TEC EQUIPMENT NEW TRUCK DEALERSHIP TRAFFIC IMPACT ANALYSIS

COUNTY OF SAN BERNARDINO, CALIFORNIA

FEBRUARY 8, 2016

Prepared for:

TEC Equipment c/o Thatcher engineering & associates, inc. 1461 Ford Street, Suite 105 Redlands, California 92373

Prepared by:



Scott Sato, P.E. 100 E. San Marcos Boulevard, Suite 400 San Marcos, CA 92069



(0255-0001-02)

TABLE OF CONTENTS

SEC	<u>TION</u>			<u>PAGE</u>	
EXEC	CUTIVE	SUMM	ARY	ES 1	
1.0	INTR	ODUCT	TION AND SUMMARY	1	
	A.	Purpo	ose of the TIA and Study Objectives		
	B.	Site L	ocation and Study Area		
	C.	Deve	lopment Project Identification		
		1.	Project Size and Description		
		2.	Existing Land Use		
		3.	Proposed Land Use		
		4.	Site Plan of Proposed Project		
		5.	Proposed Project Opening Year		
		6.	Proposed Project Phasing		
2.0	TRAI	FFIC AN	IALYSIS METHODOLOGIES	7	
	A.	Level	of Service Definition		
	B.	Coun	ty of San Bernardino Level of Service Criteria		
	C.	Inters	section Operations Analysis Methodology		
	D.	Freev	vay Ramp Analysis		
3.0	ARE	A CONE	DITIONS	11	
	A.	Study	Area Intersections		
	B.	Area	Roadway System		
	C.	Existi	ng (2016) Traffic Volumes		
	D.	Existi	ng (2016) Delay and Level of Service		
4.0	PRO	JECTE	D FUTURE TRAFFIC	17	
	A.	Proje	ct Traffic		
		1.	Ambient Growth Rate		
		2.	Project Trip Generation		
		3.	Project Trip Distribution and Assignment		
		4.	Other Trip Generation Factors		
		5.	Project Peak Hour Turning Movement Traffic		
	B.	Cumulative Traffic (Background)			
		1.	Method of Projection		
		2.	Other Approved or Proposed Development Projects		
		3.	Other Approved Projects Trip Generation		
		4.	Other Approved Development Trip Distribution and Assignment		
		5.	Total Background Peak Hour Turning Movement Volumes		

TABLE OF CONTENTS (Continued)

SEC	ΓΙΟΝ	<u>P/</u>	4GE
5.0	TRAF	FIC ANALYSIS	33
	A.	Delay and Level of Service for Existing Plus Project (E+P) Conditions	
	B.	Delay and Level of Service for Existing Plus Ambient (E+A 2017) Conditions	
	C.	Delay and Level of Service for Existing Plus Ambient Plus Project	
		(EAP 2017) Conditions	
	D.	Delay and Level of Service for Existing Plus Ambient Plus Project Plus Cumulat	ive
		(EAPC 2017) Conditions	
6.0	FINDI	NGS AND RECOMMENDATIONS	41
	A.	Traffic Impacts and Level of Service Analysis	
	B.	Circulation Recommendations	
		1. On-Site	

LIST OF FIGURES

<u>FIGUF</u>	<u>RE</u>	<u>PAGE</u>
1-A	Study Area	. 2
1-B	Site Plan	. 4
3-A	Existing (2016) Traffic Controls and Intersection Geometrics	. 12
3-B	Existing (2016) Traffic Volumes	. 14
4-A	Project Trip Distribution	. 21
4-B	Project Only Traffic Volumes	. 23
4-C	Cumulative Developments Location Map	. 24
4-D	Cumulative Developments Only Traffic Volumes	. 26
4-E	Existing Plus Project Traffic Volumes	. 27
4-F	Existing Plus Ambient (2017) Traffic Volumes	. 29
4-G	Existing Plus Ambient Plus Project (2017) Traffic Volumes	. 30
4-H	Existing Plus Ambient Plus Project Plus Cumulative (2017) Traffic Volumes	. 31
6-A	Circulation Recommendations	42

LIST OF TABLES

TABLE		<u>PAGE</u>
3-1	Intersection Analysis for Existing (2016) Conditions	15
4-1	Project Trip Generation Summary	20
4-2	Cumulative Development Trip Generation Summary	25
5-1	Intersection Analysis for Existing Plus Project Conditions	34
5-2	Intersection Analysis for Existing Plus Ambient (2017) Conditions	35
5-3	Intersection Analysis for Existing Plus Ambient Plus Project (2017) Conditions	37
5-4	Intersection Analysis for Existing Plus Ambient Plus Project Plus Cumulative (2017) Conditions	38
5-5	Freeway Ramp Analysis for Existing Plus Ambient Plus Project Plus Cumulative (2017) Conditions	39

LIST OF APPENDICES

Scoping Agreement	1.1
Traffic Count Worksheets	3.1
Existing (2016) Intersection Analysis Calculation Worksheets	3.2
Cumulative Development Projects Trip Distribution Patterns	4.1
Existing Plus Project Intersection Analysis Calculation Worksheets	5.1
Existing Plus Ambient (2017) Intersection Analysis Calculation Worksheets	5.2
Existing Plus Ambient Plus Project (2017) Intersection Analysis Calculation Worksheets	5.3
Existing Plus Ambient Plus Project Plus Cumulative (2017) Intersection Analysis Calculation Worksheets	5.4
Existing Plus Ambient Plus Project Plus Cumulative (2017) Freeway Ramp Analysis Worksheets	5.5



TEC EQUIPMENT NEW TRUCK DEALERSHIP TRAFFIC IMPACT ANALYSIS COUNTY OF SAN BERNARDINO, CALIFORNIA

EXECUTIVE SUMMARY

The purpose of this traffic impact analysis (TIA) is to evaluate the traffic impacts of the proposed TEC Equipment New Truck Dealership development. The project is proposed to be developed by 2017 with a new truck dealership which includes approximately 6,000 sf of retail area, 10,000 sf of office, and a 22,420 sf parts/service area. The site is located on the northeast corner of Randall and Cherry Avenue in the County of San Bernardino.

The proposed development does not generate traffic like a typical automobile dealership since the types of vehicles are comprised of large trucks. Therefore, the anticipated operations of the site and the number of employees/customers were used to develop the expected trip generation at the project driveways. Based on these expectations, the site is projected to generate a total of approximately 768 PCE's per day with 50 PCE's per hour during the AM peak hour and 119 PCE's per hour during the PM peak hour.

The traffic study has been conducted in accordance with the San Bernardino County's traffic study guidelines. These guidelines include the following conditions:

- o Existing (2016) Traffic
- o Existing (2016) Plus Project
- Existing (2016) Plus Ambient Traffic
- Existing + Ambient + Project (EAP 2017).
- o Existing + Ambient + Project + Cumulative (EAPC 2017).

Based on the analysis conducted for the proposed project, no study area intersections were determined to have a significant impact due to the proposed project. In addition, the I-10/Cherry Avenue interchange was evaluated and no significant impacts were identified.

Project recommendations include:

- Provide stop sign control at the project driveways.
- On-site traffic signing and striping should be implemented in conjunction with detailed construction plans for the project.
- Verify that minimum sight distance is provided at the project driveways.

TEC EQUIPMENT NEW TRUCK DEALERSHIP TRAFFIC IMPACT ANALYSIS COUNTY OF SAN BERNARDINO, CALIFORNIA

1.0 Introduction

A. Purpose of the TIA and Study Objectives

The purpose of this traffic impact analysis (TIA) is to evaluate the traffic impacts of the proposed TEC Equipment New Truck Dealership development. The project is proposed to be developed with a new truck dealership which includes approximately 6,000 sf of retail area, 10,000 sf of office, and a 22,420 sf parts/service area. The site is located on the northeast corner of Randall and Cherry Avenue in the County of San Bernardino.

Study objectives include the following:

Existing (2016) Traffic. Existing traffic will be counted to determine current conditions. This constitutes the environmental setting for a CEQA analysis at the time that the hearing body reviews the project. Traffic count data shall be new or recent. In some cases, data up to one year old may be acceptable with the approval of the County of San Bernardino Engineering Department. Any exception to this must be requested prior to approval of the scoping agreement

Existing (2016) Plus Ambient Traffic. Traffic generated by ambient growth will be added to existing traffic counts to identify and analyze impacts on the circulation system.

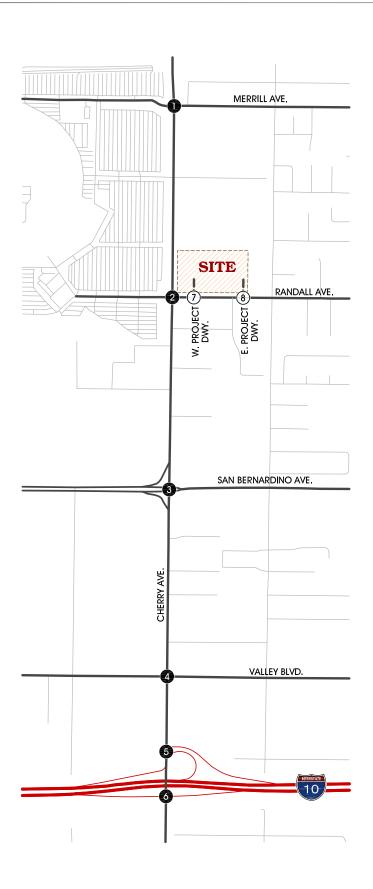
Existing + Ambient + Project (EAP 2017). Traffic conditions prior to the time that the proposed development is completed will be estimated by increasing the existing traffic counts by an appropriate growth rate to be provided by County of San Bernardino Engineering Department staff, projected to the year that the project is estimated to be completed. Traffic generated by the proposed project will then be added, and the impacts on the circulation system will be analyzed. This will be the basis for determining project-specific impacts, mitigation, and conditions of approval.

Existing + Ambient + Project + Cumulative (EAPC 2017). Traffic generated by other approved projects in the study area shall be identified and added to the Project Completion traffic identified in Scenario 3. This may also include projects that are proposed and in the review process, but not yet fully approved.

B. <u>Site Location and Study Area</u>

The site is located on the northeast corner of Randall and Cherry Avenue in the County of San Bernardino. Figure 1-A illustrates the site location and the traffic analysis study area.

FIGURE 1-A **STUDY AREA**



LEGEND:

= EXISTING INTERSECTION ANALYSIS LOCATION

= FUTURE INTERSECTION ANALYSIS LOCATION

= FUTURE ROADWAY / PROJECT DRIVEWAY



TEC Equipment New Truck Dealership Traffic Impact Analysis San Bernardino, CA (0255-0001:01.dwg)

In general, the study area shall include any intersection of Collector or higher classification street with another Collector roadway or higher classification street, at which the proposed project will add 50 or more peak hour trips. Pursuant to the attached scoping agreement (see Appendix "1.1"), the study area includes the following intersections:

	STUDY AREA INTERSECTIONS				
1.	Cherry Ave. / Merrill Ave.				
2.	Cherry Ave. / Randall Ave.				
3.	Cherry Ave. / San Bernardino Ave.				
4.	Cherry Ave. / Valley Blvd.				
5.	Cherry Ave. / I-10 WB Ramp				
6.	Cherry Ave. / I-10 EB Ramp				
7.	W. Project Driveway/ Randall Ave. – Future Intersection				
8.	E. Project Driveway/ Randall Ave. – Future Intersection				

C. Development Project Identification

1. Project Size and Description

The TEC Equipment New Truck Dealership site is proposed to be developed by 2017. The following uses are proposed as indicated below:

- 6,000 sf of truck sales retail area
- 10,000 sf of office
- 22,420 sf parts/service area

2. Existing Land Use

The project site is currently vacant. Adjacent uses include the following:

- North Industrial
- South –Industrial
- East -Industrial
- West Cal Speed Karting Center

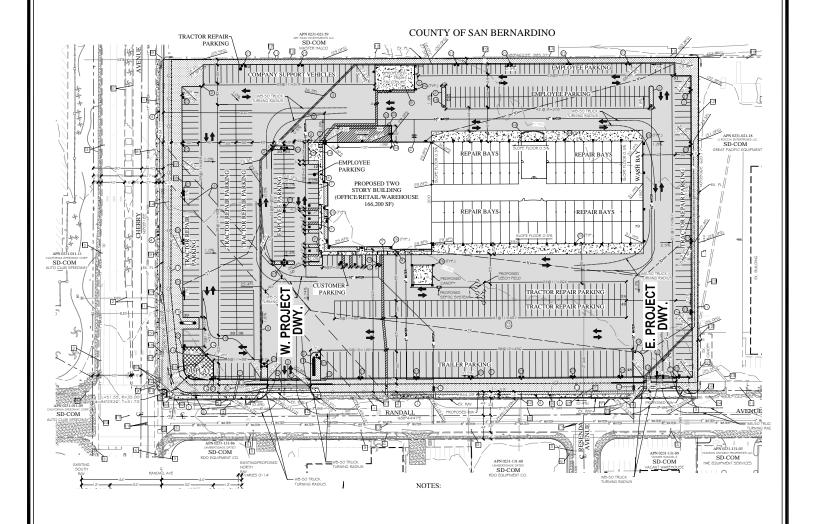
3. Proposed Land Use

Proposed Land Use: Special Development Commercial

4. Site Plan of Proposed Project

Figure 1-B illustrates the conceptual land use plan. As shown in Figure 1-B, the project is proposed to have a two full access driveways along Randall Avenue.

FIGURE 1-B SITE PLAN





5. Proposed Project Opening Year

The proposed project is anticipated to be completed by 2017. Future traffic analysis has been based on a background (ambient) growth of 2% per year, along with traffic generated by other future developments in the surrounding area.

6. <u>Proposed Project Phasing</u>

The project is expected to be completed in a single phase. Therefore, all traffic recommendations included in this report have been assumed to be completed by 2017.

THIS PAGE LEFT INTENTIONALLY BLANK

2.0 TRAFFIC ANALYSIS METHODOLOGIES

Traffic operations are quantified through the determination of "Level of Service" (LOS). Level of Service is a qualitative measure of traffic operating conditions, whereby a letter grade "A" through "F" is assigned to an infrastructure facility (intersection) representing progressively worsening traffic conditions. This section presents the LOS definition, LOS criteria and methodologies for the Intersection Operations.

A. <u>Level of Service Definition</u>

The definitions of Level of Service for uninterrupted flow (flow unrestrained by the existence of traffic control devices) are:

- LOS "A": Completely free-flow conditions. The operation of vehicles is virtually
 unaffected by the presence of other vehicles, and operations are constrained only
 by the geometric features of the highway and by driver preferences.
 Maneuverability within the traffic stream is good. Minor disruptions to flow are
 easily absorbed without a change in travel speed.
- LOS "B": Free flow conditions, although the presence of other vehicles becomes noticeable. Average travel speeds are the same as in LOS "A", but drivers have slightly less freedom to maneuver. Minor disruptions are still easily absorbed, although local deterioration in LOS will be more obvious.
- LOS "C": The influence of traffic density on operations becomes marked. The
 ability to maneuver within the traffic stream is clearly affected by other vehicles.
 Minor disruptions can cause serious local deterioration in service, and queues will
 form behind any significant traffic disruption.
- LOS "D": The ability to maneuver is restricted due to traffic congestion. Travel speed is reduced by the increasing volume. Only minor disruptions can be absorbed without extensive queues forming and the service deteriorating.
- LOS "E": Operations at or near capacity, an unstable level. Vehicles are operating with the minimum spacing for maintaining uniform flow.
- LOS "F": Forced or breakdown flow. It occurs either when vehicles arrive at a rate greater than the rate at which they are discharged or when the forecast demand exceeds the computed capacity of a planned facility. Although operations at these points and on sections immediately downstream appear to be at capacity, queues form behind these breakdowns. Operations within queues are highly unstable, with vehicles experiencing brief periods of movement followed by stoppages.

B. County of San Bernardino Level of Service Criteria

The San Bernardino County General Plan has established Level of Service (LOS) "D" as the county-wide target along all County maintained intersections, roads and conventional state highways. Therefore, LOS "E" or "F" is considered unacceptable and requires improvements measures if the project causes significant impacts.

C. Intersection Operations Analysis Methodology

The County of San Bernardino requires the use of the Transportation Research Board - Highway Capacity Manual (HCM), 2010 Update, or most recent release. The HCM defines level of service as a qualitative measure, which describes operational conditions within a traffic stream, generally in terms of such factors as speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience, and safety. The criteria used to evaluate Level of Service (LOS) conditions vary based on the type of roadway and whether the traffic flow is considered interrupted or uninterrupted. The HCM methodology expresses the level of service at an intersection in terms of delay time for the various intersection approaches. The HCM uses different procedures depending on the type of intersection control.

The level of service is typically dependent on the quality of traffic flow at the intersections along a roadway. The HCM methodology expresses the level of service at an intersection in terms of delay time for the various intersection approaches. The HCM uses different procedures depending on the type of intersection control. The Levels of Service results in this study are determined using the HCM methodology.

For signalized intersections, average total delay per vehicle for the overall intersection is used to determine level of service.

The study area intersections which are stop sign controlled with stop control on the minor street only have been analyzed using the unsignalized intersection methodology of the HCM. For these intersections, the calculation of level of service is dependent on the occurrence of gaps occurring in the traffic flow of the main street. Using data collected describing the intersection configuration and traffic volumes at the study area locations; the level of service has been calculated. The level of service criteria for this type of intersection analysis is based on average total delay per vehicle for the worst minor street movement(s).

For all way stop (AWS) controlled intersections, the ability of vehicles to enter the intersection is not controlled by the occurrence of gaps in the flow of the main street. The AWS controlled intersections have been evaluated using the HCM methodology for this type of multi-way stop controlled intersection configuration. The level of service criteria for this type of intersection analysis is based on average total delay per vehicle.

The levels of service are defined for the various analysis methodologies as follows:

LEVEL OF	AVERAGE TOTAL DELAY PER VEHICLE (SECONDS)			
SERVICE	SIGNALIZED	UNSIGNALIZED		
А	0 to 10.00	0 to 10.00		
В	10.01 to 20.00	10.01 to 15.00		
С	20.01 to 35.00	15.01 to 25.00		
D	35.01 to 55.00	25.01 to 35.00		
E	55.01 to 80.00	35.01 to 50.00		
F	80.01 and up	50.01 and up		

Peak hour factors (PHF), where known from existing traffic counts, have been used to assess intersection operations.

D. Freeway Ramp Analysis Methodology

For the purpose of this report, a Merge/Diverge operations analysis has been used to evaluate freeway on-ramps and off-ramps. The density and level of service at the Cherry Avenue/I-10 on and off-ramps have been evaluated using the HCS2010 Ramps Version 6.60 software. The measure of effectiveness (reported in passenger car/mile/lane) are calculated based on the existing number of travel lanes, number of lanes at the on and off ramps both at the analysis junction and at upstream and downstream locations (if applicable) and acceleration/deceleration lengths at each merge/diverge point.

The merge/diverge area LOS thresholds for each density range utilized in this report is presented as follows:

LEVEL OF SERVICE	DENSITY RANGE (pc/mi/ln) ¹
А	0.0 – 10.0
В	10.1 – 20.0
С	20.1 – 28.0
D	28.1 – 35.0
E	>35.0
F	Demand Exceeds Capacity

pc/mi/ln = passenger cars per mile per lane.

THIS PAGE LEFT INTENTIONALLY BLANK

3.0 AREA CONDITIONS

A. Study Area Intersections

In general, the minimum area to be studied shall include any intersection of "Collector" or higher classification street, with "Collector" or higher classification streets, at which the proposed project could have a significant impact. The County of San Bernardino Engineering Department may require deviation from these requirements based on area conditions. The study area includes the following intersections (shown previously on Figure 1-A):

	STUDY AREA INTERSECTIONS			
1.	Cherry Ave. / Merrill Ave.			
2.	Cherry Ave. / Randall Ave.			
3.	Cherry Ave. / San Bernardino Ave.			
4.	Cherry Ave. / Valley Blvd.			
5.	Cherry Ave. / I-10 WB Ramp			
6.	Cherry Ave. / I-10 EB Ramp			
7.	W. Project Driveway/ Randall Ave. – Future Intersection			
8.	E. Project Driveway/ Randall Ave. – Future Intersection			

B. Area Roadway System

Figure 3-A identifies the existing roadway conditions for study area roadways. The existing intersection traffic controls and geometrics are identified.

C. Existing (2016) Traffic Volumes

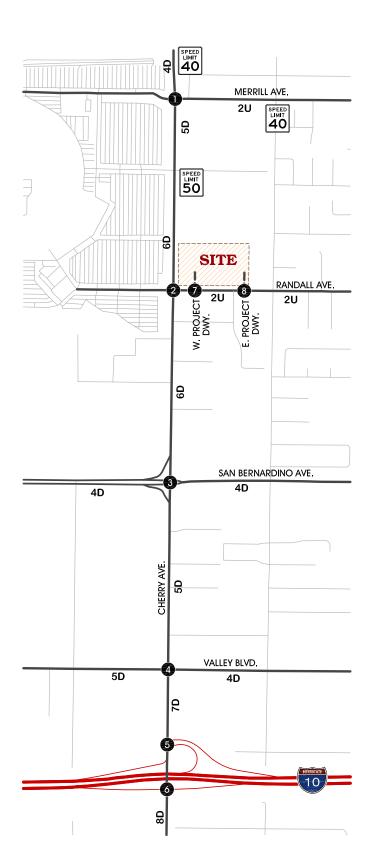
Existing intersection level of service calculations are based upon manual AM and PM peak hour turning movement counts made for Trames Solutions, Inc. in January 2016.

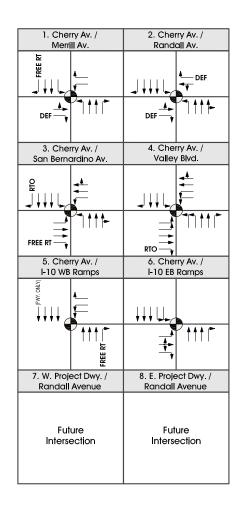
The traffic count worksheets provided in Appendix "3.1" include the following vehicle classifications:

- Passengers Cars
- 2-Axle Trucks
- 3-Axle Trucks
- 4 or more Axle Trucks

It should be noted that all trucks have been converted into passenger car equivalents (PCE) to represent the impact of large trucks, buses and recreational vehicles have on traffic flow. For the purpose of this analysis, a PCE factor of 1.5 has been applied to 2-axle

FIGURE 3-A EXISTING TRAFFIC CONTROLS AND INTERSECTION GEOMETRICS





LEGEND:

= INTERSECTION ID

Ť

= TRAFFIC SIGNAL

NUMBER OF LANESDIVIDED

U = UNDIVIDED

FREE RT = FREE RIGHT TURN

RTO = RIGHT TURN

OVERLAP PHASE



TEC Equipment New Truck Dealership Traffic Impact Analysis San Bernardino, CA (0255-0001:01.dwg)

trucks, 2.0 for 3-axle trucks and 3.0 for 4+-axle trucks to estimate each turning movement. These factors are consistent with the values recommended for use in the CMP.

Existing (2016) AM and PM peak hour intersection turning movement volumes are shown on Figure 3-B.

Existing average daily traffic (ADT) volumes are also shown on Figure 3-B. The following formula is used to estimate the ADT volumes shown on Figure 3-B:

PM Peak Hour Link Volume (Approach + Exit) x 12 = ADT Leg Volume

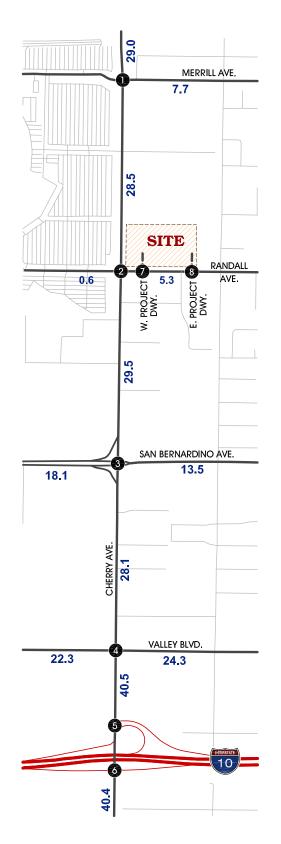
For ramp analysis purposes, the I-10 freeway mainline volume data were obtained from the Caltrans Performance Measurement System (PeMS) website. Freeway mainline peak hour volumes have been obtained between January 12 through 14, 2016 and have been flow conserved with freeway-ramp-to-arterial peak hour count data. The maximum value observed within the three day period is utilized for the AM and PM peak hours. In addition, truck percentage from the Caltrans 2014 Annual Average Daily Truck Traffic on the California State Highway System is utilized which presents 10.29% truck percentage along the I-10 freeway within the study area. The source data and freeway volume summary are also included in Appendix "3.1".

D. Existing (2016) Delay and Level of Service

The County of San Bernardino has established Level of Service (LOS) "D" as the maximum allowable threshold for the intersection operations. Therefore, LOS "E" or "F" is considered unacceptable and requires improvements measures.

The results of the existing conditions intersection analysis are summarized in Table 3-1. The existing condition operations analysis worksheets are provided in Appendix "3.2". As shown on Table 3-1, the study area intersections are currently operating at acceptable level of service (LOS "D" or better) during the peak hours with the existing geometry and traffic controls.

FIGURE 3-B **EXISTING (2016) PCE TRAFFIC VOLUMES**



AM PEAK HOUR

1. Cher Merri		2. Chei Rand		3. Che San Berno		4. Chei Valley	
←0 ←1118 ←144	—230 —0 —178	←8 ←1116 ←98	112 +3 199	←372 ←831 ←74	4-86 337 143	←88 ←964 ←67	←59 ←277 ←413
0→ 0→ 0→	1 → 733 → 107 ¬	1 → 0 → 0 →	22 ⁻ 781 - 86 ⁻	178— 69— 93—	83.→ 731.→ 87.→	58 <u>→</u> 128→ 184→	4164 853+ 332-
5. Chei I-10 WB		6. Che I-10 EB		7. W. Proje Randall		8. E. Proje Randall	
+-1568	5771 -5255 -0201	382 → 343 → ↑ 569 ← 569 ← 569	1240~ 415~		ure ectlon	ı	ure ectlon

PM PEAK HOUR

1. Cherry Av. / Merrill Av.	2. Cherry Av. / Randall Av.	3. Cherry Av. / San Bernardino Av.	4. Cherry Av. / Valley Blvd.
000 - 173 -0 - 99	4 + 831 - 30 - 30 - 60 - 60 - 60	83 95 € 6 147 72	85 5 1 26 85 1 26 26 26 26 3 3 4 3
1229	11 → ↑ [15] 4 → 23 → 1 15]	291 → 152 →	324→ 710→ 324→ 199→ 100- 100- 100- 100- 100- 100- 100- 100
5. Cherry Av. / I-10 WB Ramps	6. Cherry Av. / I-10 EB Ramps	7. W. Project Dwy. / Randall Avenue	8. E. Project Dwy. / Randall Avenue
6191 479 -393 +1882	423 +	Future Intersection	Future Intersection

LEGEND:

8

= INTERSECTION ID

1.0 = VEHICLES PER DAY (1000's)



TEC Equipment New Truck Dealership Traffic Impact Analysis San Bernardino, CA (0255-0001:02 - volumes.dwg)

TABLE 3-1
INTERSECTION ANALYSIS FOR EXISTING (2016) CONDITIONS

			Intersection Approach Lanes ²					Del	ay ³	Lev	el of							
		Traffic	Nor	thbo	ound	Sou	ıthbo	ound	Eas	Eastbound We		We	Westbound		(secs.)		Service ³	
ID	Intersection	Control 1	L	Т	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
1	Cherry Ave. / Merrill Ave.	TS	1	2	1	1	2	1>>	0.5	0.5	d	1	0	1	15.7	16.9	В	В
2	Cherry Ave. / Randall Ave.	TS	1	3	0	1	3	1	0.5	0.5	d	0.5	0.5	d	9.6	12.0	Α	В
3	Cherry Ave. / San Bernardino Ave.	TS	1	3	0	1	3	1>	1	2	1>>	1	2	0	32.4	26.3	С	С
4	Cherry Ave. / Valley Blvd.	TS	2	2	1	1	2	1	2	2	1>	2	2	0	28.5	43.2	С	D
5	Cherry Ave. / I-10 WB Ramps	TS	0	3	1>>	0	4	0	0	0	0	2	0	1	8.8	16.4	Α	В
6	Cherry Ave. / I-10 EB Ramps	TS	0	3	1	2	3	0	1	1!	1	0	0	0	21.1	28.2	С	С
7	W. Project Dwy. / Randall Ave.	-	Future Intersection				-	-	-	-								
8	E. Project Dwy. / Randall Ave.	-	Future Intersection					-	-	-	-							

¹ TS = Traffic Signal

When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right; 1! = Shared Left-Through-Right Lane; 0.5 = Shared Lane; d = Defacto right turn lane;

> = Right Turn Overlap; >> = Free Right Turn Lane

Delay and level of service calculated using the following analysis software: Synchro 8.0

THIS PAGE LEFT INTENTIONALLY BLANK

4.0 PROJECTED FUTURE TRAFFIC

This section of the report quantifies the number of trips generated by the proposed project and other known developments in the area.

A. <u>Project Traffic</u>

1. <u>Ambient Growth Rate</u>

Some traffic volume increases on roadways can be attributed to vehicles originating outside of the study area. These types of trips either end up within the study area or pass-through onto an outside destination. Therefore, to account for these trips (termed "ambient growth"), a growth rate can be applied to existing traffic volumes.

A 2% ambient growth rate that has been used in this study to account for traffic not attributed to the project or other planned developments within the study area. The County of San Bernardino Transportation Department staff has previously reviewed and approved this rate.

2. Project Trip Generation

Trip generation represents the amount of traffic which is attracted and produced by a development. The trip generation for the project is based upon the specific land use which has been planned for this development. For the purpose of this analysis, the following land use assumption is evaluated:

- 6,000 sf of truck sales retail area
- 10,000 sf of office
- 22,420 sf parts/service area

The trip generation rates are based upon the specific operations of the proposed project. The following description summarizes the anticipated traffic that will occur during the peak hours and throughout the day:

TEC Equipment will generate trip traffic in primarily (5) ways:

- 1) Employee Traffic
- 2) Delivery Traffic (Incoming and outgoing shipments)
- 3) Truck Traffic Relating to Service Operations
- 4) Truck Traffic Relating to Sales Operation
- 5) Auto Traffic Related to Sales Operations

Employee Traffic

a. Start of the Service Shift: Approximately 80 trips between 5-6am

- b. Office/Admin Approximately 30 trips between 7-8am
- c. Other morning trips: 24 total between 8 am and 11:30
- d. Lunch Traffic: Approximately 20% of office staff-36 trips during lunch hours
- e. Other midday trips: 24 total between 1pm-4pm
- f. Parts/Service Shift Change. The afternoon shift is about 65% the size of the AM shift. We expect 140 trips
- g. Admin/Sales Closes at 4 PM so we expect 30 trips between 4-5
- h. Evening shift ends at 12 midnight, we expect 60 trips

2) Delivery Traffic

- a. Most deliveries will occur between the hours of 9 AM-12 Noon.
 - i. 3rd party deliveries include FedEx, LTL and UPS, which both come and go. Accounting for (6) trips
 - ii. Internal Delivery vehicles account for 8 outgoing trips in the same period
- b. The remaining of the day will account for:
 - i. 8 more 3rd party trips

3) Truck Traffic Related to Service Operations

- a. TEC's Average repair is opened and closed in (2.2 days) there will be 74 bays and about 12% of customers don't end up going to the shop.
- b. Incoming Trips computed: 74 bays / 2.2 = 33.6 trips + 4 trips unhelped customers
- c. Outgoing Trips is identical, for a total trip estimate of 76 trips per day.
- d. Service Trips are historically relatively uniform but we have a slight increase of incoming trips between 6-7am (20% or Total) and outgoing trips between 4-5pm (30% of total)

4) Truck Traffic Related to Truck Sales

- a. This dealership will be 'New Truck' Sales Only. Used Trucks will not be on this lot. TEC does not account for additional truck sales due to the increased size of the dealership. Most customers purchase Class 8 (Semi) trucks by factory order, much different than Retail Auto Customer that purchase off-the-lot. As such we project sales of about 550 Trucks per year or a conservative average of (2) sales per day.
- b. For total trips, we will add in-coming stock trucks for a total of 4 trips per day.

5) Auto Traffic Related to Truck Sales

- a. This number is computed relatively similar to that of Truck Traffic related to truck sales, but we will apply a 3x ratio for no-purchase customers, for a total of 12 trips.
- b. Potential Customers will be relatively have relatively uniform trips between the hours of 9AM-4PM

Other notes and assumptions:

- Working hours are M-F 6am-12pm for Parts/Service, 8-4 for Admin/Sales
- 12 percent of our Parts/service workforce carpools
- Sales related (both auto and truck) Trips are relatively consistent throughout the day

The daily and peak hour trip generations for the proposed project are shown on Table 4-1. Since some of the traffic to/from the project is anticipated to be comprised of trucks, the trips have been converted to passenger car equivalences (PCE). PCE's are factors that equate large vehicles into a similar number of passenger cars. Small trucks are assumed to have the same impacts of 2 passenger cars. Large trucks are assumed to have the same impacts as 3 passenger cars. The proposed development is projected to generate a total of approximately 768 PCE's per day with 50 PCE's per hour during the AM peak hour and 119 PCE's per hour during the PM peak hour.

3. Project Trip Distribution and Assignment

Trip distribution represents the directional orientation of traffic to and from the project site. The project's trip distribution patterns are based on the proximity of the project to the proposed driveway locations, the surrounding trip attractors, and the regional freeway interchanges. The trip distribution pattern for the project is illustrated on Figure 4-A.

4. Other Trip Generation Factors

It is unlikely that the project trips will be further reduced to/from the site by non-motorized modes of travel due to the lack of; 1) convenient transit opportunities, 2) bike lanes, and 3) pedestrian trails.

5. Project Peak Hour Turning Movement Traffic

The assignment of traffic from the site to the adjoining roadway system has been based upon the site's trip generation, trip distribution, proposed arterial highway and local street systems, which would be in place by the time of initial occupancy of the

TABLE 4-1
PROJECT TRIP GENERATION SUMMARY

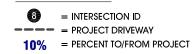
		Peak Hour						
		AM		PM				
Variable	ln	Out	Total	In	Out	Total	Daily	
Office/Admin Staff Traffic	30	2	31.5	2	30	32	424	
Delivery Vehicle Traffic	0	0	0	1	8	9	46	
- 2.0 PCE	0	0	0	2	16	18	92	
Customer Traffic	0	0	0	0	0	0	12	
Large Truck Traffic	5	1	6	1	22	23	80	
- 3.0 PCE	15	3	18	3	66	69	240	
Total Project Trips	35	3	37.5	4	60	64	562	
Total Project Trips (PCE) ¹	45	5	50	7	112	119	768	

¹ PCE = Passenger Car Equivalent

FIGURE 4-A PROJECT TRIP DISTRIBUTION



LEGEND:





TEC Equipment New Truck Dealership Traffic Impact Analysis San Bernardino, CA (0255-0001:01.dwg)

site. Based on the identified project traffic generation and distribution, Project AM and PM peak hour intersection traffic volumes are shown on Figure 4-B. The project average daily traffic (ADT) volumes utilized are also shown on Figure 4-B.

B. <u>Cumulative Traffic (Background)</u>

1. <u>Method of Projection</u>

To assess existing plus ambient plus cumulative plus project traffic conditions, project traffic is combined with existing traffic, area-wide growth and other future developments which are approved or being processed concurrently in the study area. Developments which are being processed concurrently in the study area have been provided by the County of San Bernardino staff. The City of Fontana has also been contacted regarding other developments in the area. Two projects were provided but were located more than 5 miles from the project site and would be unlikely to add considerable traffic to the study intersections.

2. Other Approved or Proposed Development Projects

A traffic study has been conducted for the cumulative development (High Cube Warehouse) by Kunzman Associates. The anticipated trip generation and trip distribution patterns have been provided by the County. The location of the cumulative project provided by the County is shown on Figure 4-C.

3. Other Approved Projects Trip Generation

Table 4-2 presents the cumulative development land uses and trip generation summary. As presented in Table 4-2 Cumulative developments are projected to generate a total of approximately 474 PCE's per day with 32 PCE's per hour during the AM peak hour and 34 PCE's per hour during the PM peak hour.

4. Other Approved Development Trip Distribution and Assignments

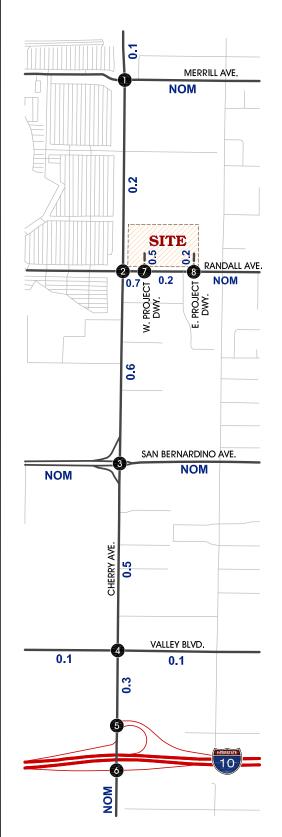
Appendix "4.1" contains the directional distribution and assignment of the cumulative development traffic.

5. Total Background Peak Hour Turning Movement Volumes

Based on the identified trip distribution for the cumulative development on arterial highways throughout the study area, cumulative development AM and PM peak hour intersection turning movement volumes and average daily traffic volumes are shown on Figure 4-D.

Existing plus Project (E+P) AM and PM peak hour intersection turning movement volumes and average daily traffic volumes are shown on Figure 4-E.

FIGURE 4-B PROJECT ONLY TRAFFIC VOLUMES



AM PEAK HOUR

1. Cherry Av. / Merrill Av.	2. Cherry Av. / Randall Av.	3. Cherry Av. / San Bernardino Av.	4. Cherry Av. / Valley Blvd.
0 1 1 1 1 1 1 1 1	0000	0 ° 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	5 +0 -0
0 + 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2 + + 0 0 + 0 0 - 0	5 † 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
5. Cherry Av. / I-10 WB Ramps	6. Cherry Av. / I-10 EB Ramps	7. W. Project Dwy. / Randall Avenue	8. E. Project Dwy. / Randall Avenue
2 - 0 -0		4 0 ←1 ←1	-2 -0
↑ [I	9- 0- 0- 0- 0-	32 _ 11 -	11 <i>→</i> 0→

PM PEAK HOUR

1. Cherry Av. / Merrill Av.	2. Cherry Av. / Randall Av.	3. Cherry Av. / San Bernardino Av.	4. Cherry Av. / Valley Blvd.
0 - 0 - 0	22 +0 -84	0 0 0 0 0 0 0	1 +0 -0 -0
0 + 0 + 0 + 0 + 0 + 0 + 0 + 0 + 0 + 0 +	0-	0 + 0 5 0	1-1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1
5. Cherry Av. / I-10 WB Ramps	6. Cherry Av. / I-10 EB Ramps	7. W. Project Dwy. / Randall Avenue	8. E. Project Dwy. / Randall Avenue
	- 6 - 22	80 ←28	0-4-0
0	1 -	5_ - ↓ 2	2—* 0—

LEGEND:

8 = INTERSECTION ID

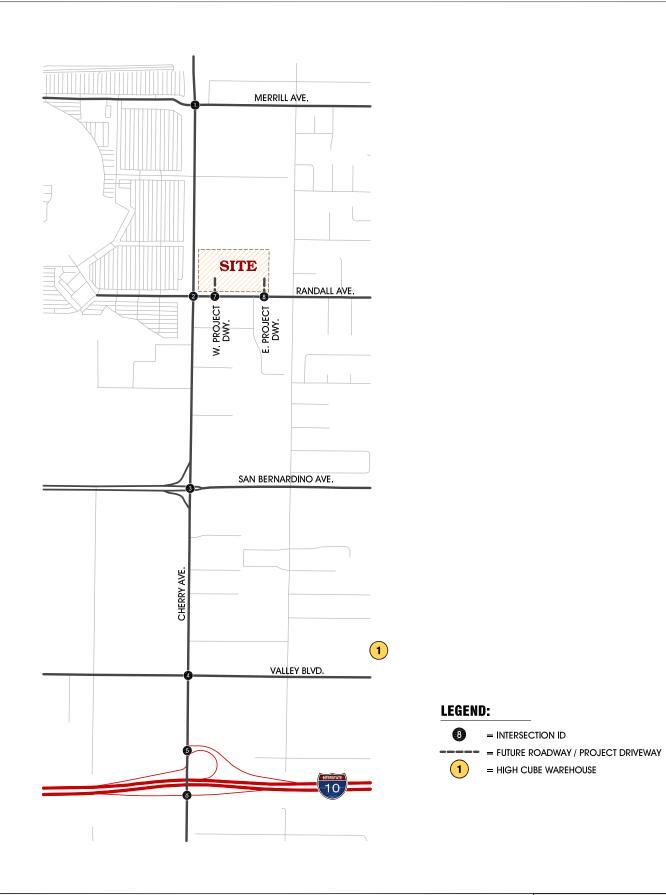
1.0 = VEHICLES PER DAY (1000's)

NOM = NOMINAL, LESS THAN 50 VEHICLES PER DAY



TEC Equipment New Truck Dealership Traffic Impact Analysis San Bernardino, CA (0255-0001:02 - volumes.dwg)

FIGURE 4-C CUMULATIVE DEVELOPMENTS LOCATION MAP



TEC Equipment New Truck Dealership Traffic Impact Analysis San Bernardino, CA (0255-0001:01.dwg)

TABLE 4-2
CUMULATIVE DEVELOPMENTS TRIP GENERATION SUMMARY¹

				Peak Hour						
					AM			PM		
ID	Project Name	Land Use	Quantity ²	ln	Out	Total	ln	Out	Total	Daily
1	High Cube Warehouse	Warehousing	215 TSF							
	- Passenger Cars			14	5	19	7	14	21	287
	- Trucks (PCE) ³			10	3	13	3	10	13	187
Total Cumulative Trips				24	8	32	10	24	34	474

¹ Source: High Cube Warehouse, Kunzman Associates

² TSF = Thousand Square Feet

³ PCE = Passenger Car Equivalent

FIGURE 4-D **CUMULATIVE DEVELOPMENT ONLY TRAFFIC VOLUMES**



AM PEAK HOUR

Cherry Av. / Merrill Av.		2. Chei Rand		3. Che San Berno		4. Cherry Av. / Valley Blvd.		
	-0 -0	0-	↓ 0 ← 0 ← 0		↓_0 +0 -0 •	0-+ 0-+	<u>←</u> 0 ←1 ←3	
0→ 0→ 0→	0 +0 +0	0→ 0→ 0→	+0	0 <u>→</u> 0→ 0→	0 +0 +0	0→ 2→ 0→	0 0 +0 -11	
	rry Av. / 3 Ramps	6. Cherry Av. / I-10 EB Ramps		7. W. Project Dwy. / Randall Avenue		8. E. Project Dwy. / Randall Avenue		
+3	5 0 0	0000	0→	Future Intersection		Fut Interse	ure ectlon	

PM PEAK HOUR

1. Cherry Av. / Merrill Av.	2. Cherry Av. / Randall Av.	3. Cherry Av. / San Bernardino Av.	4. Cherry Av. / Valley Blvd.		
J 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0	-0 -0 -0	0 -2 -11		
0-	0-+ 0-+ 0-,	0-+ 1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1	0 0 0 4 0 0 0 4 4 4 4 4 4 4 4 4 4 4 4 4		
5. Cherry Av. / I-10 WB Ramps	6. Cherry Av. / I-10 EB Ramps	7. W. Project Dwy. / Randall Avenue	8. E. Project Dwy. / Randall Avenue		
2 - 0 - 0 - 0	1 + C + C + C + C + C + C + C + C + C +	Future Intersection	Future Intersection		

LEGEND:

8 = INTERSECTION ID

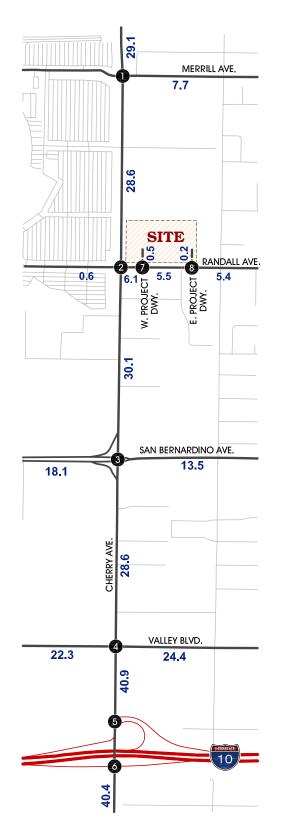
1.0 = VEHICLES PER DAY (1000's)

NOM = NOMINAL, LESS THAN 50 VEHICLES PER DAY



TEC Equipment New Truck Dealership Traffic Impact Analysis San Bernardino, CA (0255-0001:02 - volumes.dwg)

FIGURE 4-E **EXISTING PLUS PROJECT TRAFFIC VOLUMES**



AM PEAK HOUR

Cherry Av. / Merrill Av.		2. Chei Rand		3. Che San Berno		4. Cherry Av. / Valley Blvd.		
←0 ←1125 ←144	—230 —0 —180	←8 ←1116 ←107	113 13 13 13 13 13 13 13 13 13	1.372 -834 -74	€88 €337 €143	68 4966 4968	←64 ←277 ←413	
0→ 0→ 0→	1 → 734 → 107 ¬	1 → 0 → 0 →	22 ⁴ 781 - 120 ⁴	180 _ 69→ 93—	83 [→] 760 → 87 [→]	63 <u></u> 128→ 184⊸	416-4 873-+ 332-1	
5. Che I-10 WB		6. Cherry Av. / I-10 EB Ramps		7. W. Proje Randall		8. E. Project Dwy. / Randall Avenue		
- 1570	—580 ,—525	-1229 -386		4 0	<u>←</u> 0 ← 315		<u>4</u> _2 - 314	
	1081→ 513→	352 <u>→</u> 0→ 569—	1242 - 415-	32 <u>→</u> 195→		11 <i>-</i> ∲ 184 →		

PM PEAK HOUR

1. Cherry Av. / Merrill Av.	2. Cherry Av. / Randall Av.	3. Cherry Av. / San Bernardino Av.	4. Cherry Av. / Valley Blvd.		
173 +0 -99 -99	7 111 1283 -0 -174	\$4 83 \$4 84 \$4 66 \$7 \$4 \$4 \$7 \$72	697 -263 -344		
0 0 0 1246+ 1665	11 	291 → 152 →	200- 710- 324- 324- 7 10- 8 5 6 8 8		
5. Cherry Av. / I-10 WB Ramps	6. Cherry Av. / I-10 EB Ramps	7. W. Project Dwy. / Randall Avenue	8. E. Project Dwy. / Randall Avenue		
69 ↓ 480 ← 393	←1073 ←527	800 ←207	88 9 4-179		
1283 -	424 	5— ¹ 267—	2— ⁴ 265—		

LEGEND:

8 = INTERSECTION ID

1.0 = VEHICLES PER DAY (1000's)

NOM = NOMINAL, LESS THAN 50 VEHICLES PER DAY



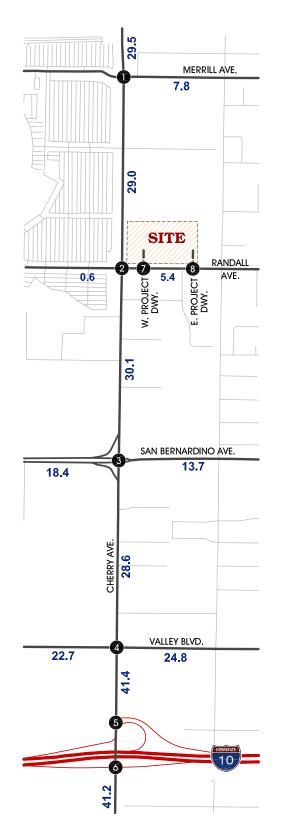
TEC Equipment New Truck Dealership Traffic Impact Analysis San Bernardino, CA (0255-0001:02 - volumes.dwg)

Existing plus Ambient (EA 2017) AM and PM peak hour intersection turning movement volumes and average daily traffic volumes are shown on Figure 4-F.

Existing plus Ambient plus Project (EAP 2017) AM and PM peak hour intersection turning movement volumes and average daily traffic volumes are shown on Figure 4-G.

Existing plus Ambient plus Project plus Cumulative (EAPC 2017) AM and PM peak hour intersection turning movement volumes and average daily traffic volumes are shown on Figure 4-H.

FIGURE 4-F **EXISTING PLUS AMBIENT (2017) TRAFFIC VOLUMES**



AM PEAK HOUR

	1. Cherry Av. / 2. Cherry Av. / Randall Av.				rry Av. / ardino Av.	4. Che Valley	rry Av. / / Blvd.
←0 ←1118 ←144	—230 —0 —178	←8 ←1116 ←98	112 +3 199	←372 ←831 ←74	4-86 337 143	←88 ←964 ←67	←59 ←277 ←413
0→ 0→ 0→	1 → 733 → 107 ¬	1 → 0 → 0 →	22 ⁻ 781 - 86 ⁻	178— 69— 93—	83_+ 731-+ 87_+	58 _ 128→ 184—	4164 853+ 332-
5. Chei I-10 WB		6. Che I-10 EB		7. W. Proje Randall	ect Dwy. / Avenue	8. E. Proje Randall	
+-1568	5771 -525 -525 -525	382 → 343 → ↑ 569 ← 343 → ↑	1240~ 415~		ure ectlon	ı	ure ectlon

PM PEAK HOUR

1. Cherry Av. / Merrill Av.	2. Cherry Av. / Randall Av.	3. Cherry Av. / San Bernardino Av.	4. Cherry Av. / Valley Blvd.
000 ← 173 000 ← 99	4 110 110 -90 -90	83 25 € +147 -72	85.6 + 263 -344
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	11 → 1 ↑ ↑ 1	291 → ↑ ↑ ↑ 601 → 898 152 → 152 → 601 → 152 → 601	324→ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑
5. Cherry Av. / I-10 WB Ramps	6. Cherry Av. / I-10 EB Ramps	7. W. Project Dwy. / Randall Avenue	8. E. Project Dwy. / Randall Avenue
6191 + 1821 6191 + 1821 6191 + 1821	423 + 1067 4505 + 1067 4505 + 1067 4505 + 1067 4505 + 1067	Future Intersection	Future Intersection

LEGEND:

8 = INTERSECTION ID

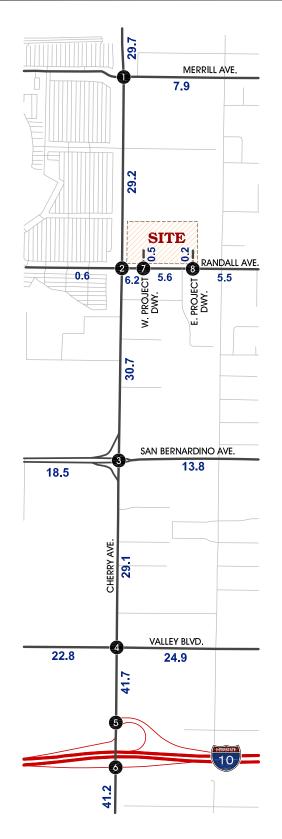
1.0 = VEHICLES PER DAY (1000's)

NOM = NOMINAL, LESS THAN 50 VEHICLES PER DAY



TEC Equipment New Truck Dealership Traffic Impact Analysis San Bernardino, CA (0255-0001:02 - volumes.dwg)

FIGURE 4-G EXISTING PLUS AMBIENT PLUS PROJECT (EAP 2017) TRAFFIC VOLUMES



AM PEAK HOUR

1. Cher Merri		2. Chei Rand		3. Che San Berno		4. Che Valley	
←0 ←1147 ←147	—235 —0 —184	←8 ←1138 ←109	115 -3 -207	1.379 1.851 1.75	1 46	←91 ←985 ←69	←65 ←283 ←421
0→ 0→ 0→	1 → 749 → 109 ¬	1⊸ 0→ 0⊸	22 [—] 797 [—] 122 [—]	184 - 70→ 95-	85 [→] 775 → 89 [→]	64_+ 131 - 188	424 ⁴ 890 * 339 [*]
5. Che I-10 WB		6. Che I-10 EB		7. W. Proje Randall		8. E. Proje Randall	
-1601	—591 ,—536	-1254 -394		1 4 1 0	← 0 ← 321	-	<u>←</u> 2 ← 320
	1102→ 523→	359 <u>→</u> 0→ 580—	1267 ~ 423¬	32 <u>→</u> 199→		11 <i>-</i> ∲ 188→	

PM PEAK HOUR

Cherry Av. / Merrill Av.	2. Cherry Av. / Randall Av.	3. Cherry Av. / San Bernardino Av.	4. Cherry Av. / Valley Blvd.
176 -0 -101 -101	7	\$5 + 150 -73	07 1000 07 1000 1000 1000 1000 1000 1000 1000 10
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	11- 4- 23- 23-	297 → 5 + 6 613 → 65 + 8 155 → 65 + 8	204 724 330 330 724 726 726 726 726 726 726 726 726 726 726
5. Cherry Av. / I-10 WB Ramps	6. Cherry Av. / I-10 EB Ramps	7. W. Project Dwy. / Randall Avenue	8. E. Project Dwy. / Randall Avenue
1021 -490 -401	+1094 +-537	800 ←211	88 9 ←183
1309→	432 + 7 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	5 1 272→	2—⁴ 270→

LEGEND:

= INTERSECTION ID

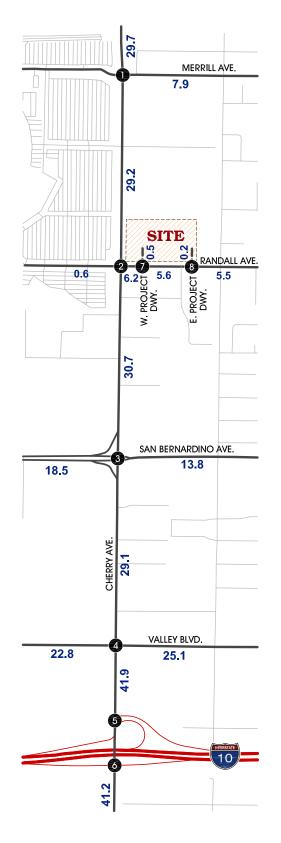
1.0 = VEHICLES PER DAY (1000's)



TEC Equipment New Truck Dealership Traffic Impact Analysis San Bernardino, CA (0255-0001:02 - volumes.dwg)

FIGURE 4-H

EXISTING PLUS AMBIENT PLUS PROJECT PLUS CUMULATIVE (EAPC 2017) TRAFFIC VOLUMES



AM PEAK HOUR

1. Cherry Av. /	2. Cherry Av. /	3. Cherry Av. /	4. Cherry Av. /
Merrill Av.	Randall Av.	San Bernardino Av.	Valley Blvd.
184	80 60 ←115	25	-65
-184	115 ←3	4-344	-284
-184	1207	-146	-424
0 0 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	22 - 797 + 122 -	184 70 95 95	64 133 455 133 455 133 133 133 133 133 133 133 1
5. Cherry Av. /	6. Cherry Av. /	7. W. Project Dwy. /	8. E. Project Dwy. /
I-10 WB Ramps	I-10 EB Ramps	Randall Avenue	Randall Avenue
1001 -596 -536	-1255 -396	\$ 0 -321	-2 -320
1108+	363 - 1569 +	32—⁴ 199—	11 <i>→</i> 188→

PM PEAK HOUR

1. Cherry Av. /	2. Cherry Av. /	3. Cherry Av. /	4. Cherry Av. /
Merrill Av.	Randall Av.	San Bernardino Av.	Valley Blvd.
176 0+0 101	7 8 6 113 4 6 6 176	6985 100 150 150 170 170 170 170 170 170 170 170 170 17	07 1 1000 07 1 1
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	11 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1	297 - 155 -	204 725 330 330 725 725 725 725 725 725 725 725 725 725
5. Cherry Av. /	6. Cherry Av. /	7. W. Project Dwy. /	8. E. Project Dwy. /
I-10 WB Ramps	I-10 EB Ramps	Randall Avenue	Randall Avenue
2	+1096 (-542	800 ←211	88 9 4-183
1311+	433 - + C	5— ¹	2— ⁴
	87 - 87 - 552	272→	270→

LEGEND:

= INTERSECTION ID

1.0 = VEHICLES PER DAY (1000's)



TEC Equipment New Truck Dealership Traffic Impact Analysis San Bernardino, CA (0255-0001:02 - volumes.dwg)

THIS PAGE LEFT INTENTIONALLY BLANK

5.0 TRAFFIC ANALYSIS

Peak hour intersection analysis has been performed at the study area intersections for each of the project scenarios and for projected future conditions. Improvements are recommended to satisfy the level of service requirements of the County of San Bernardino and if the following impacts are identified:

- 1) Any study intersection that is operating at LOS "A", "B", "C" or "D" for any study scenario without project traffic in which the addition of project traffic causes the intersection to degrade to a LOS "E" or "F" shall mitigate the impact to bring the intersection back to as least LOS "D".
- 2) Any study intersection that is operating at a LOS "E" or "F" for any study scenario without project traffic shall mitigate any impacts so as to bring the intersection back to the overall level of delay established prior to project traffic being added..

A. Existing plus Project (E+P) Conditions

The results of the E+P conditions intersection analysis are summarized in Table 5-1. The E+P conditions operations analysis worksheets are provided in Appendix "5.1". As shown on Table 5-1, the study area intersections are projected to operate at acceptable level of service (LOS "D" or better) with the addition of project traffic during the peak hours with the existing geometry and traffic controls.

It should be noted that the following driveway configurations are recommended for site access purposes.

West Project Driveway / Randall Avenue (#7)

- Provide a stop sign control for the southbound approach
- Provide a shared southbound left/right turn lane.

East Project Driveway / Randall Avenue (#8)

- Provide a stop sign control for the southbound approach
- Provide a shared southbound left/right turn lane.

B. Existing plus Ambient (E+A 2017) Conditions

The results of the E+A conditions intersection analysis are summarized in Table 5-2. The E+A conditions operations analysis worksheets are provided in Appendix "5.2". As shown on Table 5-2, the study area intersections are projected to continue to operate at acceptable level of service (LOS "D" or better) during the peak hours with the existing geometry and traffic controls.

TABLE 5-1

INTERSECTION ANALYSIS FOR EXISTING PLUS PROJECT (E+P) CONDITIONS

				Intersection Approach Lanes ²									Del	ay ³	Lev	el of		
		Traffic	Nor	Northbound			ıthbo	ound	Eastbound			Westbound			(secs.)		Service ³	
ID	Intersection	Control 1	L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
1	Cherry Ave. / Merrill Ave.	TS	1	2	1	1	2	1>>	0.5	0.5	d	1	0	1	17.3	30.3	В	С
2	Cherry Ave. / Randall Ave.	TS	1	3	0	1	3	1	0.5	0.5	d	0.5	0.5	d	9.7	42.9	Α	D
3	Cherry Ave. / San Bernardino Ave.	TS	1	3	0	1	3	1>	1	2	1>>	1	2	0	32.8	26.4	С	С
4	Cherry Ave. / Valley Blvd.	TS	2	2	1	1	2	1	2	2	1>	2	2	0	28.5	44.5	С	D
5	Cherry Ave. / I-10 WB Ramps	TS	0	3	1>>	0	4	0	0	0	0	2	0	1	9.1	16.6	Α	В
6	Cherry Ave. / I-10 EB Ramps	TS	0	3	1	2	3	0	1	1!	1	0	0	0	21.7	30.2	С	С
7	W. Project Dwy. / Randall Ave.	<u>CSS</u>	0	0	0	0	<u>1!</u>	0	0.5	0.5	0	0	1	0	10.1	9.9	В	Α
8	E. Project Dwy. / Randall Ave.	<u>CSS</u>	0	0	0	0	<u>1!</u>	0	0.5	0.5	0	0	1	0	10.1	9.9	В	Α

¹ TS = Traffic Signal; Cross-Street Stop;

When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right; 1! = Shared Left-Through-Right Lane; 0.5 = Shared Lane; d = Defacto right turn lane;

> = Right Turn Overlap; >> = Free Right Turn Lane; 1 = Improvement

Delay and level of service calculated using the following analysis software: Synchro 8.0

TABLE 5-2

INTERSECTION ANALYSIS FOR EXISTING PLUS AMBIENT (EA 2017) CONDITIONS

			Intersection Approach Lanes ²									Del	ay ³	Lev	el of			
		Traffic	Nor	Northbound			ıthbo	ound	Eas	Eastbound			Westbound			(secs.)		/ice ³
ID	Intersection	Control 1	L	Т	R	L	Τ	R	L	T	R	L	T	R	AM	PM	AM	PM
1	Cherry Ave. / Merrill Ave.	TS	1	2	1	1	2	1>>	0.5	0.5	d	1	0	1	16.1	17.4	В	В
2	Cherry Ave. / Randall Ave.	TS	1	3	0	1	3	1	0.5	0.5	d	0.5	0.5	d	9.6	12.2	Α	В
3	Cherry Ave. / San Bernardino Ave.	TS	1	3	0	1	3	1>	1	2	1>>	1	2	0	33.0	26.8	С	С
4	Cherry Ave. / Valley Blvd.	TS	2	2	1	1	2	1	2	2	1>	2	2	0	29.9	45.2	С	D
5	Cherry Ave. / I-10 WB Ramps	TS	0	3	1>>	0	4	0	0	0	0	2	0	1	9.1	16.6	Α	В
6	Cherry Ave. / I-10 EB Ramps	TS	0	3	1	2	3	0	1	1!	1	0	0	0	21.5	29.3	С	С
7	W. Project Dwy. / Randall Ave.	-	Future Intersection						-	-	-	-						
8	E. Project Dwy. / Randall Ave.	-	Future Intersection -						-	-	-							

¹ TS = Traffic Signal; Cross-Street Stop;

² When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right; 1! = Shared Left-Through-Right Lane; 0.5 = Shared Lane; d = Defacto right turn lane;

> = Right Turn Overlap; >> = Free Right Turn Lane

³ Delay and level of service calculated using the following analysis software: Synchro 8.0

C. <u>Existing plus Ambient plus Project (EAP 2017) Conditions</u>

The results of the EAP conditions intersection analysis are summarized in Table 5-3. The EAP conditions operations analysis worksheets are provided in Appendix "5.3". As shown on Table 5-3, the study area intersections are projected to continue to operate at acceptable level of service (LOS "D" or better) during the peak hours with the existing geometry and traffic controls.

D. <u>Existing plus Ambient plus Project Plus Cumulative (EAPC 2017) Conditions</u>

The results of the EAPC conditions intersection analysis are summarized in Table 5-4. The EAPC conditions operations analysis worksheets are provided in Appendix "5.4". As shown on Table 5-4, the study area intersections are projected to continue to operate at acceptable level of service (LOS "D" or better) during the peak hours with the existing geometry and traffic controls.

The freeway ramp analysis results for EAPC conditions are summarized in Table 5-5. The ramp analysis calculation worksheets for EAPC conditions are included in Appendix "5.5". As shown on Table 5-5, the study area ramp locations are projected to operate at acceptable level of service (LOS "D" or better) during the peak hours with existing geometry.

TABLE 5-3
INTERSECTION ANALYSIS FOR
EXISTING PLUS AMBIENT PLUS PROJECT (EAP 2017) CONDITIONS

				Intersection Approach Lanes ²									Delay ³		Level of			
		Traffic	Nor	Northbound			ıthbo	ound	Eas	stbou	und	Westbound			(secs.)		Service ³	
ID	Intersection	Control 1	L	Т	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
1	Cherry Ave. / Merrill Ave.	TS	1	2	1	1	2	1>>	0.5	0.5	d	1	0	1	17.6	31.5	В	С
2	Cherry Ave. / Randall Ave.	TS	1	3	0	1	3	1	0.5	0.5	d	0.5	0.5	d	9.7	43.2	Α	D
3	Cherry Ave. / San Bernardino Ave.	TS	1	3	0	1	3	1>	1	2	1>>	1	2	0	33.1	26.9	С	С
4	Cherry Ave. / Valley Blvd.	TS	2	2	1	1	2	1	2	2	1>	2	2	0	29.9	46.7	С	D
5	Cherry Ave. / I-10 WB Ramps	TS	0	3	1>>	0	4	0	0	0	0	2	0	1	9.4	16.9	Α	В
6	Cherry Ave. / I-10 EB Ramps	TS	0	3	1	2	3	0	1	1!	1	0	0	0	22.2	31.5	С	С
7	W. Project Dwy. / Randall Ave.	<u>CSS</u>	0	0	0	0	<u>1!</u>	0	0.5	0.5	0	0	1	0	10.1	9.9	В	Α
8	E. Project Dwy. / Randall Ave.	<u>CSS</u>	0	0	0	0	<u>1!</u>	0	0.5	0.5	0	0	1	0	10.1	9.9	В	Α

¹ TS = Traffic Signal; Cross-Street Stop;

² When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right; 1! = Shared Left-Through-Right Lane; 0.5 = Shared Lane; d = Defacto right turn lane;

> = Right Turn Overlap; >> = Free Right Turn Lane; <u>1</u> = Improvement

Delay and level of service calculated using the following analysis software: Synchro 8.0

TABLE 5-4
INTERSECTION ANALYSIS FOR
EXISTING PLUS AMBIENT PLUS PROJECT PLUS CUMULATIVE (EAPC 2017) CONDITIONS

				Intersection Approach Lanes ²									Del	ay ³	Level of			
		Traffic	Nor	Northbound			ıthbo	und	Eas	Eastbound			Westbound			(secs.)		vice ³
ID	Intersection	Control 1	L	Т	R	L	Т	R	L	T	R	L	T	R	AM	PM	AM	PM
1	Cherry Ave. / Merrill Ave.	TS	1	2	1	1	2	1>>	0.5	0.5	d	1	0	1	17.6	31.5	В	С
2	Cherry Ave. / Randall Ave.	TS	1	3	0	1	3	1	0.5	0.5	d	0.5	0.5	d	9.7	43.2	Α	D
3	Cherry Ave. / San Bernardino Ave.	TS	1	3	0	1	3	1>	1	2	1>>	1	2	0	33.1	26.9	С	С
4	Cherry Ave. / Valley Blvd.	TS	2	2	1	1	2	1	2	2	1>	2	2	0	30.0	47.6	С	D
5	Cherry Ave. / I-10 WB Ramps	TS	0	3	1>>	0	4	0	0	0	0	2	0	1	9.5	16.9	Α	В
6	Cherry Ave. / I-10 EB Ramps	TS	0	3	1	2	3	0	1	1!	1	0	0	0	22.2	31.5	С	С
7	W. Project Dwy. / Randall Ave.	<u>CSS</u>	0	0	0	0	<u>1!</u>	0	0.5	0.5	0	0	1	0	10.1	9.9	В	Α
8	E. Project Dwy. / Randall Ave.	<u>CSS</u>	0	0	0	0	<u>1!</u>	0	0.5	0.5	0	0	1	0	10.1	9.9	В	Α

¹ TS = Traffic Signal; Cross-Street Stop;

² When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right; 1! = Shared Left-Through-Right Lane; 0.5 = Shared Lane; d = Defacto right turn lane;

> = Right Turn Overlap; >> = Free Right Turn Lane; $\underline{1}$ = Improvement

Delay and level of service calculated using the following analysis software: Synchro 8.0

TABLE 5-5

FREEWAY RAMP ANALYSIS FOR
EXISTING PLUS AMBIENT PLUS PROJECT PLUS CUMULATIVE (EAPC 2017) CONDITIONS

		Lanes on	Lanes on		mp Imes	Den	sity ²	-	el of vice ³
Freeway	Ramp Location	Freeway	Ramp	AM	PM	AM	PM	AM	PM
	WB Off-Ramp at Cherry Avenue	4	2	1,132	893	14.0	9.9	В	Α
I-10 Westbound	WB Loop On-Ramp at Cherry Avenue	4	1	523	407	22.7	19.2	С	В
	WB Slip On-Ramp at Cherry Avenue	4	1	491	475	19.9	16.8	В	В
I-10	EB Off-Ramp at Cherry Avenue	4	2	943	985	5.9	0.7	Α	Α
Eastbound	EB On-Ramp at Cherry Avenue	4	1	819	1,050	24.4	19.8	С	В

¹ Number of lanes: 1 = Existing

² Density is measured by passenger cars per lane (pc/mi/ln)

³ Density and and level of service calculated using the following analysis software: HCS2010, Version 6.6

THIS PAGE LEFT INTENTIONALLY BLANK

6.0 FINDINGS AND RECOMMENDATIONS

A. <u>Traffic Impacts and Level of Service Analysis</u>

For Existing (2016) and future traffic conditions (E+P, E+A, EAP, and EAPC), the study area intersections are anticipated to operate at acceptable level of service (LOS "D" or better) during the peak hours with existing geometry.

In addition, the EAPC (2017) freeway ramp analysis results indicate that the study area ramp analysis locations are found to operate at acceptable level of service (LOS "D" or better) during the peak hours with existing geometry.

B. <u>Circulation Recommendations</u>

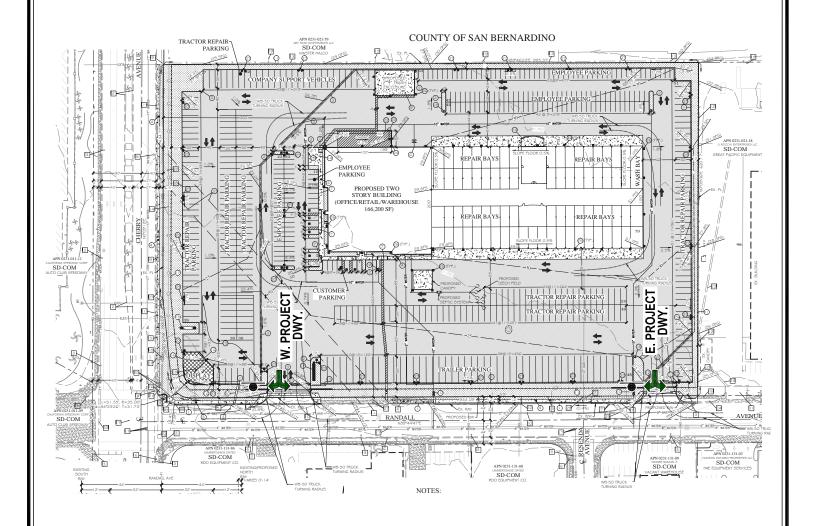
1. On-Site

Figure 6-A illustrates the on-site recommended roadway and intersection lane improvements. Construction of on-site improvements shall occur in conjunction with adjacent project development activity or as needed for project access purposes.

The recommended on-site roadway improvements are described below.

- Provide stop sign control at the project driveways.
- On-site traffic signing and striping should be implemented in conjunction with detailed construction plans for the project.
- Verify that minimum sight distance is provided at the project driveways.

FIGURE 6-A ON-SITE CIRCULATION RECOMMENDATIONS



PROVIDE STOP SIGN CONTROL AT THE PROJECT DRIVEWAYS.

ON-SITE TRAFFIC SIGNING AND STRIPING SHOULD BE IMPLEMENTED IN CONJUNCTION WITH DETAILED CONSTRUCTION PLANS FOR THE PROJECT.

VERIFY THAT MINIMUM SIGHT DISTANCE IS PROVIDED AT THE PROJECT ACCESS POINT.

LEGEND:

= STOP SIGN



TEC Equipment New Truck Dealership Traffic Impact Analysis San Bernardino, CA (0255-0001:01.dwg)

APPENDIX 1.1

SCOPING AGREEMENT

COUNTY

SCOPE FOR TRAFFIC STUDY

Project Name:	TEC Equipment
---------------	---------------

This Scope for Traffic Study acknowledges San Bernardino County Department of Public Works, Traffic Division requirements of traffic impact analysis for the project and is subject to change:

Project Address:	Northeast	corner of Randall Ave. and Cherry Ave.			
Project Description:	New Truc	New Truck Dealership			
City:	County of	County of San Bernardino			
Project Buildout Year:	2017 Ambient Growth Rate per Year: 2%				
Closest Intersection (Xtn) to the Project					
Xtn N/S Street Name:	Cherry Ave.				
Xtn E/W Street Name:	Randall Ave.				
Thomas Guide Pg+Grid:	County Supervisorial District:				

	Engineer	Developer	
Company:	Trames Solutions	TEC Equipment c/o Thatcher Engineering	
Name:	Scott Sato	Vicky Valenzuela	
Address:	100 E. San Marcos Blvd., Ste 400	1461 Ford St., Ste 105	
City, State, Zip Code:	San Marcos, CA 92069	Redlands, CA 92373	
Phone #:	(949) 244-2436	(909) 748-7777	
Fax #:		(909) 748-7776	
Email: scott@tramessolutions.com		vickyv@thatcherengineering.com	

By: Scott Sato	-	Reviewed By:		
Print Name: SCOTT SATO	12/17/15	Print Name:		
Consultant/Developer's Representative	Date	Traffic Division Representative	Date	

AN BERALDING

SCOPE FOR TRAFFIC STUDY

Project Name:	TEC Equipment
---------------	---------------

- **1. Traffic Distribution**: Please insert or attach Figure(s) illustrating project trip distribution in percentages and volumes at the study intersections analyzed.
- 2. Trip Credit: Exact amount of credit subject to approval by Traffic Division.

Transportation Demand Management (TDM)	Yes/no	No
Existing Active Land Use	Yes/no	No
Previous Land Use	Yes/no	No
Internal Trip Reduction	Yes/no	No
Pass-by Trip Reduction	Yes/no	No

3. Related Projects: Consultant should check with Planning in the San Bernardino County Department of Land Use Services and planning departments of adjoining Cities. Documentation of the consultation from these agencies shall be included in the traffic study. Related projects list shall be submitted to Traffic Division for our review and approval before being incorporated in the study.

4. Freeway Analysis:	The potential t	traffic impact on	the following	Freeway(s)	must be considered.
----------------------	-----------------	-------------------	---------------	------------	---------------------

The applicant shall consult with the State of California Department of Transportation (Caltrans) to determine the California Environmental Quality Act levels of significance with regard to traffic impacts on Caltrans' freeway facilities. This consultation shall also include a determination of Caltrans requirements for the study of traffic impacts to its facilities and the mitigation of any such impacts. This analysis must follow the most current Caltrans' Guide for the Preparation of Traffic Impact Studies (December 2002) and can be obtained from http://www.dot.ca.gov/hq/traffops/developserv/operationalsystems/reports/tiguide.pdf. If Caltrans finds that the project has a significant impact on the freeway, Caltrans shall be requested to include the basis for this finding in their response. If fees are proposed to mitigate the freeway impact, Caltrans shall be requested to identify the specific project to which the fees will apply. These written comments from Caltrans shall be included with the traffic study and submitted to Public Works for review and approval. If a documented good faith effort is made to consult with Caltrans and written comments cannot be obtained from within a reasonable amount of time, an analysis of the freeway impact shall be made using HCM procedures. Appendix A of the SANBAG CMP outlines allowable modifications to these procedures. The SANBAG CMP can be viewed online at: http://www.sanbag.ca.gov/planning/subr-congestion.html



SCOPE FOR TRAFFIC STUDY

TEC Equipment	
Project Name:	

5. Trip Generation

* - Average Vehicle Trip Ends. For ITE Land Uses provide number and name of Land Use. e.g. LU 814 - Variety Store

Page 3 of 6





TEC Equipment Project Name:

6. Study Intersections: At minimum, the study shall include the following intersections. The list is subject to change after related projects, trip generation and distribution are determined. Consultant should check with adjoining Cities regarding their requirements in addition to the following County/City intersections. Documentation of the consultation from these agencies shall be included in the traffic study.

Xtn #	% County	Thomas Guide Page+Grid	N S/E/W Street Name	City	Signalized	CMP
_			Cherry Ave./Merrill Ave.		Yes	Yes/no
2			Cherry Ave./Randall Ave.		Yes	Yes/no
3			Cherry Ave./San Bernardino Ave.		Yes	Yes/no
4			Cherry Ave./Valley Blvd.		Yes	Yes/no
2			Cherry Ave./I-10 WB Ramp		Yes	Yes/no
9			Cherry Ave./I-10 EB Ramp		Yes	Yes/no
7					Yes/no	Yes/no
8					Yes/no	Yes/no
6					Yes/no	Yes/no
10					Yes/no	Yes/no

Cites to be consulted:

Fontana

Form Rev. 9/18/2013

Page 4 of 6



SCOPE FOR TRAFFIC STUDY

Project Name:	TEC Equipment
---------------	---------------

7. Other:

Traffic	counts may be conducted immediately per the following:
•	Must be taken on Tuesdays, Wednesdays or Thursdays.
•	Must exclude holidays, and the first weekdays before and after the holiday.
•	Must be taken on days when local schools or colleges are in session.
•	Must be taken on days of good weather, and avoid atypical conditions (e.g., road construction, detours, or major traffic incidents).
•	Traffic counts used for other traffic studies in the area shall NOT be reused again, unless 25% of the counts conducted for that particular traffic study are validated with new counts. The difference in volumes between the old and new counts at each corresponding movement should not be more than 10%.
•	New traffic counts shall be checked to ensure the difference in volumes at corresponding approaches, if applicable, between two adjacent intersections is no more than 10% unless the difference can be justified.
•	For all proposed mitigation measures, a conceptual plan for the improvements shall be submitted to our Traffic Studies section for review and approval prior to the approval of the Traffic Impact Analysis. All proposed improvements shall be within the right-of-way.
•	For all cumulative mitigation measures, a cost estimate for the improvement shall be submitted.

This analysis must follow the most current Traffic Impact Study Guidelines for the County as stated in the County's Road Planning and Design Standards.

8. Fees

The County charges on an actual cost basis for review of traffic studies. An initial deposit of \$3400 is required at the time that a land use application is filed with the Department of Land Use Services If the review costs exceed the initial deposit, the applicant will be expected to provide additional funds and the review will be suspended until the additional funds are deposited.



SCOPE FOR TRAFFIC STUDY

Project Name: TEC Equipment

9. Contact Information:

Please submit a signed copy of this scope for approval by the Traffic Division. Draft scopes may be sent electronically. Final scope with signature should be submitted in person or by US Mail to:

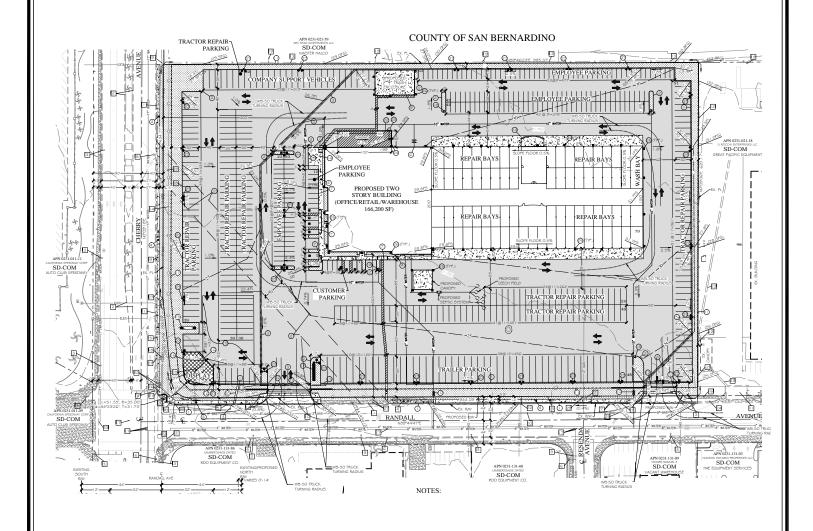
County of San Bernardino
Dept. of Public Works, Traffic Division
825 E. 3rd Street, Rm 115
San Bernardino, CA 92415-0835

Phone: 909-387-8186 Fax: 909-387-7809

Email: epetre@dpw.sbcounty.gov (Ed Petre)

Form Rev. 9/18/2013 Page 6 of 6

FIGURE A **SITE PLAN**



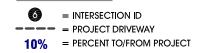


TEC Traffic Impact Analysis San Bernardino, CA (0255-0001:scope.dwg)

FIGURE B PROJECT TRIP DISTRIBUTION



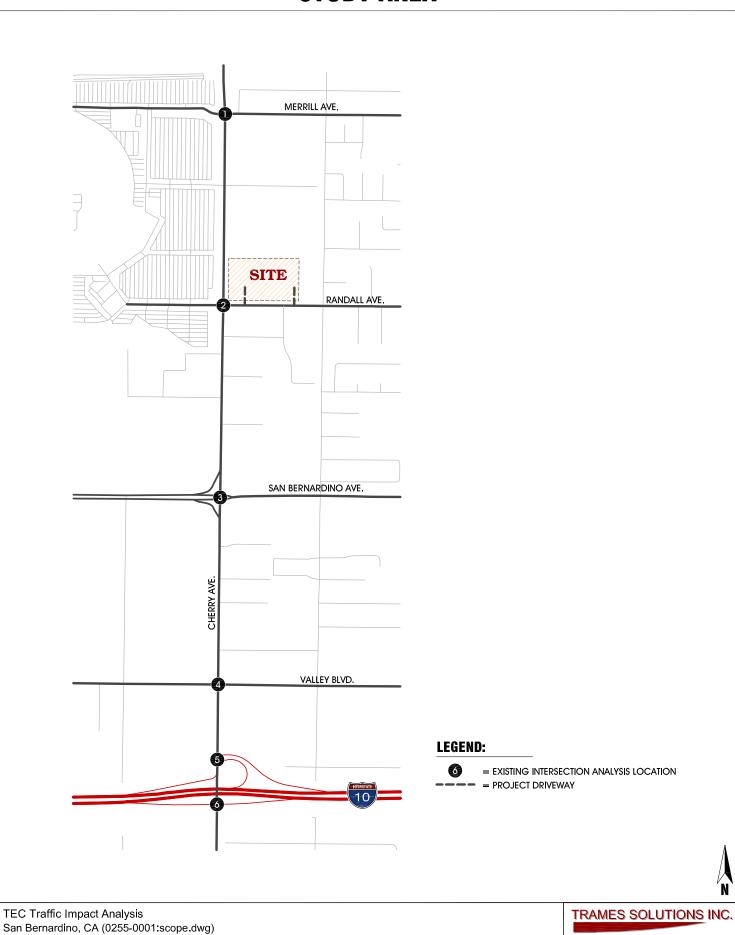
LEGEND:





TEC Traffic Impact Analysis San Bernardino, CA (0255-0001:scope.dwg)

FIGURE C STUDY AREA



THIS PAGE LEFT INTENTIONALLY BLANK

APPENDIX 3.1

TRAFFIC COUNT WORKSHEETS

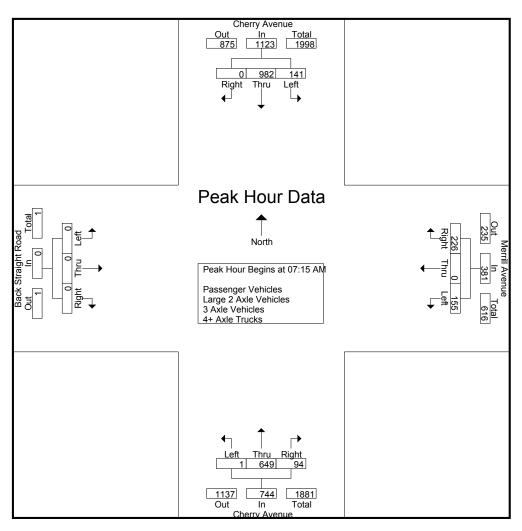
File Name: FONCHMEAM Site Code : 20116023 Start Date : 1/12/2016 Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

					assenge			arge ∠ Ax	ie veni								
		Cherry	Avenu	е		Merrill	Avenu	e		Cherry	/ Avenu	e	Ba	ack Str	aight Ro	oad	
		South	nbound			West	tbound			North	nbound			East	tbound		
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	30	215	0	245	40	0	51	91	1	154	24	179	0	0	0	0	515
07:15 AM	32	240	0	272	44	0	72	116	0	161	29	190	0	0	0	0	578
07:30 AM	32	222	0	254	48	0	63	111	0	162	35	197	0	0	0	0	562
07:45 AM	32	258	0	290	35	0	60	95	1	167	18	186	0	0	0	0	571
Total	126	935	0	1061	167	0	246	413	2	644	106	752	0	0	0	0	2226
08:00 AM	45	262	0	307	28	0	31	59	0	159	12	171	0	0	0	0	537
08:15 AM	27	178	0	205	18	0	40	58	0	149	16	165	0	0	0	0	428
08:30 AM	25	177	0	202	19	0	82	101	0	121	19	140	0	0	0	0	443
08:45 AM	25	158	0	183	11	0	57	68	0	104	17	121	0	0	0	0	372
Total	122	775	0	897	76	0	210	286	0	533	64	597	0	0	0	0	1780
Grand Total	248	1710	0	1958	243	0	456	699	2	1177	170	1349	0	0	0	0	4006
Apprch %	12.7	87.3	0		34.8	0	65.2		0.1	87.2	12.6		0	0	0		
Total %	6.2	42.7	0	48.9	6.1	0	11.4	17.4	0	29.4	4.2	33.7	0	0	0	0	
Passenger Vehicles	242	1538	0	1780	219	0	449	668	2	1048	151	1201	0	0	0	0	3649
% Passenger Vehicles	97.6	89.9	0	90.9	90.1	0	98.5	95.6	100	89	88.8	89	0	0	0	0	91.1
Large 2 Axle Vehicles	3	52	0	55	8	0	1	9	0	34	6	40	0	0	0	0	104
% Large 2 Axle Vehicles	1.2	3	0	2.8	3.3	0	0.2	1.3	0	2.9	3.5	3	0	0	0	0	2.6
3 Axle Vehicles	2	33	0	35	4	0	2	6	0	31	0	31	0	0	0	0	72
% 3 Axle Vehicles	0.8	1.9	0	1.8	1.6	0	0.4	0.9	0	2.6	0	2.3	0	0	0	0	1.8
4+ Axle Trucks	1	87	0	88	12	0	4	16	0	64	13	77	0	0	0	0	181
% 4+ Axle Trucks	0.4	5.1	0	4.5	4.9	0	0.9	2.3	0	5.4	7.6	5.7	0	0	0	0	4.5

		Cherry	Avenue	Э		Merrill	Avenue	9		Cherry	Avenu	е	В	ack Str	aight Ro	oad	
		South	nbound			West	bound			North	nbound			East	bound		
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Ana	alysis Fr	om 07:0	00 AM to	o 08:45 A	M - Pea	k 1 of 1	1				_				_		
Peak Hour for I	Entire In	tersect	ion Beg	ins at 07:	15 AM												
07:15 AM	32	240	0	272	44	0	72	116	0	161	29	190	0	0	0	0	578
07:30 AM	32	222	0	254	48	0	63	111	0	162	35	197	0	0	0	0	562
07:45 AM	32	258	0	290	35	0	60	95	1	167	18	186	0	0	0	0	571
MA 00:80	45	262	0	307	28	0	31	59	0	159	12	171	0	0	0	0	537
Total Volume	141	982	0	1123	155	0	226	381	1	649	94	744	0	0	0	0	2248
% App. Total	12.6	87.4	0		40.7	0	59.3		0.1	87.2	12.6		0	0	0		
PHF	.783	.937	.000	.914	.807	.000	.785	.821	.250	.972	.671	.944	.000	.000	.000	.000	.972

File Name: FONCHMEAM Site Code : 20116023 Start Date : 1/12/2016 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for	Each A	pproacl	า Begins	s at:												
	07:15 AM	I			07:00 AM	1			07:00 AM	1			07:00 AM	I		
+0 mins.	32	240	0	272	40	0	51	91	1	154	24	179	0	0	0	0
+15 mins.	32	222	0	254	44	0	72	116	0	161	29	190	0	0	0	0
+30 mins.	32	258	0	290	48	0	63	111	0	162	35	197	0	0	0	0
+45 mins.	45	262	0	307	35	0	60	95	1	167	18	186	0	0	0	0
Total Volume	141	982	0	1123	167	0	246	413	2	644	106	752	0	0	0	0
% App. Total	12.6	87.4	0		40.4	0	59.6		0.3	85.6	14.1		0	0	0	
PHF	.783	.937	.000	.914	.870	.000	.854	.890	.500	.964	.757	.954	.000	.000	.000	.000

File Name: FONCHMEAM Site Code: 20116023

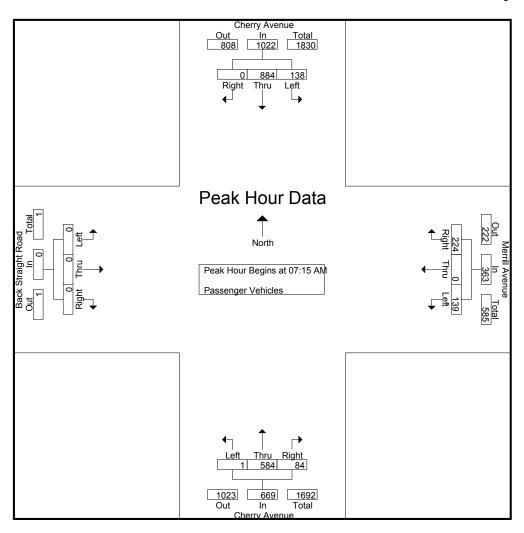
Start Date : 1/12/2016 Page No : 1

Groups Printed- Passenger Vehicles

					010	upo i iii	nicu- i aș	<u>scrigor</u>	V CITICI							
	Cherry	Avenu	e		Merrill	Avenu	e		Cherry	/ Avenu	е	Ba	ack Str	aight Ro	oad	
	South	nbound			West	tbound			North	bound			East	bound		
Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
29	207	0	236	39	0	51	90	1	140	23	164	0	0	0	0	490
29	219	0	248	41	0	71	112	0	145	25	170	0	0	0	0	530
32	197	0	229	42	0	62	104	0	144	30	174	0	0	0	0	507
32	234	0	266	32	0	60	92	1	151	17	169	0	0	0	0	527
122	857	0	979	154	0	244	398	2	580	95	677	0	0	0	0	2054
45	234	0	279	24	0	31	55	0	144	12	156	0	0	0	0	490
27	158	0	185	15	0	38	53	0	133	14	147	0	0	0	0	385
24	154	0	178	16	0	79	95	0	101	18	119	0	0	0	0	392
24	135	0	159	10	0	57	67	0	90	12	102	0	0	0	0	328
120	681	0	801	65	0	205	270	0	468	56	524	0	0	0	0	1595
242	1538	0	1780	219	0	449	668	2	1048	151	1201	0	0	0	0	3649
13.6	86.4	0		32.8	0	67.2		0.2	87.3	12.6		0	0	0		
6.6	42.1	0	48.8	6	0	12.3	18.3	0.1	28.7	4.1	32.9	0	0	0	0	
	29 29 32 32 122 45 27 24 24 120 242 13.6	South Left Thru 29 207 29 219 32 197 32 234 122 857 45 234 27 158 24 154 24 135 120 681 242 1538 13.6 86.4	Southbound Left Thru Right 29 207 0 29 219 0 32 197 0 32 234 0 122 857 0 45 234 0 27 158 0 24 154 0 24 135 0 120 681 0 242 1538 0 13.6 86.4 0	29 207 0 236 29 219 0 248 32 197 0 229 32 234 0 266 122 857 0 979 45 234 0 279 27 158 0 185 24 154 0 178 24 135 0 159 120 681 0 801 242 1538 0 1780 13.6 86.4 0	Southbound Left Thru Right App. Total Left 29 207 0 236 39 29 219 0 248 41 32 197 0 229 42 32 234 0 266 32 122 857 0 979 154 45 234 0 279 24 27 158 0 185 15 24 154 0 178 16 24 135 0 159 10 120 681 0 801 65 242 1538 0 1780 219 13.6 86.4 0 32.8	Cherry Avenue Southbound Merrill West Left Thru Right App. Total Left Thru Thru 29 207 0 236 39 0 29 219 0 248 41 0 32 197 0 229 42 0 32 234 0 266 32 0 122 857 0 979 154 0 45 234 0 279 24 0 27 158 0 185 15 0 24 154 0 178 16 0 24 135 0 159 10 0 120 681 0 801 65 0 242 1538 0 1780 219 0 33.6 86.4 0 32.8 0	Cherry Avenue Southbound Merrill Avenue Westbound Left Thru Right App. Total Left Thru Right 29 207 0 236 39 0 51 29 219 0 248 41 0 71 32 197 0 229 42 0 62 32 234 0 266 32 0 60 122 857 0 979 154 0 244 45 234 0 279 24 0 31 27 158 0 185 15 0 38 24 154 0 178 16 0 79 24 135 0 159 10 0 57 120 681 0 801 65 0 205 242 1538 0 1780 219 0	Cherry Avenue Southbound Merrill Avenue Westbound Left Thru Right App. Total Left Thru Right App. Total 29 207 0 236 39 0 51 90 29 219 0 248 41 0 71 112 32 197 0 229 42 0 62 104 32 234 0 266 32 0 60 92 122 857 0 979 154 0 244 398 45 234 0 279 24 0 31 55 27 158 0 185 15 0 38 53 24 154 0 178 16 0 79 95 24 135 0 159 10 0 57 67 120 681 0 801	Cherry Avenue Southbound Merrill Avenue Westbound Left Thru Right App. Total Left Thru Right App. Total Left 29 207 0 236 39 0 51 90 1 29 219 0 248 41 0 71 112 0 32 197 0 229 42 0 62 104 0 32 234 0 266 32 0 60 92 1 122 857 0 979 154 0 244 398 2 45 234 0 279 24 0 31 55 0 27 158 0 185 15 0 38 53 0 24 154 0 178 16 0 79 95 0 24 135 0 159	Cherry Avenue Southbound Merrill Avenue Westbound Cherry North	Southbound Westbound Northbound Left Thru Right App. Total Left Thru Right App. Total Left Thru Right App. Total Left Thru Right 29 207 0 236 39 0 51 90 1 140 23 29 219 0 248 41 0 71 112 0 145 25 32 197 0 229 42 0 62 104 0 144 30 32 234 0 266 32 0 60 92 1 151 17 122 857 0 979 154 0 244 398 2 580 95 45 234 0 279 24 0 31 55 0 144 12 27 158 0 185	Cherry Avenue South-bound Merrill Avenue Westbound Cherry Avenue North-bound Left Thru Right App. Total Left Thru Right App. Total Left Thru Right App. Total 29 207 0 236 39 0 51 90 1 140 23 164 29 219 0 248 41 0 71 112 0 145 25 170 32 197 0 229 42 0 62 104 0 144 30 174 32 234 0 266 32 0 60 92 1 151 17 169 122 857 0 979 154 0 244 398 2 580 95 677 45 234 0 279 24 0 31 55 0 144 12 156	Cherry Avenue South-bound Merrill Avenue Westbound Cherry Avenue North-bound Batter South-bound Cherry Avenue North-bound Cher	Cherry Avenue South-bound Merrill Avenue Westbound Cherry Avenue North-bound Back Str East Left Thru Right App. Total Left Thru Right App. Total Left Thru 29 207 0 236 39 0 51 90 1 140 23 164 0 0 29 219 0 248 41 0 71 112 0 145 25 170 0 0 32 197 0 229 42 0 62 104 0 144 30 174 0 0 32 234 0 266 32 0 60 92 1 151 17 169 0 0 122 857 0 979 154 0 244 398 2 580 95 677 0 0 27 158 0	Cherry Avenue South-bound Merrill Avenue Westbound Cherry Avenue North-bound Back Straight Reast-bound Left Thru Right App. Total Left Thru App. Total Ap	Cherry Avenue South-bound Merrill Avenue Westbound Cherry Avenue North-bound Back Straight Road Eastbound Left Thru Right App. Total App. Total Left Thru <th< td=""></th<>

		Cherry	Avenue	е		Merrill	Avenue	•		Cherry	Avenu	е	В	ack Str	aight Ro	oad	
		South	bound			West	bound			North	nbound			East	bound		
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Ana	alysis Fro	om 07:1	5 AM to	o 08:00 A	M - Pea	k 1 of 1	1								_		
Peak Hour for I	Entire In	tersecti	on Beg	ins at 07:	15 AM												
07:15 AM	29	219	0	248	41	0	71	112	0	145	25	170	0	0	0	0	530
07:30 AM	32	197	0	229	42	0	62	104	0	144	30	174	0	0	0	0	507
07:45 AM	32	234	0	266	32	0	60	92	1	151	17	169	0	0	0	0	527
MA 00:80	45	234	0	279	24	0	31	55	0	144	12	156	0	0	0	0	490
Total Volume	138	884	0	1022	139	0	224	363	1	584	84	669	0	0	0	0	2054
% App. Total	13.5	86.5	0		38.3	0	61.7		0.1	87.3	12.6		0	0	0		
PHF	.767	.944	.000	.916	.827	.000	.789	.810	.250	.967	.700	.961	.000	.000	.000	.000	.969

File Name: FONCHMEAM Site Code : 20116023 Start Date : 1/12/2016 Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1

Peak Hour for	Each Approach Begins at:
	07:15 AM

Peak Hour for	Each A	pproacr	n Begins	s at:												
	07:15 AM	I			07:15 AM	I			07:15 AM	1			07:15 AM	I		
+0 mins.	29	219	0	248	41	0	71	112	0	145	25	170	0	0	0	0
+15 mins.	32	197	0	229	42	0	62	104	0	144	30	174	0	0	0	0
+30 mins.	32	234	0	266	32	0	60	92	1	151	17	169	0	0	0	0
+45 mins.	45	234	0	279	24	0	31	55	0	144	12	156	0	0	0	0
Total Volume	138	884	0	1022	139	0	224	363	1	584	84	669	0	0	0	0
% App. Total	13.5	86.5	0		38.3	0	61.7		0.1	87.3	12.6		0	0	0	
PHF	767	944	000	916	827	000	789	810	250	967	700	961	000	000	000	000

Counts Unlimited PO Box 1178 Corona, CA 92878 (951) 268-6268

City of Fontana N/S: Cherry Avenue E/W: Merrill Avenue Weather: Clear

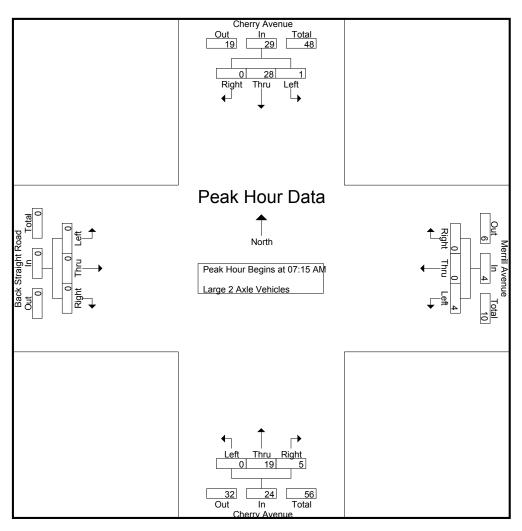
File Name: FONCHMEAM Site Code : 20116023 Start Date : 1/12/2016 Page No : 1

Groups Printed- Large 2 Axle Vehicles

					0100	103 1 1111	tcu- Laig	C Z /\xit	, v Cilic	100						
	Cherry	Avenu	е		Merrill	Avenu	e [е	Ва	ack Str	aight Ro	oad	
	South	nbound			Wes	tbound			North	nbound			East	bound		
Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
1	2	0	3	0	0	0	0	0	3	0	3	0	0	0	0	6
1	3	0	4	1	0	0	1	0	6	2	8	0	0	0	0	13
0	10	0	10	0	0	0	0	0	3	2	5	0	0	0	0	15
0	8	0	8	1	0	0	1	0	4	1	5	0	0	0	0	14
2	23	0	25	2	0	0	2	0	16	5	21	0	0	0	0	48
0	7	0	7	2	0	0	2	0	6	0	6	0	0	0	0	15
0	8	0	8	2	0	1	3	0	3	1	4	0	0	0	0	15
0	7	0	7	1	0	0	1	0	6	0	6	0	0	0	0	14
1_	7	0	8	1	0	0	1	0	3	0	3	0	0	0	0	12
1	29	0	30	6	0	1	7	0	18	1	19	0	0	0	0	56
3	52	0	55	8	0	1	9	0	34	6	40	0	0	0	0	104
5.5	94.5	0		88.9	0	11.1		0	85	15		0	0	0		
2.9	50	0	52.9	7.7	0	1	8.7	0	32.7	5.8	38.5	0	0	0	0	
	1 1 0 0 2 0 0 0 1 1 3 5.5	South Left Thru 1 2 1 3 0 10 0 8 2 23 0 7 0 8 0 7 1 7 1 29 3 52 5.5 94.5	Southbound Left Thru Right 1 2 0 1 3 0 0 10 0 0 8 0 2 23 0 0 7 0 0 8 0 0 7 0 1 7 0 1 29 0 3 52 0 5.5 94.5 0	1 2 0 3 1 3 0 4 0 10 0 10 0 8 0 8 2 23 0 25 0 7 0 7 0 8 0 8 0 7 0 7 1 7 0 8 1 29 0 30 3 52 0 55 5.5 94.5 0	Southbound Left Thru Right App. Total Left 1 2 0 3 0 1 3 0 4 1 0 10 0 10 0 0 8 0 8 1 2 23 0 25 2 0 7 0 7 2 0 8 0 8 2 0 7 0 7 1 1 7 0 8 1 1 29 0 30 6 3 52 0 55 8 5.5 94.5 0 88.9 88.9	Cherry Avenue Southbound Merrill Wes Left Thru Merrill Wes Left Thru Right App. Total Left Thru 1 2 0 3 0 0 1 3 0 4 1 0 0 10 0 10 0 0 0 8 0 8 1 0 2 23 0 25 2 0 0 7 0 7 2 0 0 8 0 8 2 0 0 8 0 8 2 0 0 7 0 7 1 0 1 7 0 8 1 0 1 29 0 30 6 0 3 52 0 55 8 0 5.5 <	Cherry Avenue Southbound Merrill Avenue Westbound Left Thru Right App. Total Left Thru Right 1 2 0 3 0 0 0 1 3 0 4 1 0 0 0 10 0 10 0 0 0 0 8 0 8 1 0 0 2 23 0 25 2 0 0 0 7 0 7 2 0 0 0 8 0 8 2 0 1 0 7 0 7 1 0 0 1 7 0 8 1 0 0 1 29 0 30 6 0 1 3 52 0 55 8 0 1 5.5 94.5	Cherry Avenue	Cherry Avenue South-bound Merrill Avenue Westbound Left Thru Right App. Total Left Thru Right App. Total Left 1 2 0 3 0 0 0 0 0 1 3 0 4 1 0 0 1 0 0 10 0 10 0 0 0 0 0 0 8 0 8 1 0 0 1 0 2 23 0 25 2 0 0 2 0 0 7 0 7 2 0 0 2 0 0 8 0 8 2 0 1 3 0 0 7 0 7 1 0 0 1 0 1 7 0 8 1 0 0 1	Cherry Avenue Southbound Merrill Avenue Westbound Cherry North North Left Thru Right App. Total Left Thru Right App. Total Left Thru Right App. Total Left Thru 1 2 0 3 0 0 0 0 0 3 1 3 0 4 1 0 0 1 0 6 0 10 0 10 0 0 0 0 0 3 0 8 0 8 1 0 0 1 0 4 2 23 0 25 2 0 0 2 0 16 0 7 0 7 2 0 0 2 0 6 0 8 0 8 2 0 1 3 3 3 0 7	Southbound Westbound Northbound Left Thru Right App. Total Left Thru App. Total Left Thru App. Total App. Total Left Thru App. Total App	Cherry Avenue South-bound Merrill Avenue Westbound Cherry Avenue North-bound Left Thru Right App. Total Left Thru Right App. Total Left Thru Right App. Total 1 2 0 3 0 0 0 0 0 3 0 3 1 3 0 4 1 0 0 1 0 6 2 8 0 10 0 10 0 0 0 0 3 2 5 0 8 0 8 1 0 0 1 0 4 1 5 2 23 0 25 2 0 0 2 0 6 0 6 0 7 0 7 2 0 0 2 0 6 0 6 0 8 0 8	Cherry Avenue South-bound Merrill Avenue Westbound Cherry Avenue Northbound Batter South-bound Left Thru Right App. Total Left Thru Right App. Total Left Left Description App. Total Left Left Description App. Total Left Left Description App. Total Left Description Description Description App. Total Left Left Thru Right App. Total Left Description App. Total Left Description App. Total Left Description Description	Cherry Avenue South-bound Merrill Avenue Westbound Cherry Avenue North-bound Back Str East Left Thru Right App. Total Left Thru Right App. Total Left Thru 1 2 0 3 0 0 0 0 3 0 0 0 1 3 0 4 1 0 0 1 0 6 2 8 0 0 0 10 0 10 0 0 0 0 3 2 5 0 0 0 10 0 10 0 0 0 0 3 2 5 0 0 2 23 0 25 2 0 0 2 0 6 0 6 0 0 0 7 0 7 2 0 0 2 0 6 <t< td=""><td>Cherry Avenue South-bound Merrill Avenue Westbound Cherry Avenue North-bound Back Straight Reastbound Left Thru Right App. Total Left 1 Thru Right App. Total Left 10 0 0</td><td>Cherry Avenue South-bound Merrill Avenue Westbound Cherry Avenue North-bound Back Straight Road Eastbound Left Thru Right App. Total <t< td=""></t<></td></t<>	Cherry Avenue South-bound Merrill Avenue Westbound Cherry Avenue North-bound Back Straight Reastbound Left Thru Right App. Total Left 1 Thru Right App. Total Left 10 0 0	Cherry Avenue South-bound Merrill Avenue Westbound Cherry Avenue North-bound Back Straight Road Eastbound Left Thru Right App. Total App. Total App. Total App. Total App. Total App. Total App. Total <t< td=""></t<>

		Cherry	Avenue	;		Merrill	Avenue	9		Cherry	Avenu	е	В	ack Str	aight Ro	oad	
		South	bound			West	bound			North	bound			East	bound		
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Ana	lysis Fro	om 07:1	5 AM to	08:00 A	M - Pea	k 1 of 1											
Peak Hour for I	Entire In	tersecti	on Begi	ins at 07:	15 AM												
07:15 AM	1	3	0	4	1	0	0	1	0	6	2	8	0	0	0	0	13
07:30 AM	0	10	0	10	0	0	0	0	0	3	2	5	0	0	0	0	15
07:45 AM	0	8	0	8	1	0	0	1	0	4	1	5	0	0	0	0	14
08:00 AM	0	7	0	7	2	0	0	2	0	6	0	6	0	0	0	0	15
Total Volume	1	28	0	29	4	0	0	4	0	19	5	24	0	0	0	0	57
% App. Total	3.4	96.6	0		100	0	0		0	79.2	20.8		0	0	0		
PHF	.250	.700	.000	.725	.500	.000	.000	.500	.000	.792	.625	.750	.000	.000	.000	.000	.950

File Name: FONCHMEAM Site Code : 20116023 Start Date : 1/12/2016 Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1

Peak Hour for	Each A	oproact	n Begins	s at:												
	07:15 AM				07:15 AM	I			07:15 AN	Л			07:15 AM	I		
+0 mins.	1	3	0	4	1	0	0	1	0	6	2	8	0	0	0	0
+15 mins.	0	10	0	10	0	0	0	0	0	3	2	5	0	0	0	0
+30 mins.	0	8	0	8	1	0	0	1	0	4	1	5	0	0	0	0
+45 mins.	0	7	0	7	2	0	0	2	0	6	0	6	0	0	0	0
Total Volume	1	28	0	29	4	0	0	4	0	19	5	24	0	0	0	0
% App. Total	3.4	96.6	0		100	0	0		0	79.2	20.8		0	0	0	
PHF	250	700	000	725	500	000	000	500	000	792	625	750	000	000	000	000

Counts Unlimited PO Box 1178 Corona, CA 92878 (951) 268-6268

City of Fontana N/S: Cherry Avenue E/W: Merrill Avenue Weather: Clear

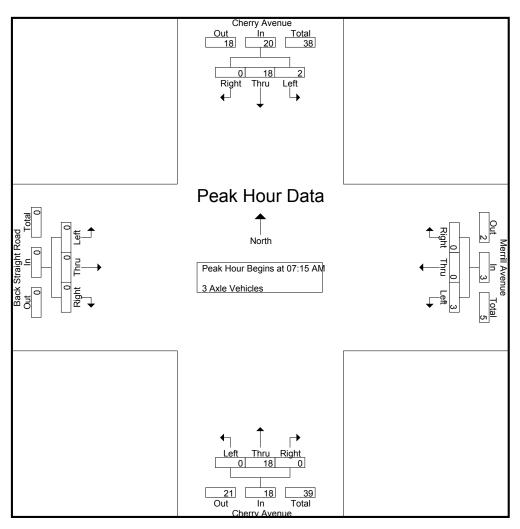
File Name: FONCHMEAM Site Code: 20116023 Start Date : 1/12/2016 Page No : 1

Groups Printed- 3 Axle Vehicles

	Groups Printed- 3 Axie Venicies																
		Cherry	Avenue	e	Merrill Avenue				Cherry Avenue				Ba				
		South	nbound		Westbound				Northbound				Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
07:15 AM	2	5	0	7	1	0	0	1	0	2	0	2	0	0	0	0	10
07:30 AM	0	4	0	4	1	0	0	1	0	5	0	5	0	0	0	0	10
07:45 AM	0	4	0	4	1	0	0	1	0	5	0	5	0	0	0	0	10
Total	2	14	0	16	3	0	0	3	0	14	0	14	0	0	0	0	33
08:00 AM	0	5	0	5	0	0	0	0	0	6	0	6	0	0	0	0	11
08:15 AM	0	3	0	3	1	0	0	1	0	5	0	5	0	0	0	0	9
08:30 AM	0	6	0	6	0	0	2	2	0	4	0	4	0	0	0	0	12
08:45 AM	0	5	0	5	0	0	0	0	0	2	0	2	0	0	0	0	7
Total	0	19	0	19	1	0	2	3	0	17	0	17	0	0	0	0	39
Grand Total	2	33	0	35	4	0	2	6	0	31	0	31	0	0	0	0	72
Apprch %	5.7	94.3	0		66.7	0	33.3		0	100	0		0	0	0		
Total %	2.8	45.8	0	48.6	5.6	0	2.8	8.3	0	43.1	0	43.1	0	0	0	0	

		Cherry	Avenue	Э	Merrill Avenue				Cherry Avenue				В				
	Southbound				Westbound				Northbound				Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for I	Peak Hour for Entire Intersection Begins at 07:15 AM																
07:15 AM	2	5	0	7	1	0	0	1	0	2	0	2	0	0	0	0	10
07:30 AM	0	4	0	4	1	0	0	1	0	5	0	5	0	0	0	0	10
07:45 AM	0	4	0	4	1	0	0	1	0	5	0	5	0	0	0	0	10
MA 00:80	0	5	0	5	0	0	0	0	0	6	0	6	0	0	0	0	11_
Total Volume	2	18	0	20	3	0	0	3	0	18	0	18	0	0	0	0	41
% App. Total	10	90	0		100	0	0		0	100	0		0	0	0		
PHF	.250	.900	.000	.714	.750	.000	.000	.750	.000	.750	.000	.750	.000	.000	.000	.000	.932

File Name: FONCHMEAM Site Code : 20116023 Start Date : 1/12/2016 Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1

Peak Hour for	Each Approach	n Begins at:

Peak Hour for	Each Ap	oproacr	n Begins	s at:												
	07:15 AM				07:15 AM	I			07:15 AM	1			07:15 AM	I		
+0 mins.	2	5	0	7	1	0	0	1	0	2	0	2	0	0	0	0
+15 mins.	0	4	0	4	1	0	0	1	0	5	0	5	0	0	0	0
+30 mins.	0	4	0	4	1	0	0	1	0	5	0	5	0	0	0	0
+45 mins.	0	5	0	5	0	0	0	0	0	6	0	6	0	0	0	0
Total Volume	2	18	0	20	3	0	0	3	0	18	0	18	0	0	0	0
% App. Total	10	90	0		100	0	0		0	100	0		0	0	0	
PHF	250	900	000	714	750	000	000	750	000	750	000	750	000	000	000	000

City of Fontana N/S: Cherry Avenue E/W: Merrill Avenue Weather: Clear

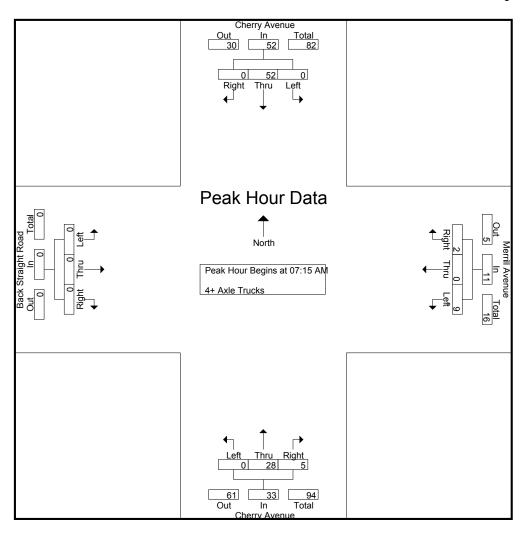
File Name: FONCHMEAM Site Code : 20116023 Start Date : 1/12/2016 Page No : 1

Groups Printed- 4+ Axle Trucks

Gloups Filitieu- 4 FAXIE Trucks	
Merrill Avenue Cherry Avenue Bac	ick Straight Road
Westbound Northbound	Eastbound
tal Left Thru Right App. Total Left Thru Right App. Total Left 7	Thru Right App. Total Int. Total
5 1 0 0 1 0 9 1 10 0	0 0 0 16
3 1 0 1 2 0 8 2 10 0	0 0 0 25
11 5 0 1 6 0 10 3 13 0	0 0 0 30
2 1 0 0 1 0 7 0 7 0	0 0 0 20
11 8 0 2 10 0 34 6 40 0	0 0 0 91
6 2 0 0 2 0 3 0 3 0	0 0 0 21
9 0 0 1 1 0 8 1 9 0	0 0 0 19
11 2 0 1 3 0 10 1 11 0	0 0 0 25
11 0 0 0 0 0 9 5 14 0	0 0 0 25
47 4 0 2 6 0 30 7 37 0	0 0 0 90
38 12 0 4 16 0 64 13 77 0	0 0 0 181
75 0 25 0 83.1 16.9 0	0 0
.6 6.6 0 2.2 8.8 0 35.4 7.2 42.5 0	0 0 0
81 8 0 2 10 0 34 6 40 0 16 2 0 0 2 0 3 0 3 0 19 0 0 1 1 0 8 1 9 0 11 2 0 1 3 0 10 1 11 0 11 0 0 0 0 9 5 14 0 17 4 0 2 6 0 30 7 37 0 38 12 0 4 16 0 64 13 77 0 75 0 25 0 83.1 16.9 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

		Cherry	Avenue	е		Merrill	Avenue	9		Cherry	Avenu	е	В	ack Str	aight Ro	oad	
		South	bound			West	bound			North	nbound			East	bound		
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Ana	alysis Fro	om 07:1	5 AM to	o 08:00 A	M - Pea	k 1 of 1	1								_		
Peak Hour for I	Entire In	tersecti	on Beg	ins at 07:	15 AM												
07:15 AM	0	13	0	13	1	0	1	2	0	8	2	10	0	0	0	0	25
07:30 AM	0	11	0	11	5	0	1	6	0	10	3	13	0	0	0	0	30
07:45 AM	0	12	0	12	1	0	0	1	0	7	0	7	0	0	0	0	20
MA 00:80	0	16	0	16	2	0	0	2	0	3	0	3	0	0	0	0	21
Total Volume	0	52	0	52	9	0	2	11	0	28	5	33	0	0	0	0	96
% App. Total	0	100	0		81.8	0	18.2		0	84.8	15.2		0	0	0		
PHF	.000	.813	.000	.813	.450	.000	.500	.458	.000	.700	.417	.635	.000	.000	.000	.000	.800

File Name: FONCHMEAM Site Code : 20116023 Start Date : 1/12/2016 Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1

Peak Hour for	Each Ap	proact	n Begins	s at:												
	07:15 AM				07:15 AM	I			07:15 AN	1			07:15 AM	I		
+0 mins.	0	13	0	13	1	0	1	2	0	8	2	10	0	0	0	0
+15 mins.	0	11	0	11	5	0	1	6	0	10	3	13	0	0	0	0
+30 mins.	0	12	0	12	1	0	0	1	0	7	0	7	0	0	0	0
+45 mins.	0	16	0	16	2	0	0	2	0	3	0	3	0	0	0	0
Total Volume	0	52	0	52	9	0	2	11	0	28	5	33	0	0	0	0
% App. Total	0	100	0		81.8	0	18.2		0	84.8	15.2		0	0	0	
PHF	000	813	000	813	450	000	500	458	000	700	417	635	000	000	000	000

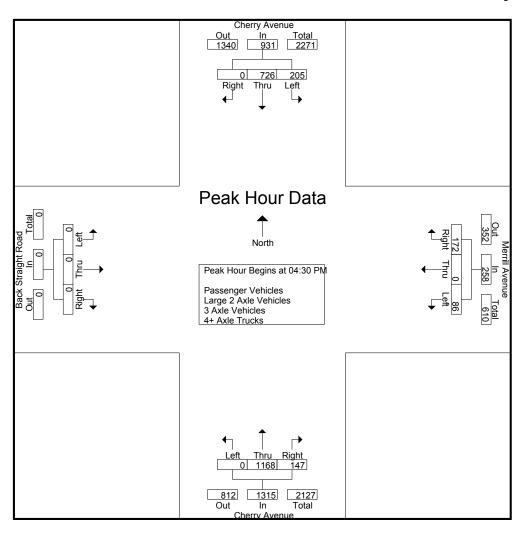
File Name: FONCHMEPM Site Code : 20116023 Start Date : 1/12/2016 Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

		<u> </u>	oups r	IIIILEU- F	assenge				ie veiii			enicles -					
		Cherry	Avenu	е		Merrill	Avenu	e		Cherry	/ Avenu	е	Ba	ack Str	aight R	oad	
		South	nbound			West	bound			North	nbound			East	tbound		
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	48	191	0	239	20	0	45	65	0	274	46	320	0	0	0	0	624
04:15 PM	47	173	0	220	22	0	41	63	0	263	34	297	0	0	0	0	580
04:30 PM	48	206	0	254	24	0	51	75	0	261	33	294	0	0	0	0	623
04:45 PM	50	161	0	211	17	0	40	57	0	287	38	325	0	0	0	0	593
Total	193	731	0	924	83	0	177	260	0	1085	151	1236	0	0	0	0	2420
05:00 PM	53	190	0	243	28	0	43	71	0	309	41	350	0	0	0	0	664
05:15 PM	54	169	0	223	17	0	38	55	0	311	35	346	0	0	0	0	624
05:30 PM	53	130	1	184	21	0	44	65	0	284	49	333	0	0	0	0	582
05:45 PM	48	131	0	179	10	0	46	56	0	236	37	273	0	0	0	0	508
Total	208	620	1	829	76	0	171	247	0	1140	162	1302	0	0	0	0	2378
Grand Total	401	1351	1	1753	159	0	348	507	0	2225	313	2538	0	0	0	0	4798
Apprch %	22.9	77.1	0.1		31.4	0	68.6		0	87.7	12.3		0	0	0		
Total %	8.4	28.2	0	36.5	3.3	0	7.3	10.6	0	46.4	6.5	52.9	0	0	0	0	
Passenger Vehicles	398	1230	1	1629	143	0	345	488	0	2118	293	2411	0	0	0	0	4528
% Passenger Vehicles	99.3	91	100	92.9	89.9	0	99.1	96.3	0	95.2	93.6	95	0	0	0	0	94.4
Large 2 Axle Vehicles	1	32	0	33	4	0	2	6	0	23	6	29	0	0	0	0	68
% Large 2 Axle Vehicles	0.2	2.4	0	1.9	2.5	0	0.6	1.2	0	1	1.9	1.1	0	0	0	0	1.4
3 Axle Vehicles	1	42	0	43	6	0	1	7	0	31	5	36	0	0	0	0	86
% 3 Axle Vehicles	0.2	3.1	0	2.5	3.8	0	0.3	1.4	0	1.4	1.6	1.4	0	0	0	0	1.8
4+ Axle Trucks	1	47	0	48	6	0	0	6	0	53	9	62	0	0	0	0	116
% 4+ Axle Trucks	0.2	3.5	0	2.7	3.8	0	0	1.2	0	2.4	2.9	2.4	0	0	0	0	2.4

		Cherry	Avenu	е		Merrill	Avenue	9		Cherry	Avenu	е	В	ack Str	aight Ro	oad	
		South	nbound			West	bound			North	nbound			East	bound		
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Ana	alysis Fro	om 04:0	00 PM t	o 05:45 P	M - Pea	k 1 of 1	1				_						
Peak Hour for I	Entire In	tersect	ion Beg	ins at 04:	24 0 51 75 0 261 33 294 0 0 0 0												
04:30 PM	48	206	0	254	24	0	51	75	0	261	33	294	0	0	0	0	623
04:45 PM	50	161	0	211	17	0	40	57	0	287	38	325	0	0	0	0	593
05:00 PM	53	190	0	243	28	0	43	71	0	309	41	350	0	0	0	0	664
05:15 PM	54	169	0	223	17	0	38	55	0	311	35	346	0	0	0	0	624
Total Volume	205	726	0	931	86	0	172	258	0	1168	147	1315	0	0	0	0	2504
% App. Total	22	78	0		33.3	0	66.7		0	88.8	11.2		0	0	0		
PHF	.949	.881	.000	.916	.768	.000	.843	.860	.000	.939	.896	.939	.000	.000	.000	.000	.943

File Name: FONCHMEPM Site Code : 20116023 Start Date : 1/12/2016 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for	Each Ap	proacl	n Begins	s at:												
	04:30 PM				04:15 PM	I			04:45 PN	Л			04:00 PM	1		
+0 mins.	48	206	0	254	22	0	41	63	0	287	38	325	0	0	0	0
+15 mins.	50	161	0	211	24	0	51	75	0	309	41	350	0	0	0	0
+30 mins.	53	190	0	243	17	0	40	57	0	311	35	346	0	0	0	0
+45 mins.	54	169	0	223	28	0	43	71	0	284	49	333	0	0	0	0
Total Volume	205	726	0	931	91	0	175	266	0	1191	163	1354	0	0	0	0
% App. Total	22	78	0		34.2	0	65.8		0	88	12		0	0	0	
PHF	.949	.881	.000	.916	.813	.000	.858	.887	.000	.957	.832	.967	.000	.000	.000	.000

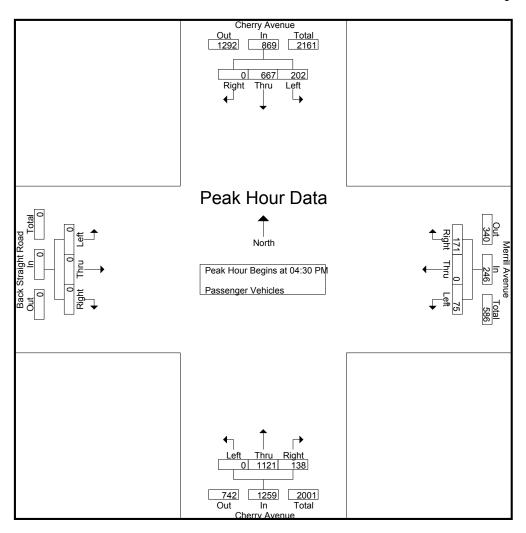
File Name: FONCHMEPM Site Code: 20116023 Start Date : 1/12/2016 Page No : 1

Groups Printed- Passenger Vehicles

						Gro	ups Prii	<u>nted- Pas</u>	<u>senger</u>	venici	<u>es </u>						
		Cherry	Avenu	e		Merrill	Avenue	e		Cherry	/ Avenu	е	Ba	ick Str	aight Ro	oad	
		South	nbound			West	bound			North	nbound			East	bound		
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	48	168	0	216	20	0	45	65	0	255	43	298	0	0	0	0	579
04:15 PM	47	153	0	200	19	0	40	59	0	244	30	274	0	0	0	0	533
04:30 PM	46	184	0	230	23	0	51	74	0	249	30	279	0	0	0	0	583
04:45 PM	49	150	0	199	14	0	39	53	0	276	35	311	0	0	0	0	563
Total	190	655	0	845	76	0	175	251	0	1024	138	1162	0	0	0	0	2258
05:00 PM	53	176	0	229	25	0	43	68	0	299	39	338	0	0	0	0	635
05:15 PM	54	157	0	211	13	0	38	51	0	297	34	331	0	0	0	0	593
05:30 PM	53	122	1	176	21	0	44	65	0	272	46	318	0	0	0	0	559
05:45 PM	48	120	0	168	8	0	45	53	0	226	36	262	0	0	0	0	483
Total	208	575	1	784	67	0	170	237	0	1094	155	1249	0	0	0	0	2270
Grand Total	398	1230	1	1629	143	0	345	488	0	2118	293	2411	0	0	0	0	4528
Apprch %	24.4	75.5	0.1		29.3	0	70.7		0	87.8	12.2		0	0	0		
Total %	8.8	27.2	0	36	3.2	0	7.6	10.8	0	46.8	6.5	53.2	0	0	0	0	

		Cherry		е			Avenue	9		,	Avenue	е	В		aight Ro	ad	
		South	bound			West	bound			Nortr	nbound			East	bound		
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Ana	lysis Fro	om 04:3	80 PM t	o 05:15 P	M - Pea	ık 1 of 1											
Peak Hour for E	Entire In	tersecti	on Beg	ins at 04:	30 PM												
04:30 PM	46	184	0	230	23	0	51	74	0	249	30	279	0	0	0	0	583
04:45 PM	49	150	0	199	14	0	39	53	0	276	35	311	0	0	0	0	563
05:00 PM	53	176	0	229	25	0	43	68	0	299	39	338	0	0	0	0	635
05:15 PM	54	157	0	211	13	0	38	51	0	297	34	331	0	0	0	0	593
Total Volume	202	667	0	869	75	0	171	246	0	1121	138	1259	0	0	0	0	2374
% App. Total	23.2	76.8	0		30.5	0	69.5		0	89	11		0	0	0		
PHF	.935	.906	.000	.945	.750	.000	.838	.831	.000	.937	.885	.931	.000	.000	.000	.000	.935

File Name: FONCHMEPM Site Code : 20116023 Start Date : 1/12/2016 Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1 Peak Hour for Each Approach Regins at:

Peak Hour for	Each A	pproact	<u>n Begins</u>	s at:												
	04:30 PM	1			04:30 PM				04:30 PI	Л			04:30 PM			
+0 mins.	46	184	0	230	23	0	51	74	0	249	30	279	0	0	0	0
+15 mins.	49	150	0	199	14	0	39	53	0	276	35	311	0	0	0	0
+30 mins.	53	176	0	229	25	0	43	68	0	299	39	338	0	0	0	0
+45 mins.	54	157	0	211	13	0	38	51	0	297	34	331	0	0	0	0
Total Volume	202	667	0	869	75	0	171	246	0	1121	138	1259	0	0	0	0
% App. Total	23.2	76.8	0		30.5	0	69.5		0	89	11		0	0	0	
PHF	935	906	000	945	750	000	838	831	000	937	885	931	000	000	000	000

City of Fontana N/S: Cherry Avenue E/W: Merrill Avenue Weather: Clear

File Name: FONCHMEPM Site Code: 20116023

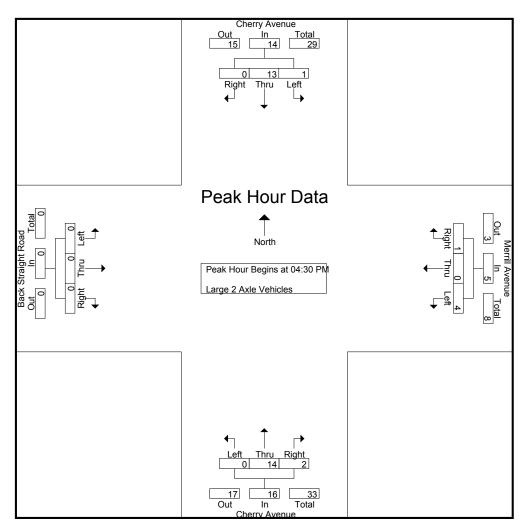
Start Date : 1/12/2016 Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Cherry	Avenu	e		Merrill	Avenue	e [Cherry	/ Avenu	е	Ba	ack Str	aight Ro	oad	
	South	bound			West	tbound			North	nbound			East	bound		
Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
0	9	0	9	0	0	0	0	0	3	2	5	0	0	0	0	14
0	5	0	5	0	0	1	1	0	3	2	5	0	0	0	0	11
0	6	0	6	1	0	0	1	0	3	0	3	0	0	0	0	10
1	3	0	4	0	0	1	1	0	2	1	3	0	0	0	0	8
1	23	0	24	1	0	2	3	0	11	5	16	0	0	0	0	43
0	4	0	4	2	0	0	2	0	4	1	5	0	0	0	0	11
0	0	0	0	1	0	0	1	0	5	0	5	0	0	0	0	6
0	1	0	1	0	0	0	0	0	3	0	3	0	0	0	0	4
0	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
0	9	0	9	3	0	0	3	0	12	1	13	0	0	0	0	25
1	32	0	33	4	0	2	6	0	23	6	29	0	0	0	0	68
3	97	0		66.7	0	33.3		0	79.3	20.7		0	0	0		
1.5	47.1	0	48.5	5.9	0	2.9	8.8	0	33.8	8.8	42.6	0	0	0	0	
	Left 0 0 0 1 1 1 0 0 0 0 0 0 1 3	South Left Thru 0 9 0 5 0 6 1 3 1 23 0 4 0 0 0 1 0 4 0 9 1 32 3 97	Southbound	0 9 0 9 0 5 0 5 0 6 0 6 1 3 0 4 1 23 0 24 0 4 0 4 0 0 0 0 0 1 0 1 0 4 0 4 0 9 0 9	Southbound Left Thru Right App. Total Left	Southbound Wester	Southbound Westbound Left Thru Right App. Total Left Thru Right 0 9 0 0 0 0 0 5 0 0 1 0 0 0 6 0 6 1 0 0 0 1 1 23 0 24 1 0 2 0 4 0 4 2 0 0 0 0 0 1 0 0 0 0 1 0	Southbound Left Thru Right App. Total Left Thru Right App. Total Left Thru Right App. Total	Southbound Westbound Left Thru Right App. Total Left Thru Right App. Total Left Thru Right App. Total Left	Southbound Westbound North Left Thru Right App. Total Left Thru Right Right	Northbound Northbound Northbound Left Thru Right App. Total Left Thru Right	Northbound Northbound Northbound Left Thru Right App. Total Left Thru Right App. Total	Southbound Southbound Southbound Southbound Left Thru Right App. Total Left Thru Right Left Thru Right Left Thru Right Left Thru Right Right Left Thru Right R	Southbound Sou	Southbound Fastbound Fas	Southbound Fastbound Southbound Sout

		Cherry	Avenue)		Merrill	Avenue	9		Cherry	Avenu	е	В	ack Stra	aight Ro	oad	
		South	bound			West	bound			North	bound			East	bound		
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Ana	lysis Fro	om 04:3	0 PM to	05:15 P	M - Pea	k 1 of 1	l										
Peak Hour for I	Entire In	tersecti	on Begi	ins at 04:	30 PM												
04:30 PM	0	6	0	6	1	0	0	1	0	3	0	3	0	0	0	0	10
04:45 PM	1	3	0	4	0	0	1	1	0	2	1	3	0	0	0	0	8
05:00 PM	0	4	0	4	2	0	0	2	0	4	1	5	0	0	0	0	11
05:15 PM	0	0	0	0	1	0	0	1	0	5	0	5	0	0	0	0	6
Total Volume	1	13	0	14	4	0	1	5	0	14	2	16	0	0	0	0	35
% App. Total	7.1	92.9	0		80	0	20		0	87.5	12.5		0	0	0		
PHF	.250	.542	.000	.583	.500	.000	.250	.625	.000	.700	.500	.800	.000	.000	.000	.000	.795

File Name: FONCHMEPM Site Code : 20116023 Start Date : 1/12/2016 Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1

Peak Hour for	Each A	oproacr	n Begins	s at:												
	04:30 PM				04:30 PM	1			04:30 PN	Л			04:30 PM	I		
+0 mins.	0	6	0	6	1	0	0	1	0	3	0	3	0	0	0	0
+15 mins.	1	3	0	4	0	0	1	1	0	2	1	3	0	0	0	0
+30 mins.	0	4	0	4	2	0	0	2	0	4	1	5	0	0	0	0
+45 mins.	0	0	0	0	1	0	0	1	0	5	0	5	0	0	0	0
Total Volume	1	13	0	14	4	0	1	5	0	14	2	16	0	0	0	0
% App. Total	7.1	92.9	0		80	0	20		0	87.5	12.5		0	0	0	
PHF	250	542	000	583	500	000	250	625	000	700	500	800	000	000	000	000

City of Fontana N/S: Cherry Avenue E/W: Merrill Avenue Weather: Clear

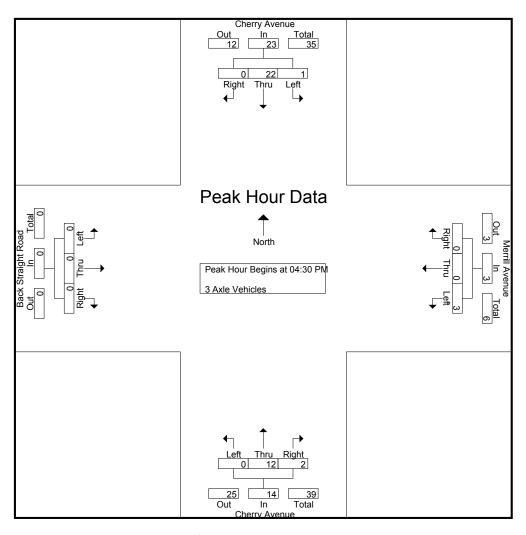
File Name: FONCHMEPM Site Code: 20116023 Start Date : 1/12/2016 Page No : 1

Groups Printed- 3 Axle Vehicles

						i oups i	TITICU O	/ IXIC V	STITUTUS							
	Cherry	Avenu	e		Merrill	Avenu	e		Cherry	/ Avenu	е	Ba	ack Str	aight Ro	oad	
	South	nbound			Wes	tbound			North	bound			East	bound		
Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
0	7	0	7	0	0	0	0	0	7	0	7	0	0	0	0	14
0	8	0	8	2	0	0	2	0	5	1	6	0	0	0	0	16
1	7	0	8	0	0	0	0	0	1	0	1	0	0	0	0	9
0	4	0	4	2	0	0	2	0	3	1	4	0	0	0	0	10
1	26	0	27	4	0	0	4	0	16	2	18	0	0	0	0	49
0	6	0	6	0	0	0	0	0	3	1	4	0	0	0	0	10
0	5	0	5	1	0	0	1	0	5	0	5	0	0	0	0	11
0	2	0	2	0	0	0	0	0	4	2	6	0	0	0	0	8
0	3	0	3	1	0	1	2	0	3	0	3	0	0	0	0	8
0	16	0	16	2	0	1	3	0	15	3	18	0	0	0	0	37
1	42	0	43	6	0	1	7	0	31	5	36	0	0	0	0	86
2.3	97.7	0		85.7	0	14.3		0	86.1	13.9		0	0	0		
1.2	48.8	0	50	7	0	1.2	8.1	0	36	5.8	41.9	0	0	0	0	
	0 0 1 0 1 0 0 0 0 0 0	South Left Thru 0 7 0 8 1 7 0 4 1 26 0 6 0 5 0 2 0 3 0 16 1 42 2.3 97.7	Southbound Left Thru Right 0 7 0 0 8 0 1 7 0 0 4 0 1 26 0 0 5 0 0 2 0 0 3 0 0 16 0 1 42 0 2.3 97.7 0	0 7 0 7 0 8 0 8 1 7 0 8 0 4 0 4 1 26 0 27 0 6 0 6 0 5 0 5 0 2 0 2 0 3 0 3 0 16 0 16 1 42 0 43 2.3 97.7 0	Southbound Left Thru Right App. Total Left 0 7 0 7 0 0 8 0 8 2 1 7 0 8 0 0 4 0 4 2 1 26 0 27 4 0 6 0 6 0 0 5 0 5 1 0 2 0 2 0 0 3 0 3 1 0 16 0 16 2 1 42 0 43 6 2.3 97.7 0 85.7	Cherry Avenue Southbound Merrill Wes Left Thru Merrill Wes Left Thru Right App. Total Left Thru 0 7 0	Cherry Avenue Southbound Merrill Avenue Westbound Left Thru Right App. Total Left Thru Right 0 7 0 0 0 0 0 8 0 8 2 0 0 1 7 0 8 0 0 0 0 4 0 4 2 0 0 1 26 0 27 4 0 0 0 6 0 6 0 0 0 0 5 0 5 1 0 0 0 3 0 3 1 0 1 0 16 0 16 2 0 1 1 42 0 43 6 0 1 2.3 97.7 0 85.7 0 14.3	Cherry Avenue	Cherry Avenue South-bound Merrill Avenue Westbound Left Thru Right App. Total Left Thru Right App. Total Left 0 7 0 0 0 0 0 0 8 0 8 2 0 0 2 0 1 7 0 8 0	Southbound Westbound North Left Thru Right App. Total Left Thru Right R	Cherry Avenue South-bound Merrill Avenue Westbound Cherry Avenue North-bound Left Thru Right App. Total Left Thru Right 0 8 0 8 0 0 0 0 0 1 0 1 0 1 0 1 0 0 1 0 0 0 0 0 0 0 0 0 <td>Cherry Avenue South-bound Merrill Avenue Westbound Cherry Avenue North-bound Left Thru Right App. Total Left Thru Right App. Total Left Thru Right App. Total 0 7 0 7 0 0 0 0 7 0 7 0 8 0 8 2 0 0 2 0 5 1 6 1 7 0 8 0 0 0 0 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0</td> <td>Cherry Avenue South-bound Merrill Avenue Westbound Cherry Avenue North-bound Batter South-bound Left Thru Right App. Total Left Thru Right App. Total Left Deft Deft</td> <td>Cherry Avenue South-bound Merrill Avenue Westbound Cherry Avenue North-bound Back Str East Left Thru Right App. Total Left Thru Right App. Total Left Thru 0 7 0 7 0 0 0 0 7 0 7 0 0 0 8 0 8 2 0 0 0 0 1 0 1 0 0 0 1 7 0 8 0 0 0 0 0 1 0 1 0 0 0 1 26 0 27 4 0 0 0 0 16 2 18 0 0 0 6 0 6 0 0 0 0 3 1 4 0 0 0 5 0 5 1 0</td> <td>Cherry Avenue South-bound Merrill Avenue Westbound Cherry Avenue North-bound Back Straight Reast-bound Left Thru Right App. Total Left District App. Total <t< td=""><td> Cherry Avenue South-bound Westbound Westbound Westbound Westbound North-bound Eastbound Eastboun</td></t<></td>	Cherry Avenue South-bound Merrill Avenue Westbound Cherry Avenue North-bound Left Thru Right App. Total Left Thru Right App. Total Left Thru Right App. Total 0 7 0 7 0 0 0 0 7 0 7 0 8 0 8 2 0 0 2 0 5 1 6 1 7 0 8 0 0 0 0 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Cherry Avenue South-bound Merrill Avenue Westbound Cherry Avenue North-bound Batter South-bound Left Thru Right App. Total Left Thru Right App. Total Left Deft Deft	Cherry Avenue South-bound Merrill Avenue Westbound Cherry Avenue North-bound Back Str East Left Thru Right App. Total Left Thru Right App. Total Left Thru 0 7 0 7 0 0 0 0 7 0 7 0 0 0 8 0 8 2 0 0 0 0 1 0 1 0 0 0 1 7 0 8 0 0 0 0 0 1 0 1 0 0 0 1 26 0 27 4 0 0 0 0 16 2 18 0 0 0 6 0 6 0 0 0 0 3 1 4 0 0 0 5 0 5 1 0	Cherry Avenue South-bound Merrill Avenue Westbound Cherry Avenue North-bound Back Straight Reast-bound Left Thru Right App. Total Left District App. Total <t< td=""><td> Cherry Avenue South-bound Westbound Westbound Westbound Westbound North-bound Eastbound Eastboun</td></t<>	Cherry Avenue South-bound Westbound Westbound Westbound Westbound North-bound Eastbound Eastboun

		Cherry	Avenu	e		Merrill	Avenue	Э		Cherry	/ Avenu	е	В	ack Str	aight Ro	oad	
		South	nbound			West	tbound			North	nbound				bound		
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Ana	alysis Fro	om 04:	30 PM t	o 05:15 P	M - Pea	ak 1 of 1	1										
Peak Hour for I	Entire In	tersect	ion Beg	ins at 04:	30 PM												
04:30 PM	1	7	0	8	0	0	0	0	0	1	0	1	0	0	0	0	9
04:45 PM	0	4	0	4	2	0	0	2	0	3	1	4	0	0	0	0	10
05:00 PM	0	6	0	6	0	0	0	0	0	3	1	4	0	0	0	0	10
05:15 PM	0	5	0	5	1	0	0	1	0	5	0	5	0	0	0	0	11
Total Volume	1	22	0	23	3	0	0	3	0	12	2	14	0	0	0	0	40
% App. Total	4.3	95.7	0		100	0	0		0	85.7	14.3		0	0	0		
PHF	.250	.786	.000	.719	.375	.000	.000	.375	.000	.600	.500	.700	.000	.000	.000	.000	.909

File Name: FONCHMEPM Site Code : 20116023 Start Date : 1/12/2016 Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1

Peak Hour for	Each App	roach Begins at:
		-

Peak Hour for	Each A	oproacr	n Begins	s at:												
	04:30 PM				04:30 PM	1			04:30 PN	Л			04:30 PM	1		
+0 mins.	1	7	0	8	0	0	0	0	0	1	0	1	0	0	0	0
+15 mins.	0	4	0	4	2	0	0	2	0	3	1	4	0	0	0	0
+30 mins.	0	6	0	6	0	0	0	0	0	3	1	4	0	0	0	0
+45 mins.	0	5	0	5	1	0	0	1	0	5	0	5	0	0	0	0
Total Volume	1	22	0	23	3	0	0	3	0	12	2	14	0	0	0	0
% App. Total	4.3	95.7	0		100	0	0		0	85.7	14.3		0	0	0	
PHF	250	786	000	719	375	000	000	375	000	600	500	700	000	000	000	000

City of Fontana N/S: Cherry Avenue E/W: Merrill Avenue Weather: Clear

File Name: FONCHMEPM Site Code: 20116023

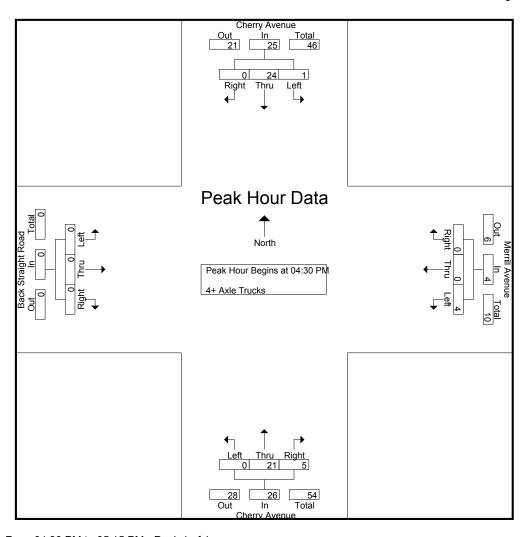
Start Date : 1/12/2016 Page No : 1

Groups Printed- 4+ Axle Trucks

						G	roups r	mileu- 4	+ Axie	HUCKS							
		Cherry	Avenu	e		Merrill	Avenu	e		Cherry	/ Avenu	е	Ba	ack Str	aight R	oad	
		South	nbound			West	tbound			North	nbound			East	bound		
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	7	0	7	0	0	0	0	0	9	1	10	0	0	0	0	17
04:15 PM	0	7	0	7	1	0	0	1	0	11	1	12	0	0	0	0	20
04:30 PM	1	9	0	10	0	0	0	0	0	8	3	11	0	0	0	0	21
04:45 PM	0	4	0	4	1	0	0	1	0	6	1	7	0	0	0	0	12
Total	1	27	0	28	2	0	0	2	0	34	6	40	0	0	0	0	70
05:00 PM	0	4	0	4	1	0	0	1	0	3	0	3	0	0	0	0	8
05:15 PM	0	7	0	7	2	0	0	2	0	4	1	5	0	0	0	0	14
05:30 PM	0	5	0	5	0	0	0	0	0	5	1	6	0	0	0	0	11
05:45 PM	0	4	0	4	1	0	0	1	0	7	1	8	0	0	0	0	13
Total	0	20	0	20	4	0	0	4	0	19	3	22	0	0	0	0	46
Grand Total	1	47	0	48	6	0	0	6	0	53	9	62	0	0	0	0	116
Apprch %	2.1	97.9	0		100	0	0		0	85.5	14.5		0	0	0		
Total %	0.9	40.5	0	41.4	5.2	0	0	5.2	0	45.7	7.8	53.4	0	0	0	0	

		Cherry	Avenue	е		Merrill	Avenue	9		Cherry	Avenu	е	В	ack Str	aight Ro	oad]
		South	bound			West	tbound			North	nbound			East	bound		
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Ana	alysis Fro	om 04:3	30 PM to	o 05:15 P	M - Pea												
Peak Hour for I	Entire In	tersecti	on Beg	ins at 04:	30 PM												
04:30 PM	1	9	0	10	0	0	0	0	0	8	3	11	0	0	0	0	21
04:45 PM	0	4	0	4	1	0	0	1	0	6	1	7	0	0	0	0	12
05:00 PM	0	4	0	4	1	0	0	1	0	3	0	3	0	0	0	0	8
05:15 PM	0	7	0	7	2	0	0	2	0	4	1	5	0	0	0	0	14
Total Volume	1	24	0	25	4	0	0	4	0	21	5	26	0	0	0	0	55
% App. Total	4	96	0		100	0	0		0	80.8	19.2		0	0	0		
PHF	.250	.667	.000	.625	.500	.000	.000	.500	.000	.656	.417	.591	.000	.000	.000	.000	.655

File Name: FONCHMEPM Site Code : 20116023 Start Date : 1/12/2016 Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1

I Call Hour for		prodo	. 209	<u> </u>												
	04:30 PM				04:30 PM	1			04:30 PN	Л			04:30 PM	I		
+0 mins.	1	9	0	10	0	0	0	0	0	8	3	11	0	0	0	0
+15 mins.	0	4	0	4	1	0	0	1	0	6	1	7	0	0	0	0
+30 mins.	0	4	0	4	1	0	0	1	0	3	0	3	0	0	0	0
+45 mins.	0	7	0	7	2	0	0	2	0	4	1	5	0	0	0	0
Total Volume	1	24	0	25	4	0	0	4	0	21	5	26	0	0	0	0
% App. Total	4	96	0		100	0	0		0	80.8	19.2		0	0	0	
PHF	.250	.667	.000	.625	.500	.000	.000	.500	.000	.656	.417	.591	.000	.000	.000	.000

Location: Fontana N/S: Cherry Avenue E/W: Merrill Avenue



Site Code: 201-16023 Date: 1/12/2016 Weather: Clear

PEDESTRIANS

	North Leg Cherry Avenue	East Leg Merrill Avenue	South Leg Cherry Avenue	West Leg Back Straight Road	TOTAL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

	North Leg Cherry Avenue	East Leg Merrill Avenue	South Leg Cherry Avenue	West Leg Back Straight Road	TOTAL
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	1	0	0	1
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	1	0	0	1
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	2	0	0	2

Location: Fontana N/S: Cherry Avenue E/W: Merrill Avenue



Site Code: 201-16023 Date: 1/12/2016 Weather: Clear

BICYCLES

	North Leg Cherry Avenue	East Leg Merrill Avenue	South Leg Cherry Avenue	West Leg Back Straight Road	TOTAL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

	North Leg Cherry Avenue	East Leg Merrill Avenue	South Leg Cherry Avenue	West Leg Back Straight Road	TOTAL
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

City of Fontana N/S: Cherry Avenue E/W: Randall Avenue Weather: Clear

Large 2 Axle Vehicles

% Large 2 Axle Vehicles
3 Axle Vehicles

% 3 Axle Vehicles

4+ Axle Trucks

% 4+ Axle Trucks

90

5

2

99

5.5

35

4.1

0.6

1

0

0

0

0

0

0

0

0

97

4.9

36

1.8

99

8

4

1

1.5

0.4

2.9

0

0

0

1

100

6

0

0

0

0

3.6

File Name: FONCHRAAM Site Code: 20116023 Start Date: 1/12/2016

190

4.9

75

1.9

183

4.7

7.7

0

0

2

15.4

Page No : 1

	Cherry	Avenu	е		l Avenu	ie		Cherry	/ Avenu	е	Au	lway				
	South	nbound			West	tbound			North	nbound			East	bound		
Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
35	212	1	248	61	0	24	85	3	164	18	185	1	0	0	1	519
35	244	1	280	64	1	27	92	2	164	23	189	0	0	1	1	562
14	260	1	275	35	0	32	67	4	167	30	201	0	0	0	0	543
12	274	5	291	31	0	28	59	11	176	11	198	0	0	0	0	548
96	990	8	1094	191	1	111	303	20	671	82	773	1	0	1	2	2172
19	265	5	289	25	0	20	45	14	150	10	174	1	0	2	3	511
24	185	1	210	24	0	15	39	9	159	19	187	0	0	5	5	441
16	189	1	206	19	0	8	27	7	142	15	164	1	0	0	1	398
14	156	1	171	13	0	14	27	5	128	12	145	0	1	1_	2	345
73	795	8	876	81	0	57	138	35	579	56	670	2	1	8	11	1695
169	1785	16	1970	272	1	168	441	55	1250	138	1443	3	1	9	13	3867
8.6	90.6	8.0		61.7	0.2	38.1		3.8	86.6	9.6		23.1	7.7	69.2		
4.4	46.2	0.4	50.9	7	0	4.3	11.4	1.4	32.3	3.6	37.3	0.1	0	0.2	0.3	
161	1561	16	1738	259	0	162	421	49	1077	124	1250	3	1	6	10	3419
95.3	87.5	100	88.2	95.2	0	96.4	95.5	89.1	86.2	89.9	86.6	100	100	66.7	76.9	88.4
	35 35 14 12 96 19 24 16 14 73 169 8.6 4.4	South Left Thru 35 212 35 244 14 260 12 274 96 990 19 265 24 185 16 189 14 156 73 795 169 1785 8.6 90.6 4.4 46.2 161 1561	Southbound Left Thru Right 35 212 1 35 244 1 14 260 1 12 274 5 96 990 8 19 265 5 24 185 1 16 189 1 14 156 1 73 795 8 169 1785 16 8.6 90.6 0.8 4.4 46.2 0.4 161 1561 16	Left Thru Right App. Total 35 212 1 248 35 244 1 280 14 260 1 275 12 274 5 291 96 990 8 1094 19 265 5 289 24 185 1 210 16 189 1 206 14 156 1 171 73 795 8 876 169 1785 16 1970 8.6 90.6 0.8 4.4 46.2 0.4 50.9 161 1561 16 1738	Southbound Left Thru Right App. Total Left 35 212 1 248 61 35 244 1 280 64 14 260 1 275 35 12 274 5 291 31 96 990 8 1094 191 19 265 5 289 25 24 185 1 210 24 16 189 1 206 19 14 156 1 171 13 73 795 8 876 81 169 1785 16 1970 272 8.6 90.6 0.8 61.7 4.4 46.2 0.4 50.9 7 161 1561 16 1738 259	Southound West	Southbound Westbound Left Thru Right App. Total Left Thru Right 35 212 1 248 61 0 24 35 244 1 280 64 1 27 14 260 1 275 35 0 32 12 274 5 291 31 0 28 96 990 8 1094 191 1 111 111 19 265 5 289 25 0 20 24 185 1 210 24 0 15 16 189 1 206 19 0 8 14 156 1 171 13 0 14 73 795 8 876 81 0 57 169 1785 16 1970 272 1 168 8.6 90.6 0.8 61.7 0.2 38.1 4.4 46.2 0.4 50.9 7 0 4.3 161 1561 16 1738 259 0 162 165 165 162 1738 259 0 162 165 189 162 165	Southbound Westbound Left Thru Right App. Total Left Thru Right App. Total Left Thru Right App. Total 35 212 1 248 61 0 24 85 35 244 1 280 64 1 27 92 14 260 1 275 35 0 32 67 12 274 5 291 31 0 28 59 96 990 8 1094 191 1 111 303 19 265 5 289 25 0 20 45 24 185 1 210 24 0 15 39 16 189 1 206 19 0 8 27 14 156 1 171 13 0 14 27 73 795 8 876 81 0 57 138 169 1785 16 1970 272 1 168 441 8.6 90.6 0.8 61.7 0.2 38.1 4.4 46.2 0.4 50.9 7 0 4.3 11.4 161 1561 16 1738 259 0 162 421 425 421 1661 1561 16 1738 259 0 162 421 164 1561 16 1738 259 0 162 421 164 1561 16 1738 259 0 162 421 164	Southbound Westbound Left Thru Right App. Total Left 35 212 1 248 61 0 24 85 3 35 244 1 280 64 1 27 92 2 2 14 260 1 275 35 0 32 67 4 12 274 5 291 31 0 28 59 11 96 990 8 1094 191 1 111 303 20 20 45 14 24 185 1 210 24 0 15 39 9 16 189 1 206 19 0 8 27 7 14 156 1 171 13 0 14 27 5 73 795 8 876 81 0 57 138 35 169 1785 16 1970 272 1 168 441 55 8.6 90.6 0.8 61.7 0.2 38.1 3.8 4.4 46.2 0.4 50.9 7 0 4.3 11.4 1.4 161 1561 16 1738 259 0 162 421 49 49 185 16 1738 259 0 162 421 49 185	Southbound Westbound North	Northbound Northbound Northbound Left Thru Right App. Total Left Thru App. Total Left App. Total App. Total	Northound Northound Northound Left Thru Right App. Total State State Thru Right App. Total Left Thru Right App. Total State Thru Right App. Total Thru Thru	Northbound Northbound Southbound Northbound Left Thru Right App. Total Left Thru Right Reft Thru Total Right Reft Thru Total Reft Reft Thru Total Reft Thru Total Reft Thru Total Test Thru Total Test Thru Tes	Southound Sout	Southbound Westbound Northbound Eastbound Left Thru Right App. Total Left Thru Right Left Thru Right App. Total Left Thru Right App. Total Left Thru Right Ri	South S

14

3.2

0.9

0.5

4

2

3

2

1

5.5

3.6

1.8

65

5.2

31

2.5

77

6.2

10

7.2

1.4

1.4

2

2

78

5.4

35

2.4

80

5.5

0

0

0

0

0

0

0

0

0

0

0

11.1

0

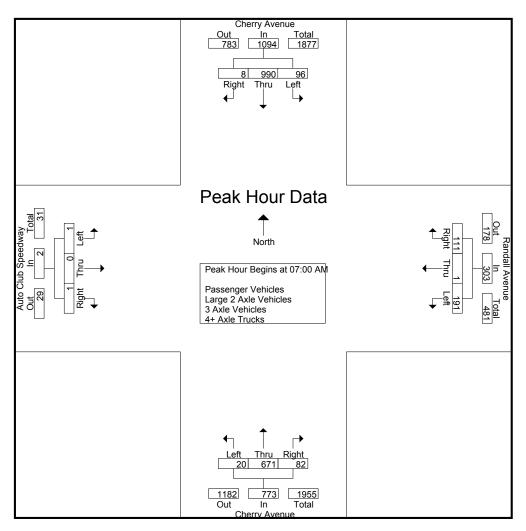
0

2

22.2

		Cherry	Avenu	е		Randal	l Avenu	ie		Cherry	Avenu	е	Αu	way			
		South	bound			West	bound			North	bound			East	bound		
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Ana	lysis Fr	om 07:0	00 AM t	o 08:45 A	M - Pea	ak 1 of 1					_						
Peak Hour for I	Entire In	tersecti	ion Beg	ins at 07:	00 AM												
07:00 AM	35	212	1	248	61	0	24	85	3	164	18	185	1	0	0	1	519
07:15 AM	35	244	1	280	64	1	27	92	2	164	23	189	0	0	1	1	562
07:30 AM	14	260	1	275	35	0	32	67	4	167	30	201	0	0	0	0	543
07:45 AM	12	274	5	291	31	0	28	59	11	176	11	198	0	0	0	0	548
Total Volume	96	990	8	1094	191	1	111	303	20	671	82	773	1	0	1	2	2172
% App. Total	8.8	90.5	0.7		63	0.3	36.6		2.6	86.8	10.6		50	0	50		
PHF	.686	.903	.400	.940	.746	.250	.867	.823	.455	.953	.683	.961	.250	.000	.250	.500	.966

File Name: FONCHRAAM Site Code : 20116023 Start Date : 1/12/2016 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

Peak Hour for	Each A	pproacl	n Begin	s at:												
	07:15 AM	1			07:00 AM	I			07:00 AN	Л			08:00 AM			
+0 mins.	35	244	1	280	61	0	24	85	3	164	18	185	1	0	2	3
+15 mins.	14	260	1	275	64	1	27	92	2	164	23	189	0	0	5	5
+30 mins.	12	274	5	291	35	0	32	67	4	167	30	201	1	0	0	1
+45 mins.	19	265	5	289	31	0	28	59	11	176	11	198	0	1	1	2
Total Volume	80	1043	12	1135	191	1	111	303	20	671	82	773	2	1	8	11
% App. Total	7	91.9	1.1		63	0.3	36.6		2.6	86.8	10.6		18.2	9.1	72.7	
PHF	571	952	600	975	746	250	867	823	455	953	683	961	500	250	400	550

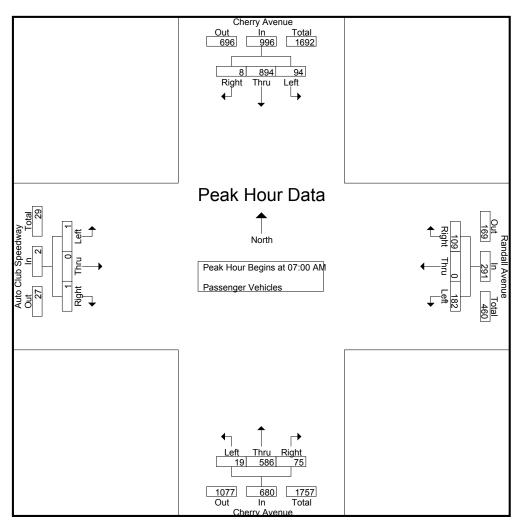
File Name: FONCHRAAM Site Code: 20116023 Start Date : 1/12/2016 Page No : 1

Groups	Printed-	Passenger	Vehicles

_						Randall Avenue													
			Cherry	Avenu	e		Randal	I Avenu	ıe		Cherry	/ Avenu	e	Au	to Club	Speed	way		
			South	nbound			West	bound			North	nbound			East	bound			
Γ	Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total	
_	07:00 AM	35	198	1	234	60	0	24	84	3	141	16	160	1	0	0	1	479	
	07:15 AM	33	222	1	256	63	0	27	90	2	141	22	165	0	0	1	1	512	
	07:30 AM	14	229	1	244	30	0	31	61	4	145	26	175	0	0	0	0	480	
	07:45 AM	12	245	5	262	29	0	27	56	10	159	11	180	0	0	0	0	498	
	Total	94	894	8	996	182	0	109	291	19	586	75	680	1	0	1	2	1969	
	08:00 AM	17	228	5	250	24	0	18	42	14	135	9	158	1	0	0	1	451	
	08:15 AM	22	152	1	175	23	0	14	37	6	138	16	160	0	0	4	4	376	
	08:30 AM	15	158	1	174	17	0	7	24	5	114	13	132	1	0	0	1	331	
	08:45 AM	13	129	1	143	13	0	14	27	5	104	11	120	0	1	1	2	292	
	Total	67	667	8	742	77	0	53	130	30	491	49	570	2	1	5	8	1450	
	Grand Total	161	1561	16	1738	259	0	162	421	49	1077	124	1250	3	1	6	10	3419	
	Apprch %	9.3	89.8	0.9		61.5	0	38.5		3.9	86.2	9.9		30	10	60			
	Total %	4.7	45.7	0.5	50.8	7.6	0	4.7	12.3	1.4	31.5	3.6	36.6	0.1	0	0.2	0.3		
	Total %	4.7	45.7	0.5	50.8	7.6	0	4.7	12.3	1.4	31.5	3.6	36.6	0.1	0	0.2	0.3		

		Cherry	Avenue	е		Randal	I Avenu	ie		Cherry	Avenu	е	Au	way			
		South	nbound			West	bound			North	nbound			East	bound		
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Ana	alysis Fr	om 07:0	00 AM to	o 07:45 A	M - Pea	k 1 of 1	1				_				_		
Peak Hour for I	Entire Ir	ntersect	ion Beg	ins at 07:	00 AM												
07:00 AM	35	198	1	234	60	0	24	84	3	141	16	160	1	0	0	1	479
07:15 AM	33	222	1	256	63	0	27	90	2	141	22	165	0	0	1	1	512
07:30 AM	14	229	1	244	30	0	31	61	4	145	26	175	0	0	0	0	480
07:45 AM	12	245	5	262	29	0	27	56	10	159	11	180	0	0	0	0	498
Total Volume	94	894	8	996	182	0	109	291	19	586	75	680	1	0	1	2	1969
% App. Total	9.4	89.8	8.0		62.5	0	37.5		2.8	86.2	11		50	0	50		
PHF	.671	.912	.400	.950	.722	.000	.879	.808	.475	.921	.721	.944	.250	.000	.250	.500	.961

File Name: FONCHRAAM Site Code : 20116023 Start Date : 1/12/2016 Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1

Peak Hour for	Each App	oroach	Begins a	t:
	07:00 AM			

Peak Hour for	Each A	pproacl	n Begins	s at:												
	07:00 AM				07:00 AM	1			07:00 AM	1			07:00 AM	I		
+0 mins.	35	198	1	234	60	0	24	84	3	141	16	160	1	0	0	1
+15 mins.	33	222	1	256	63	0	27	90	2	141	22	165	0	0	1	1
+30 mins.	14	229	1	244	30	0	31	61	4	145	26	175	0	0	0	0
+45 mins.	12	245	5	262	29	0	27	56	10	159	11	180	0	0	0	0
Total Volume	94	894	8	996	182	0	109	291	19	586	75	680	1	0	1	2
% App. Total	9.4	89.8	0.8		62.5	0	37.5		2.8	86.2	11		50	0	50	
PHF	.671	.912	.400	.950	.722	.000	.879	.808	.475	.921	.721	.944	.250	.000	.250	.500

City of Fontana N/S: Cherry Avenue E/W: Randall Avenue Weather: Clear

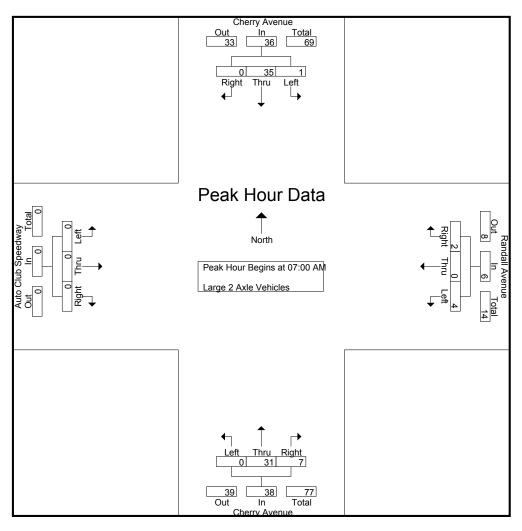
File Name: FONCHRAAM Site Code: 20116023 Start Date : 1/12/2016 Page No : 1

Groups Printed- Large 2 Axle Vehicles

						Grou	ips Prin	ted- Larg	e z Axie	e venic	ies						
		Cherry	Avenu	e		Randal	II Avenι	ue l		Cherry	/ Avenu	е	Au	to Club	Speed	lway	
		South	nbound			West	tbound			North	nbound			East	bound		
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	5	0	5	0	0	0	0	0	9	2	11	0	0	0	0	16
07:15 AM	1	6	0	7	1	0	0	1	0	10	1	11	0	0	0	0	19
07:30 AM	0	10	0	10	2	0	1	3	0	7	4	11	0	0	0	0	24
07:45 AM	0	14	0	14	1	0	1	2	0	5	0	5	0	0	0	0	21
Total	1	35	0	36	4	0	2	6	0	31	7	38	0	0	0	0	80
08:00 AM	2	12	0	14	1	0	2	3	0	5	1	6	0	0	0	0	23
08:15 AM	2	18	0	20	1	0	1	2	2	6	0	8	0	0	1	1	31
08:30 AM	1	13	0	14	2	0	1	3	1	13	1	15	0	0	0	0	32
08:45 AM	1_	12	0	13	0	0	0	0	0	10	1_	11	0	0	0	0	24
Total	6	55	0	61	4	0	4	8	3	34	3	40	0	0	1	1	110
Grand Total	7	90	0	97	8	0	6	14	3	65	10	78	0	0	1	1	190
Apprch %	7.2	92.8	0		57.1	0	42.9		3.8	83.3	12.8		0	0	100		
Total %	3.7	47.4	0	51.1	4.2	0	3.2	7.4	1.6	34.2	5.3	41.1	0	0	0.5	0.5	

		Cherry	Avenue	е		Randa	ll Avenu	ie		Cherry	/ Avenu	е	Αι	ito Club	Speed	way	
		South	nbound			Wes	tbound			North	nbound			East	bound	-	
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Ana	alysis Fro	om 07:0	00 AM to	o 07:45 A	M - Pea	ak 1 of	1										
Peak Hour for I	Entire In	tersect	ion Beg	ins at 07:	00 AM												
07:00 AM	0	5	0	5	0	0	0	0	0	9	2	11	0	0	0	0	16
07:15 AM	1	6	0	7	1	0	0	1	0	10	1	11	0	0	0	0	19
07:30 AM	0	10	0	10	2	0	1	3	0	7	4	11	0	0	0	0	24
07:45 AM	0	14	0	14	1	0	1	2	0	5	0	5	0	0	0	0	21
Total Volume	1	35	0	36	4	0	2	6	0	31	7	38	0	0	0	0	80
% App. Total	2.8	97.2	0		66.7	0	33.3		0	81.6	18.4		0	0	0		
PHF	.250	.625	.000	.643	.500	.000	.500	.500	.000	.775	.438	.864	.000	.000	.000	.000	.833

File Name: FONCHRAAM Site Code : 20116023 Start Date : 1/12/2016 Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1

Peak Hour for	Each A	oproact	n Begins	s at:												
	07:00 AM				07:00 AM	1			07:00 AN	Л			07:00 AM			
+0 mins.	0	5	0	5	0	0	0	0	0	9	2	11	0	0	0	0
+15 mins.	1	6	0	7	1	0	0	1	0	10	1	11	0	0	0	0
+30 mins.	0	10	0	10	2	0	1	3	0	7	4	11	0	0	0	0
+45 mins.	0	14	0	14	1	0	1	2	0	5	0	5	0	0	0	0
Total Volume	1	35	0	36	4	0	2	6	0	31	7	38	0	0	0	0
% App. Total	2.8	97.2	0		66.7	0	33.3		0	81.6	18.4		0	0	0	
PHF	250	625	000	643	500	000	500	500	000	775	438	864	000	000	000	000

City of Fontana N/S: Cherry Avenue E/W: Randall Avenue Weather: Clear

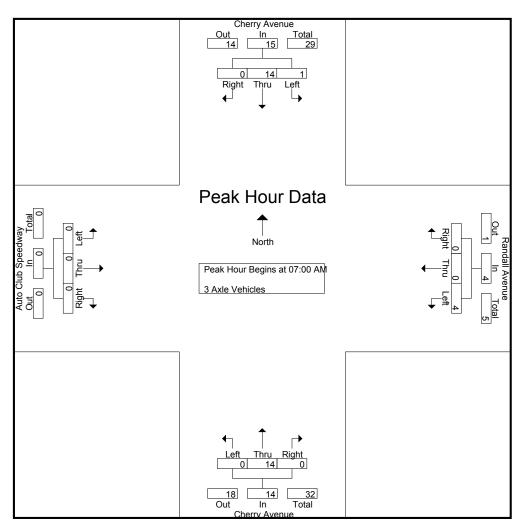
File Name: FONCHRAAM Site Code: 20116023 Start Date : 1/12/2016 Page No : 1

Groups Printed- 3 Axle Vehicles

							TOUPO I	milea o	, ,,,,,, , , , , , , , , , , , , , , ,	01110100							
		Cherry	Avenu	e		Randa	II Avenu	ıe		Cherry	/ Avenu	е	Au	to Club	Speed	lway	
		South	nbound			Wes	tbound			Norti	hbound			East	bound	-	
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	1	0	1	1	0	0	1	0	2	0	2	0	0	0	0	4
07:15 AM	1	4	0	5	0	0	0	0	0	4	0	4	0	0	0	0	9
07:30 AM	0	5	0	5	2	0	0	2	0	3	0	3	0	0	0	0	10
07:45 AM	0	4	0	4	1	0	0	1	0	5	0	5	0	0	0	0	10
Total	1	14	0	15	4	0	0	4	0	14	0	14	0	0	0	0	33
08:00 AM	0	5	0	5	0	0	0	0	0	5	0	5	0	0	0	0	10
08:15 AM	0	5	0	5	0	0	0	0	1	4	2	7	0	0	0	0	12
08:30 AM	0	7	0	7	0	0	0	0	1	7	0	8	0	0	0	0	15
08:45 AM	0	4	0	4	0	0	0	0	0	1	0	1	0	0	0	0	5_
Total	0	21	0	21	0	0	0	0	2	17	2	21	0	0	0	0	42
Grand Total	1	35	0	36	4	0	0	4	2	31	2	35	0	0	0	0	75
Apprch %	2.8	97.2	0		100	0	0		5.7	88.6	5.7		0	0	0		
Total %	1.3	46.7	0	48	5.3	0	0	5.3	2.7	41.3	2.7	46.7	0	0	0	0	

			Cherry	Avenue	е		Randal	I Avenu	ie		Cherry	Avenu	е	Au	ito Club	Speed	way	
			South	bound			West	tbound			North	bound			East	bound	-	
	Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
ĺ	Peak Hour Ana	lysis Fr	om 07:0	00 AM t	o 07:45 A	M - Pea	k 1 of 1	1								_		
	Peak Hour for E	Entire In	tersecti	ion Beg	ins at 07:	00 AM												
	07:00 AM	0	1	0	1	1	0	0	1	0	2	0	2	0	0	0	0	4
	07:15 AM	1	4	0	5	0	0	0	0	0	4	0	4	0	0	0	0	9
	07:30 AM	0	5	0	5	2	0	0	2	0	3	0	3	0	0	0	0	10
	07:45 AM	0	4	0	4	1	0	0	1	0	5	0	5	0	0	0	0	10_
	Total Volume	1	14	0	15	4	0	0	4	0	14	0	14	0	0	0	0	33
	% App. Total	6.7	93.3	0		100	0	0		0	100	0		0	0	0		
	PHF	.250	.700	.000	.750	.500	.000	.000	.500	.000	.700	.000	.700	.000	.000	.000	.000	.825

File Name: FONCHRAAM Site Code : 20116023 Start Date : 1/12/2016 Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1 Peak Hour for Each Approach Begins at:

I Cak Hour lor	Luoii / t	pprodo	i Degiii	o ut.												
	07:00 AM	1			07:00 AM	1			07:00 AN	Л			07:00 AM	1		
+0 mins.	0	1	0	1	1	0	0	1	0	2	0	2	0	0	0	0
+15 mins.	1	4	0	5	0	0	0	0	0	4	0	4	0	0	0	0
+30 mins.	0	5	0	5	2	0	0	2	0	3	0	3	0	0	0	0
+45 mins.	0	4	0	4	1	0	0	1	0	5	0	5	0	0	0	0
Total Volume	1	14	0	15	4	0	0	4	0	14	0	14	0	0	0	0
% App. Total	6.7	93.3	0		100	0	0		0	100	0		0	0	0	
PHF	.250	.700	.000	.750	.500	.000	.000	.500	.000	.700	.000	.700	.000	.000	.000	.000

City of Fontana N/S: Cherry Avenue E/W: Randall Avenue Weather: Clear

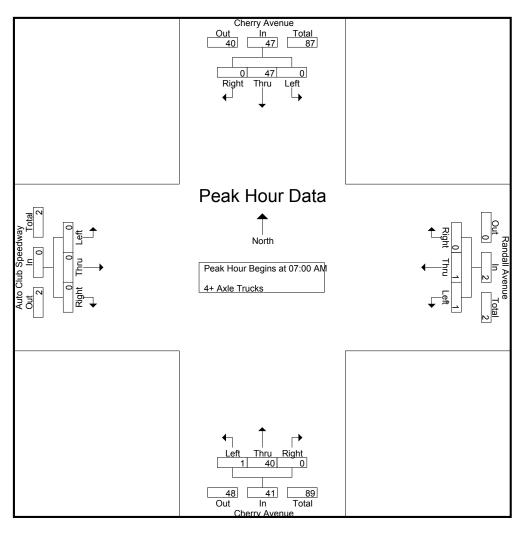
File Name: FONCHRAAM Site Code: 20116023 Start Date : 1/12/2016 Page No : 1

Groups Printed- 4+ Axle Trucks

							roups i	<u> miniea- 4</u>	+ Axie	TUCKS							
		Cherry	Avenu	е		Randal	I Avenu	ie		Cherry	/ Avenu	е	Au	to Club	Speed	lway	
		South	nbound			West	tbound			North	nbound			East	tbound		
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	8	0	8	0	0	0	0	0	12	0	12	0	0	0	0	20
07:15 AM	0	12	0	12	0	1	0	1	0	9	0	9	0	0	0	0	22
07:30 AM	0	16	0	16	1	0	0	1	0	12	0	12	0	0	0	0	29
07:45 AM	0	11	0	11	0	0	0	0	1	7	0	8	0	0	0	0	19
Total	0	47	0	47	1	1	0	2	1	40	0	41	0	0	0	0	90
08:00 AM	0	20	0	20	0	0	0	0	0	5	0	5	0	0	2	2	27
08:15 AM	0	10	0	10	0	0	0	0	0	11	1	12	0	0	0	0	22
08:30 AM	0	11	0	11	0	0	0	0	0	8	1	9	0	0	0	0	20
08:45 AM	0	11	0	11	0	0	0	0	0	13	0	13	0	0	0	0	24
Total	0	52	0	52	0	0	0	0	0	37	2	39	0	0	2	2	93
Grand Total	0	99	0	99	1	1	0	2	1	77	2	80	0	0	2	2	183
Apprch %	0	100	0		50	50	0		1.2	96.2	2.5		0	0	100		
Total %	0	54.1	0	54.1	0.5	0.5	0	1.1	0.5	42.1	1.1	43.7	0	0	1.1	1.1	

		Cherry	Avenue	е		Randal	ll Avenu	е		Cherry	Avenu	е	Αu	ito Club	Speed	way	
		South	nbound			West	tbound			North	nbound			East	bound		
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Ana	alysis Fro	om 07:0	00 AM to	o 07:45 A	M - Pea	ak 1 of 1	1										
Peak Hour for I	Entire In	tersect	ion Beg	ins at 07:	00 AM												
07:00 AM	0	8	0	8	0	0	0	0	0	12	0	12	0	0	0	0	20
07:15 AM	0	12	0	12	0	1	0	1	0	9	0	9	0	0	0	0	22
07:30 AM	0	16	0	16	1	0	0	1	0	12	0	12	0	0	0	0	29
07:45 AM	0	11	0	11	0	0	0	0	1	7	0	8	0	0	0	0	19
Total Volume	0	47	0	47	1	1	0	2	1	40	0	41	0	0	0	0	90
% App. Total	0	100	0		50	50	0		2.4	97.6	0		0	0	0		
PHF	.000	.734	.000	.734	.250	.250	.000	.500	.250	.833	.000	.854	.000	.000	.000	.000	.776

File Name: FONCHRAAM Site Code : 20116023 Start Date : 1/12/2016 Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1

Peak Hour for	Each Ap	proact	n Begins	at:												
	07:00 AM				07:00 AM	I			07:00 AN	Л			07:00 AM	I		
+0 mins.	0	8	0	8	0	0	0	0	0	12	0	12	0	0	0	0
+15 mins.	0	12	0	12	0	1	0	1	0	9	0	9	0	0	0	0
+30 mins.	0	16	0	16	1	0	0	1	0	12	0	12	0	0	0	0
+45 mins.	0	11	0	11	0	0	0	0	1	7	0	8	0	0	0	0
Total Volume	0	47	0	47	1	1	0	2	1	40	0	41	0	0	0	0
% App. Total	0	100	0		50	50	0		2.4	97.6	0		0	0	0	
PHF	000	734	000	734	250	250	000	500	250	833	000	854	000	000	000	000

2.6

5

4+ Axle Trucks

% 4+ Axle Trucks

51

3.6

0

0

56 3.5

3 1.8

0

0

1 0.6

File Name: FONCHRAPM Site Code : 20116023 Start Date : 1/12/2016 Page No : 1

0

127 2.7

			Gr	oups P	rinted- Pa	assenge	er Vehic	cles - La	arge 2 Ax	le Vehi	cles - 3	Axle V	ehicles -	4+ Axle	Truck	s		
			Cherry	Avenu	e		Randal	II Avenu	ıe a		Cherry	/ Avenu	е	Au	to Club	Speed	lway	
			Soutl	nbound			West	tbound			North	bound			East	bound		
Į	Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
	04:00 PM	22	216	0	238	24	1	18	43	4	274	38	316	2	0	2	4	601
	04:15 PM	22	182	0	204	26	0	21	47	5	274	26	305	1	0	2	3	559
	04:30 PM	33	223	0	256	27	0	18	45	4	262	22	288	1	0	3	4	593
	04:45 PM	23	161	2	186	21	0	16	37	4	319	28	351	1	0	4	5	579
	Total	100	782	2	884	98	1	73	172	17	1129	114	1260	5	0	11	16	2332
	05:00 PM	23	195	1	219	20	0	33	53	0	338	42	380	4	0	12	16	668
	05:15 PM	24	157	1	182	18	0	20	38	1	323	48	372	4	3	4	11	603
	05:30 PM	17	143	0	160	18	0	15	33	0	325	30	355	3	0	1	4	552
	05:45 PM	28	124	0	152	17	0	19	36	1	238	34	273	1	0	3	4	465
	Total	92	619	2	713	73	0	87	160	2	1224	154	1380	12	3	20	35	2288
	Grand Total	192	1401	4	1597	171	1	160	332	19	2353	268	2640	17	3	31	51	4620
	Apprch %	12	87.7	0.3		51.5	0.3	48.2		0.7	89.1	10.2		33.3	5.9	60.8		
	Total %	4.2	30.3	0.1	34.6	3.7	0	3.5	7.2	0.4	50.9	5.8	57.1	0.4	0.1	0.7	1.1	
	Passenger Vehicles	184	1246	4	1434	160	1	154	315	19	2203	256	2478	15	2	31	48	4275
	% Passenger Vehicles	95.8	88.9	100	89.8	93.6	100	96.2	94.9	100	93.6	95.5	93.9	88.2	66.7	100	94.1	92.5
	Large 2 Axle Vehicles	2	60	0	62	4	0	5	9	0	49	6	55	2	1	0	3	129
	% Large 2 Axle Vehicles	1	4.3	0	3.9	2.3	0	3.1	2.7	0	2.1	2.2	2.1	11.8	33.3	0	5.9	2.8
	3 Axle Vehicles	1	44	0	45	4	0	0	4	0	40	0	40	0	0	0	0	89
	% 3 Axle Vehicles	0.5	3.1	0	2.8	2.3	0	0	1.2	0	1.7	0	1.5	0	0	0	0	1.9

61 2.6

0

67 2.5

0

0

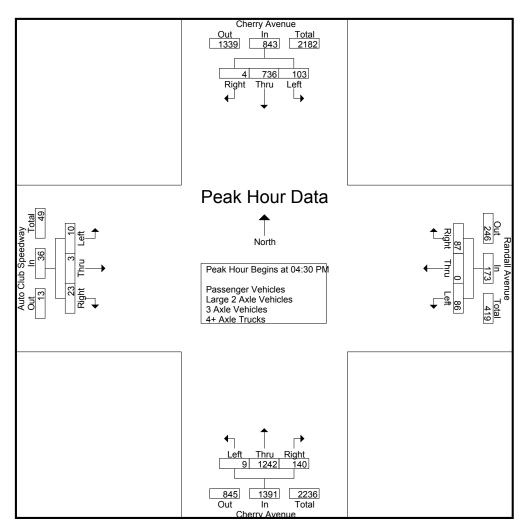
0

6 2.2

		Cherry	Avenu	е		Randal	I Avenu	ie		Cherry	Avenu	е	Αu	ito Club	Speed	way	
		South	bound			West	bound			North	nbound			East	bound		
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Ana	alysis Fr	om 04:0	00 PM t	o 05:45 P	M - Pea	ak 1 of 1	1										
Peak Hour for I	Entire In	tersecti	on Beg	ins at 04:	30 PM												
04:30 PM	33	223	0	256	27	0	18	45	4	262	22	288	1	0	3	4	593
04:45 PM	23	161	2	186	21	0	16	37	4	319	28	351	1	0	4	5	579
05:00 PM	23	195	1	219	20	0	33	53	0	338	42	380	4	0	12	16	668
05:15 PM	24	157	1	182	18	0	20	38	1	323	48	372	4	3	4	11	603
Total Volume	103	736	4	843	86	0	87	173	9	1242	140	1391	10	3	23	36	2443
% App. Total	12.2	87.3	0.5		49.7	0	50.3		0.6	89.3	10.1		27.8	8.3	63.9		
PHF	.780	.825	.500	.823	.796	.000	.659	.816	.563	.919	.729	.915	.625	.250	.479	.563	.914

4 1.2

File Name: FONCHRAPM Site Code : 20116023 Start Date : 1/12/2016 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1 Peak Hour for Each Approach Begins at:

reak noul loi	LacinA	pproac	n begins	o al.												
	04:00 PM	1			04:15 PM	1			04:45 PN	1			04:30 PM			
+0 mins.	22	216	0	238	26	0	21	47	4	319	28	351	1	0	3	4
+15 mins.	22	182	0	204	27	0	18	45	0	338	42	380	1	0	4	5
+30 mins.	33	223	0	256	21	0	16	37	1	323	48	372	4	0	12	16
+45 mins.	23	161	2	186	20	0	33	53	0	325	30	355	4	3	4	11
Total Volume	100	782	2	884	94	0	88	182	5	1305	148	1458	10	3	23	36
% App. Total	11.3	88.5	0.2		51.6	0	48.4		0.3	89.5	10.2		27.8	8.3	63.9	
PHF	.758	.877	.250	.863	.870	.000	.667	.858	.313	.965	.771	.959	.625	.250	.479	.563

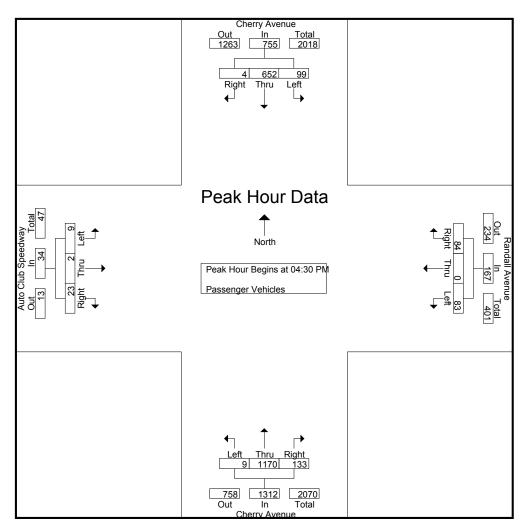
File Name: FONCHRAPM Site Code: 20116023 Start Date : 1/12/2016 Page No : 1

Groups	Printed-	Passenger	Vehicles

			Cherry	Avenu	е			II Avenu	ie .			Avenu	е	Au	to Club	Speed	way	
				nbound			West	tbound			Norti	nbound				bound	,	
	Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
	04:00 PM	21	191	0	212	18	1	18	37	4	250	37	291	2	0	2	4	544
	04:15 PM	20	158	0	178	24	0	20	44	5	247	25	277	1	0	2	3	502
	04:30 PM	31	192	0	223	27	0	17	44	4	240	19	263	1	0	3	4	534
_	04:45 PM	21	144	2	167	21	0	16	37	4	301	25	330	1	0	4	5	539
	Total	93	685	2	780	90	1	71	162	17	1038	106	1161	5	0	11	16	2119
	05:00 PM	23	174	1	198	18	0	31	49	0	317	41	358	4	0	12	16	621
	05:15 PM	24	142	1	167	17	0	20	37	1	312	48	361	3	2	4	9	574
	05:30 PM	17	132	0	149	18	0	15	33	0	310	28	338	3	0	1	4	524
	05:45 PM	27	113	0	140	17	0	17	34	1_	226	33	260	0	0	3	3	437
	Total	91	561	2	654	70	0	83	153	2	1165	150	1317	10	2	20	32	2156
	Grand Total	184	1246	4	1434	160	1	154	315	19	2203	256	2478	15	2	31	48	4275
	Apprch %	12.8	86.9	0.3		50.8	0.3	48.9		8.0	88.9	10.3		31.2	4.2	64.6		
	Total %	4.3	29.1	0.1	33.5	3.7	0	3.6	7.4	0.4	51.5	6	58	0.4	0	0.7	1.1	

		Cherry	Avenue	е		Randal	I Avenu	ie		Cherry	/ Avenu	е	Αu	to Club	Speed	way	
		South	nbound			West	tbound			North	nbound			East	bound		
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Ana	alysis Fr	om 04:3	30 PM to	o 05:15 P	M - Pea	k 1 of 1	1				_				_		
Peak Hour for I	Entire Ir	ntersect	ion Beg	ins at 04:	30 PM												
04:30 PM	31	192	0	223	27	0	17	44	4	240	19	263	1	0	3	4	534
04:45 PM	21	144	2	167	21	0	16	37	4	301	25	330	1	0	4	5	539
05:00 PM	23	174	1	198	18	0	31	49	0	317	41	358	4	0	12	16	621
05:15 PM	24	142	1	167	17	0	20	37	1	312	48	361	3	2	4	9	574
Total Volume	99	652	4	755	83	0	84	167	9	1170	133	1312	9	2	23	34	2268
% App. Total	13.1	86.4	0.5		49.7	0	50.3		0.7	89.2	10.1		26.5	5.9	67.6		
PHF	.798	.849	.500	.846	.769	.000	.677	.852	.563	.923	.693	.909	.563	.250	.479	.531	.913

File Name: FONCHRAPM Site Code : 20116023 Start Date : 1/12/2016 Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1

Peak Hour for	Each A	Approach	Begins at:
	04:30 P	M	-

Peak Hour for	Each A	pproacr	n Begins	s at:												
	04:30 PM	1			04:30 PM	I			04:30 PI	И			04:30 PM			
+0 mins.	31	192	0	223	27	0	17	44	4	240	19	263	1	0	3	4
+15 mins.	21	144	2	167	21	0	16	37	4	301	25	330	1	0	4	5
+30 mins.	23	174	1	198	18	0	31	49	0	317	41	358	4	0	12	16
+45 mins.	24	142	1	167	17	0	20	37	1	312	48	361	3	2	4	9
Total Volume	99	652	4	755	83	0	84	167	9	1170	133	1312	9	2	23	34
_ % App. Total	13.1	86.4	0.5		49.7	0	50.3		0.7	89.2	10.1		26.5	5.9	67.6	
PHF	798	849	500	846	769	000	677	852	563	923	693	909	563	250	479	531

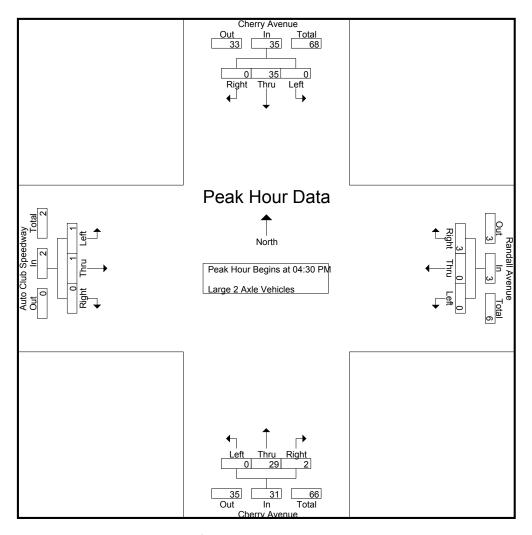
File Name: FONCHRAPM Site Code: 20116023 Start Date : 1/12/2016 Page No : 1

Groups Printed- Large 2 Axle Ve	/ehicles
---------------------------------	----------

							•		<u> </u>								
		Cherry	Avenu	e				ıe		Cherry	/ Avenu	е	Au			way	
		South	nbound			West	tbound			North	nbound			East	bound		
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	12	0	12	4	0	0	4	0	8	1	9	0	0	0	0	25
04:15 PM	1	9	0	10	0	0	1	1	0	8	0	8	0	0	0	0	19
04:30 PM	0	16	0	16	0	0	1	1	0	8	1	9	0	0	0	0	26
04:45 PM	0	7	0	7	0	0	0	0	0	8	1	9	0	0	0	0	16
Total	1	44	0	45	4	0	2	6	0	32	3	35	0	0	0	0	86
05:00 PM	0	10	0	10	0	0	2	2	0	10	0	10	0	0	0	0	22
05:15 PM	0	2	0	2	0	0	0	0	0	3	0	3	1	1	0	2	7
05:30 PM	0	2	0	2	0	0	0	0	0	3	2	5	0	0	0	0	7
05:45 PM	1	2	0	3	0	0	1	1	0	1	1	2	1	0	0	1	7
Total	1	16	0	17	0	0	3	3	0	17	3	20	2	1	0	3	43
Grand Total	2	60	0	62	4	0	5	9	0	49	6	55	2	1	0	3	129
Apprch %	3.2	96.8	0		44.4	0	55.6		0	89.1	10.9		66.7	33.3	0		
Total %	1.6	46.5	0	48.1	3.1	0	3.9	7	0	38	4.7	42.6	1.6	8.0	0	2.3	
	04:00 PM 04:15 PM 04:30 PM 04:45 PM Total 05:00 PM 05:15 PM 05:30 PM 05:45 PM Total Grand Total Apprch %	Start Time Left 04:00 PM 0 04:15 PM 1 04:30 PM 0 04:45 PM 0 Total 1 05:00 PM 0 05:15 PM 0 05:30 PM 0 05:45 PM 1 Total 1 Grand Total 2 Apprch % 3.2	Start Time Left Thru 04:00 PM 0 12 04:15 PM 1 9 04:30 PM 0 16 04:45 PM 0 7 Total 1 44 05:00 PM 0 10 05:15 PM 0 2 05:30 PM 0 2 05:45 PM 1 2 Total 1 16 Grand Total Apprch % 2 60 3.2 96.8	Start Time Left Thru Right 04:00 PM 0 12 0 04:15 PM 1 9 0 04:30 PM 0 16 0 04:45 PM 0 7 0 Total 1 44 0 05:00 PM 0 10 0 05:15 PM 0 2 0 05:30 PM 0 2 0 05:45 PM 1 2 0 Total 1 16 0 Grand Total 2 60 0 Apprch % 3.2 96.8 0	Start Time Left Thru Right App. Total 04:00 PM 0 12 0 12 04:15 PM 1 9 0 10 04:30 PM 0 16 0 16 04:45 PM 0 7 0 7 Total 1 44 0 45 05:00 PM 0 10 0 10 05:15 PM 0 2 0 2 05:30 PM 0 2 0 2 05:45 PM 1 2 0 3 Total 1 16 0 17 Grand Total 2 60 0 62 Apprch % 3.2 96.8 0 62	Southbound Start Time Left Thru Right App. Total Left 04:00 PM 0 12 0 12 4 04:15 PM 1 9 0 10 0 04:30 PM 0 16 0 16 0 04:45 PM 0 7 0 7 0 Total 1 44 0 45 4 05:00 PM 0 10 0 10 0 05:15 PM 0 2 0 2 0 05:30 PM 0 2 0 2 0 05:45 PM 1 2 0 3 0 Total 1 16 0 17 0 Grand Total 2 60 0 62 4 Apprich % 3.2 96.8 0 44.4.4	Southbound West Start Time Left Thru Right Appr. Total Left Thru 04:00 PM 0 12 0 12 4 0 04:15 PM 1 9 0 10 0 0 04:30 PM 0 16 0 16 0 0 04:45 PM 0 7 0 7 0 0 Total 1 44 0 45 4 0 05:00 PM 0 10 0 10 0 0 05:15 PM 0 2 0 2 0 0 05:30 PM 0 2 0 2 0 0 05:45 PM 1 2 0 3 0 0 Total 1 16 0 17 0 0 Grand Total 2 60 0 62 4 0 <	Cherry Avenue Southbound Randall Avenue Westbound Start Time Left Thru Right App. Total Left Thru Right 04:00 PM 0 12 0 12 4 0 0 04:15 PM 1 9 0 10 0 0 1 04:30 PM 0 16 0 16 0 0 1 04:45 PM 0 7 0 7 0 0 0 Total 1 44 0 45 4 0 2 05:00 PM 0 10 0 10 0 0 2 05:15 PM 0 2 0 2 0 0 0 05:30 PM 0 2 0 2 0 0 0 05:45 PM 1 2 0 3 0 0 1	Cherry Avenue Southbound Randall Avenue Westbound Start Time Left Thru Right App. Total 04:00 PM 0 12 0 12 4 0 0 4 04:00 PM 0 12 0 12 4 0 0 4 04:15 PM 1 9 0 10 0 0 1 1 04:30 PM 0 16 0 16 0 0 1 1 04:45 PM 0 7 0 7 0 0 0 0 0 Total 1 44 0 45 4 0 2 2 05:00 PM 0 10 0 10 0 0 2 2 05:15 PM 0 2 0 2 0 0 0 0 05:30 PM 0 2 0 2	Cherry Avenue Southbound Randall Avenue Westbound Start Time Left Thru Right Avenue Westbound Start Time Left Thru Right Appr. Total 1 0	Cherry Avenue Southbound Randall Avenue Westbound Cherry North North Start Time Left Thru Randall Avenue Westbound Cherry North Start Time Left Thru Right App. Total Left Thru App. Total Left Thru 0 App. Total Left Thru 0 App. Total 1 0 8 O 0 0 0 0 0 Clear Thru 0 0 0 0 0 0 0 0 0 <th< td=""><td>Cherry Avenue Southbound Randall Avenue Westbound Cherry Avenue Northbound Start Time Left Thru Right Avenue Westbound Cherry Avenue Northbound Start Time Left Thru Right App. Total App. Total D<!--</td--><td>Cherry Avenue South-bound Randall Avenue Westbound Cherry Avenue North-bound Start Time Left Thru Right Avenue Westbound Cherry Avenue North-bound Start Time Left Thru Right App. Total Left Thru Right App. Total 04:00 PM 0 12 0 12 4 0 0 4 0 8 1 9 04:15 PM 1 9 0 10 0 0 1 1 0 8 1 9 04:30 PM 0 16 0 16 0 0 1 1 0 8 1 9 04:45 PM 0 7 0 7 0 0 0 0 8 1 9 05:00 PM 0 10 0 0 2 2 0 10 0 10 05:15 PM <</td><td> Cherry Avenue South-bound Westbound North-bound North-bound North-bound North-bound North-bound </td><td> Cherry Avenue South-bound Westbound Westbound North-bound East </td><td> Cherry Avenue South-bound Westbound Westbound North-bound North-bound Eastbound </td><td> Start Time Left Thru Right App. Total L</td></td></th<>	Cherry Avenue Southbound Randall Avenue Westbound Cherry Avenue Northbound Start Time Left Thru Right Avenue Westbound Cherry Avenue Northbound Start Time Left Thru Right App. Total App. Total D </td <td>Cherry Avenue South-bound Randall Avenue Westbound Cherry Avenue North-bound Start Time Left Thru Right Avenue Westbound Cherry Avenue North-bound Start Time Left Thru Right App. Total Left Thru Right App. Total 04:00 PM 0 12 0 12 4 0 0 4 0 8 1 9 04:15 PM 1 9 0 10 0 0 1 1 0 8 1 9 04:30 PM 0 16 0 16 0 0 1 1 0 8 1 9 04:45 PM 0 7 0 7 0 0 0 0 8 1 9 05:00 PM 0 10 0 0 2 2 0 10 0 10 05:15 PM <</td> <td> Cherry Avenue South-bound Westbound North-bound North-bound North-bound North-bound North-bound </td> <td> Cherry Avenue South-bound Westbound Westbound North-bound East </td> <td> Cherry Avenue South-bound Westbound Westbound North-bound North-bound Eastbound </td> <td> Start Time Left Thru Right App. Total L</td>	Cherry Avenue South-bound Randall Avenue Westbound Cherry Avenue North-bound Start Time Left Thru Right Avenue Westbound Cherry Avenue North-bound Start Time Left Thru Right App. Total Left Thru Right App. Total 04:00 PM 0 12 0 12 4 0 0 4 0 8 1 9 04:15 PM 1 9 0 10 0 0 1 1 0 8 1 9 04:30 PM 0 16 0 16 0 0 1 1 0 8 1 9 04:45 PM 0 7 0 7 0 0 0 0 8 1 9 05:00 PM 0 10 0 0 2 2 0 10 0 10 05:15 PM <	Cherry Avenue South-bound Westbound North-bound North-bound North-bound North-bound North-bound	Cherry Avenue South-bound Westbound Westbound North-bound East	Cherry Avenue South-bound Westbound Westbound North-bound North-bound Eastbound	Start Time Left Thru Right App. Total L

		Cherry	Avenue	е		Randal	l Avenu	е		Cherry	/ Avenu	е	Αu	to Club	Speed	way	
		South	nbound			West	bound			North	nbound			East	bound	-	
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Ana	ilysis Fr	om 04:	30 PM to	o 05:15 P	M - Pea	k 1 of 1					_				_		
Peak Hour for I	Entire In	tersect	ion Beg	ins at 04:	30 PM												
04:30 PM	0	16	0	16	0	0	1	1	0	8	1	9	0	0	0	0	26
04:45 PM	0	7	0	7	0	0	0	0	0	8	1	9	0	0	0	0	16
05:00 PM	0	10	0	10	0	0	2	2	0	10	0	10	0	0	0	0	22
05:15 PM	0	2	0	2	0	0	0	0	0	3	0	3	1	1	0	2	7_
Total Volume	0	35	0	35	0	0	3	3	0	29	2	31	1	1	0	2	71
% App. Total	0	100	0		0	0	100		0	93.5	6.5		50	50	0		
PHF	.000	.547	.000	.547	.000	.000	.375	.375	.000	.725	.500	.775	.250	.250	.000	.250	.683

File Name: FONCHRAPM Site Code : 20116023 Start Date : 1/12/2016 Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1

Peak Hour for	Each Ap	proacr	n Begins	s at:												
	04:30 PM				04:30 PM	I			04:30 PN	Л			04:30 PM	I		
+0 mins.	0	16	0	16	0	0	1	1	0	8	1	9	0	0	0	0
+15 mins.	0	7	0	7	0	0	0	0	0	8	1	9	0	0	0	0
+30 mins.	0	10	0	10	0	0	2	2	0	10	0	10	0	0	0	0
+45 mins.	0	2	0	2	0	0	0	0	0	3	0	3	1	1	0	2
Total Volume	0	35	0	35	0	0	3	3	0	29	2	31	1	1	0	2
% App. Total	0	100	0		0	0	100		0	93.5	6.5		50	50	0	
PHF	000	547	000	547	000	000	375	375	000	725	500	775	250	250	000	250

City of Fontana N/S: Cherry Avenue E/W: Randall Avenue Weather: Clear

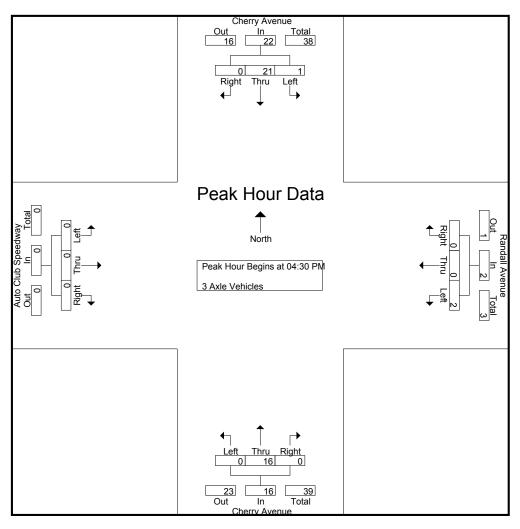
File Name: FONCHRAPM Site Code : 20116023 Start Date : 1/12/2016 Page No : 1

Groups Printed- 3 Axle Vehicles

								TITILE U- 3	/ IXIC V	21110103							
		Cherry	Avenu	e		Randa	II Avenu	ue eu		Cherry	/ Avenu	е	Au	to Club	Speed	lway	
		Soutl	nbound			Wes	tbound			North	nbound			East	bound		
Start Time	e Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PN	1 0	7	0	7	1	0	0	1	0	5	0	5	0	0	0	0	13
04:15 PN	1 0	9	0	9	1	0	0	1	0	8	0	8	0	0	0	0	18
04:30 PN	1 1	6	0	7	0	0	0	0	0	3	0	3	0	0	0	0	10
04:45 PN	1 0	5	0	5	0	0	0	0	0	4	0	4	0	0	0	0	9
Tota	ıl 1	27	0	28	2	0	0	2	0	20	0	20	0	0	0	0	50
05:00 PN	1 0	7	0	7	1	0	0	1	0	6	0	6	0	0	0	0	14
05:15 PN	1 0	3	0	3	1	0	0	1	0	3	0	3	0	0	0	0	7
05:30 PN	1 0	3	0	3	0	0	0	0	0	7	0	7	0	0	0	0	10
05:45 PN	1 0	4	0	4	0	0	0	0	0	4	0	4	0	0	0	0	8_
Tota	ıl 0	17	0	17	2	0	0	2	0	20	0	20	0	0	0	0	39
Grand Tota	ıl 1	44	0	45	4	0	0	4	0	40	0	40	0	0	0	0	89
Apprch %	6 2.2	97.8	0		100	0	0		0	100	0		0	0	0		
Total %		49.4	0	50.6	4.5	0	0	4.5	0	44.9	0	44.9	0	0	0	0	

		Cherry	Avenue	е		Randal	I Avenu	е		Cherry	Avenu	е	Au	ito Club	Speed	way	
		South	bound			West	bound			North	bound			East	bound	•	
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Ana	lysis Fro	om 04:3	BO PM to	o 05:15 P	M - Pea	k 1 of 1	1								_		
Peak Hour for I	Entire In	tersecti	on Beg	ins at 04:	30 PM												
04:30 PM	1	6	0	7	0	0	0	0	0	3	0	3	0	0	0	0	10
04:45 PM	0	5	0	5	0	0	0	0	0	4	0	4	0	0	0	0	9
05:00 PM	0	7	0	7	1	0	0	1	0	6	0	6	0	0	0	0	14
05:15 PM	0	3	0	3	1_	0	0	1	0	3	0	3	0	0	0	0	7
Total Volume	1	21	0	22	2	0	0	2	0	16	0	16	0	0	0	0	40
% App. Total	4.5	95.5	0		100	0	0		0	100	0		0	0	0		
PHF	.250	.750	.000	.786	.500	.000	.000	.500	.000	.667	.000	.667	.000	.000	.000	.000	.714

File Name: FONCHRAPM Site Code : 20116023 Start Date : 1/12/2016 Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1

Peak Hour for	Each Approx	ach Be	egins at:
	04:30 PM		-

Peak Hour for	Each A	pproact	n Begins	s at:												
	04:30 PM	I			04:30 PM				04:30 PM	1			04:30 PM			
+0 mins.	1	6	0	7	0	0	0	0	0	3	0	3	0	0	0	0
+15 mins.	0	5	0	5	0	0	0	0	0	4	0	4	0	0	0	0
+30 mins.	0	7	0	7	1	0	0	1	0	6	0	6	0	0	0	0
+45 mins.	0	3	0	3	1	0	0	1	0	3	0	3	0	0	0	0
Total Volume	1	21	0	22	2	0	0	2	0	16	0	16	0	0	0	0
% App. Total	4.5	95.5	0		100	0	0		0	100	0		0	0	0	
PHF	250	750	000	786	500	000	000	500	000	667	000	667	000	000	000	000

City of Fontana N/S: Cherry Avenue E/W: Randall Avenue Weather: Clear

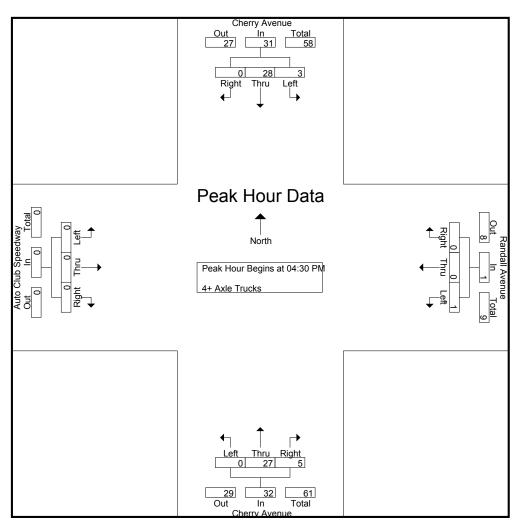
File Name: FONCHRAPM Site Code: 20116023 Start Date : 1/12/2016 Page No : 1

Groups Printed- 4+ Axle Trucks

						<u>G</u>	roups r	rintea- 4	+ Axie	TUCKS							
		Cherry	Avenue	:		Randal	I Avenι	ıe		Cherry	/ Avenu	е	Au	to Club	Speed	lway	
		South	nbound			West	bound			Norti	nbound			East	bound	-	
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	1	6	0	7	1	0	0	1	0	11	0	11	0	0	0	0	19
04:15 PM	1	6	0	7	1	0	0	1	0	11	1	12	0	0	0	0	20
04:30 PM	1	9	0	10	0	0	0	0	0	11	2	13	0	0	0	0	23
04:45 PM	2	5	0	7	0	0	0	0	0	6	2	8	0	0	0	0	15
Total	5	26	0	31	2	0	0	2	0	39	5	44	0	0	0	0	77
05:00 PM	0	4	0	4	1	0	0	1	0	5	1	6	0	0	0	0	11
05:15 PM	0	10	0	10	0	0	0	0	0	5	0	5	0	0	0	0	15
05:30 PM	0	6	0	6	0	0	0	0	0	5	0	5	0	0	0	0	11
05:45 PM	0	5	0	5	0	0	1	1	0	7	0	7	0	0	0	0	13
Total	0	25	0	25	1	0	1	2	0	22	1	23	0	0	0	0	50
Grand Total	5	51	0	56	3	0	1	4	0	61	6	67	0	0	0	0	127
Apprch %	8.9	91.1	0		75	0	25		0	91	9		0	0	0		
Total %		40.2	0	44.1	2.4	0	8.0	3.1	0	48	4.7	52.8	0	0	0	0	

		Cherry	Avenue	е		Randal	ll Avenu	ie		Cherry	Avenu	е	Αu	ito Club	Speed	way	
		South	nbound			West	tbound			North	nbound			East	bound	-	
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Ana	alysis Fro	om 04:	30 PM to	o 05:15 P	M - Pea	k 1 of 1	1				_				_		
Peak Hour for I	Entire In	tersect	ion Beg	ins at 04:	30 PM												
04:30 PM	1	9	0	10	0	0	0	0	0	11	2	13	0	0	0	0	23
04:45 PM	2	5	0	7	0	0	0	0	0	6	2	8	0	0	0	0	15
05:00 PM	0	4	0	4	1	0	0	1	0	5	1	6	0	0	0	0	11
05:15 PM	0	10	0	10	0	0	0	0	0	5	0	5	0	0	0	0	15
Total Volume	3	28	0	31	1	0	0	1	0	27	5	32	0	0	0	0	64
% App. Total	9.7	90.3	0		100	0	0		0	84.4	15.6		0	0	0		
PHF	.375	.700	.000	.775	.250	.000	.000	.250	.000	.614	.625	.615	.000	.000	.000	.000	.696

File Name: FONCHRAPM Site Code : 20116023 Start Date : 1/12/2016 Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1

Peak Hour for	Each Ap	oproact	n Begins	s at:												
	04:30 PM				04:30 PM	I			04:30 PN	Л			04:30 PM	I		
+0 mins.	1	9	0	10	0	0	0	0	0	11	2	13	0	0	0	0
+15 mins.	2	5	0	7	0	0	0	0	0	6	2	8	0	0	0	0
+30 mins.	0	4	0	4	1	0	0	1	0	5	1	6	0	0	0	0
+45 mins.	0	10	0	10	0	0	0	0	0	5	0	5	0	0	0	0
Total Volume	3	28	0	31	1	0	0	1	0	27	5	32	0	0	0	0
% App. Total	9.7	90.3	0		100	0	0		0	84.4	15.6		0	0	0	
PHF	375	700	000	775	250	000	000	250	000	614	625	615	000	000	000	000

Location: Fontana N/S: Cherry Avenue E/W: Randall Avenue



Site Code: 201-16023 Date: 1/12/2016 Weather: Clear

PEDESTRIANS

	North Leg Cherry Avenue	East Leg Randall Avenue	South Leg Cherry Avenue	West Leg Entry Road	TOTAL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	1	0	0	1
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	1	0	0	1

	North Leg Cherry Avenue	East Leg Randall Avenue	South Leg Cherry Avenue	West Leg Entry Road	TOTAL
4:00 PM	0	0	0	0	0
4:15 PM	0	1	0	0	1
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	1	0	0	1
5:15 PM	0	0	0	1	1
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	2	0	1	3

Location: Fontana N/S: Cherry Avenue E/W: Randall Avenue



Site Code: 201-16023 Date: 1/12/2016 Weather: Clear

BICYCLES

	North Leg Cherry Avenue	East Leg Randall Avenue	South Leg Cherry Avenue	West Leg Entry Road	TOTAL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

	North Leg Cherry Avenue	East Leg Randall Avenue	South Leg Cherry Avenue	West Leg Entry Road	TOTAL
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	1	1
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	1	1

City of Fontana N/S: Cherry Avenue

E/W: San Bernardino Avenue

Weather: Clear

File Name: FONCHSAAM Site Code : 20116023

Start Date : 1/12/2016 Page No : 1

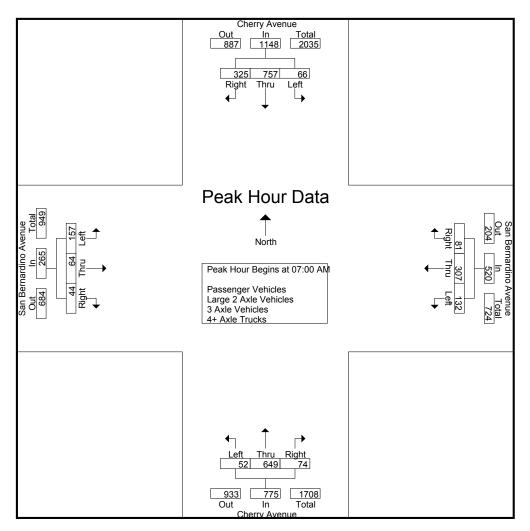
		Gr	oups P	rinted- Pa	assenge	er Vehic	cles - La	arge 2 Ax	le Vehi	cles - 3	Axle V	ehicles -	4+ Axle	Truck	S		
			Avenu				dino A				Avenu				rdino Av	/enue	
		South	nbound			West	bound			North	nbound			East	tbound		
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	14	192	59	265	46	58	24	128	12	152	20	184	42	10	6	58	635
07:15 AM	19	211	73	303	41	71	29	141	7	158	23	188	33	18	12	63	695
07:30 AM	16	167	103	286	35	94	13	142	12	176	19	207	34	17	15	66	701
07:45 AM	17	187	90	294	10	84	15	109	21	163	12	196	48	19	11_	78	677
Total	66	757	325	1148	132	307	81	520	52	649	74	775	157	64	44	265	2708
				1								. 1					1
08:00 AM	15	205	70	290	19	54	9	82	13	154	10	177	43	23	14	80	629
08:15 AM	13	156	45	214	19	51	18	88	11	127	13	151	35	24	6	65	518
08:30 AM	15	148	53	216	21	47	16	84	9	119	13	141	31	28	12	71	512
08:45 AM	17	141	39	197	14	41	9	64	18_	112	11_	141	29	6	10_	45	447
Total	60	650	207	917	73	193	52	318	51	512	47	610	138	81	42	261	2106
								1				ı					i
Grand Total	126	1407	532	2065	205	500	133	838	103	1161	121	1385	295	145	86	526	4814
Apprch %	6.1	68.1	25.8		24.5	59.7	15.9		7.4	83.8	8.7		56.1	27.6	16.3		
Total %	2.6	29.2	11.1	42.9	4.3	10.4	2.8	17.4	2.1	24.1	2.5	28.8	6.1	3	1.8	10.9	
Passenger Vehicles	114	1265	469	1848	184	462	127	773	64	1043	107	1214	259	128	35	422	4257
% Passenger Vehicles	90.5	89.9	88.2	89.5	89.8	92.4	95.5	92.2	62.1	89.8	88.4	87.7	87.8	88.3	40.7	80.2	88.4
Large 2 Axle Vehicles	5	44	20	69	8	9	1	18	2	32	3	37	8	11	5	24	148
% Large 2 Axle Vehicles	4	3.1	3.8	3.3	3.9	1.8	0.8	2.1	1.9	2.8	2.5	2.7	2.7	7.6	5.8	4.6	3.1
3 Axle Vehicles	2	37	7	46	5	9	3	17	9	23	3	35	9	_ 1	8	18	116
% 3 Axle Vehicles	1.6	2.6	1.3	2.2	2.4	1.8	2.3	2	8.7	2	2.5	2.5	3.1	0.7	9.3	3.4	2.4
4+ Axle Trucks	5	61	36	102	8	20	2	30	28	63	8	99	19	5	38	62	293
% 4+ Axle Trucks	4	4.3	6.8	4.9	3.9	4	1.5	3.6	27.2	5.4	6.6	7.1	6.4	3.4	44.2	11.8	6.1

		Cherry	Avenu	е	San	Bernar	dino A	/enue		Cherry	Avenu	е	San	Berna	rdino Av	enue/	
		South	bound			West	bound			North	bound			East	bound		
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Ana	alysis Fro	om 07:0	00 AM t	o 08:45 A	M - Pea	k 1 of 1	1				_						
Peak Hour for I	Entire In	tersecti	ion Beg	ins at 07:	00 AM												
07:00 AM	14	192	59	265	46	58	24	128	12	152	20	184	42	10	6	58	635
07:15 AM	19	211	73	303	41	71	29	141	7	158	23	188	33	18	12	63	695
07:30 AM	16	167	103	286	35	94	13	142	12	176	19	207	34	17	15	66	701
07:45 AM	17	187	90	294	10	84	15	109	21	163	12	196	48	19	11	78	677
Total Volume	66	757	325	1148	132	307	81	520	52	649	74	775	157	64	44	265	2708
% App. Total	5.7	65.9	28.3		25.4	59	15.6		6.7	83.7	9.5		59.2	24.2	16.6		
PHF	.868	.897	.789	.947	.717	.816	.698	.915	.619	.922	.804	.936	.818	.842	.733	.849	.966

E/W: San Bernardino Avenue

Weather: Clear

File Name: FONCHSAAM Site Code : 20116023 Start Date : 1/12/2016 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for	Each A	pproach	า Begins	at:
	07:15 AN	1		
+0 mins.	19	211	73	30

I CUIT TOUT TOT		pprodo	<u>Dog</u>	<u> </u>												
	07:15 AM	I			07:00 AM	I			07:00 AN	1			07:45 AM	1		
+0 mins.	19	211	73	303	46	58	24	128	12	152	20	184	48	19	11	78
+15 mins.	16	167	103	286	41	71	29	141	7	158	23	188	43	23	14	80
+30 mins.	17	187	90	294	35	94	13	142	12	176	19	207	35	24	6	65
+45 mins.	15	205	70	290	10	84	15	109	21	163	12	196	31	28	12	71
Total Volume	67	770	336	1173	132	307	81	520	52	649	74	775	157	94	43	294
% App. Total	5.7	65.6	28.6		25.4	59	15.6		6.7	83.7	9.5		53.4	32	14.6	
PHF	.882	.912	.816	.968	.717	.816	.698	.915	.619	.922	.804	.936	.818	.839	.768	.919

City of Fontana N/S: Cherry Avenue E/W: San Bernardino Avenue

Weather: Clear

File Name: FONCHSAAM Site Code: 20116023

Start Date : 1/12/2016 Page No : 1

Groups Printed- Passenger Vehicles

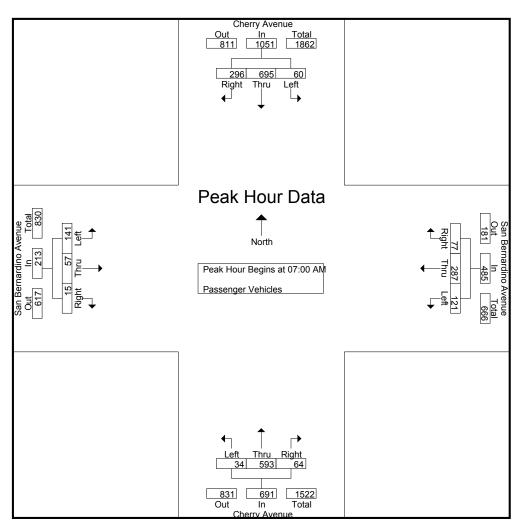
						Oit	upo i iii	nicu- i as	ocnigoi	V CITION	<u> </u>						
		Cherry	Avenu	e	San	Berna	rdino A	venue		Cherry	/ Avenu	e	San	Berna	rdino A	venue	
		South	nbound			West	tbound			North	bound			East	bound		
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	13	182	55	250	43	54	22	119	7	143	19	169	38	8	1	47	585
07:15 AM	18	199	64	281	37	68	29	134	2	141	19	162	30	17	4	51	628
07:30 AM	14	144	94	252	31	89	12	132	7	157	18	182	29	14	6	49	615
07:45 AM	15	170	83	268	10	76	14	100	18	152	8	178	44	18	4	66	612
Total	60	695	296	1051	121	287	77	485	34	593	64	691	141	57	15	213	2440
08:00 AM	14	179	59	252	16	50	9	75	8	143	10	161	37	20	10	67	555
08:15 AM	10	138	37	185	16	48	17	81	6	112	11	129	32	20	2	54	449
08:30 AM	13	130	45	188	21	41	15	77	6	101	12	119	24	26	4	54	438
08:45 AM	17	123	32	172	10	36	9	55	10	94	10	114	25	5	4	34	375
Total	54	570	173	797	63	175	50	288	30	450	43	523	118	71	20	209	1817
Grand Total	114	1265	469	1848	184	462	127	773	64	1043	107	1214	259	128	35	422	4257
Apprch %	6.2	68.5	25.4		23.8	59.8	16.4		5.3	85.9	8.8		61.4	30.3	8.3		
Total %	2.7	29.7	11	43.4	4.3	10.9	3	18.2	1.5	24.5	2.5	28.5	6.1	3	0.8	9.9	

		Cherry	Avenu	е	San	Bernai	rdino Av	/enue		Cherry	Avenu	е	San	Berna	rdino Av	/enue	
		South	nbound			West	tbound			North	nbound			East	bound		
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Ana	ilysis Fr	om 07:0	00 AM t	o 07:45 A	M - Pea	ak 1 of 1	1				_				_		
Peak Hour for I	Entire In	tersect	ion Beg	ins at 07:	00 AM												
07:00 AM	13	182	55	250	43	54	22	119	7	143	19	169	38	8	1	47	585
07:15 AM	18	199	64	281	37	68	29	134	2	141	19	162	30	17	4	51	628
07:30 AM	14	144	94	252	31	89	12	132	7	157	18	182	29	14	6	49	615
07:45 AM	15	170	83	268	10	76	14	100	18	152	8	178	44	18	4	66	612
Total Volume	60	695	296	1051	121	287	77	485	34	593	64	691	141	57	15	213	2440
% App. Total	5.7	66.1	28.2		24.9	59.2	15.9		4.9	85.8	9.3		66.2	26.8	7		
PHF	.833	.873	.787	.935	.703	.806	.664	.905	.472	.944	.842	.949	.801	.792	.625	.807	.971

E/W: San Bernardino Avenue

Weather: Clear

File Name: FONCHSAAM Site Code : 20116023 Start Date : 1/12/2016 Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1

Peak Hour for	Each Approach Begins at:
-	

Peak Hour for	Each A	oproac	n Begin	s at:												
	07:00 AM				07:00 AM	1			07:00 AN	1			07:00 AM	1		
+0 mins.	13	182	55	250	43	54	22	119	7	143	19	169	38	8	1	47
+15 mins.	18	199	64	281	37	68	29	134	2	141	19	162	30	17	4	51
+30 mins.	14	144	94	252	31	89	12	132	7	157	18	182	29	14	6	49
+45 mins.	15	170	83	268	10	76	14	100	18	152	8	178	44	18	4	66
Total Volume	60	695	296	1051	121	287	77	485	34	593	64	691	141	57	15	213
% App. Total	5.7	66.1	28.2		24.9	59.2	15.9		4.9	85.8	9.3		66.2	26.8	7	
PHF	.833	.873	.787	.935	.703	.806	.664	.905	.472	.944	.842	.949	.801	.792	.625	.807

City of Fontana N/S: Cherry Avenue

E/W: San Bernardino Avenue

Weather: Clear

File Name: FONCHSAAM Site Code : 20116023

Start Date : 1/12/2016 Page No : 1

Groups Printed- Large 2 Axle Vehicles

						Giou	ps Filli	teu- Lary	C Z AXII	e venic	iles .						
		Cherry	Avenu	e	San	Bernai	rdino Av	venue		Cherry	/ Avenu	е	San	Berna	rdino A	venue	
		South	bound			West	tbound			Norti	hbound			East	bound		
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	1	5	1	7	2	1	0	3	0	0	0	0	0	2	0	2	12
07:15 AM	0	3	3	6	2	0	0	2	0	5	0	5	2	1	2	5	18
07:30 AM	0	7	0	7	1	1	0	2	0	7	1	8	1	2	0	3	20
07:45 AM	1	7	1	9	0	1	0	1	0	1	2	3	3	1	1	5	18
Total	2	22	5	29	5	3	0	8	0	13	3	16	6	6	3	15	68
08:00 AM	0	5	5	10	1	1	0	2	0	3	0	3	0	1	0	1	16
08:15 AM	3	8	3	14	0	1	1	2	1	3	0	4	0	3	0	3	23
08:30 AM	0	5	4	9	0	3	0	3	1	4	0	5	2	1	0	3	20
08:45 AM	0	4	3	7	2	1	0	3	0	9	0	9	0	0	2	2	21
Total	3	22	15	40	3	6	1	10	2	19	0	21	2	5	2	9	80
Grand Total	5	44	20	69	8	9	1	18	2	32	3	37	8	11	5	24	148
Apprch %	7.2	63.8	29		44.4	50	5.6		5.4	86.5	8.1		33.3	45.8	20.8		
Total %	3.4	29.7	13.5	46.6	5.4	6.1	0.7	12.2	1.4	21.6	2	25	5.4	7.4	3.4	16.2	

		Cherry	Avenue	е	San	Bernai	dino Av	enue/		Cherry	Avenu	е	San	Berna	rdino Av	/enue	
		South	bound			West	bound			North	bound			East	bound		
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Ana	alysis Fro	om 07:0	00 AM to	o 07:45 A	M - Pea	ak 1 of 1	1										
Peak Hour for I	Entire In	tersecti	on Beg	ins at 07:	00 AM												
07:00 AM	1	5	1	7	2	1	0	3	0	0	0	0	0	2	0	2	12
07:15 AM	0	3	3	6	2	0	0	2	0	5	0	5	2	1	2	5	18
07:30 AM	0	7	0	7	1	1	0	2	0	7	1	8	1	2	0	3	20
07:45 AM	1	7	1	9	0	1	0	1	0	1	2	3	3	1	1	5	18
Total Volume	2	22	5	29	5	3	0	8	0	13	3	16	6	6	3	15	68
% App. Total	6.9	75.9	17.2		62.5	37.5	0		0	81.2	18.8		40	40	20		
PHF	.500	.786	.417	.806	.625	.750	.000	.667	.000	.464	.375	.500	.500	.750	.375	.750	.850

E/W: San Bernardino Avenue

Weather: Clear

% App. Total

PHF

6.9

75.9

.786

File Name: FONCHSAAM Site Code : 20116023 Start Date : 1/12/2016 Page No : 2

07:00 AM

2

6

40

0 5

8

16

.500

2 **5**

3 5

15

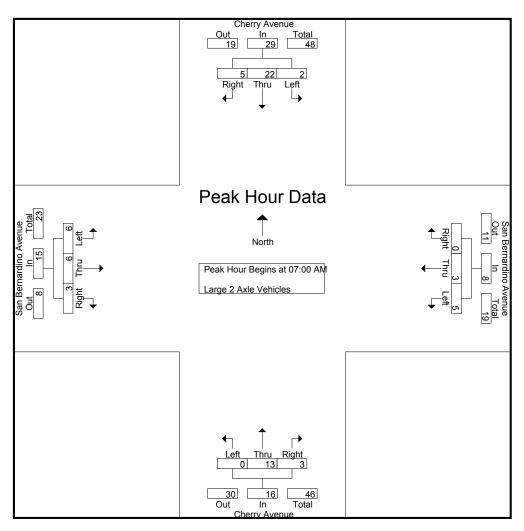
.750

2

0

20

40



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1 Peak Hour for Each Approach Begins at:

17.2

.417

reak noul loi	Each Ap	proacri	begins	aı.							
	07:00 AM		_		07:00 AM				07:00 AM		
+0 mins.	1	5	1	7	2	1	0	3	0	0	0
+15 mins.	0	3	3	6	2	0	0	2	0	5	0
+30 mins.	0	7	0	7	1	1	0	2	0	7	1
+45 mins.	1	7	1	9	0	1	0	1	0	1	2
Total Volume	2	22	5	29	5	3	0	8	0	13	3

62.5

.625

0

81.2

18.8

.375

City of Fontana N/S: Cherry Avenue E/W: San Bernardino Avenue

Weather: Clear

File Name: FONCHSAAM Site Code: 20116023

Start Date : 1/12/2016 Page No : 1

Groups Printed- 3 Axle Vehicles

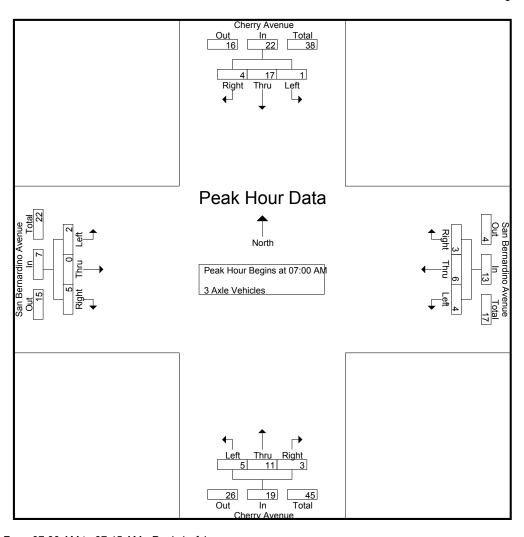
				1		AVIC A	TITILE U- J	noups i							
ernardino Avenue	Bernar	San	e	/ Avenu	Cherry		venue	rdino A	Berna	San	ie	Avenu			
Eastbound	East			hbound	North			tbound	Wes			nbound	Sout		
hru Right App. Total Int. To	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	Start Time
0 0 0	0	0	3	0	2	1	2	1	1	0	4	2	2	0	07:00 AM
0 2 2	0	0	7	1	4	2	3	0	1	2	4	0	4	0	07:15 AM
0 2 3	0	1	3	0	1	2	5	1	2	2	9	1	7	1	07:30 AM
0 1 2	0	1	6	2	4	0	3	1	2	0	5	1	4	0	07:45 AM
0 5 7	0	2	19	3	11	5	13	3	6	4	22	4	17	1	Total
0 2 6	0	4	4	0	3	1	0	0	0	0	4	1	3	0	08:00 AM
0 1 2	0	1	4	0	4	0	1	0	0	1	5	0	5	0	08:15 AM
1 0 2	1	1	6	0	5	1	2	0	2	0	9	2	6	1	08:30 AM
0 0 1	0	1	2	0	0	2	1	0	1	0	6	0	6	0	08:45 AM
1 3 11	1	7	16	0	12	4	4	0	3	1	24	3	20	1	Total
1 8 18 1	1	9	35	3	23	9	17	3	9	5	46	7	37	2	Grand Total
5.6 44.4	5.6	50		8.6	65.7	25.7		17.6	52.9	29.4		15.2	80.4	4.3	Apprch %
0.9 6.9 15.5	0.9	7.8	30.2	2.6	19.8	7.8	14.7	2.6	7.8	4.3	39.7	6	31.9	1.7	Total %
0 1 2 1 0 2 0 0 1 1 3 11 1 8 18 5.6 44.4	0 1 0 1 1 5.6	50	4 6 2 16	0 0 0 0 3 8.6	12 23 65.7	9 25.7	17	3 17.6	9 52.9	1 0 0 1 1 5 29.4	5 9 6 24 46	7 15.2	5 6 6 20 37 80.4	0 1 0 1 2 4.3	08:15 AM 08:30 AM 08:45 AM Total Grand Total Apprch %

		Cherry	Avenu	е	San	Berna	rdino Av	/enue		Cherry	Avenu	е	San	Bernar	rdino Av	/enue	
		South	nbound			Wes	tbound			North	nbound			East	tbound		
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Ana	alysis Fro	om 07:0	00 AM t	o 07:45 A	M - Pea	ak 1 of	1										
Peak Hour for I	Entire In	tersect	ion Beg	ins at 07:	00 AM												
07:00 AM	0	2	2	4	0	1	1	2	1	2	0	3	0	0	0	0	9
07:15 AM	0	4	0	4	2	1	0	3	2	4	1	7	0	0	2	2	16
07:30 AM	1	7	1	9	2	2	1	5	2	1	0	3	1	0	2	3	20
07:45 AM	0	4	1	5	0	2	1	3	0	4	2	6	1	0	1	2	16
Total Volume	1	17	4	22	4	6	3	13	5	11	3	19	2	0	5	7	61
% App. Total	4.5	77.3	18.2		30.8	46.2	23.1		26.3	57.9	15.8		28.6	0	71.4	ļ	
PHF	.250	.607	.500	.611	.500	.750	.750	.650	.625	.688	.375	.679	.500	.000	.625	.583	.763

E/W: San Bernardino Avenue

Weather: Clear

File Name: FONCHSAAM Site Code : 20116023 Start Date : 1/12/2016 Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1 Peak Hour for Each Approach Begins at:

reak noul loi	LacinA	pproac	n begin	s at.												
	07:00 AM				07:00 AM	1			07:00 AN	Л			07:00 AM	1		
+0 mins.	0	2	2	4	0	1	1	2	1	2	0	3	0	0	0	0
+15 mins.	0	4	0	4	2	1	0	3	2	4	1	7	0	0	2	2
+30 mins.	1	7	1	9	2	2	1	5	2	1	0	3	1	0	2	3
+45 mins.	0	4	1	5	0	2	1	3	0	4	2	6	1	0	1	2
Total Volume	1	17	4	22	4	6	3	13	5	11	3	19	2	0	5	7
% App. Total	4.5	77.3	18.2		30.8	46.2	23.1		26.3	57.9	15.8		28.6	0	71.4	
PHF	.250	.607	.500	.611	.500	.750	.750	.650	.625	.688	.375	.679	.500	.000	.625	.583

City of Fontana N/S: Cherry Avenue

E/W: San Bernardino Avenue

Weather: Clear

File Name: FONCHSAAM Site Code: 20116023

Start Date : 1/12/2016 Page No : 1

Groups Printed- 4+ Axle Trucks

							iioups r	- IIIIleu- 4	T AXIE	HUCKS							
		Cherry	Avenu	e	San	Bernai	rdino A	venue		Cherry	/ Avenu	е	San	Berna	rdino Av	/enue	
		South	nbound			West	tbound			North	nbound			East	bound		
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	3	1	4	1	2	1	4	4	7	1	12	4	0	5	9	29
07:15 AM	1	5	6	12	0	2	0	2	3	8	3	14	1	0	4	5	33
07:30 AM	1	9	8	18	1	2	0	3	3	11	0	14	3	1	7	11	46
07:45 AM	1	6	5	12	0	5	0	5	3	6	0	9	0	0	5	5	31
Total	3	23	20	46	2	11	1	14	13	32	4	49	8	1	21	30	139
08:00 AM	1	18	5	24	2	3	0	5	4	5	0	9	2	2	2	6	44
08:15 AM	0	5	5	10	2	2	0	4	4	8	2	14	2	1	3	6	34
08:30 AM	1	7	2	10	0	1	1	2	1	9	1	11	4	0	8	12	35
08:45 AM	0	8	4	12	2	3	0	5	6	9	1	16	3	1	4	8	41
Total	2	38	16	56	6	9	1	16	15	31	4	50	11	4	17	32	154
Grand Total	5	61	36	102	8	20	2	30	28	63	8	99	19	5	38	62	293
Apprch %	4.9	59.8	35.3		26.7	66.7	6.7		28.3	63.6	8.1		30.6	8.1	61.3		
Total %	1.7	20.8	12.3	34.8	2.7	6.8	0.7	10.2	9.6	21.5	2.7	33.8	6.5	1.7	13	21.2	

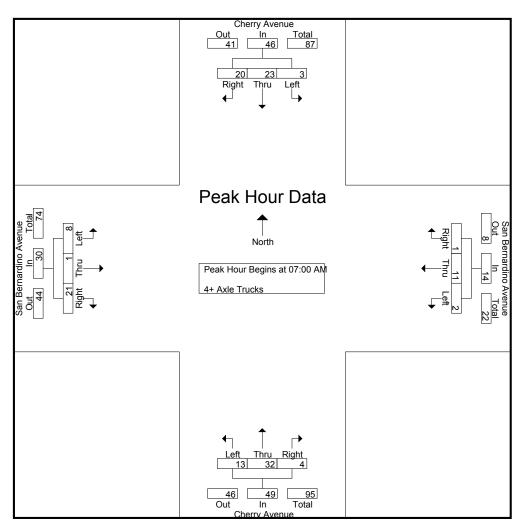
		Cherry	Avenu	е	San	Berna	rdino Av	/enue		Cherry	/ Avenu	е	San	Berna	rdino Av	/enue	
		South	nbound			Wes	tbound			North	nbound			East	bound		
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Ana	alysis Fro	om 07:0	00 AM t	o 07:45 A	M - Pea	ak 1 of	1										
Peak Hour for I	Entire In	tersect	ion Beg	ins at 07:	00 AM												
07:00 AM	0	3	1	4	1	2	1	4	4	7	1	12	4	0	5	9	29
07:15 AM	1	5	6	12	0	2	0	2	3	8	3	14	1	0	4	5	33
07:30 AM	1	9	8	18	1	2	0	3	3	11	0	14	3	1	7	11	46
07:45 AM	1	6	5	12	0	5	0	5	3	6	0	9	0	0	5	5	31
Total Volume	3	23	20	46	2	11	1	14	13	32	4	49	8	1	21	30	139
% App. Total	6.5	50	43.5		14.3	78.6	7.1		26.5	65.3	8.2		26.7	3.3	70		
PHF	.750	.639	.625	.639	.500	.550	.250	.700	.813	.727	.333	.875	.500	.250	.750	.682	.755

E/W: San Bernardino Avenue

Weather: Clear

File Name: FONCHSAAM Site Code: 20116023 Start Date: 1/12/2016

Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1

Peak Hour for	Each App	roach	Begins	at:				
	07:00 AM				07:00 AM			
+0 mins.	0	3	1	4	1	2	1	4
+15 mins.	1	5	6	12	0	2	0	2
+30 mins.	1	9	8	18	1	2	0	3
+45 mins.	1	6	5	12	0	5	0	5
	+0 mins. +15 mins. +30 mins.	Peak Hour for Each App 07:00 AM +0 mins. 0 +15 mins. 1 +30 mins. 1	Peak Hour for Each Approach +0 mins. +15 mins. +30 mins. 1 5 9	Peak Hour for Each Approach Begins 07:00 AM +0 mins. 0 3 1 +15 mins. 1 5 6 +30 mins. 1 9 8	Peak Hour for Each Approach Begins at: +0 mins. 0 3 1 4 4 5 6 12 4 5 6 12 4 5 6 12 4 5 6 18 18 18 18 18 18 18 18 18 18 18 18 18	Peak Hour for Each Approach Begins at: 07:00 AM 07:00 AM +0 mins. 0 3 1 4 1 +15 mins. 1 5 6 12 0 +30 mins. 1 9 8 18 1	Peak Hour for Each Approach Begins at: 07:00 AM +0 mins. 0 3 1 4 1 2 +15 mins. 1 5 6 12 0 2 +30 mins. 1 9 8 18 1 2	+0 mins. 0 3 1 4 1 2 1 +15 mins. 1 5 6 12 0 2 0 +30 mins. 1 9 8 18 1 2 0

07:00 AM

4

3

3

8

3

07:00 AM

5

11

14

14

City of Fontana N/S: Cherry Avenue

E/W: San Bernardino Avenue

Weather: Clear

File Name: FONCHSAPM Site Code : 20116023

Start Date : 1/12/2016 Page No : 1

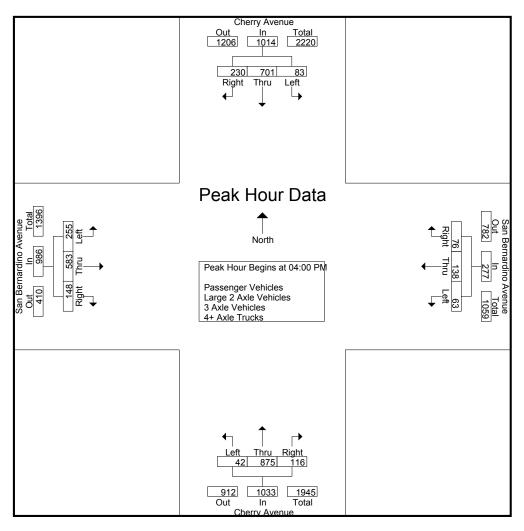
		Gr	oups P	rinted- Pa	assenge	er Vehic	cles - La	arge 2 Ax	le Vehi	cles - 3	Axle V	ehicles -	4+ Axle	Truck	S		
			Avenu				rdino A				Avenu				rdino A	venue	
		South	nbound			West	tbound			North	nbound			East	tbound		
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	24	187	76	287	23	42	27	92	13	225	30	268	54	160	44	258	905
04:15 PM	24	152	58	234	19	30	21	70	9	199	27	235	63	123	27	213	752
04:30 PM	19	215	46	280	12	24	11	47	9	186	23	218	55	151	31	237	782
04:45 PM	16	147	50	213	9	42	17	68	11_	265	36	312	83	149	46	278	871
Total	83	701	230	1014	63	138	76	277	42	875	116	1033	255	583	148	986	3310
05:00 PM	13	183	55	251	5	44	10	59	15	225	31	271	86	112	40	238	819
05:15 PM	17	142	32	191	21	29	10	60	13	218	38	269	95	128	42	265	785
05:30 PM	8	135	36	179	18	33	7	58	12	270	33	315	71	124	36	231	783
05:45 PM	14_	104	28	146	19_	22	7	48	9	192	19_	220	67_	117	22	206	620
Total	52	564	151	767	63	128	34	225	49	905	121	1075	319	481	140	940	3007
Grand Total	135	1265	381	1781	126	266	110	502	91	1780	237	2108	574	1064	288	1926	6317
Apprch %	7.6	71	21.4		25.1	53	21.9		4.3	84.4	11.2		29.8	55.2	15		
Total %	2.1	20	6	28.2	2	4.2	1.7	7.9	1.4	28.2	3.8	33.4	9.1	16.8	4.6	30.5	
Passenger Vehicles	126	1154	350	1630	110	244	105	459	70	1692	223	1985	530	1037	284	1851	5925
% Passenger Vehicles	93.3	91.2	91.9	91.5	87.3	91.7	95.5	91.4	76.9	95.1	94.1	94.2	92.3	97.5	98.6	96.1	93.8
Large 2 Axle Vehicles	2	30	12	44	3	11	2	16	2	21	1	24	12	13	0	25	109
% Large 2 Axle Vehicles	1.5	2.4	3.1	2.5	2.4	4.1	1.8	3.2	2.2	1.2	0.4	1.1	2.1	1.2	0	1.3	1.7
3 Axle Vehicles	3	41	5	49	7	3	0	10	7	25	2	34	12	2	3	17	110
% 3 Axle Vehicles	2.2	3.2	1.3	2.8	5.6	1.1	0	2	7.7	1.4	0.8	1.6	2.1	0.2	1	0.9	1.7
4+ Axle Trucks	4	40	14	58	6	8	3	17	12	42	11	65	20	12	1	33	173
% 4+ Axle Trucks	3	3.2	3.7	3.3	4.8	3	2.7	3.4	13.2	2.4	4.6	3.1	3.5	1.1	0.3	1.7	2.7

		Cherry	Avenu	е	San	Bernar	dino A	/enue		Cherry	Avenu	е	San	Berna	rdino Av	/enue	
		South	bound			West	bound			North	bound			East	bound		
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Ana	lysis Fro	om 04:0	00 PM t	o 05:45 P	M - Pea	k 1 of 1	1				_						
Peak Hour for I	Entire In	tersecti	ion Beg	ins at 04:	00 PM												
04:00 PM	24	187	76	287	23	42	27	92	13	225	30	268	54	160	44	258	905
04:15 PM	24	152	58	234	19	30	21	70	9	199	27	235	63	123	27	213	752
04:30 PM	19	215	46	280	12	24	11	47	9	186	23	218	55	151	31	237	782
04:45 PM	16	147	50	213	9	42	17	68	11	265	36	312	83	149	46	278	871
Total Volume	83	701	230	1014	63	138	76	277	42	875	116	1033	255	583	148	986	3310
% App. Total	8.2	69.1	22.7		22.7	49.8	27.4		4.1	84.7	11.2		25.9	59.1	15		
PHF	.865	.815	.757	.883	.685	.821	.704	.753	.808	.825	.806	.828	.768	.911	.804	.887	.914

E/W: San Bernardino Avenue

Weather: Clear

File Name: FONCHSAPM Site Code : 20116023 Start Date : 1/12/2016 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for	Each A	pproacl	<u>h Begin</u>	s at:												
	04:00 PM	1			04:00 PN	1			04:45 PN	1			04:30 PM	1		
+0 mins.	24	187	76	287	23	42	27	92	11	265	36	312	55	151	31	237
+15 mins.	24	152	58	234	19	30	21	70	15	225	31	271	83	149	46	278
+30 mins.	19	215	46	280	12	24	11	47	13	218	38	269	86	112	40	238
+45 mins.	16	147	50	213	9	42	17	68	12	270	33	315	95	128	42	265
Total Volume	83	701	230	1014	63	138	76	277	51	978	138	1167	319	540	159	1018
% App. Total	8.2	69.1	22.7		22.7	49.8	27.4		4.4	83.8	11.8		31.3	53	15.6	
PHF	.865	.815	.757	.883	.685	.821	.704	.753	.850	.906	.908	.926	.839	.894	.864	.915

City of Fontana N/S: Cherry Avenue E/W: San Bernardino Avenue

Weather: Clear

File Name: FONCHSAPM Site Code: 20116023

Start Date : 1/12/2016 Page No : 1

Groups Printed- Passenger Vehicles

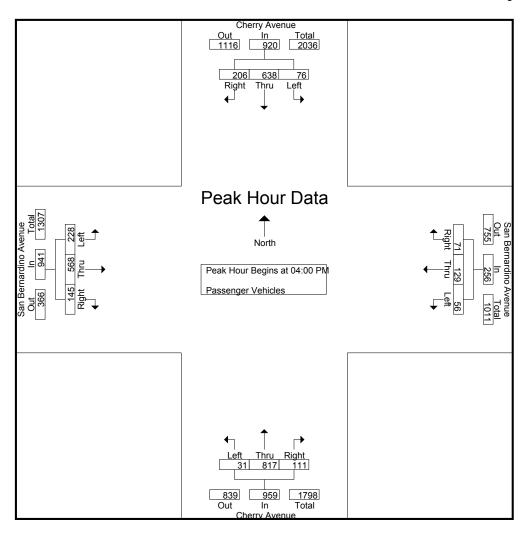
						GIO	ups Pni	nieu- Pas	senger	venici	es						
		Cherry	Avenu	e	San	Bernar	dino A	venue		Cherry	/ Avenu	е	San	Berna	rdino A	venue	
		South	nbound			West	bound			North	nbound			East	bound		
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	23	172	64	259	21	40	25	86	8	208	28	244	49	156	41	246	835
04:15 PM	20	137	52	209	16	29	20	65	8	185	25	218	57	120	27	204	696
04:30 PM	17	195	42	254	11	22	11	44	6	171	23	200	44	147	31	222	720
04:45 PM	16	134	48	198	8	38	15	61	9	253	35	297	78	145	46	269	825
Total	76	638	206	920	56	129	71	256	31	817	111	959	228	568	145	941	3076
05:00 PM	13	167	55	235	4	40	10	54	14	219	29	262	78	109	40	227	778
05:15 PM	16	128	30	174	21	25	10	56	10	213	36	259	92	126	41	259	748
05:30 PM	7	124	33	164	13	29	7	49	10	258	29	297	68	121	36	225	735
05:45 PM	14	97	26	137	16	21	7	44	5	185	18	208	64	113	22	199	588
Total	50	516	144	710	54	115	34	203	39	875	112	1026	302	469	139	910	2849
Grand Total	126	1154	350	1630	110	244	105	459	70	1692	223	1985	530	1037	284	1851	5925
Apprch %	7.7	70.8	21.5		24	53.2	22.9		3.5	85.2	11.2		28.6	56	15.3		
Total %	2.1	19.5	5.9	27.5	1.9	4.1	1.8	7.7	1.2	28.6	3.8	33.5	8.9	17.5	4.8	31.2	

		Cherry	Avenu	е	San	Bernar	dino A	/enue		Cherry	/ Avenu	е	San	Berna	rdino Av	/enue	
		South	nbound			West	bound			North	nbound			East	tbound		
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Ana	Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1 for Entire Intersection Begins at 04:00 PM																
Peak Hour for I	Entire In	tersect	ion Beg	ins at 04:	00 PM												
04:00 PM	23	172	64	259	21	40	25	86	8	208	28	244	49	156	41	246	835
04:15 PM	20	137	52	209	16	29	20	65	8	185	25	218	57	120	27	204	696
04:30 PM	17	195	42	254	11	22	11	44	6	171	23	200	44	147	31	222	720
04:45 PM	16	134	48	198	8	38	15	61	9	253	35	297	78	145	46	269	825
Total Volume	76	638	206	920	56	129	71	256	31	817	111	959	228	568	145	941	3076
% App. Total	8.3	69.3	22.4		21.9	50.4	27.7		3.2	85.2	11.6		24.2	60.4	15.4		
PHF	.826	.818	.805	.888	.667	.806	.710	.744	.861	.807	.793	.807	.731	.910	.788	.875	.921

E/W: San Bernardino Avenue

Weather: Clear

File Name: FONCHSAPM Site Code : 20116023 Start Date : 1/12/2016 Page No : 2



Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1

Peak Hour for	04:00 P		n begin	s al.
+0 mins.		172	64	25

Peak Hour for	Each A	pproac	<u>h Begin</u>	s at:												
	04:00 PM	1			04:00 PM	1			04:00 PN	Л			04:00 PM	1		
+0 mins.	23	172	64	259	21	40	25	86	8	208	28	244	49	156	41	246
+15 mins.	20	137	52	209	16	29	20	65	8	185	25	218	57	120	27	204
+30 mins.	17	195	42	254	11	22	11	44	6	171	23	200	44	147	31	222
+45 mins.	16	134	48	198	8	38	15	61	9	253	35	297	78	145	46	269
Total Volume	76	638	206	920	56	129	71	256	31	817	111	959	228	568	145	941
% App. Total	8.3	69.3	22.4		21.9	50.4	27.7		3.2	85.2	11.6		24.2	60.4	15.4	
PHF	.826	.818	.805	.888	.667	.806	.710	.744	.861	.807	.793	.807	.731	.910	.788	.875

City of Fontana N/S: Cherry Avenue E/W: San Bernardino Avenue

Weather: Clear

File Name: FONCHSAPM Site Code: 20116023

Start Date : 1/12/2016 Page No : 1

Groups Printed- Large 2 Axle Vehicles

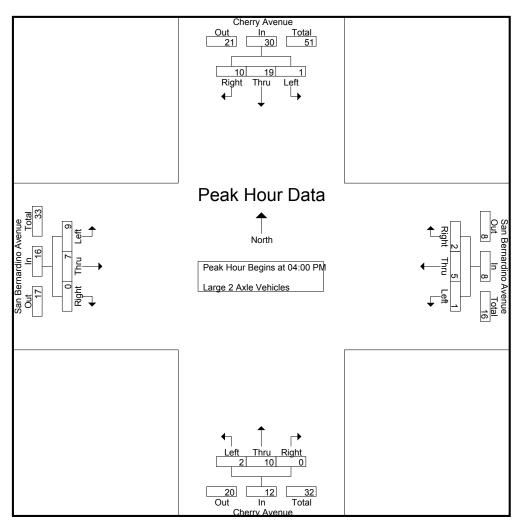
						Grou	<u>ps Print</u>	eu- Larg	e z Axie	e venic	ies						
		Cherry	/ Avenu	e	San	Bernar	dino Av	enue		Cherry	Avenu	е	San	Bernai	rdino Av	/enue	
		South	hbound			West	bound			North	nbound			East	bound		
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	1	4	7	12	1	1	1	3	0	1	0	1	1	1	0	2	18
04:15 PM	0	3	3	6	0	0	0	0	0	4	0	4	1	2	0	3	13
04:30 PM	0	5	0	5	0	2	0	2	1	3	0	4	4	2	0	6	17
04:45 PM	0	7	0	7	0	2	1	3	1	2	0	3	3	2	0	5	18
Total	1	19	10	30	1	5	2	8	2	10	0	12	9	7	0	16	66
05:00 PM	0	3	0	3	0	1	0	1	0	6	0	6	2	2	0	4	14
05:15 PM	1	5	1	7	0	2	0	2	0	2	0	2	0	2	0	2	13
05:30 PM	0	1	1	2	2	2	0	4	0	2	0	2	1	1	0	2	10
05:45 PM	0	2	0	2	0	1	0	1	0	1	1	2	0	1	0	1	6_
Total	1	11	2	14	2	6	0	8	0	11	1	12	3	6	0	9	43
Grand Total	2	30	12	44	3	11	2	16	2	21	1	24	12	13	0	25	109
Apprch %	4.5	68.2	27.3		18.8	68.8	12.5		8.3	87.5	4.2		48	52	0		
Total %	1.8	27.5	11	40.4	2.8	10.1	1.8	14.7	1.8	19.3	0.9	22	11	11.9	0	22.9	

		Cherry	Avenu	е						Cherry	Avenu	е	San	Berna	rdino Av	enue	
		South	nbound			West	bound			North	bound			East	bound		
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Ana	alysis Fro	om 04:0	00 PM t	o 04:45 P	M - Pea	k 1 of 1	1				_				_		
Peak Hour for I	Entire In	tersect	ion Beg	ins at 04:	00 PM												
04:00 PM	1	4	7	12	1	1	1	3	0	1	0	1	1	1	0	2	18
04:15 PM	0	3	3	6	0	0	0	0	0	4	0	4	1	2	0	3	13
04:30 PM	0	5	0	5	0	2	0	2	1	3	0	4	4	2	0	6	17
04:45 PM	0	7	0	7	0	2	1	3	1	2	0	3	3	2	0	5	18
Total Volume	1	19	10	30	1	5	2	8	2	10	0	12	9	7	0	16	66
% App. Total	3.3	63.3	33.3		12.5	62.5	25		16.7	83.3	0		56.2	43.8	0		
PHF	.250	.679	.357	.625	.250	.625	.500	.667	.500	.625	.000	.750	.563	.875	.000	.667	.917

E/W: San Bernardino Avenue

Weather: Clear

File Name: FONCHSAPM Site Code : 20116023 Start Date : 1/12/2016 Page No : 2



Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1

Peak Hour for	Each A	Approac	:h Begir	ns at:
	04:00 P	M	_	
+0 mins.	1	4	7	1:

I CUIT TOUT TOT	Luoii / t	pprodo	n Degiii	o at.												
	04:00 PM	1			04:00 PM	1			04:00 PN	Л			04:00 PN	1		
+0 mins.	1	4	7	12	1	1	1	3	0	1	0	1	1	1	0	2
+15 mins.	0	3	3	6	0	0	0	0	0	4	0	4	1	2	0	3
+30 mins.	0	5	0	5	0	2	0	2	1	3	0	4	4	2	0	6
+45 mins.	0	7	0	7	0	2	1	3	1	2	0	3	3	2	0	5
Total Volume	1	19	10	30	1	5	2	8	2	10	0	12	9	7	0	16
% App. Total	3.3	63.3	33.3		12.5	62.5	25		16.7	83.3	0		56.2	43.8	0	
PHF	.250	.679	.357	.625	.250	.625	.500	.667	.500	.625	.000	.750	.563	.875	.000	.667

City of Fontana N/S: Cherry Avenue

E/W: San Bernardino Avenue

Weather: Clear

File Name: FONCHSAPM Site Code: 20116023

Start Date : 1/12/2016 Page No : 1

Groups Printed- 3 Axle Vehicles

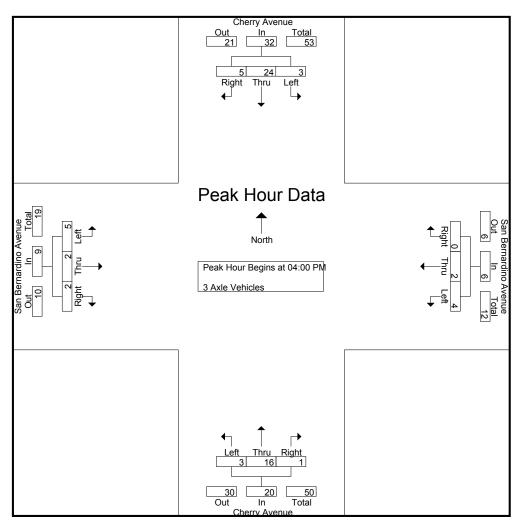
							roups r	Tilliteu- S	Axie v	eniicies							
		Cherry	Avenu	e	San	Bernar	dino A	venue		Cherry	/ Avenu	е	San	Berna	rdino A	venue	
		South	nbound			West	bound			Norti	hbound			East	tbound		
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	4	3	7	1	0	0	1	1	5	1	7	1	0	2	3	18
04:15 PM	2	8	2	12	3	1	0	4	1	4	0	5	2	1	0	3	24
04:30 PM	1	8	0	9	0	0	0	0	1	3	0	4	2	0	0	2	15
04:45 PM	0	4	0	4	0	1	0	1	0	4	0	4	0	1	0	1	10
Total	3	24	5	32	4	2	0	6	3	16	1	20	5	2	2	9	67
05:00 PM	0	6	0	6	0	1	0	1	0	0	0	0	2	0	0	2	9
05:15 PM	0	5	0	5	0	0	0	0	1	2	1	4	2	0	1	3	12
05:30 PM	0	4	0	4	2	0	0	2	2	6	0	8	1	0	0	1	15
05:45 PM	0	2	0	2	1	0	0	1	1	1	0	2	2	0	0	2	7_
Total	0	17	0	17	3	1	0	4	4	9	1	14	7	0	1	8	43
Grand Total	3	41	5	49	7	3	0	10	7	25	2	34	12	2	3	17	110
Apprch %	6.1	83.7	10.2		70	30	0		20.6	73.5	5.9		70.6	11.8	17.6		
Total %	2.7	37.3	4.5	44.5	6.4	2.7	0	9.1	6.4	22.7	1.8	30.9	10.9	1.8	2.7	15.5	

			Cherry	Avenu	е	San	Bernai	rdino Av	/enue		Cherry	Avenu	е	San	Berna	rdino Av	enue/	
			South	nbound			West	tbound			North	nbound			East	bound		
Start Ti	me	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour	Ana	lysis Fr	om 04:0	00 PM t	to 04:45 P	M - Pea	ak 1 of 1	1										
Peak Hour	for E	Entire In	ntersect	ion Beg	gins at 04:	00 PM												
04:00	PM	0	4	3	7	1	0	0	1	1	5	1	7	1	0	2	3	18
04:15	РМ	2	8	2	12	3	1	0	4	1	4	0	5	2	1	0	3	24
04:30	PM	1	8	0	9	0	0	0	0	1	3	0	4	2	0	0	2	15
04:45	PM	0	4	0	4	0	1	0	1	0	4	0	4	0	1	0	1	10
Total Volu	ıme	3	24	5	32	4	2	0	6	3	16	1	20	5	2	2	9	67
% App. To	otal	9.4	75	15.6		66.7	33.3	0		15	80	5		55.6	22.2	22.2		
Р	HF	.375	.750	.417	.667	.333	.500	.000	.375	.750	.800	.250	.714	.625	.500	.250	.750	.698

E/W: San Bernardino Avenue

Weather: Clear

File Name: FONCHSAPM Site Code : 20116023 Start Date : 1/12/2016 Page No : 2



Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1

Peak Hour for	Each Ap	oproacl	<u>h Begin</u>	s at:												
	04:00 PM				04:00 PN	1			04:00 PN	Л			04:00 PN	1		
+0 mins.	0	4	3	7	1	0	0	1	1	5	1	7	1	0	2	3
+15 mins.	2	8	2	12	3	1	0	4	1	4	0	5	2	1	0	3
+30 mins.	1	8	0	9	0	0	0	0	1	3	0	4	2	0	0	2
+45 mins.	0	4	0	4	0	1	0	1	0	4	0	4	0	1	0	1
Total Volume	3	24	5	32	4	2	0	6	3	16	1	20	5	2	2	9
% App. Total	9.4	75	15.6		66.7	33.3	0		15	80	5		55.6	22.2	22.2	
PHF	.375	.750	.417	.667	.333	.500	.000	.375	.750	.800	.250	.714	.625	.500	.250	.750

City of Fontana N/S: Cherry Avenue

E/W: San Bernardino Avenue

Weather: Clear

File Name: FONCHSAPM Site Code: 20116023

Start Date : 1/12/2016 Page No : 1

Groups Printed- 4+ Axle Trucks

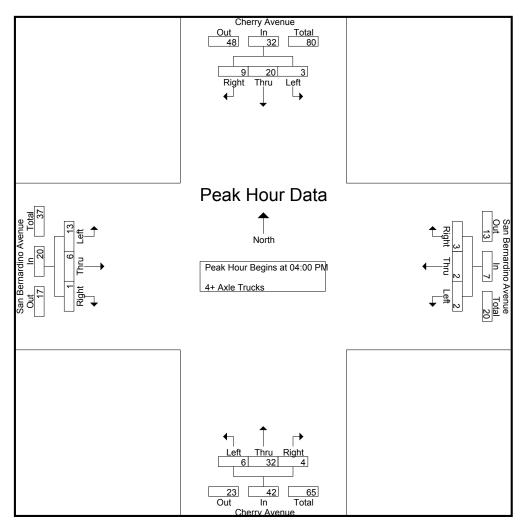
						<u>G</u>	roups r	TITILEU- 4	' AVIC	HUCKS							
		Cherry	Avenu	e	San	Bernar	dino A	venue		Cherry	Avenu	е	San	Berna	rdino A	venue	
		South	bound			West	bound			North	nbound			East	tbound		
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	7	2	9	0	1	1	2	4	11	1	16	3	3	1	7	34
04:15 PM	2	4	1	7	0	0	1	1	0	6	2	8	3	0	0	3	19
04:30 PM	1	7	4	12	1	0	0	1	1	9	0	10	5	2	0	7	30
04:45 PM	0	2	2	4	1	1	1	3	1	6	1	8	2	1	0	3	18
Total	3	20	9	32	2	2	3	7	6	32	4	42	13	6	1	20	101
05:00 PM	0	7	0	7	1	2	0	3	1	0	2	3	4	1	0	5	18
05:15 PM	0	4	1	5	0	2	0	2	2	1	1	4	1	0	0	1	12
05:30 PM	1	6	2	9	1	2	0	3	0	4	4	8	1	2	0	3	23
05:45 PM	0	3	2	5	2	0	0	2	3	5	0	8	1	3	0	4	19
Total	1	20	5	26	4	6	0	10	6	10	7	23	7	6	0	13	72
Grand Total	4	40	14	58	6	8	3	17	12	42	11	65	20	12	1	33	173
Apprch %	6.9	69	24.1		35.3	47.1	17.6		18.5	64.6	16.9		60.6	36.4	3		
Total %	2.3	23.1	8.1	33.5	3.5	4.6	1.7	9.8	6.9	24.3	6.4	37.6	11.6	6.9	0.6	19.1	

		Cherry	Avenu	е	San	Bernar	rdino Av	/enue		Cherry	Avenu	е	San	Berna	rdino Av	/enue	
		South	bound			West	tbound			North	bound			East	bound		
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Ana	alysis Fr	om 04:0	00 PM t	o 04:45 P	M - Pea	k 1 of 1	1				_				_		
Peak Hour for I	Entire In	tersecti	on Beg	ins at 04:	00 PM												
04:00 PM	0	7	2	9	0	1	1	2	4	11	1	16	3	3	1	7	34
04:15 PM	2	4	1	7	0	0	1	1	0	6	2	8	3	0	0	3	19
04:30 PM	1	7	4	12	1	0	0	1	1	9	0	10	5	2	0	7	30
04:45 PM	0	2	2	4	1	1	1	3	1	6	1	8	2	1	0	3	18
Total Volume	3	20	9	32	2	2	3	7	6	32	4	42	13	6	1	20	101
% App. Total	9.4	62.5	28.1		28.6	28.6	42.9		14.3	76.2	9.5		65	30	5		
PHF	.375	.714	.563	.667	.500	.500	.750	.583	.375	.727	.500	.656	.650	.500	.250	.714	.743

E/W: San Bernardino Avenue

Weather: Clear

File Name: FONCHSAPM Site Code : 20116023 Start Date : 1/12/2016 Page No : 2



Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1

Peak Hour for	Each Ap	oproacl	h Begin:	s at:												
	04:00 PM				04:00 PN	1			04:00 PN	1			04:00 PM	1		
+0 mins.	0	7	2	9	0	1	1	2	4	11	1	16	3	3	1	7
+15 mins.	2	4	1	7	0	0	1	1	0	6	2	8	3	0	0	3
+30 mins.	1	7	4	12	1	0	0	1	1	9	0	10	5	2	0	7
+45 mins.	0	2	2	4	1	1	1	3	1	6	1	8	2	1	0	3
Total Volume	3	20	9	32	2	2	3	7	6	32	4	42	13	6	1	20
% App. Total	9.4	62.5	28.1		28.6	28.6	42.9		14.3	76.2	9.5		65	30	5	
PHF	.375	.714	.563	.667	.500	.500	.750	.583	.375	.727	.500	.656	.650	.500	.250	.714

Location: Fontana N/S: Cherry Avenue E/W: San Bernardino Avenue



Site Code: 201-16023 Date: 1/12/2016 Weather: Clear

PEDESTRIANS

	North Leg Cherry Avenue	East Leg San Bernardino Avenue	South Leg Cherry Avenue	West Leg San Bernardino Avenue	TOTAL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	1	0	1
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	1	0	1

	North Leg Cherry Avenue	East Leg San Bernardino Avenue	South Leg Cherry Avenue	West Leg San Bernardino Avenue	TOTAL
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	1	0	1	0	2
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	1	0	1
5:30 PM	0	0	0	0	0
5:45 PM	0	0	2	0	2
TOTAL VOLUMES:	1	0	4	0	5

Location: Fontana N/S: Cherry Avenue E/W: San Bernardino Avenue



Site Code: 201-16023 Date: 1/12/2016 Weather: Clear

BICYCLES

	North Leg Cherry Avenue	East Leg San Bernardino Avenue	South Leg Cherry Avenue	West Leg San Bernardino Avenue	TOTAL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	Ö	Ö	Ö	Ö	0
TOTAL VOLUMES:	0	0	0	0	0

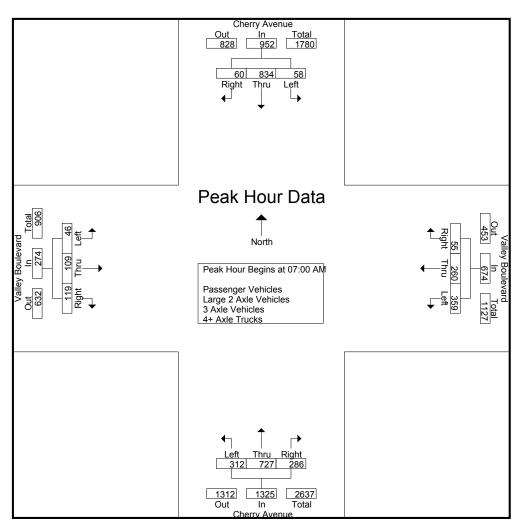
	North Leg Cherry Avenue	East Leg San Bernardino Avenue	South Leg Cherry Avenue	West Leg San Bernardino Avenue	TOTAL
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

File Name: FONCHVAAM Site Code : 20116023 Start Date : 1/12/2016 Page No : 1

	Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks Cherry Avenue Valley Boulevard Cherry Avenue Valley Boulevard																
		Cherry	/ Avenu	е	\	/alley E	Bouleva	ırd		Cherry	/ Avenu	е	'	√alley E	Bouleva	ırd	
		Sout	hbound			Wes	tbound			North	bound			East	bound		
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	11	226	14	251	94	48	8	150	84	165	62	311	10	27	28	65	777
07:15 AM	14	233	17	264	125	54	9	188	55	192	72	319	11	28	32	71	842
07:30 AM	11	194	16	221	82	80	16	178	87	187	81	355	13	32	30	75	829
07:45 AM	22	181	13_	216	58	78	22	158	86	183	71	340	12	22	29	63	777
Total	58	834	60	952	359	260	55	674	312	727	286	1325	46	109	119	274	3225
08:00 AM	28	176	17	221	59	66	13	138	77	146	58	281	12	32	38	82	722
08:15 AM	21	158	11	190	69	60	14	143	56	142	68	266	18	34	33	85	684
08:30 AM	23	175	12	210	74	56	13	143	65	129	48	242	17	35	44	96	691
08:45 AM	13	126	11	150	50	45	13	108	69	125	51	245	15	33	46	94	597
Total	85	635	51	771	252	227	53	532	267	542	225	1034	62	134	161	357	2694
Grand Total	143	1469	111	1723	611	487	108	1206	579	1269	511	2359	108	243	280	631	5919
Apprch %	8.3	85.3	6.4		50.7	40.4	9		24.5	53.8	21.7		17.1	38.5	44.4		
Total %	2.4	24.8	1.9	29.1	10.3	8.2	1.8	20.4	9.8	21.4	8.6	39.9	1.8	4.1	4.7	10.7	
Passenger Vehicles	123	1251	74	1448	520	441	95	1056	431	1079	440	1950	84	198	163	445	4899
% Passenger Vehicles	86	85.2	66.7	84	85.1	90.6	88	87.6	74.4	85	86.1	82.7	77.8	81.5	58.2	70.5	82.8
Large 2 Axle Vehicles	7	69	8	84	32	18	9	59	35	63	20	118	7	17	23	47	308
% Large 2 Axle Vehicles	4.9	4.7	7.2	4.9	5.2	3.7	8.3	4.9	6	5	3.9	5	6.5	7	8.2	7.4	5.2
3 Axle Vehicles	7	46	12	65	13	14	2	29	25	34	14	73	9	7	35	51	218
% 3 Axle Vehicles	4.9	3.1	10.8	3.8	2.1	2.9	1.9	2.4	4.3	2.7	2.7	3.1	8.3	2.9	12.5	8.1	3.7
4+ Axle Trucks	6	103	17	126	46	14	2	62	88	93	37	218	8	21	59	88	494
% 4+ Axle Trucks	4.2	7	15.3	7.3	7.5	2.9	1.9	5.1	15.2	7.3	7.2	9.2	7.4	8.6	21.1	13.9	8.3

		Cherry	Avenu	е	,	Valley E	Bouleva	rd		Cherry	Avenu	е	,	Valley E	Bouleva	rd	
		South	bound			West	bound			North	bound			East	bound		
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for I	Entire In	tersecti	on Beg	ins at 07:	00 AM												
07:00 AM	11	226	14	251	94	48	8	150	84	165	62	311	10	27	28	65	777
07:15 AM	14	233	17	264	125	54	9	188	55	192	72	319	11	28	32	71	842
07:30 AM	11	194	16	221	82	80	16	178	87	187	81	355	13	32	30	75	829
07:45 AM	22	181	13	216	58	78	22	158	86	183	71	340	12	22	29	63	777
Total Volume	58	834	60	952	359	260	55	674	312	727	286	1325	46	109	119	274	3225
% App. Total	6.1	87.6	6.3		53.3	38.6	8.2		23.5	54.9	21.6		16.8	39.8	43.4		
PHF	.659	.895	.882	.902	.718	.813	.625	.896	.897	.947	.883	.933	.885	.852	.930	.913	.958

File Name: FONCHVAAM Site Code : 20116023 Start Date : 1/12/2016 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for	Peak Hour for Each Approach Begins at:															
	07:00 AM	1			07:00 AM	1			07:00 AN	1			08:00 AM	1		
+0 mins.	11	226	14	251	94	48	8	150	84	165	62	311	12	32	38	82
+15 mins.	14	233	17	264	125	54	9	188	55	192	72	319	18	34	33	85
+30 mins.	11	194	16	221	82	80	16	178	87	187	81	355	17	35	44	96
+45 mins.	22	181	13	216	58	78	22	158	86	183	71	340	15	33	46	94
Total Volume	58	834	60	952	359	260	55	674	312	727	286	1325	62	134	161	357
% App. Total	6.1	87.6	6.3		53.3	38.6	8.2		23.5	54.9	21.6		17.4	37.5	45.1	
PHF	.659	.895	.882	.902	.718	.813	.625	.896	.897	.947	.883	.933	.861	.957	.875	.930

City of Fontana N/S: Cherry Avenue E/W: Valley Boulevard Weather: Clear

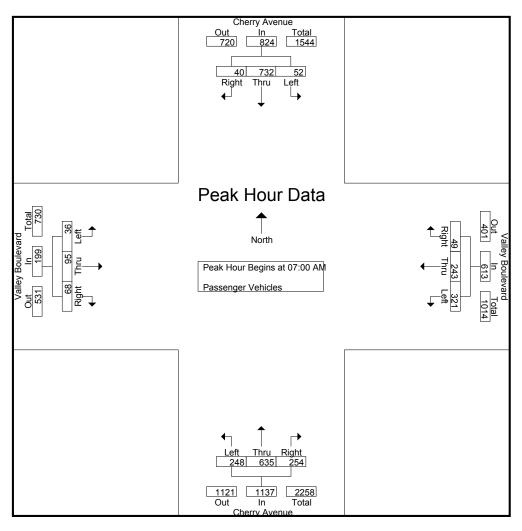
File Name: FONCHVAAM Site Code: 20116023 Start Date : 1/12/2016 Page No : 1

Groups Printed- Passenger Vehicles

Cloups I linea-1 assenger vehicles																
	Cherry	Avenu	е	'	√alley E	Bouleva	ard		Cherry	Avenu	е	\	/alley E	Bouleva	ırd	
	South	nbound			Wes	tbound			North	bound			East	bound		
Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
9	203	10	222	88	46	7	141	65	147	55	267	8	24	20	52	682
13	214	11	238	110	50	8	168	46	160	66	272	9	25	19	53	731
9	159	9	177	71	78	13	162	70	169	76	315	10	26	14	50	704
21	156	10	187	52	69	21	142	67	159	57	283	9	20	15	44	656
52	732	40	824	321	243	49	613	248	635	254	1137	36	95	68	199	2773
27	143	13	183	47	58	12	117	55	129	46	230	9	24	22	55	585
16	132	6	154	56	50	14	120	43	117	59	219	13	24	20	57	550
19	143	7	169	58	52	10	120	41	102	38	181	14	29	25	68	538
9	101	8	118	38	38	10	86	44	96	43	183	12	26	28	66	453
71	519	34	624	199	198	46	443	183	444	186	813	48	103	95	246	2126
123	1251	74	1448	520	441	95	1056	431	1079	440	1950	84	198	163	445	4899
8.5	86.4	5.1		49.2	41.8	9		22.1	55.3	22.6		18.9	44.5	36.6		
2.5	25.5	1.5	29.6	10.6	9	1.9	21.6	8.8	22	9	39.8	1.7	4	3.3	9.1	
_	9 13 9 21 52 27 16 19 9 71 123 8.5	South Left Thru 9	Southbound Left Thru Right 9 203 10 13 214 11 9 159 9 21 156 10 52 732 40 27 143 13 16 132 6 19 143 7 9 101 8 71 519 34 123 1251 74 8.5 86.4 5.1	9 203 10 222 13 214 11 238 9 159 9 177 21 156 10 187 52 732 40 824 27 143 13 183 16 132 6 154 19 143 7 169 9 101 8 118 71 519 34 624 123 1251 74 1448 8.5 86.4 5.1	Southbound Left Thru Right App. Total Left 9 203 10 222 88 13 214 11 238 110 9 159 9 177 71 21 156 10 187 52 52 732 40 824 321 27 143 13 183 47 16 132 6 154 56 19 143 7 169 58 9 101 8 118 38 71 519 34 624 199 123 1251 74 1448 520 8.5 86.4 5.1 49.2	Cherry Avenue Southbound Valley B Wes Left Thru Right App. Total Left Thru 9 203 10 222 88 46 13 214 11 238 110 50 9 159 9 177 71 78 21 156 10 187 52 69 52 732 40 824 321 243 27 143 13 183 47 58 16 132 6 154 56 50 19 143 7 169 58 52 9 101 8 118 38 38 71 519 34 624 199 198 123 1251 74 1448 520 441 8.5 86.4 5.1 49.2 41.8	Cherry Avenue Southbound Valley Bouleva Westbound Left Thru Right App. Total Left Thru Right 9 203 10 222 88 46 7 13 214 11 238 110 50 8 9 159 9 177 71 78 13 21 156 10 187 52 69 21 52 732 40 824 321 243 49 27 143 13 183 47 58 12 16 132 6 154 56 50 14 19 143 7 169 58 52 10 9 101 8 118 38 38 10 71 519 34 624 199 198 46 123 1251 74 1448 520 441	Cherry Avenue Southbound Valley Boulevard Westbound Left Thru Right App. Total Left Thru Right App. Total 9 203 10 222 88 46 7 141 13 214 11 238 110 50 8 168 9 159 9 177 71 78 13 162 21 156 10 187 52 69 21 142 52 732 40 824 321 243 49 613 27 143 13 183 47 58 12 117 16 132 6 154 56 50 14 120 19 143 7 169 58 52 10 120 9 101 8 118 38 38 10 86 71 519 34	Cherry Avenue Southbound Valley Boulevard Westbound Left Thru Right App. Total Left Thru Right App. Total Left 9 203 10 222 88 46 7 141 65 13 214 11 238 110 50 8 168 46 9 159 9 177 71 78 13 162 70 21 156 10 187 52 69 21 142 67 52 732 40 824 321 243 49 613 248 27 143 13 183 47 58 12 117 55 16 132 6 154 56 50 14 120 43 19 143 7 169 58 52 10 120 41 9 101 8	Cherry Avenue Southbound Valley Boulevard Westbound Cherry Southbound Cherry North Left Thru Right App. Total Left Thru Right App. Total Left Thru Right App. Total Left Thru 9 203 10 222 88 46 7 141 65 147 13 214 11 238 110 50 8 168 46 160 9 159 9 177 71 78 13 162 70 169 21 156 10 187 52 69 21 142 67 159 52 732 40 824 321 243 49 613 248 635 27 143 13 183 47 58 12 117 55 129 16 132 6 154 56 50 <t< td=""><td>Cherry Avenue Southbound Valley Boulevard Westbound Cherry Avenue Northbound Left Thru Right App. Total Left Thru Right 21 156 10</td><td>Cherry Avenue South-bound Valley Boulevard Westbound Cherry Avenue North-bound Left Thru Right App. Total Left Thru Right App. Total Left Thru Right App. Total 9 203 10 222 88 46 7 141 65 147 55 267 13 214 11 238 110 50 8 168 46 160 66 272 9 159 9 177 71 78 13 162 70 169 76 315 21 156 10 187 52 69 21 142 67 159 57 283 52 732 40 824 321 243 49 613 248 635 254 1137 27 143 13 183 47 58 12 117 55 129 46</td><td> Cherry Avenue</td><td>Cherry Avenue South-bound Valley Boulevard Westbound Cherry Avenue North-bound Valley East Left Thru Right App. Total Left Thru Right App. Total Left Thru 9 203 10 222 88 46 7 141 65 147 55 267 8 24 13 214 11 238 110 50 8 168 46 160 66 272 9 25 9 159 9 177 71 78 13 162 70 169 76 315 10 26 21 156 10 187 52 69 21 142 67 159 57 283 9 20 52 732 40 824 321 243 49 613 248 635 254 1137 36 95 27 143<!--</td--><td> Cherry Avenue</td><td> Cherry Avenue</td></td></t<>	Cherry Avenue Southbound Valley Boulevard Westbound Cherry Avenue Northbound Left Thru Right App. Total Left Thru Right 21 156 10	Cherry Avenue South-bound Valley Boulevard Westbound Cherry Avenue North-bound Left Thru Right App. Total Left Thru Right App. Total Left Thru Right App. Total 9 203 10 222 88 46 7 141 65 147 55 267 13 214 11 238 110 50 8 168 46 160 66 272 9 159 9 177 71 78 13 162 70 169 76 315 21 156 10 187 52 69 21 142 67 159 57 283 52 732 40 824 321 243 49 613 248 635 254 1137 27 143 13 183 47 58 12 117 55 129 46	Cherry Avenue	Cherry Avenue South-bound Valley Boulevard Westbound Cherry Avenue North-bound Valley East Left Thru Right App. Total Left Thru Right App. Total Left Thru 9 203 10 222 88 46 7 141 65 147 55 267 8 24 13 214 11 238 110 50 8 168 46 160 66 272 9 25 9 159 9 177 71 78 13 162 70 169 76 315 10 26 21 156 10 187 52 69 21 142 67 159 57 283 9 20 52 732 40 824 321 243 49 613 248 635 254 1137 36 95 27 143 </td <td> Cherry Avenue</td> <td> Cherry Avenue</td>	Cherry Avenue	Cherry Avenue

		Cherry	Avenu	е	,	Valley E	Bouleva	rd		Cherry	Avenue	9	,	Valley E	Bouleva	rd]
		South	bound			West	tbound			North	bound			East	bound		
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for I	Entire In	tersecti	on Beg	ins at 07:	00 AM												
07:00 AM	9	203	10	222	88	46	7	141	65	147	55	267	8	24	20	52	682
07:15 AM	13	214	11	238	110	50	8	168	46	160	66	272	9	25	19	53	731
07:30 AM	9	159	9	177	71	78	13	162	70	169	76	315	10	26	14	50	704
07:45 AM	21	156	10	187	52	69	21	142	67	159	57	283	9	20	15	44	656
Total Volume	52	732	40	824	321	243	49	613	248	635	254	1137	36	95	68	199	2773
% App. Total	6.3	88.8	4.9		52.4	39.6	8		21.8	55.8	22.3		18.1	47.7	34.2		
PHF	.619	.855	.909	.866	.730	.779	.583	.912	.886	.939	.836	.902	.900	.913	.850	.939	.948

File Name: FONCHVAAM Site Code : 20116023 Start Date : 1/12/2016 Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1

Peak Hour for	Each A	pproacl	n Begin	s at:												
	07:00 AM	1			07:00 AN	1			07:00 AN	1			07:00 AM	1		
+0 mins.	9	203	10	222	88	46	7	141	65	147	55	267	8	24	20	52
+15 mins.	13	214	11	238	110	50	8	168	46	160	66	272	9	25	19	53
+30 mins.	9	159	9	177	71	78	13	162	70	169	76	315	10	26	14	50
+45 mins.	21	156	10	187	52	69	21	142	67	159	57	283	9	20	15	44
Total Volume	52	732	40	824	321	243	49	613	248	635	254	1137	36	95	68	199
% App. Total	6.3	88.8	4.9		52.4	39.6	8		21.8	55.8	22.3		18.1	47.7	34.2	
PHF	.619	.855	.909	.866	.730	.779	.583	.912	.886	.939	.836	.902	.900	.913	.850	.939

File Name: FONCHVAAM Site Code: 20116023 Start Date : 1/12/2016 Page No : 1

Г			<u> </u>															
				Avenu	e	'		Bouleva	ırd			/ Avenu	е	\	,	Bouleva	rd	
L			South	nbound			West	tbound			North	nbound			East	tbound		
	Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
	07:00 AM	1	8	1	10	1	0	1	2	4	7	1	12	0	1	4	5	29
	07:15 AM	1	9	1	11	4	2	1	7	2	7	0	9	1	2	3	6	33
	07:30 AM	0	11	1	12	3	1	2	6	5	6	1	12	1	3	4	8	38
	07:45 AM	0	9	0	9	3	3	1	7	0	7	6	13	0	0	2	2	31_
	Total	2	37	3	42	11	6	5	22	11	27	8	46	2	6	13	21	131
	08:00 AM	0	11	1	12	6	2	1	9	8	6	5	19	0	4	3	7	47
	08:15 AM	2	9	2	13	7	6	0	13	2	10	3	15	2	4	5	11	52
	08:30 AM	1	8	2	11	4	2	1	7	8	8	1	17	2	2	1	5	40
	08:45 AM	2	4	0	6	4	2	2	8	6	12	3	21	1	1	1	3	38
	Total	5	32	5	42	21	12	4	37	24	36	12	72	5	11	10	26	177
	Grand Total	7	69	8	84	32	18	9	59	35	63	20	118	7	17	23	47	308
	Apprch %	8.3	82.1	9.5		54.2	30.5	15.3		29.7	53.4	16.9		14.9	36.2	48.9		
	Total %	2.3	22.4	2.6	27.3	10.4	5.8	2.9	19.2	11.4	20.5	6.5	38.3	2.3	5.5	7.5	15.3	

		Charm	Λ.,οο.,		,	/allay F) a ulaya	rd		Charm	. ^	_		/allay [Bouleva	r.d	
		Cherry	Avenu	е		valley b	Bouleva	Iu		Cherry	/ Avenu	e		valley b	souleva	Iu	
		South	nbound			West	bound			North	nbound			East	bound		
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour An	alysis Fr	om 07:0	00 AM t	o 07:45 A	M - Pea	ak 1 of 1	1				_				_		
Peak Hour for	Entire In	tersect	ion Beg	ins at 07:	00 AM												
07:00 AM	1	8	1	10	1	0	1	2	4	7	1	12	0	1	4	5	29
07:15 AM	1	9	1	11	4	2	1	7	2	7	0	9	1	2	3	6	33
07:30 AM	0	11	1	12	3	1	2	6	5	6	1	12	1	3	4	8	38
07:45 AM	0	9	0	9	3	3	1	7	0	7	6	13	0	0	2	2	31_
Total Volume	2	37	3	42	11	6	5	22	11	27	8	46	2	6	13	21	131
% App. Total	4.8	88.1	7.1		50	27.3	22.7		23.9	58.7	17.4		9.5	28.6	61.9		
PHF	.500	.841	.750	.875	.688	.500	.625	.786	.550	.964	.333	.885	.500	.500	.813	.656	.862

File Name: FONCHVAAM Site Code : 20116023 Start Date : 1/12/2016 Page No : 2

2

28.6

.500

.333

3

13

61.9

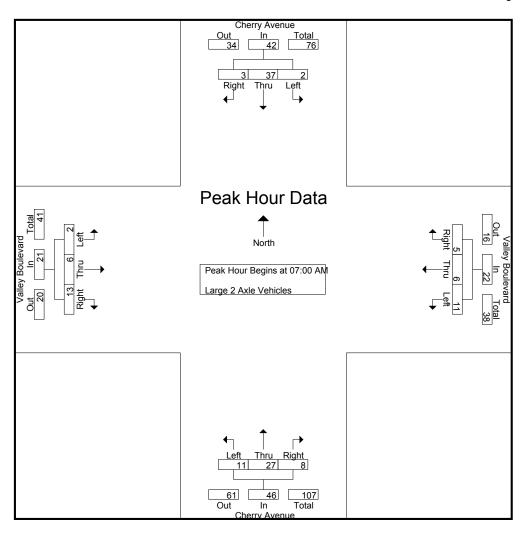
.813

6 8

2

21

.656



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1 Peak Hour for Each Approach Begins at:

.500

.841

PHF

Cak Hour lor	Lacii A	pproaci	n begii	is at.										
	07:00 AM	1			07:00 AN	Л			07:00 AN	Л			07:00 AM	1
+0 mins.	1	8	1	10	1	0	1	2	4	7	1	12	0	
+15 mins.	1	9	1	11	4	2	1	7	2	7	0	9	1	
+30 mins.	0	11	1	12	3	1	2	6	5	6	1	12	1	
+45 mins.	0	9	0	9	3	3	1	7	0	7	6	13	0	
Total Volume	2	37	3	42	11	6	5	22	11	27	8	46	2	
% App. Total	4.8	88.1	7.1		50	27.3	22.7		23.9	58.7	17.4		9.5	

.625

.875

.688

City of Fontana N/S: Cherry Avenue E/W: Valley Boulevard Weather: Clear

File Name: FONCHVAAM Site Code: 20116023 Start Date : 1/12/2016 Page No : 1

Grouns	Printed-	3 Ayle	Vehicles

Г			<u> </u>															
			,	Avenu	e	,		Bouleva	ırd		,	/ Avenu	e	\	,	Bouleva	rd	
			South	nbound			West	tbound			North	nbound			East	bound		
	Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
	07:00 AM	0	5	3	8	2	1	0	3	2	1	1	4	1	0	1	2	17
	07:15 AM	0	2	2	4	2	2	0	4	1	8	0	9	1	0	5	6	23
	07:30 AM	0	7	2	9	1	1	1	3	2	0	2	4	2	0	7	9	25
_	07:45 AM	0	5	1	6	1	4	0	5	3	9	3	15	1	0	5	6	32
	Total	0	19	8	27	6	8	1	15	8	18	6	32	5	0	18	23	97
	08:00 AM	0	4	2	6	0	1	0	1	6	1	2	9	2	1	3	6	22
	08:15 AM	3	7	1	11	0	1	0	1	2	3	1	6	1	2	2	5	23
	08:30 AM	3	9	1	13	4	1	1	6	3	8	2	13	1	2	6	9	41
	08:45 AM	1	7	0	8	3	3	0	6	6	4	3	13	0	2	6	8	35
	Total	7	27	4	38	7	6	1	14	17	16	8	41	4	7	17	28	121
	Grand Total	7	46	12	65	13	14	2	29	25	34	14	73	9	7	35	51	218
	Apprch %	10.8	70.8	18.5		44.8	48.3	6.9		34.2	46.6	19.2		17.6	13.7	68.6		
	Total %	3.2	21.1	5.5	29.8	6	6.4	0.9	13.3	11.5	15.6	6.4	33.5	4.1	3.2	16.1	23.4	

		Cherry	Avenu	е	,	Valley E	Bouleva	rd		Cherry	/ Avenu	е	,	Valley E	Bouleva	rd	
		South	nbound			West	bound			North	nbound			East	bound		
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Ana	alysis Fr	om 07:0	00 AM t	o 07:45 A	M - Pea	ak 1 of 1	1				_				_		
Peak Hour for	Entire In	tersecti	ion Beg	ins at 07:	00 AM												
07:00 AM	0	5	3	8	2	1	0	3	2	1	1	4	1	0	1	2	17
07:15 AM	0	2	2	4	2	2	0	4	1	8	0	9	1	0	5	6	23
07:30 AM	0	7	2	9	1	1	1	3	2	0	2	4	2	0	7	9	25
07:45 AM	0	5	1	6	1	4	0	5	3	9	3	15	1	0	5	6	32
Total Volume	0	19	8	27	6	8	1	15	8	18	6	32	5	0	18	23	97
% App. Total	0	70.4	29.6		40	53.3	6.7		25	56.2	18.8		21.7	0	78.3		
PHF	.000	.679	.667	.750	.750	.500	.250	.750	.667	.500	.500	.533	.625	.000	.643	.639	.758

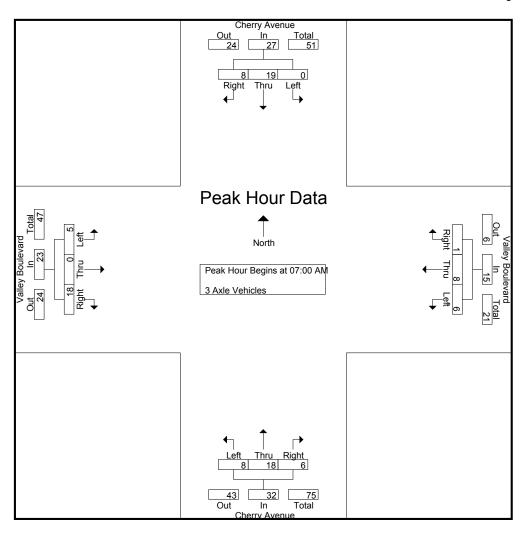
File Name: FONCHVAAM Site Code : 20116023 Start Date : 1/12/2016 Page No : 2

.643

6 9 6

23

.639



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1 Peak Hour for Each Approach Begins at:

.667

.000

.679

reak Hour to	Lauir	pproac	n begin	ง ลเ.											
	07:00 AM		_		07:00 AM	1			07:00 AN	Л			07:00 AM	í	
+0 mins.	0	5	3	8	2	1	0	3	2	1	1	4	1	0	1
+15 mins.	0	2	2	4	2	2	0	4	1	8	0	9	1	0	5
+30 mins.	0	7	2	9	1	1	1	3	2	0	2	4	2	0	7
+45 mins.	0	5	1	6	1	4	0	5	3	9	3	15	1	0	5
Total Volume	0	19	8	27	6	8	1	15	8	18	6	32	5	0	18
% App. Total	0	70.4	29.6		40	53.3	6.7		25	56.2	18.8		21.7	0	78.3

.250

.750 .750

.750 .667

.500

.533 .625

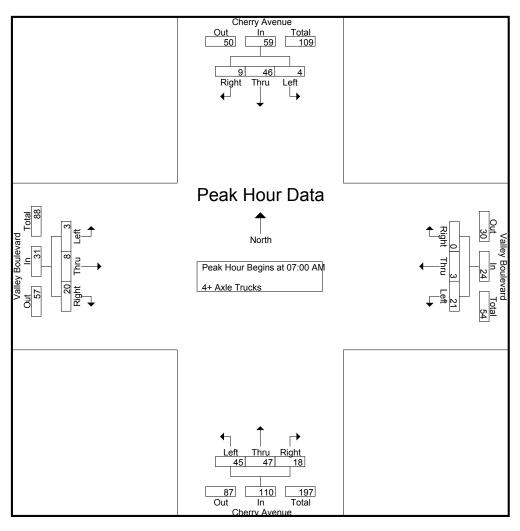
File Name: FONCHVAAM Site Code: 20116023 Start Date : 1/12/2016 Page No : 1

Groups Printed- 4+ Axle Trucks

Gloups Fillieu- 41 Axie Hucks																
	Cherry	Avenu	e	,	Valley E	Bouleva	ırd		Cherry	/ Avenu	e	\	/alley I	3ouleva	ırd	
	South	nbound			Wes	tbound			North	bound			East	bound		
Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
1	10	0	11	3	1	0	4	13	10	5	28	1	2	3	6	49
0	8	3	11	9	0	0	9	6	17	6	29	0	1	5	6	55
2	17	4	23	7	0	0	7	10	12	2	24	0	3	5	8	62
1	11	2	14	2	2	0	4	16	8	5	29	2	2	7	11	58
4	46	9	59	21	3	0	24	45	47	18	110	3	8	20	31	224
1	18	1	20	6	5	0	11	8	10	5	23	1	3	10	14	68
0	10	2	12	6	3	0	9	9	12	5	26	2	4	6	12	59
0	15	2	17	8	1	1	10	13	11	7	31	0	2	12	14	72
1_	14	3	18	5	2	1	8	13	13	2	28	2	4	11_	17	71
2	57	8	67	25	11	2	38	43	46	19	108	5	13	39	57	270
6	103	17	126	46	14	2	62	88	93	37	218	8	21	59	88	494
4.8	81.7	13.5		74.2	22.6	3.2		40.4	42.7	17		9.1	23.9	67		
1.2	20.9	3.4	25.5	9.3	2.8	0.4	12.6	17.8	18.8	7.5	44.1	1.6	4.3	11.9	17.8	
	Left 1 0 2 1 4 1 0 0 0 1 2 6 4.8	South Left Thru 1 10 0 8 2 17 1 11 4 46 1 18 0 10 0 15 1 14 2 57 6 103 4.8 81.7	Southbound Left Thru Right 1 10 0 0 8 3 2 17 4 1 11 2 4 46 9 1 18 1 0 10 2 0 15 2 1 14 3 2 57 8 6 103 17 4.8 81.7 13.5	1 10 0 11 0 8 3 11 2 17 4 23 1 11 2 14 4 46 9 59 1 18 1 20 0 10 2 12 0 15 2 17 1 14 3 18 2 57 8 67 6 103 17 126 4.8 81.7 13.5	Southbound Left Thru Right App. Total Left	Cherry Avenue Southbound Valley E West Left Thru Right App. Total Left Thru 1 10 0 11 3 1 0 8 3 11 9 0 2 17 4 23 7 0 1 11 2 14 2 2 4 46 9 59 21 3 1 18 1 20 6 5 0 10 2 12 6 3 0 15 2 17 8 1 1 14 3 18 5 2 2 57 8 67 25 11 6 103 17 126 46 14 4.8 81.7 13.5 74.2 22.6	Cherry Avenue Southbound Valley Bouleva Westbound Left Thru Right App. Total Left Thru Right 1 10 0 11 3 1 0 0 8 3 11 9 0 0 2 17 4 23 7 0 0 0 1 11 2 14 2 2 0 4 46 9 59 21 3 0 1 18 1 20 6 5 0 0 10 2 12 6 3 0 0 15 2 17 8 1 1 1 14 3 18 5 2 1 2 57 8 67 25 11 2 6 103 17 126 46 14 2	Cherry Avenue Southbound Valley Boulevard Westbound Left Thru Right App. Total Left Thru Right App. Total 1 10 0 11 3 1 0 4 0 8 3 11 9 0 0 9 2 17 4 23 7 0 0 7 1 11 2 14 2 2 0 4 4 46 9 59 21 3 0 24 1 18 1 20 6 5 0 11 0 10 2 12 6 3 0 9 0 15 2 17 8 1 1 10 1 14 3 18 5 2 1 8 2 57 8 67 25 11 2	Cherry Avenue	Cherry Avenue Southbound Valley Boulevard Westbound Cherry North North Left Thru Right App. Total Left Thru Right App. Total Left Thru Right App. Total Left Thru 1 10 0 11 3 1 0 4 13 10 0 8 3 11 9 0 0 9 6 17 2 17 4 23 7 0 0 7 10 12 1 11 2 14 2 2 0 4 16 8 4 46 9 59 21 3 0 24 45 47 1 18 1 20 6 5 0 11 8 10 0 10 2 12 6 3 0 9 9 12 0	Cherry Avenue Southbound Valley Boulevard Westbound Cherry Avenue Northbound Left Thru Right App. Total Left Thru Right 0 8 3 11 9 0 0 9 6 17 6 2 17 4 23 7 0 0 7 10 12 2 4 46 3 <t< td=""><td>Cherry Avenue South-bound Valley Boulevard Westbound Cherry Avenue North-bound Left Thru Right App. Total Left Thru Right App. Total Left Thru Right App. Total 1 10 0 11 3 1 0 4 13 10 5 28 0 8 3 11 9 0 0 9 6 17 6 29 2 17 4 23 7 0 0 7 10 12 2 24 1 11 2 14 2 2 0 4 16 8 5 29 4 46 9 59 21 3 0 24 45 47 18 110 1 18 1 20 6 5 0 11 8 10 5 23 0 1</td><td> Cherry Avenue</td><td>Cherry Avenue South-bound Valley Boulevard Westbound Cherry Avenue North-bound Valley Beast North-bound Left Thru Right App. Total Left Thru Right App. Total Left Thru 1 10 0 11 3 1 0 4 13 10 5 28 1 2 0 8 3 11 9 0 0 9 6 17 6 29 0 1 2 17 4 23 7 0 0 7 10 12 2 24 0 3 1 11 2 14 2 2 0 4 16 8 5 29 2 2 4 46 9 59 21 3 0 24 45 47 18 110 3 8 1 18 1 20 6</td><td> Cherry Avenue</td><td> Cherry Avenue South-bound Westbound Westbound Westbound Westbound North-bound Cherry Avenue North-bound Cherry Avenue Eastbound Eastbound </td></t<>	Cherry Avenue South-bound Valley Boulevard Westbound Cherry Avenue North-bound Left Thru Right App. Total Left Thru Right App. Total Left Thru Right App. Total 1 10 0 11 3 1 0 4 13 10 5 28 0 8 3 11 9 0 0 9 6 17 6 29 2 17 4 23 7 0 0 7 10 12 2 24 1 11 2 14 2 2 0 4 16 8 5 29 4 46 9 59 21 3 0 24 45 47 18 110 1 18 1 20 6 5 0 11 8 10 5 23 0 1	Cherry Avenue	Cherry Avenue South-bound Valley Boulevard Westbound Cherry Avenue North-bound Valley Beast North-bound Left Thru Right App. Total Left Thru Right App. Total Left Thru 1 10 0 11 3 1 0 4 13 10 5 28 1 2 0 8 3 11 9 0 0 9 6 17 6 29 0 1 2 17 4 23 7 0 0 7 10 12 2 24 0 3 1 11 2 14 2 2 0 4 16 8 5 29 2 2 4 46 9 59 21 3 0 24 45 47 18 110 3 8 1 18 1 20 6	Cherry Avenue	Cherry Avenue South-bound Westbound Westbound Westbound Westbound North-bound Cherry Avenue North-bound Cherry Avenue Eastbound Eastbound

		Cherry	Avenue	Э		Valley E	Bouleva	rd		Cherry	Avenu	е	,	Valley E	Bouleva	rd	
		South	bound			West	bound			North	bound			East	bound		
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Ana	lysis Fro	om 07:0	00 AM to	o 07:45 A	M - Pea	k 1 of 1	1								_		
Peak Hour for I	Entire In	tersecti	ion Begi	ins at 07:	00 AM												
07:00 AM	1	10	0	11	3	1	0	4	13	10	5	28	1	2	3	6	49
07:15 AM	0	8	3	11	9	0	0	9	6	17	6	29	0	1	5	6	55
07:30 AM	2	17	4	23	7	0	0	7	10	12	2	24	0	3	5	8	62
07:45 AM	1	11	2	14	2	2	0	4	16	8	5	29	2	2	7	11	58
Total Volume	4	46	9	59	21	3	0	24	45	47	18	110	3	8	20	31	224
% App. Total	6.8	78	15.3		87.5	12.5	0		40.9	42.7	16.4		9.7	25.8	64.5		
PHF	.500	.676	.563	.641	.583	.375	.000	.667	.703	.691	.750	.948	.375	.667	.714	.705	.903

File Name: FONCHVAAM Site Code : 20116023 Start Date : 1/12/2016 Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1

Peak Hour for	Each A	Approac	h Begir	ns at:
	07:00 Af	M	_	
+0 mins.	1	10	0	1

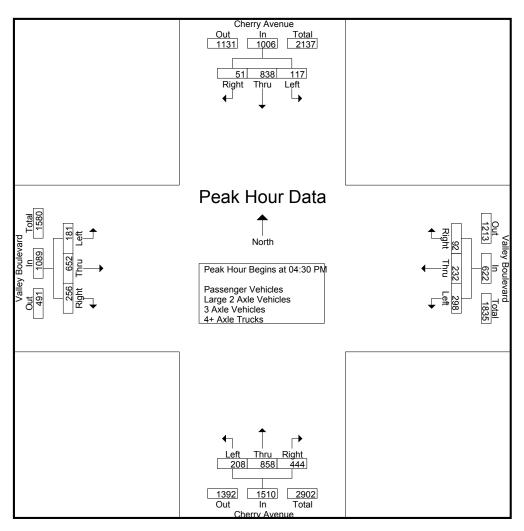
I Cak Hour for	Lucii / t	pprodo	n begin	o ut.												
	07:00 AM	I			07:00 AM	1			07:00 AN	1			07:00 AM	1		
+0 mins.	1	10	0	11	3	1	0	4	13	10	5	28	1	2	3	6
+15 mins.	0	8	3	11	9	0	0	9	6	17	6	29	0	1	5	6
+30 mins.	2	17	4	23	7	0	0	7	10	12	2	24	0	3	5	8
+45 mins.	1	11	2	14	2	2	0	4	16	8	5	29	2	2	7	11
Total Volume	4	46	9	59	21	3	0	24	45	47	18	110	3	8	20	31
% App. Total	6.8	78	15.3		87.5	12.5	0		40.9	42.7	16.4		9.7	25.8	64.5	
PHF	.500	.676	.563	.641	.583	.375	.000	.667	.703	.691	.750	.948	.375	.667	.714	.705

File Name: FONCHVAPM Site Code : 20116023 Start Date : 1/12/2016 Page No : 1

		Gr	oups P	rinted- Pa	assenge	er Vehic	cles - La	arge 2 Ax	le Vehi	cles - 3	Axle V	ehicles -	4+ Axle	Truck	S		
		Cherry	/ Avenu	e	\		Bouleva	rd		Cherry	/ Avenu	e	'	√alley E	Bouleva	rd	
		South	nbound			West	bound				bound				bound		
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	33	224	10	267	76	55	26	157	59	198	114	371	59	151	76	286	1081
04:15 PM	29	204	12	245	82	48	17	147	55	180	94	329	53	136	60	249	970
04:30 PM	34	242	15	291	75	49	25	149	47	193	97	337	32	125	59	216	993
04:45 PM	27	165	10	202	84	68	29	181	51	223	148	422	60	169	50	279	1084
Total	123	835	47	1005	317	220	97	634	212	794	453	1459	204	581	245	1030	4128
												i					
05:00 PM	27	243	12	282	70	56	22	148	56	220	112	388	34	169	77	280	1098
05:15 PM	29	188	14	231	69	59	16	144	54	222	87	363	55	189	70	314	1052
05:30 PM	21	192	5	218	65	32	19	116	50	207	79	336	33	133	43	209	879
05:45 PM	25	128	10	163	57	35	15	107	61	164	88	313	37	98	45	180	763
Total	102	751	41	894	261	182	72	515	221	813	366	1400	159	589	235	983	3792
Grand Total	225	1586	88	1899	578	402	169	1149	433	1607	819	2859	363	1170	480	2013	7920
Apprch %	11.8	83.5	4.6		50.3	35	14.7		15.1	56.2	28.6		18	58.1	23.8		
Total %	2.8	20	1.1	24	7.3	5.1	2.1	14.5	5.5	20.3	10.3	36.1	4.6	14.8	6.1	25.4	
Passenger Vehicles	202	1420	70	1692	519	362	159	1040	307	1488	756	2551	333	1100	383	1816	7099
% Passenger Vehicles	89.8	89.5	79.5	89.1	89.8	90	94.1	90.5	70.9	92.6	92.3	89.2	91.7	94	79.8	90.2	89.6
Large 2 Axle Vehicles	10	59	3	72	15	11	4	30	20	40	16	76	11	24	16	51	229
% Large 2 Axle Vehicles	4.4	3.7	3.4	3.8	2.6	2.7	2.4	2.6	4.6	2.5	2	2.7	3_	2.1	3.3_	2.5	2.9
3 Axle Vehicles	4	43	8	55	21	12	3	36	26	27	14	67	8	13	27	48	206
% 3 Axle Vehicles	1.8	2.7	9.1	2.9	3.6	3	1.8	3.1	6	1.7	1.7	2.3	2.2	1.1	5.6	2.4	2.6
4+ Axle Trucks	9	64	7	80	23	17	3	43	80	52	33	165	11	33	54	98	386
% 4+ Axle Trucks	4	4	8	4.2	4	4.2	1.8	3.7	18.5	3.2	4	5.8	3	2.8	11.2	4.9	4.9

		Cherry	Avenu	е	,	Valley E	Bouleva	rd		Cherry	Avenu	е	,	Valley E	Bouleva	rd	
		South	bound			West	bound			North	bound			East	bound		
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Ana	alysis Fro	om 04:0	00 PM t	o 05:45 P	M - Pea	k 1 of 1	1				_				_		
Peak Hour for I	Entire In	tersecti	on Beg	ins at 04:	30 PM												
04:30 PM	34	242	15	291	75	49	25	149	47	193	97	337	32	125	59	216	993
04:45 PM	27	165	10	202	84	68	29	181	51	223	148	422	60	169	50	279	1084
05:00 PM	27	243	12	282	70	56	22	148	56	220	112	388	34	169	77	280	1098
05:15 PM	29	188	14	231	69	59	16	144	54	222	87	363	55	189	70	314	1052
Total Volume	117	838	51	1006	298	232	92	622	208	858	444	1510	181	652	256	1089	4227
% App. Total	11.6	83.3	5.1		47.9	37.3	14.8		13.8	56.8	29.4		16.6	59.9	23.5		
PHF	.860	.862	.850	.864	.887	.853	.793	.859	.929	.962	.750	.895	.754	.862	.831	.867	.962

File Name: FONCHVAPM Site Code : 20116023 Start Date : 1/12/2016 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:																
	04:15 PM	1			04:00 PM	1			04:30 PN	Л			04:30 PM	1		
+0 mins.	29	204	12	245	76	55	26	157	47	193	97	337	32	125	59	216
+15 mins.	34	242	15	291	82	48	17	147	51	223	148	422	60	169	50	279
+30 mins.	27	165	10	202	75	49	25	149	56	220	112	388	34	169	77	280
+45 mins.	27	243	12	282	84	68	29	181	54	222	87	363	55	189	70	314
Total Volume	117	854	49	1020	317	220	97	634	208	858	444	1510	181	652	256	1089
% App. Total	11.5	83.7	4.8		50	34.7	15.3		13.8	56.8	29.4		16.6	59.9	23.5	
PHF	.860	.879	.817	.876	.943	.809	.836	.876	.929	.962	.750	.895	.754	.862	.831	.867

City of Fontana N/S: Cherry Avenue E/W: Valley Boulevard Weather: Clear

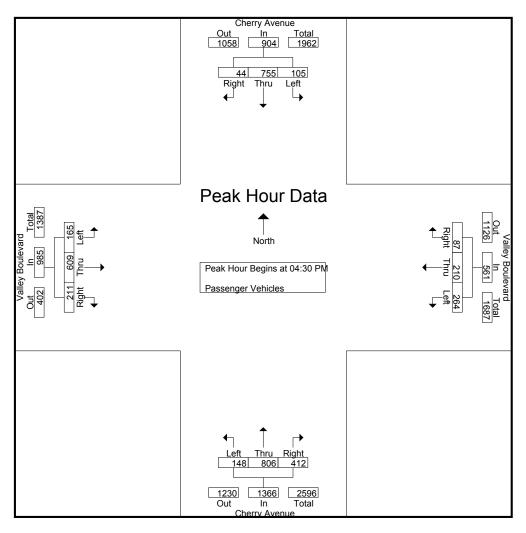
File Name: FONCHVAPM Site Code: 20116023 Start Date : 1/12/2016 Page No : 1

Gro	ups	Printed-	Passenger	Vehicles	,
				-	

Γ			Cherry	Avenu	e	\		Bouleva	rd			Avenu	е	\				
				nbound	_		,	bound			,	nbound	-					
Ī	Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
_	04:00 PM	31	200	7	238	68	49	24	141	38	177	107	322	57	142	61	260	961
	04:15 PM	25	177	11	213	75	44	16	135	40	162	81	283	48	134	46	228	859
	04:30 PM	30	214	11	255	67	46	23	136	35	179	90	304	29	112	44	185	880
_	04:45 PM	25	153	10	188	74	61	28	163	37	212	139	388	53	160	41	254	993
	Total	111	744	39	894	284	200	91	575	150	730	417	1297	187	548	192	927	3693
	05:00 PM	22	218	10	250	64	51	21	136	39	202	101	342	32	155	63	250	978
	05:15 PM	28	170	13	211	59	52	15	126	37	213	82	332	51	182	63	296	965
	05:30 PM	21	174	2	197	57	28	18	103	37	189	76	302	29	123	33	185	787
	05:45 PM	20	114	6	140	55	31	14	100	44	154	80	278	34	92	32	158	676
	Total	91	676	31	798	235	162	68	465	157	758	339	1254	146	552	191	889	3406
	Grand Total	202	1420	70	1692	519	362	159	1040	307	1488	756	2551	333	1100	383	1816	7099
	Apprch %	11.9	83.9	4.1		49.9	34.8	15.3		12	58.3	29.6		18.3	60.6	21.1		
	Total %	2.8	20	1	23.8	7.3	5.1	2.2	14.6	4.3	21	10.6	35.9	4.7	15.5	5.4	25.6	

		Cherry	Avenu	е	,	Valley E	Bouleva	rd		Cherry	Avenu	е	,				
		South	bound			West	bound			North	nbound						
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	30	214	11	255	67	46	23	136	35	179	90	304	29	112	44	185	880
04:45 PM	25	153	10	188	74	61	28	163	37	212	139	388	53	160	41	254	993
05:00 PM	22	218	10	250	64	51	21	136	39	202	101	342	32	155	63	250	978
05:15 PM	28	170	13	211	59	52	15	126	37	213	82	332	51	182	63	296	965
Total Volume	105	755	44	904	264	210	87	561	148	806	412	1366	165	609	211	985	3816
% App. Total	11.6	83.5	4.9		47.1	37.4	15.5		10.8	59	30.2		16.8	61.8	21.4		
PHF	.875	.866	.846	.886	.892	.861	.777	.860	.949	.946	.741	.880	.778	.837	.837	.832	.961

File Name: FONCHVAPM Site Code : 20116023 Start Date : 1/12/2016 Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1

Peak Hour for	Each A	pproacl	h Begin:	s at:												
	04:30 PM	1			04:30 PM	1			04:30 PM	1			04:30 PN	1		
+0 mins.	30	214	11	255	67	46	23	136	35	179	90	304	29	112	44	185
+15 mins.	25	153	10	188	74	61	28	163	37	212	139	388	53	160	41	254
+30 mins.	22	218	10	250	64	51	21	136	39	202	101	342	32	155	63	250
+45 mins.	28	170	13	211	59	52	15	126	37	213	82	332	51	182	63	296
Total Volume	105	755	44	904	264	210	87	561	148	806	412	1366	165	609	211	985
% App. Total	11.6	83.5	4.9		47.1	37.4	15.5		10.8	59	30.2		16.8	61.8	21.4	
PHF	.875	.866	.846	.886	.892	.861	.777	.860	.949	.946	.741	.880	.778	.837	.837	.832

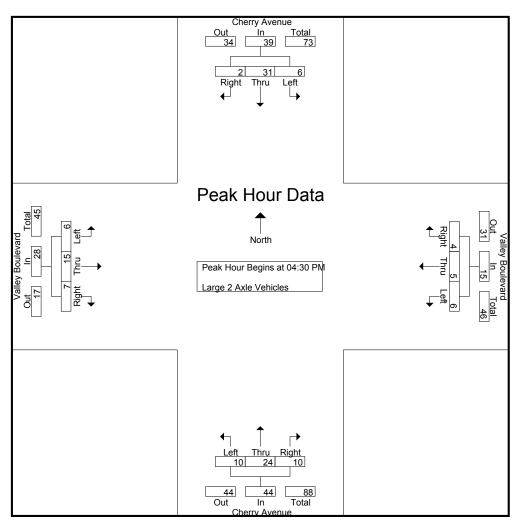
File Name: FONCHVAPM Site Code: 20116023 Start Date : 1/12/2016 Page No : 1

Groups	Printed-	Large	2 Axle	Vehicl	es

Г			<u> </u>	_														
				Avenu	e	,		Bouleva	ırd			/ Avenu	е	\	,	Bouleva	rd	
			South	nbound			West	tbound			North	nbound			East	bound		
	Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
	04:00 PM	1	11	0	12	4	2	0	6	6	4	1	11	1	5	2	8	37
	04:15 PM	2	8	1	11	2	2	0	4	3	5	4	12	1	0	4	5	32
	04:30 PM	0	8	2	10	1	1	2	4	1	5	1	7	1	5	2	8	29
_	04:45 PM	2	5	0	7	1	3	1	5	2	3	6	11	3	4	2	9	32
	Total	5	32	3	40	8	8	3	19	12	17	12	41	6	14	10	30	130
	05:00 PM	3	13	0	16	1	0	1	2	7	12	1	20	1	4	3	8	46
	05:15 PM	1	5	0	6	3	1	0	4	0	4	2	6	1	2	0	3	19
	05:30 PM	0	5	0	5	1	1	0	2	1	4	0	5	2	4	0	6	18
	05:45 PM	1	4	0	5	2	1	0	3	0	3	1	4	1	0	3	4	16
	Total	5	27	0	32	7	3	1	11	8	23	4	35	5	10	6	21	99
	Grand Total	10	59	3	72	15	11	4	30	20	40	16	76	11	24	16	51	229
	Apprch %	13.9	81.9	4.2		50	36.7	13.3		26.3	52.6	21.1		21.6	47.1	31.4		
	Total %	4.4	25.8	1.3	31.4	6.6	4.8	1.7	13.1	8.7	17.5	7	33.2	4.8	10.5	7	22.3	

		Cherry	Avenu	е	,	Valley E	Bouleva	rd		Cherry	/ Avenu	е	,	Valley E	Bouleva	rd	
		South	nbound			West	tbound			North	nbound			East	tbound		
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Ana	ilysis Fr	om 04:3	30 PM t	o 05:15 P	M - Pea	ak 1 of 1	1				_				_		
Peak Hour for E	Entire In	tersecti	ion Beg	ins at 04:	30 PM												
04:30 PM	0	8	2	10	1	1	2	4	1	5	1	7	1	5	2	8	29
04:45 PM	2	5	0	7	1	3	1	5	2	3	6	11	3	4	2	9	32
05:00 PM	3	13	0	16	1	0	1	2	7	12	1	20	1	4	3	8	46
05:15 PM	1	5	0	6	3	1	0	4	0	4	2	6	1	2	0	3	19_
Total Volume	6	31	2	39	6	5	4	15	10	24	10	44	6	15	7	28	126
% App. Total	15.4	79.5	5.1		40	33.3	26.7		22.7	54.5	22.7		21.4	53.6	25		
PHF	.500	.596	.250	.609	.500	.417	.500	.750	.357	.500	.417	.550	.500	.750	.583	.778	.685

File Name: FONCHVAPM Site Code : 20116023 Start Date : 1/12/2016 Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1

Peak Hour for	Each A	pproacl	h Begin	s at:												
	04:30 PM	1			04:30 PN	Л			04:30 PN	Л			04:30 PN	Л		
+0 mins.	0	8	2	10	1	1	2	4	1	5	1	7	1	5	2	8
+15 mins.	2	5	0	7	1	3	1	5	2	3	6	11	3	4	2	9
+30 mins.	3	13	0	16	1	0	1	2	7	12	1	20	1	4	3	8
+45 mins.	1	5	0	6	3	1	0	4	0	4	2	6	1	2	0	3
Total Volume	6	31	2	39	6	5	4	15	10	24	10	44	6	15	7	28
% App. Total	15.4	79.5	5.1		40	33.3	26.7		22.7	54.5	22.7		21.4	53.6	25	
PHF	.500	.596	.250	.609	.500	.417	.500	.750	.357	.500	.417	.550	.500	.750	.583	.778

City of Fontana N/S: Cherry Avenue E/W: Valley Boulevard Weather: Clear

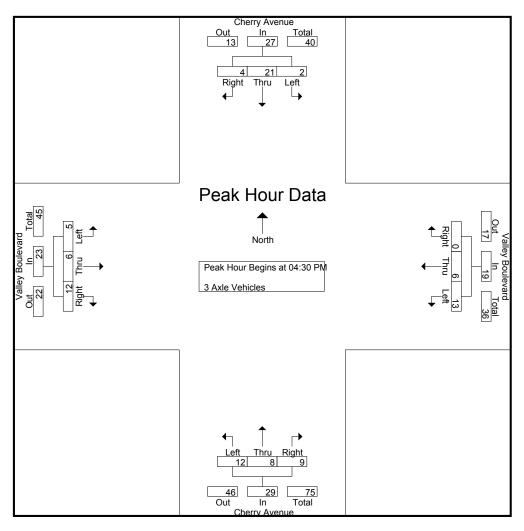
File Name: FONCHVAPM Site Code: 20116023 Start Date : 1/12/2016 Page No : 1

Groups	Printed-	3 Axle	Vehicles
Oloubs	i illiteu-		v Ci ilcico

ſ			Cherry	Avenu	Δ	١		Bouleva	rd			/ Avenu	Δ	١	/allev F	Bouleva	rd	
				nbound	٠		,	tbound	"u		,	nbound	C	`	,	bound	i u	
ŀ	O44 T:	1 -4				1 -64			I	1 -44				1 - 64				
L	Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right		Left	Thru	Right	App. Total	Int. Total
	04:00 PM	0	4	0	4	2	1	1	4	5	7	1	13	0	2	5	7	28
	04:15 PM	2	8	0	10	2	1	1	4	3	3	2	8	3	0	6	9	31
	04:30 PM	2	11	2	15	4	0	0	4	2	2	2	6	0	1	5	6	31
	04:45 PM	0	1	0	1	3	4	0	7	1	3	2	6	2	2	1	5	19
	Total	4	24	2	30	11	6	2	19	11	15	7	33	5	5	17	27	109
	05:00 PM	0	3	1	4	1	1	0	2	3	1	3	7	0	2	3	5	18
	05:15 PM	0	6	1	7	5	1	0	6	6	2	2	10	3	1	3	7	30
	05:30 PM	0	5	1	6	4	2	0	6	1	8	0	9	0	2	4	6	27
	05:45 PM	0	5	3	8	0	2	1	3	5	1	2	8	0	3	0	3	22
	Total	0	19	6	25	10	6	1	17	15	12	7	34	3	8	10	21	97
	Grand Total	4	43	8	55	21	12	3	36	26	27	14	67	8	13	27	48	206
	Apprch %	7.3	78.2	14.5		58.3	33.3	8.3		38.8	40.3	20.9		16.7	27.1	56.2		
	Total %	1.9	20.9	3.9	26.7	10.2	5.8	1.5	17.5	12.6	13.1	6.8	32.5	3.9	6.3	13.1	23.3	

		Cherry	Avenu	е	'	Valley E	Bouleva	rd		Cherry	/ Avenu	е	,	Valley E	Bouleva	rd	
		South	nbound			West	bound			North	nbound			East	bound		
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Ana	alysis Fr	om 04:	30 PM t	o 05:15 P	M - Pea	ak 1 of 1	1										
Peak Hour for	Entire In	tersect	ion Beg	ins at 04:	30 PM												
04:30 PM	2	11	2	15	4	0	0	4	2	2	2	6	0	1	5	6	31
04:45 PM	0	1	0	1	3	4	0	7	1	3	2	6	2	2	1	5	19
05:00 PM	0	3	1	4	1	1	0	2	3	1	3	7	0	2	3	5	18
05:15 PM	0	6	1	7	5	1	0	6	6	2	2	10	3	1	3	7	30_
Total Volume	2	21	4	27	13	6	0	19	12	8	9	29	5	6	12	23	98
% App. Total	7.4	77.8	14.8		68.4	31.6	0		41.4	27.6	31		21.7	26.1	52.2		
PHF	.250	.477	.500	.450	.650	.375	.000	.679	.500	.667	.750	.725	.417	.750	.600	.821	.790

File Name: FONCHVAPM Site Code : 20116023 Start Date : 1/12/2016 Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1

Peak Hour for	Each Ap	proach	Begins	at:
	04:30 PM		-	
	_		_	

Peak Hour for	Each Ap	oproac	<u>n Begin</u>	s at:												
	04:30 PM				04:30 PM	1			04:30 PN	1			04:30 PN	1		
+0 mins.	2	11	2	15	4	0	0	4	2	2	2	6	0	1	5	6
+15 mins.	0	1	0	1	3	4	0	7	1	3	2	6	2	2	1	5
+30 mins.	0	3	1	4	1	1	0	2	3	1	3	7	0	2	3	5
+45 mins.	0	6	1	7	5	1	0	6	6	2	2	10	3	1	3	7
Total Volume	2	21	4	27	13	6	0	19	12	8	9	29	5	6	12	23
% App. Total	7.4	77.8	14.8		68.4	31.6	0		41.4	27.6	31		21.7	26.1	52.2	
PHF	250	477	500	450	650	375	000	679	500	667	750	725	417	750	600	821

City of Fontana N/S: Cherry Avenue E/W: Valley Boulevard Weather: Clear

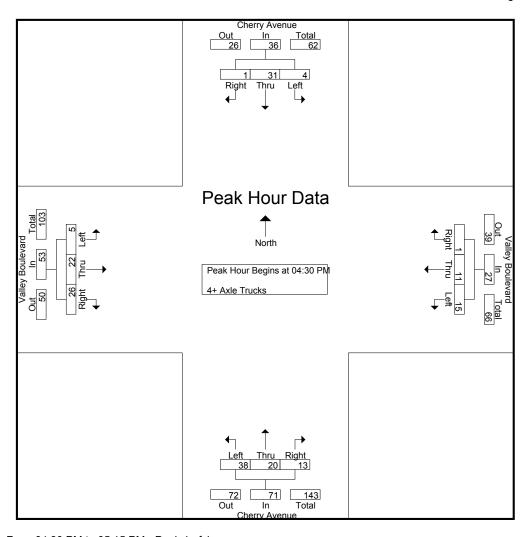
File Name: FONCHVAPM Site Code: 20116023 Start Date : 1/12/2016 Page No : 1

Groups Printed- 4+ Axle Trucks

		Cherry	Avenu	e	'	√alley E	Bouleva	rd		Cherry	/ Avenu	е	\	/alley I	Bouleva	ırd	
		South	nbound			West	bound			North	hbound			East	tbound		
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	1	9	3	13	2	3	1	6	10	10	5	25	1	2	8	11	55
04:15 PM	0	11	0	11	3	1	0	4	9	10	7	26	1	2	4	7	48
04:30 PM	2	9	0	11	3	2	0	5	9	7	4	20	2	7	8	17	53
04:45 PM	0	6	0	6	6	0	0	6	11	5	1	17	2	3	6	11	40
Total	3	35	3	41	14	6	1	21	39	32	17	88	6	14	26	46	196
05:00 PM	2	9	1	12	4	4	0	8	7	5	7	19	1	8	8	17	56
05:15 PM	0	7	0	7	2	5	1	8	11	3	1	15	0	4	4	8	38
05:30 PM	0	8	2	10	3	1	1	5	11	6	3	20	2	4	6	12	47
05:45 PM	4	5	1	10	0	1	0	1	12	6	5	23	2	3	10	15	49
Total	6	29	4	39	9	11	2	22	41	20	16	77	5	19	28	52	190
Grand Total	9	64	7	80	23	17	3	43	80	52	33	165	11	33	54	98	386
Apprch %	11.2	80	8.8		53.5	39.5	7		48.5	31.5	20		11.2	33.7	55.1		
Total %	2.3	16.6	1.8	20.7	6	4.4	8.0	11.1	20.7	13.5	8.5	42.7	2.8	8.5	14	25.4	

		Cherry	Avenue	е	,	Valley E	Bouleva	rd		Cherry	/ Avenu	е	,	Valley E	Bouleva	rd	
		South	nbound			West	bound			North	nbound			East	tbound		
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Ana	lysis Fr	om 04:3	30 PM to	o 05:15 P	M - Pea	k 1 of 1	1				_				-		
Peak Hour for E	Entire In	tersect	ion Beg	ins at 04:	30 PM												
04:30 PM	2	9	0	11	3	2	0	5	9	7	4	20	2	7	8	17	53
04:45 PM	0	6	0	6	6	0	0	6	11	5	1	17	2	3	6	11	40
05:00 PM	2	9	1	12	4	4	0	8	7	5	7	19	1	8	8	17	56
05:15 PM	0	7	0	7	2	5	1	8	11	3	1	15	0	4	4	8	38
Total Volume	4	31	1	36	15	11	1	27	38	20	13	71	5	22	26	53	187
% App. Total	11.1	86.1	2.8		55.6	40.7	3.7		53.5	28.2	18.3		9.4	41.5	49.1		
PHF	.500	.861	.250	.750	.625	.550	.250	.844	.864	.714	.464	.888	.625	.688	.813	.779	.835

File Name: FONCHVAPM Site Code : 20116023 Start Date : 1/12/2016 Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1 Peak Hour for Each Approach Begins at:

reak Houl loi	Lacii	pproac	n begin	o at.												
	04:30 PM	l			04:30 PN	1			04:30 PN	1			04:30 PN	1		
+0 mins.	2	9	0	11	3	2	0	5	9	7	4	20	2	7	8	17
+15 mins.	0	6	0	6	6	0	0	6	11	5	1	17	2	3	6	11
+30 mins.	2	9	1	12	4	4	0	8	7	5	7	19	1	8	8	17
+45 mins.	0	7	0	7	2	5	1	8	11	3	1	15	0	4	4	8
Total Volume	4	31	1	36	15	11	1	27	38	20	13	71	5	22	26	53
% App. Total	11.1	86.1	2.8		55.6	40.7	3.7		53.5	28.2	18.3		9.4	41.5	49.1	
PHF	.500	.861	.250	.750	.625	.550	.250	.844	.864	.714	.464	.888	.625	.688	.813	.779

Location: Fontana N/S: Cherry Avenue E/W: Valley Boulevard



Site Code: 201-16023 Date: 1/12/2016 Weather: Clear

PEDESTRIANS

	North Leg Cherry Avenue	East Leg Valley Boulevard	South Leg Cherry Avenue	West Leg Valley Boulevard	TOTAL
7:00 AM	1	1	0	0	2
7:15 AM	0	0	1	0	1
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	1	1
8:30 AM	0	0	0	0	0
8:45 AM	0	0	3	1	4
TOTAL VOLUMES:	1	1	4	2	8

	North Leg Cherry Avenue	East Leg Valley Boulevard	South Leg Cherry Avenue	West Leg Valley Boulevard	TOTAL
4:00 PM	0	0	1	0	1
4:15 PM	0	0	2	1	3
4:30 PM	0	0	0	0	0
4:45 PM	1	0	0	2	3
5:00 PM	5	2	1	1	9
5:15 PM	5	3	0	0	8
5:30 PM	0	0	0	1	1
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	11	5	4	5	25

Location: Fontana N/S: Cherry Avenue E/W: Valley Boulevard



Site Code: 201-16023 Date: 1/12/2016 Weather: Clear

BICYCLES

	North Leg Cherry Avenue	East Leg Valley Boulevard	South Leg Cherry Avenue	West Leg Valley Boulevard	TOTAL
7:00 AM	0	0	1	0	1
7:15 AM	0	0	0	0	0
7:30 AM	1	0	0	0	1
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	1	0	1	0	2

	North Leg Cherry Avenue	East Leg Valley Boulevard	South Leg Cherry Avenue	West Leg Valley Boulevard	TOTAL
4:00 PM	0	0	1	0	1
4:15 PM	1	0	0	0	1
4:30 PM	1	0	0	0	1
4:45 PM	0	0	1	0	1
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	1	0	0	0	1
TOTAL VOLUMES:	3	0	2	0	5

City of Fontana N/S: Cherry Avenue

E/W: I-10 Westbound Ramps

Weather: Clear

File Name: FONCH10WAM

Site Code : 20116023 Start Date : 1/12/2016 Page No : 1

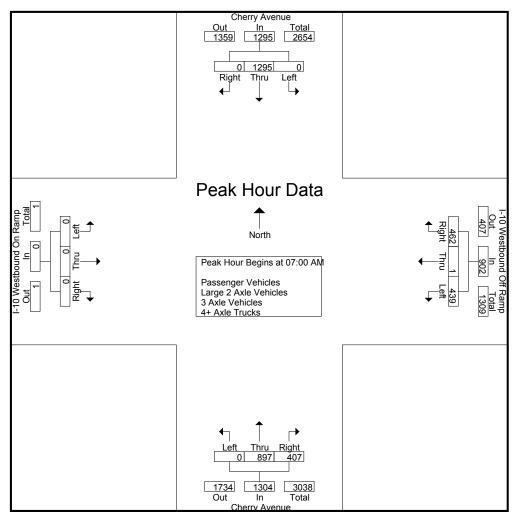
		Gr	oups P	rinted- Pa	assenae	er Vehic	les - L	arge 2 Ax	le Vehi	cles - 3	Axle V	ehicles -	4+ Axle	Truck	3		
			Avenu					f Ramp			Avenu				und On	Ramp	
		South	nbound			West	bound	.			nbound			East	bound	•	
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	354	0	354	136	1	127	264	0	174	89	263	0	0	0	0	881
07:15 AM	0	375	0	375	110	0	99	209	0	239	101	340	0	0	0	0	924
07:30 AM	0	288	0	288	83	0	112	195	0	278	114	392	0	0	0	0	875
07:45 AM	0	278	0	278	110	0	124	234	0	206	103	309	0	0	0	0	821
Total	0	1295	0	1295	439	1	462	902	0	897	407	1304	0	0	0	0	3501
												,					
08:00 AM	0	285	0	285	87	0	121	208	0	170	95	265	0	0	0	0	758
08:15 AM	0	258	0	258	88	0	100	188	0	176	72	248	0	0	0	0	694
08:30 AM	0	283	0	283	64	2	94	160	0	148	75	223	0	0	0	0	666
08:45 AM	0	238	0	238	78	0	85	163	0	172	100	272	0	0	0_	0	673
Total	0	1064	0	1064	317	2	400	719	0	666	342	1008	0	0	0	0	2791
												i					
Grand Total	0	2359	0	2359	756	3	862	1621	0	1563	749	2312	0	0	0	0	6292
Apprch %	0	100	0		46.6	0.2	53.2		0	67.6	32.4		0	0	0		
Total %	0	37.5	0	37.5	12	0	13.7	25.8	0	24.8	11.9	36.7	0	0	0	0	
Passenger Vehicles	0	1899	0	1899	637	3	699	1339	0	1317	606	1923	0	0	0	0	5161
% Passenger Vehicles	0_	80.5	0	80.5	84.3	100	81.1	82.6	0	84.3	80.9	83.2	0	0	0	0	82
Large 2 Axle Vehicles	0	143	0	143	25	0	55	80	0	62	21	83	0	0	0	0	306
% Large 2 Axle Vehicles	0	6.1	0	6.1	3.3	0	6.4	4.9	0_	4	2.8	3.6	0_	0	0	0	4.9
3 Axle Vehicles	0	90	0	90	22	0	29	51	0	45	12	57	0	0	0	0	198
% 3 Axle Vehicles	0	3.8	0	3.8	2.9	0	3.4	3.1	0	2.9	1.6	2.5	0	0	0	0	3.1
4+ Axle Trucks	0	227	0	227	72	0	79	151	0	139	110	249	0	0	0	0	627
% 4+ Axle Trucks	0	9.6	0	9.6	9.5	0	9.2	9.3	0	8.9	14.7	10.8	0	0	0	0	10

		Cherry	Avenu	е	I-10 \	Vestbo	und Off	Ramp		Cherry	Avenu	е	I-10 \	Vestbo	und On	Ramp	
		South	bound			West	bound			North	bound			East	bound		
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Ana	alysis Fr	om 07:0	00 AM t	o 08:45 A	M - Pea	k 1 of 1	1										
Peak Hour for I	Entire In	tersecti	on Beg	ins at 07:	00 AM												
07:00 AM	0	354	0	354	136	1	127	264	0	174	89	263	0	0	0	0	881
07:15 AM	0	375	0	375	110	0	99	209	0	239	101	340	0	0	0	0	924
07:30 AM	0	288	0	288	83	0	112	195	0	278	114	392	0	0	0	0	875
07:45 AM	0	278	0	278	110	0	124	234	0	206	103	309	0	0	0	0	821
Total Volume	0	1295	0	1295	439	1	462	902	0	897	407	1304	0	0	0	0	3501
_ % App. Total	0	100	0		48.7	0.1	51.2		0	68.8	31.2		0	0	0		
PHF	.000	.863	.000	.863	.807	.250	.909	.854	.000	.807	.893	.832	.000	.000	.000	.000	.947

E/W: I-10 Westbound Ramps

Weather: Clear

File Name: FONCH10WAM Site Code : 20116023 Start Date : 1/12/2016 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for	Each Approach	n Begins at:

Peak Hour for	Each A	pproac	<u>n Begin</u>	s at:												
	07:00 AM	Л			07:00 AM	1			07:15 AM	1			07:00 AM			
+0 mins.	0	354	0	354	136	1	127	264	0	239	101	340	0	0	0	0
+15 mins.	0	375	0	375	110	0	99	209	0	278	114	392	0	0	0	0
+30 mins.	0	288	0	288	83	0	112	195	0	206	103	309	0	0	0	0
+45 mins.	0	278	0	278	110	0	124	234	0	170	95	265	0	0	0	0
Total Volume	0	1295	0	1295	439	1	462	902	0	893	413	1306	0	0	0	0
% App. Total	0	100	0		48.7	0.1	51.2		0	68.4	31.6		0	0	0	
PHF	000	863	000	863	807	250	909	854	000	803	906	833	000	000	000	000

City of Fontana N/S: Cherry Avenue E/W: I-10 Westbound Ramps

Weather: Clear

File Name: FONCH10WAM Site Code: 20116023

Start Date : 1/12/2016 Page No : 1

Groups Printed- Passenger Vehicles

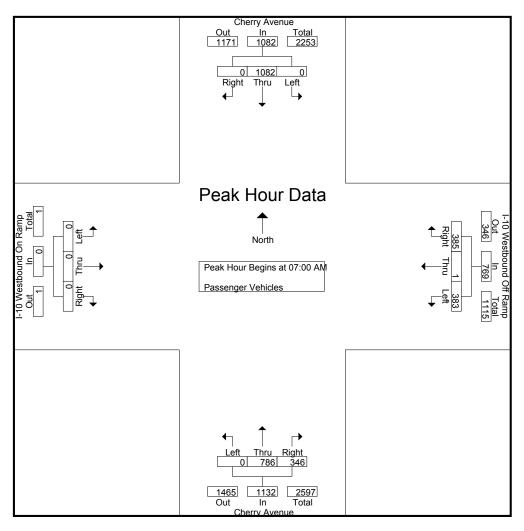
I-10 Westbound On Ramp	
Eastbound	
Left Thru Right App. Total Int.	Total
0 0 0 0	769
0 0 0 0	796
0 0 0 0	735
0 0 0 0	683
0 0 0 0 2	2983
0 0 0 0	612
0 0 0 0	554
0 0 0 0	511
0 0 0 0	501
0 0 0 0 2	2178
0 0 0 0 5	161
0 0 0	
0 0 0 0	
	Left Thru Right App. Total Int. 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 2 0 0 0 0 0 5 0 0 0 0 0 5 0 0 0 0 0 5

		Cherry	Avenue	Э	I-10 V	Vestbo	und Off	Ramp		Cherry	Avenu	е	I-10 \	Vestbo	und On	Ramp	
		South	bound			West	bound			North	nbound			East	bound	-	
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Ana	llysis Fr	om 07:0	00 AM to	o 07:45 A	M - Pea	k 1 of 1	1										
Peak Hour for I	Entire In	itersecti	ion Beg	ins at 07:	00 AM												
07:00 AM	0	310	0	310	122	1	105	228	0	153	78	231	0	0	0	0	769
07:15 AM	0	323	0	323	98	0	85	183	0	206	84	290	0	0	0	0	796
07:30 AM	0	225	0	225	66	0	91	157	0	254	99	353	0	0	0	0	735
07:45 AM	0	224	0	224	97	0	104	201	0	173	85	258	0	0	0	0	683
Total Volume	0	1082	0	1082	383	1	385	769	0	786	346	1132	0	0	0	0	2983
% App. Total	0	100	0		49.8	0.1	50.1		0	69.4	30.6		0	0	0		
PHF	.000	.837	.000	.837	.785	.250	.917	.843	.000	.774	.874	.802	.000	.000	.000	.000	.937

E/W: I-10 Westbound Ramps

Weather: Clear

File Name: FONCH10WAM Site Code : 20116023 Start Date : 1/12/2016 Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1

Peak Hour for	Each Approach	n Begins at:

Peak Hour for	Each A	pproac	h Begin	s at:												
	07:00 AM	1			07:00 AM	1			07:00 AM	1			07:00 AM	I		
+0 mins.	0	310	0	310	122	1	105	228	0	153	78	231	0	0	0	0
+15 mins.	0	323	0	323	98	0	85	183	0	206	84	290	0	0	0	0
+30 mins.	0	225	0	225	66	0	91	157	0	254	99	353	0	0	0	0
+45 mins.	0	224	0	224	97	0	104	201	0	173	85	258	0	0	0	0
Total Volume	0	1082	0	1082	383	1	385	769	0	786	346	1132	0	0	0	0
% App. Total	0	100	0		49.8	0.1	50.1		0	69.4	30.6		0	0	0	
PHF	.000	.837	.000	.837	.785	.250	.917	.843	.000	.774	.874	.802	.000	.000	.000	.000

City of Fontana N/S: Cherry Avenue E/W: I-10 Westbound Ramps

Weather: Clear

File Name: FONCH10WAM Site Code: 20116023

Start Date : 1/12/2016 Page No : 1

Groups Printed- Large 2 Axle Vehicles

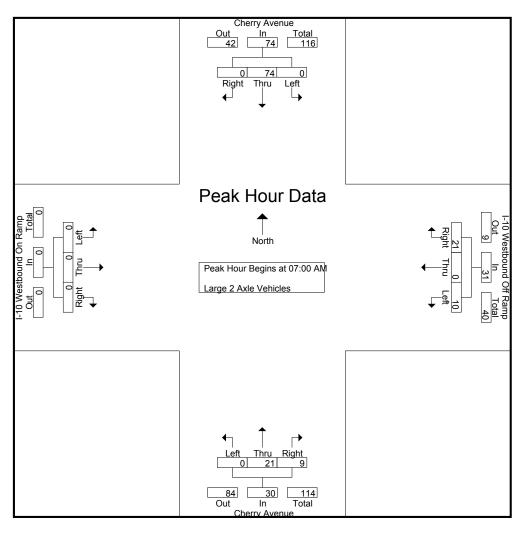
_							Giou	ps Filli	teu- Lary	C Z AXI	e venic	iles .						
			Cherry	Avenu	е	I-10 \	Nestbo	und Off	Ramp		Cherry	/ Avenu	е	I-10 V	Vestbo	und On	Ramp	
L			South	nbound			West	tbound			North	hbound			East	bound		
	Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
	07:00 AM	0	15	0	15	3	0	6	9	0	3	1	4	0	0	0	0	28
	07:15 AM	0	19	0	19	0	0	6	6	0	8	2	10	0	0	0	0	35
	07:30 AM	0	20	0	20	4	0	6	10	0	4	5	9	0	0	0	0	39
	07:45 AM	0	20	0	20	3	0	3	6	0	6	1	7	0	0	0	0	33
	Total	0	74	0	74	10	0	21	31	0	21	9	30	0	0	0	0	135
	08:00 AM	0	17	0	17	2	0	9	11	0	9	3	12	0	0	0	0	40
	08:15 AM	0	25	0	25	5	0	6	11	0	10	3	13	0	0	0	0	49
	08:30 AM	0	16	0	16	1	0	12	13	0	7	3	10	0	0	0	0	39
	08:45 AM	0	11	0	11	7	0	7	14	0	15	3	18	0	0	0	0	43
	Total	0	69	0	69	15	0	34	49	0	41	12	53	0	0	0	0	171
	Grand Total	0	143	0	143	25	0	55	80	0	62	21	83	0	0	0	0	306
	Apprch %	0	100	0		31.2	0	68.8		0	74.7	25.3		0	0	0		
	Total %	0	46.7	0	46.7	8.2	0	18	26.1	0	20.3	6.9	27.1	0	0	0	0	

		Cherry	Avenu	е	I-10 \	Nestbo	und Off	Ramp		Cherry	/ Avenu	е	I-10 \	Westbo	und On	Ramp	
		South	bound			West	tbound	-		North	nbound			East	bound		
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Ana	alysis Fro	om 07:0	00 AM t	o 07:45 A	M - Pea	ak 1 of 1	1				_				_		
Peak Hour for	Entire In	tersect	ion Beg	ins at 07:	00 AM												
07:00 AM	0	15	0	15	3	0	6	9	0	3	1	4	0	0	0	0	28
07:15 AM	0	19	0	19	0	0	6	6	0	8	2	10	0	0	0	0	35
07:30 AM	0	20	0	20	4	0	6	10	0	4	5	9	0	0	0	0	39
07:45 AM	0	20	0	20	3	0	3	6	0	6	1	7	0	0	0	0	33
Total Volume	0	74	0	74	10	0	21	31	0	21	9	30	0	0	0	0	135
% App. Total	0	100	0		32.3	0	67.7		0	70	30		0	0	0		
PHF	.000	.925	.000	.925	.625	.000	.875	.775	.000	.656	.450	.750	.000	.000	.000	.000	.865

E/W: I-10 Westbound Ramps

Weather: Clear

File Name: FONCH10WAM Site Code : 20116023 Start Date : 1/12/2016 Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Regins at:

Peak Hour for	Each Ap	proact	<u>n Begins</u>	s at:												
	07:00 AM				07:00 AM	I			07:00 AM	1			07:00 AM	I		
+0 mins.	0	15	0	15	3	0	6	9	0	3	1	4	0	0	0	0
+15 mins.	0	19	0	19	0	0	6	6	0	8	2	10	0	0	0	0
+30 mins.	0	20	0	20	4	0	6	10	0	4	5	9	0	0	0	0
+45 mins.	0	20	0	20	3	0	3	6	0	6	1	7	0	0	0	0
Total Volume	0	74	0	74	10	0	21	31	0	21	9	30	0	0	0	0
% App. Total	0	100	0		32.3	0	67.7		0	70	30		0	0	0	
PHF	000	925	000	925	625	000	875	775	000	656	450	750	000	000	000	000

City of Fontana N/S: Cherry Avenue

E/W: I-10 Westbound Ramps

Weather: Clear

File Name: FONCH10WAM

Site Code : 20116023 Start Date : 1/12/2016 Page No : 1

Groups Printed- 3 Axle Vehicles

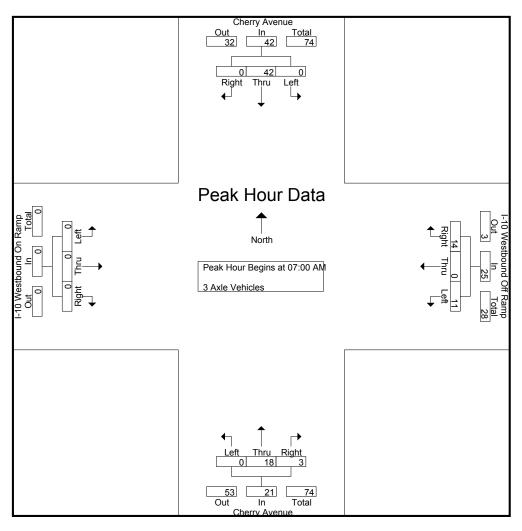
_								roups r	riiiileu- <u>s</u>	AXIE V	eniicies							
			Cherry	Avenu	e	I-10 \	Nestbo	und Off	Ramp		Cherry	/ Avenu	е	I-10 V	Vestbo	und On	Ramp	
L			South	nbound			West	tbound			North	hbound			East	bound		
	Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
_	07:00 AM	0	11	0	11	3	0	1	4	0	2	0	2	0	0	0	0	17
	07:15 AM	0	9	0	9	2	0	4	6	0	4	1	5	0	0	0	0	20
	07:30 AM	0	13	0	13	3	0	2	5	0	4	0	4	0	0	0	0	22
	07:45 AM	0	9	0	9	3	0	7	10	0	8	2	10	0	0	0	0	29
	Total	0	42	0	42	11	0	14	25	0	18	3	21	0	0	0	0	88
	08:00 AM	0	8	0	8	1	0	5	6	0	5	1	6	0	0	0	0	20
	08:15 AM	0	5	0	5	3	0	2	5	0	3	1	4	0	0	0	0	14
	08:30 AM	0	20	0	20	3	0	5	8	0	8	2	10	0	0	0	0	38
	08:45 AM	0	15	0	15	4	0	3	7	0	11	5	16	0	0	0	0	38
	Total	0	48	0	48	11	0	15	26	0	27	9	36	0	0	0	0	110
	Grand Total	0	90	0	90	22	0	29	51	0	45	12	57	0	0	0	0	198
	Apprch %	0	100	0		43.1	0	56.9		0	78.9	21.1		0	0	0		
	Total %	0	45.5	0	45.5	11.1	0	14.6	25.8	0	22.7	6.1	28.8	0	0	0	0	

		Cherry	Avenue	:	I-10 V	Vestbo	und Off	Ramp		Cherry	Avenu	е	I-10 \	Nestbo	und On	Ramp	
		South	bound			West	bound			North	bound			East	bound	-	
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Ana	llysis Fro	om 07:0	00 AM to	07:45 A	M - Pea	k 1 of 1											
Peak Hour for I	Entire In	tersecti	on Begi	ns at 07:	00 AM												
07:00 AM	0	11	0	11	3	0	1	4	0	2	0	2	0	0	0	0	17
07:15 AM	0	9	0	9	2	0	4	6	0	4	1	5	0	0	0	0	20
07:30 AM	0	13	0	13	3	0	2	5	0	4	0	4	0	0	0	0	22
07:45 AM	0	9	0	9	3	0	7	10	0	8	2	10	0	0	0	0	29
Total Volume	0	42	0	42	11	0	14	25	0	18	3	21	0	0	0	0	88
% App. Total	0	100	0		44	0	56		0	85.7	14.3		0	0	0		
PHF	.000	.808	.000	.808	.917	.000	.500	.625	.000	.563	.375	.525	.000	.000	.000	.000	.759

E/W: I-10 Westbound Ramps

Weather: Clear

File Name: FONCH10WAM Site Code : 20116023 Start Date : 1/12/2016 Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1

Peak Hour for	Each Ap	proact	<u>n Begins</u>	s at:												
	07:00 AM				07:00 AM	1			07:00 AN	Л			07:00 AM			
+0 mins.	0	11	0	11	3	0	1	4	0	2	0	2	0	0	0	0
+15 mins.	0	9	0	9	2	0	4	6	0	4	1	5	0	0	0	0
+30 mins.	0	13	0	13	3	0	2	5	0	4	0	4	0	0	0	0
+45 mins.	0	9	0	9	3	0	7	10	0	8	2	10	0	0	0	0
Total Volume	0	42	0	42	11	0	14	25	0	18	3	21	0	0	0	0
% App. Total	0	100	0		44	0	56		0	85.7	14.3		0	0	0	
PHF	000	808	000	808	917	000	500	625	000	563	375	525	000	000	000	000

City of Fontana N/S: Cherry Avenue E/W: I-10 Westbound Ramps

Weather: Clear

File Name: FONCH10WAM Site Code: 20116023

Start Date : 1/12/2016 Page No : 1

Groups Printed- 4+ Axle Trucks

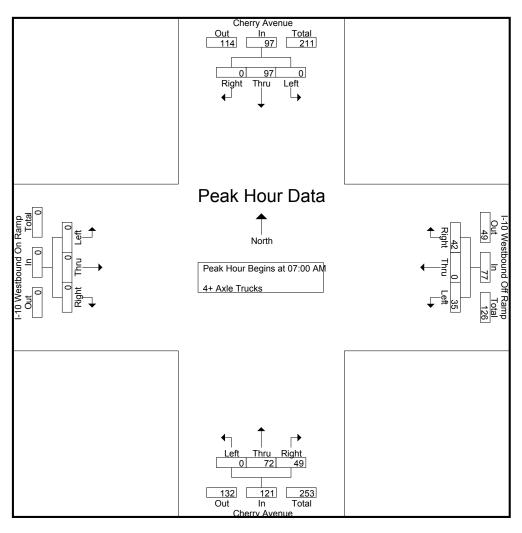
-								noupo i		· / (//IC	HUUNU							
			Cherry	Avenu	e	I-10 V	Vestbo	und Off	Ramp		Cherry	/ Avenu	e	I-10 V	Vestbo	und On	Ramp	
			South	nbound			West	tbound			North	nbound			East	bound		
	Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
	07:00 AM	0	18	0	18	8	0	15	23	0	16	10	26	0	0	0	0	67
	07:15 AM	0	24	0	24	10	0	4	14	0	21	14	35	0	0	0	0	73
	07:30 AM	0	30	0	30	10	0	13	23	0	16	10	26	0	0	0	0	79
	07:45 AM	0	25	0	25	7	0	10	17	0	19	15	34	0	0	0	0	76
	Total	0	97	0	97	35	0	42	77	0	72	49	121	0	0	0	0	295
	08:00 AM	0	39	0	39	8	0	8	16	0	13	18	31	0	0	0	0	86
	08:15 AM	0	25	0	25	9	0	8	17	0	17	18	35	0	0	0	0	77
	08:30 AM	0	33	0	33	8	0	9	17	0	18	10	28	0	0	0	0	78
	08:45 AM	0	33	0	33	12	0	12	24	0	19	15	34	0	0	0	0	91
	Total	0	130	0	130	37	0	37	74	0	67	61	128	0	0	0	0	332
	Grand Total	0	227	0	227	72	0	79	151	0	139	110	249	0	0	0	0	627
	Apprch %	0	100	0		47.7	0	52.3		0	55.8	44.2		0	0	0		
	Total %	0	36.2	0	36.2	11.5	0	12.6	24.1	0	22.2	17.5	39.7	0	0	0	0	
	Apprch %	0	100	0 0 0		47.7	0	52.3		0	55.8	44.2		0 0 0	0			627

		Cherry	Avenu	е	I-10 \	Nestbo	und Off	Ramp		Cherry	Avenu	е	I-10 \	Vestbo	und On	Ramp	
		South	nbound			West	tbound	·		North	nbound			East	bound		
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Ana	alysis Fro	om 07:0	00 AM t	o 07:45 A	M - Pea	ak 1 of 1	1										
Peak Hour for I	Entire In	tersect	ion Beg	ins at 07:	00 AM												
07:00 AM	0	18	0	18	8	0	15	23	0	16	10	26	0	0	0	0	67
07:15 AM	0	24	0	24	10	0	4	14	0	21	14	35	0	0	0	0	73
07:30 AM	0	30	0	30	10	0	13	23	0	16	10	26	0	0	0	0	79
07:45 AM	0	25	0	25	7	0	10	17	0	19	15	34	0	0	0	0	76
Total Volume	0	97	0	97	35	0	42	77	0	72	49	121	0	0	0	0	295
% App. Total	0	100	0		45.5	0	54.5		0	59.5	40.5		0	0	0		
PHF	.000	.808	.000	.808	.875	.000	.700	.837	.000	.857	.817	.864	.000	.000	.000	.000	.934

E/W: I-10 Westbound Ramps

Weather: Clear

File Name: FONCH10WAM Site Code : 20116023 Start Date : 1/12/2016 Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1

Peak Hour for	Each Ap	proacl	n Begins	s at:												
	07:00 AM				07:00 AM	1			07:00 AN	Л			07:00 AN	1		
+0 mins.	0	18	0	18	8	0	15	23	0	16	10	26	0	0	0	0
+15 mins.	0	24	0	24	10	0	4	14	0	21	14	35	0	0	0	0
+30 mins.	0	30	0	30	10	0	13	23	0	16	10	26	0	0	0	0
+45 mins.	0	25	0	25	7	0	10	17	0	19	15	34	0	0	0	0
Total Volume	0	97	0	97	35	0	42	77	0	72	49	121	0	0	0	0
% App. Total	0	100	0		45.5	0	54.5		0	59.5	40.5		0	0	0	
PHF	.000	.808	.000	.808	.875	.000	.700	.837	.000	.857	.817	.864	.000	.000	.000	.000

City of Fontana N/S: Cherry Avenue

E/W: I-10 Westbound Ramps

Weather: Clear

File Name: FONCH10WPM

Site Code : 20116023 Start Date : 1/12/2016 Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

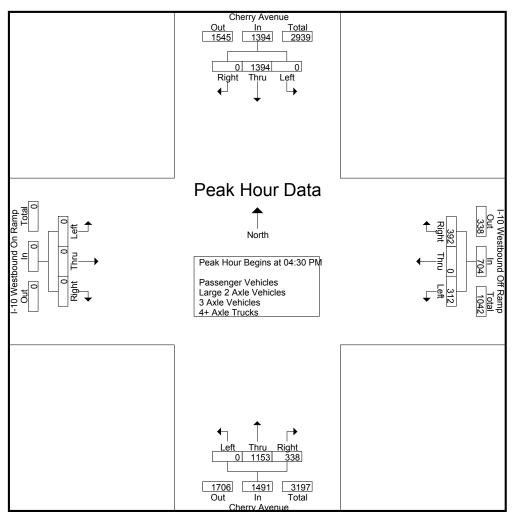
			•					arge ∠ Ax	ie veni								
		Cherry	Avenue	9	I-10 \	Nestbo	und Off	Ramp		Cherry	/ Avenu	e	I-10 V	Vestbo	und On	Ramp	
		South	nbound			West	bound			North	nbound			East	bound		
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	359	0	359	75	0	101	176	0	252	100	352	0	0	0	0	887
04:15 PM	0	354	0	354	86	0	87	173	0	263	107	370	0	0	0	0	897
04:30 PM	0	355	0	355	75	0	81	156	0	268	71	339	0	0	0	0	850
04:45 PM	0	329	0	329	89	0	112	201	0	322	94	416	0	0	0	0	946
Total	0	1397	0	1397	325	0	381	706	0	1105	372	1477	0	0	0	0	3580
05:00 PM	0	348	0	348	81	0	85	166	0	288	93	381	0	0	0	0	895
05:15 PM	0	362	0	362	67	0	114	181	0	275	80	355	0	0	0	0	898
05:30 PM	0	287	0	287	85	0	112	197	0	245	47	292	0	0	0	0	776
05:45 PM	0	233	1	234	74	0	96	170	0	242	80	322	0	0	0	0	726
Total	0	1230	1	1231	307	0	407	714	0	1050	300	1350	0	0	0	0	3295
Grand Total	0	2627	1	2628	632	0	788	1420	0	2155	672	2827	0	0	0	0	6875
Apprch %	0	100	0		44.5	0	55.5		0	76.2	23.8		0	0	0		
Total %	0	38.2	0	38.2	9.2	0	11.5	20.7	0	31.3	9.8	41.1	0	0	0	0	
Passenger Vehicles	0	2293	1	2294	535	0	668	1203	0	1994	598	2592	0	0	0	0	6089
% Passenger Vehicles	0	87.3	100	87.3	84.7	0	84.8	84.7	0	92.5	89	91.7	0	0	0	0	88.6
Large 2 Axle Vehicles	0	88	0	88	20	0	12	32	0	35	12	47	0	0	0	0	167
% Large 2 Axle Vehicles	0	3.3	0	3.3	3.2	0	1.5	2.3	0	1.6	1.8	1.7	0	0	0	0	2.4
3 Axle Vehicles	0	90	0	90	21	0	26	47	0	41	9	50	0	0	0	0	187
% 3 Axle Vehicles	0	3.4	0	3.4	3.3	0	3.3	3.3	0	1.9	1.3	1.8	0	0	0	0	2.7
4+ Axle Trucks	0	156	0	156	56	0	82	138	0	85	53	138	0	0	0	0	432
% 4+ Axle Trucks	0	5.9	0	5.9	8.9	0	10.4	9.7	0	3.9	7.9	4.9	0	0	0	0	6.3

		Cherry	Avenue	е	I-10 \	Vestbo	und Off	Ramp		Cherry	Avenu	е	I-10 \	Vestbo	und On	Ramp	
		South	nbound			West	tbound			North	nbound			East	bound	-	
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Ana	alysis Fr	om 04:0	00 PM to	o 05:45 P	M - Pea	k 1 of 1	1				_				_		
Peak Hour for I	Entire Ir	ntersect	ion Beg	ins at 04:	30 PM												
04:30 PM	0	355	0	355	75	0	81	156	0	268	71	339	0	0	0	0	850
04:45 PM	0	329	0	329	89	0	112	201	0	322	94	416	0	0	0	0	946
05:00 PM	0	348	0	348	81	0	85	166	0	288	93	381	0	0	0	0	895
05:15 PM	0	362	0	362	67	0	114	181	0	275	80	355	0	0	0	0	898
Total Volume	0	1394	0	1394	312	0	392	704	0	1153	338	1491	0	0	0	0	3589
% App. Total	0	100	0		44.3	0	55.7		0	77.3	22.7		0	0	0		
PHF	.000	.963	.000	.963	.876	.000	.860	.876	.000	.895	.899	.896	.000	.000	.000	.000	.948

E/W: I-10 Westbound Ramps

Weather: Clear

File Name: FONCH10WPM Site Code : 20116023 Start Date : 1/12/2016 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for	Each Approach	n Begins at:

Peak Hour for	Each A	pproac	n Begin	s at:												
	04:00 PM	Л			04:45 PM	I			04:15 PI	И			04:00 PM	1		
+0 mins.	0	359	0	359	89	0	112	201	0	263	107	370	0	0	0	0
+15 mins.	0	354	0	354	81	0	85	166	0	268	71	339	0	0	0	0
+30 mins.	0	355	0	355	67	0	114	181	0	322	94	416	0	0	0	0
+45 mins.	0	329	0	329	85	0	112	197	0	288	93	381	0	0	0	0
Total Volume	0	1397	0	1397	322	0	423	745	0	1141	365	1506	0	0	0	0
% App. Total	0	100	0		43.2	0	56.8		0	75.8	24.2		0	0	0	
PHF	000	973	000	973	904	000	928	927	000	886	853	905	000	000	000	000

City of Fontana N/S: Cherry Avenue E/W: I-10 Westbound Ramps

Weather: Clear

File Name: FONCH10WPM Site Code: 20116023 Start Date : 1/12/2016 Page No : 1

Groups Printed- Passenger Vehicles

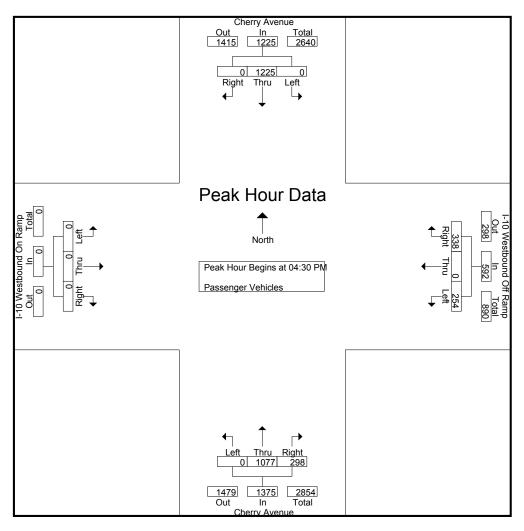
						GIO	ups Pili	nted-Pas	senger	venici	es						
		Cherry	Avenu	е	I-10 V	Vestbo	und Off	Ramp		Cherry	/ Avenu	e	I-10 \	Vestbo	und On	Ramp	
		South	nbound			West	bound			North	nbound			East	bound		
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	314	0	314	62	0	81	143	0	226	93	319	0	0	0	0	776
04:15 PM	0	298	0	298	79	0	71	150	0	237	92	329	0	0	0	0	777
04:30 PM	0	309	0	309	49	0	70	119	0	246	63	309	0	0	0	0	737
04:45 PM	0	286	0	286	79	0	98	177	0	303	82	385	0	0	0	0	848
Total	0	1207	0	1207	269	0	320	589	0	1012	330	1342	0	0	0	0	3138
05:00 PM	0	313	0	313	71	0	69	140	0	274	86	360	0	0	0	0	813
05:15 PM	0	317	0	317	55	0	101	156	0	254	67	321	0	0	0	0	794
05:30 PM	0	252	0	252	78	0	94	172	0	233	45	278	0	0	0	0	702
05:45 PM	0	204	1	205	62	0	84	146	0	221	70	291	0	0	0	0	642
Total	0	1086	1	1087	266	0	348	614	0	982	268	1250	0	0	0	0	2951
Grand Total	0	2293	1	2294	535	0	668	1203	0	1994	598	2592	0	0	0	0	6089
Apprch %	0	100	0		44.5	0	55.5		0	76.9	23.1		0	0	0		
Total %	0	37.7	0	37.7	8.8	0	11	19.8	0	32.7	9.8	42.6	0	0	0	0	

		Cherry	Avenu	е	I-10 \	Nestbo	und Off	Ramp		Cherry	Avenu	е	I-10 \	Westbo	und On	Ramp	
		South	nbound			West	tbound	-		North	nbound			East	bound	-	
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Ana	alysis Fr	om 04:3	30 PM t	o 05:15 P	M - Pea	ak 1 of 1	1				_				_		
Peak Hour for	Entire In	ntersect	ion Beg	ins at 04:	30 PM												
04:30 PM	0	309	0	309	49	0	70	119	0	246	63	309	0	0	0	0	737
04:45 PM	0	286	0	286	79	0	98	177	0	303	82	385	0	0	0	0	848
05:00 PM	0	313	0	313	71	0	69	140	0	274	86	360	0	0	0	0	813
05:15 PM	0	317	0	317	55	0	101	156	0	254	67	321	0	0	0	0	794
Total Volume	0	1225	0	1225	254	0	338	592	0	1077	298	1375	0	0	0	0	3192
% App. Total	0	100	0		42.9	0	57.1		0	78.3	21.7		0	0	0		
PHF	.000	.966	.000	.966	.804	.000	.837	.836	.000	.889	.866	.893	.000	.000	.000	.000	.941

E/W: I-10 Westbound Ramps

Weather: Clear

File Name: FONCH10WPM Site Code : 20116023 Start Date : 1/12/2016 Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1

Peak Hour for	Each A	pproac	n Begin	s at:												
	04:30 PM	1			04:30 PM	I			04:30 PN	Л			04:30 PM			
+0 mins.	0	309	0	309	49	0	70	119	0	246	63	309	0	0	0	0
+15 mins.	0	286	0	286	79	0	98	177	0	303	82	385	0	0	0	0
+30 mins.	0	313	0	313	71	0	69	140	0	274	86	360	0	0	0	0
+45 mins.	0	317	0	317	55	0	101	156	0	254	67	321	0	0	0	0
Total Volume	0	1225	0	1225	254	0	338	592	0	1077	298	1375	0	0	0	0
% App. Total	0	100	0		42.9	0	57.1		0	78.3	21.7		0	0	0	
PHF	000	966	000	966	804	000	837	836	000	889	866	893	000	000	000	000

City of Fontana N/S: Cherry Avenue

E/W: I-10 Westbound Ramps

Weather: Clear

File Name: FONCH10WPM

Site Code : 20116023 Start Date : 1/12/2016 Page No : 1

Groups Printed- Large 2 Axle Vehicles

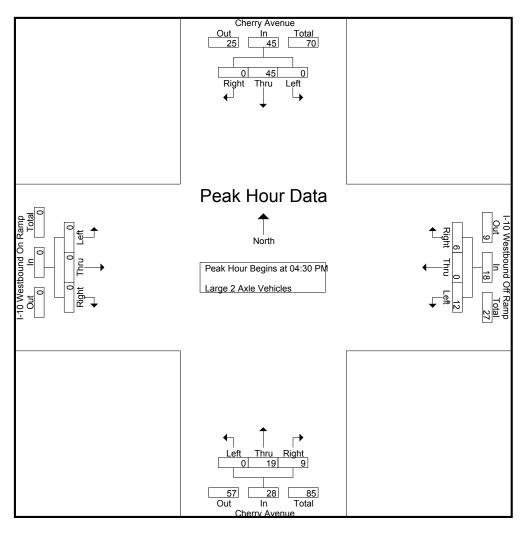
						Orou	ipa i iiii	teu- Laig	C Z ANIC	e verne	103						
		Cherry	Avenu	e	I-10 \	Nestbo	und Off	f Ramp		Cherry	/ Avenu	е	I-10 V	Vestbo	und On	Ramp	
		South	nbound			West	tbound			North	nbound			East	bound		
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	16	0	16	5	0	4	9	0	5	0	5	0	0	0	0	30
04:15 PM	0	18	0	18	1	0	1	2	0	4	2	6	0	0	0	0	26
04:30 PM	0	11	0	11	5	0	2	7	0	8	0	8	0	0	0	0	26
04:45 PM	0	14	0	14	0	0	1	1	0	7	4	11	0	0	0	0	26
Total	0	59	0	59	11	0	8	19	0	24	6	30	0	0	0	0	108
05:00 PM	0	10	0	10	3	0	1	4	0	2	1	3	0	0	0	0	17
05:15 PM	0	10	0	10	4	0	2	6	0	2	4	6	0	0	0	0	22
05:30 PM	0	4	0	4	1	0	1	2	0	3	0	3	0	0	0	0	9
05:45 PM	0	5	0	5	1	0	0	1	0	4	1	5	0	0	0	0	11
Total	0	29	0	29	9	0	4	13	0	11	6	17	0	0	0	0	59
Grand Total	0	88	0	88	20	0	12	32	0	35	12	47	0	0	0	0	167
Apprch %	0	100	0		62.5	0	37.5		0	74.5	25.5		0	0	0		
Total %	0	52.7	0	52.7	12	0	7.2	19.2	0	21	7.2	28.1	0	0	0	0	

		Cherry	Avenue	e	I-10 V	Vestbo	und Off	Ramp		Cherry	Avenu	е	I-10 V	Vestbo	und On	Ramp	
		South	bound			West	bound			North	nbound			East	bound		
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Ana	alysis Fro	om 04:3	30 PM to	05:15 P	M - Pea	k 1 of 1	1										
Peak Hour for I	Entire In	tersecti	on Begi	ins at 04:	30 PM												
04:30 PM	0	11	0	11	5	0	2	7	0	8	0	8	0	0	0	0	26
04:45 PM	0	14	0	14	0	0	1	1	0	7	4	11	0	0	0	0	26
05:00 PM	0	10	0	10	3	0	1	4	0	2	1	3	0	0	0	0	17
05:15 PM	0	10	0	10	4	0	2	6	0	2	4	6	0	0	0	0	22
Total Volume	0	45	0	45	12	0	6	18	0	19	9	28	0	0	0	0	91
% App. Total	0	100	0		66.7	0	33.3		0	67.9	32.1		0	0	0		
PHF	.000	.804	.000	.804	.600	.000	.750	.643	.000	.594	.563	.636	.000	.000	.000	.000	.875

E/W: I-10 Westbound Ramps

Weather: Clear

File Name: FONCH10WPM Site Code : 20116023 Start Date : 1/12/2016 Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1 Peak Hour for Each Approach Regins at:

Peak Hour for	Each Ap	proact	n Begins	at:												
	04:30 PM				04:30 PM	I			04:30 PN	1			04:30 PM	I		
+0 mins.	0	11	0	11	5	0	2	7	0	8	0	8	0	0	0	0
+15 mins.	0	14	0	14	0	0	1	1	0	7	4	11	0	0	0	0
+30 mins.	0	10	0	10	3	0	1	4	0	2	1	3	0	0	0	0
+45 mins.	0	10	0	10	4	0	2	6	0	2	4	6	0	0	0	0
Total Volume	0	45	0	45	12	0	6	18	0	19	9	28	0	0	0	0
% App. Total	0	100	0		66.7	0	33.3		0	67.9	32.1		0	0	0	
PHF	000	804	000	804	600	000	750	643	000	594	563	636	000	000	000	000

City of Fontana N/S: Cherry Avenue E/W: I-10 Westbound Ramps

Weather: Clear

File Name: FONCH10WPM Site Code: 20116023 Start Date : 1/12/2016 Page No : 1

Groups Printed- 3 Axle Vehicles

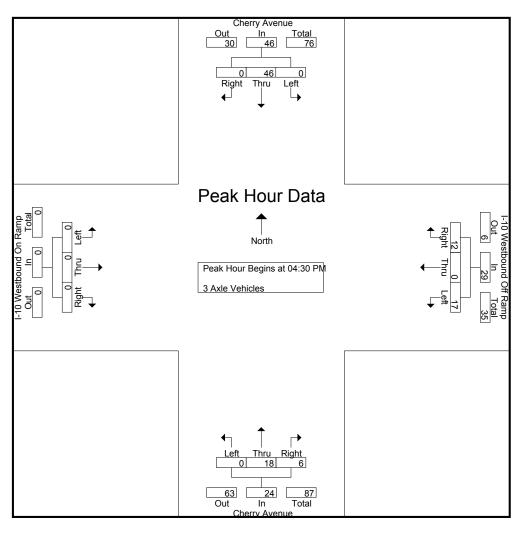
								<u>riintea- 3</u>	Axie ve	enicies							
		Cherry	Avenu	e	I-10 \	Nestbo	und Off	Ramp		Cherry	Avenu	е	I-10 V	Vestbo	und On	Ramp	
		South	nbound			West	bound			North	nbound			East	bound	-	
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	11	0	11	2	0	4	6	0	8	1	9	0	0	0	0	26
04:15 PM	0	15	0	15	1	0	3	4	0	7	1	8	0	0	0	0	27
04:30 PM	0	15	0	15	5	0	0	5	0	5	1	6	0	0	0	0	26
04:45 PM	0	8	0	8	7	0	3	10	0	4	1	5	0	0	0	0	23
Total	0	49	0	49	15	0	10	25	0	24	4	28	0	0	0	0	102
05:00 PM	0	7	0	7	2	0	5	7	0	4	2	6	0	0	0	0	20
05:15 PM	0	16	0	16	3	0	4	7	0	5	2	7	0	0	0	0	30
05:30 PM	0	13	0	13	1	0	5	6	0	2	1	3	0	0	0	0	22
05:45 PM	0	5	0	5	0	0	2	2	0	6	0	6	0	0	0	0	13
Total	0	41	0	41	6	0	16	22	0	17	5	22	0	0	0	0	85
Grand Total	0	90	0	90	21	0	26	47	0	41	9	50	0	0	0	0	187
Apprch %	0	100	0		44.7	0	55.3		0	82	18		0	0	0		
Total %	0	48.1	0	48.1	11.2	0	13.9	25.1	0	21.9	4.8	26.7	0	0	0	0	

		Cherry	Avenu	е	I-10 \	Nestbo	und Off	Ramp		Cherry	Avenu	е	I-10 \	Westbo	und On	Ramp	
		South	bound			West	bound	·		North	nbound			East	bound	•	
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Ana	ilysis Fro	om 04:3	30 PM t	o 05:15 P	M - Pea	ak 1 of 1	1				_				_		
Peak Hour for I	Entire In	tersect	ion Beg	ins at 04:	30 PM												
04:30 PM	0	15	0	15	5	0	0	5	0	5	1	6	0	0	0	0	26
04:45 PM	0	8	0	8	7	0	3	10	0	4	1	5	0	0	0	0	23
05:00 PM	0	7	0	7	2	0	5	7	0	4	2	6	0	0	0	0	20
05:15 PM	0	16	0	16	3	0	4	7	0	5	2	7	0	0	0	0	30
Total Volume	0	46	0	46	17	0	12	29	0	18	6	24	0	0	0	0	99
% App. Total	0	100	0		58.6	0	41.4		0	75	25		0	0	0		
PHF	.000	.719	.000	.719	.607	.000	.600	.725	.000	.900	.750	.857	.000	.000	.000	.000	.825

E/W: I-10 Westbound Ramps

Weather: Clear

File Name: FONCH10WPM Site Code : 20116023 Start Date : 1/12/2016 Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1 Peak Hour for Each Approach Regins at:

Peak Hour for	Each Ap	proact	n Begins	s at:												
	04:30 PM				04:30 PM	1			04:30 PM	1			04:30 PM	I		
+0 mins.	0	15	0	15	5	0	0	5	0	5	1	6	0	0	0	0
+15 mins.	0	8	0	8	7	0	3	10	0	4	1	5	0	0	0	0
+30 mins.	0	7	0	7	2	0	5	7	0	4	2	6	0	0	0	0
+45 mins.	0	16	0	16	3	0	4	7	0	5	2	7	0	0	0	0
Total Volume	0	46	0	46	17	0	12	29	0	18	6	24	0	0	0	0
% App. Total	0	100	0		58.6	0	41.4		0	75	25		0	0	0	
PHF	000	719	000	719	607	000	600	725	000	900	750	857	000	000	000	000

City of Fontana N/S: Cherry Avenue E/W: I-10 Westbound Ramps Weather: Clear

File Name: FONCH10WPM Site Code: 20116023

Start Date : 1/12/2016 Page No : 1

Groups Printed- 4+ Axle Trucks

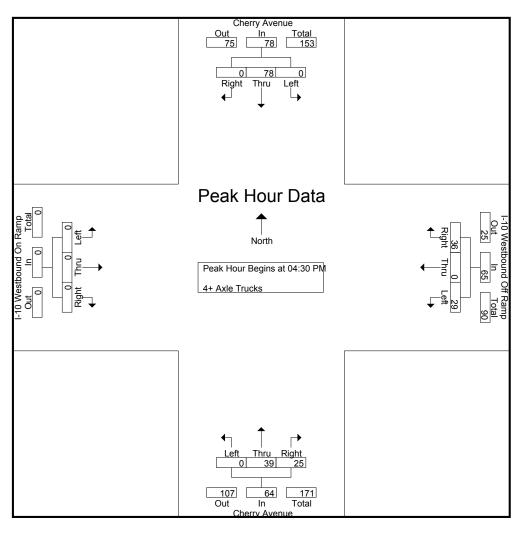
								<u> rintea- 4</u>	+ Axie	Trucks							
		Cherry	Avenue		I-10 \	Nestbo	und Off	Ramp		Cherry	Avenu	е	I-10 V	Vestbo	und On	Ramp	
		South	nbound			West	bound			North	nbound			East	bound		
Start Time	Left	Thru	Right A	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	18	0	18	6	0	12	18	0	13	6	19	0	0	0	0	55
04:15 PM	0	23	0	23	5	0	12	17	0	15	12	27	0	0	0	0	67
04:30 PM	0	20	0	20	16	0	9	25	0	9	7	16	0	0	0	0	61
04:45 PM	0	21	0	21	3	0	10	13	0	8	7	15	0	0	0	0	49
Total	0	82	0	82	30	0	43	73	0	45	32	77	0	0	0	0	232
05:00 PM	0	18	0	18	5	0	10	15	0	8	4	12	0	0	0	0	45
05:15 PM	0	19	0	19	5	0	7	12	0	14	7	21	0	0	0	0	52
05:30 PM	0	18	0	18	5	0	12	17	0	7	1	8	0	0	0	0	43
05:45 PM	0	19	0	19	11	0	10	21	0	11	9	20	0	0	0	0	60
Total	0	74	0	74	26	0	39	65	0	40	21	61	0	0	0	0	200
Grand Total	0	156	0	156	56	0	82	138	0	85	53	138	0	0	0	0	432
Apprch %	0	100	0		40.6	0	59.4		0	61.6	38.4		0	0	0		
Total %	0	36.1	0	36.1	13	0	19	31.9	0	19.7	12.3	31.9	0	0	0	0	

		Cherry	Avenu	е	I-10 \	Nestbo	und Off	Ramp		Cherry	/ Avenu	е	I-10 \	Westbo	und On	Ramp	
		South	bound			West	bound	-		North	nbound			East	tbound	•	
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Ana	alysis Fr	om 04:3	80 PM t	o 05:15 P	M - Pea	ak 1 of 1	1				_				_		
Peak Hour for	Entire In	tersecti	on Beg	ins at 04:	30 PM												
04:30 PM	0	20	0	20	16	0	9	25	0	9	7	16	0	0	0	0	61
04:45 PM	0	21	0	21	3	0	10	13	0	8	7	15	0	0	0	0	49
05:00 PM	0	18	0	18	5	0	10	15	0	8	4	12	0	0	0	0	45
05:15 PM	0	19	0	19	5	0	7	12	0	14	7	21	0	0	0	0	52
Total Volume	0	78	0	78	29	0	36	65	0	39	25	64	0	0	0	0	207
% App. Total	0	100	0		44.6	0	55.4		0	60.9	39.1		0	0	0		
PHF	.000	.929	.000	.929	.453	.000	.900	.650	.000	.696	.893	.762	.000	.000	.000	.000	.848

E/W: I-10 Westbound Ramps

Weather: Clear

File Name: FONCH10WPM Site Code : 20116023 Start Date : 1/12/2016 Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1 Peak Hour for Each Approach Regins at:

Peak Hour for	Each Ap	proact	n Begins	s at:												
	04:30 PM				04:30 PM	I			04:30 PN	1			04:30 PM	I		
+0 mins.	0	20	0	20	16	0	9	25	0	9	7	16	0	0	0	0
+15 mins.	0	21	0	21	3	0	10	13	0	8	7	15	0	0	0	0
+30 mins.	0	18	0	18	5	0	10	15	0	8	4	12	0	0	0	0
+45 mins.	0	19	0	19	5	0	7	12	0	14	7	21	0	0	0	0
Total Volume	0	78	0	78	29	0	36	65	0	39	25	64	0	0	0	0
% App. Total	0	100	0		44.6	0	55.4		0	60.9	39.1		0	0	0	
PHF	000	929	000	929	453	000	900	650	000	696	893	762	000	000	000	000

Location: Fontana
N/S: Cherry Avenue
E/W: I-10 Westbound Ramps



Site Code: 201-16023 Date: 1/12/2016 Weather: Clear

PEDESTRIANS

	North Leg Cherry Avenue	East Leg I-10 Westbound Ramps	South Leg Cherry Avenue	West Leg I-10 Westbound Ramps	TOTAL
7:00 AM	0	0	0	1	1
7:15 AM	0	0	0	1	1
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	2	2
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	3	3
TOTAL VOLUMES:	0	0	0	7	7

	North Leg Cherry Avenue	East Leg I-10 Westbound Ramps	South Leg Cherry Avenue	West Leg I-10 Westbound Ramps	TOTAL
4:00 PM	0	0	0	3	3
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	3	3

Location: Fontana
N/S: Cherry Avenue
E/W: I-10 Westbound Ramps



Site Code: 201-16023 Date: 1/12/2016 Weather: Clear

BICYCLES

	North Leg Cherry Avenue	East Leg I-10 Westbound Ramps	South Leg Cherry Avenue	West Leg I-10 Westbound Ramps	TOTAL
7:00 AM	0	0	0	1	1
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	1	0	0	1
8:45 AM	0	0	0	1	1
TOTAL VOLUMES:	0	1	0	2	3

	North Leg Cherry Avenue	East Leg I-10 Westbound Ramps	South Leg Cherry Avenue	West Leg I-10 Westbound Ramps	TOTAL
4:00 PM	0	0	0	2	2
4:15 PM	0	0	0	2	2
4:30 PM	0	0	0	1	1
4:45 PM	0	0	0	4	4
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	1	0	0	1
TOTAL VOLUMES:	0	1	0	9	10

City of Fontana N/S: Cherry Avenue E/W: I-10 Éastbound Ramps

Weather: Clear

File Name: FONCH10EAM

Site Code : 20116023 Start Date : 1/12/2016 Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

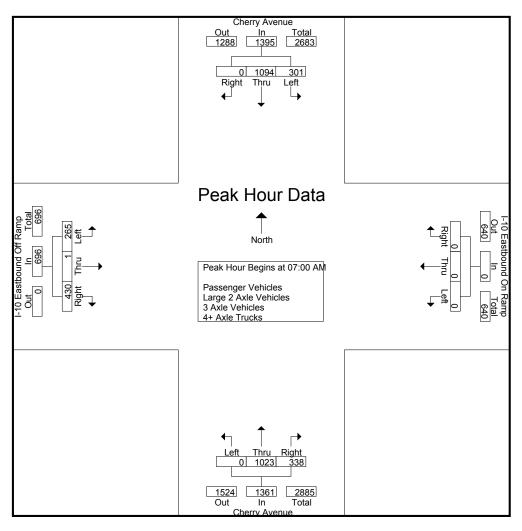
			•					arge z Ax	ic veiii								1
		Cherry	Avenu	е	I-10 I	Eastbo	und On	Ramp		Cherry	/ Avenu	е	I-10 I	Eastbo	und Off	Ramp	
		South	nbound			West	tbound			North	nbound			East	bound		
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	72	323	0	395	0	0	0	0	0	212	71	283	58	0	133	191	869
07:15 AM	71	327	0	398	0	0	0	0	0	271	77	348	69	0	93	162	908
07:30 AM	84	206	0	290	0	0	0	0	0	313	95	408	59	0	99	158	856
07:45 AM	74	238	0	312	0	0	0	0	0	227	95	322	79	1	105	185	819
Total	301	1094	0	1395	0	0	0	0	0	1023	338	1361	265	1	430	696	3452
08:00 AM	61	206	0	267	0	0	0	0	0	193	64	257	74	0	105	179	703
08:15 AM	78	168	0	246	0	0	0	0	0	184	60	244	70	2	106	178	668
08:30 AM	90	162	0	252	0	0	0	0	0	163	69	232	69	1	70	140	624
08:45 AM	61	167	0	228	0	0	0	0	0	180	52	232	61	1	90	152	612
Total	290	703	0	993	0	0	0	0	0	720	245	965	274	4	371	649	2607
Grand Total	591	1797	0	2388	0	0	0	0	0	1743	583	2326	539	5	801	1345	6059
Apprch %	24.7	75.3	0		0	0	0		0	74.9	25.1		40.1	0.4	59.6		
Total %	9.8	29.7	0	39.4	0	0	0	0	0	28.8	9.6	38.4	8.9	0.1	13.2	22.2	
Passenger Vehicles	459	1556	0	2015	0	0	0	0	0	1450	481	1931	441	4	615	1060	5006
% Passenger Vehicles	77.7	86.6	0	84.4	0	0	0	0	0	83.2	82.5	83	81.8	80	76.8	78.8	82.6
Large 2 Axle Vehicles	39	74	0	113	0	0	0	0	0	55	23	78	21	0	31	52	243
% Large 2 Axle Vehicles	6.6	4.1	0	4.7	0	0	0	0	0	3.2	3.9	3.4	3.9	0	3.9	3.9	4
3 Axle Vehicles	21	65	0	86	0	0	0	0	0	42	12	54	15	0	27	42	182
% 3 Axle Vehicles	3.6	3.6	0	3.6	0	0	0	0	0	2.4	2.1	2.3	2.8	0	3.4	3.1	3
4+ Axle Trucks	72	102	0	174	0	0	0	0	0	196	67	263	62	1	128	191	628
% 4+ Axle Trucks	12.2	5.7	0	7.3	0	0	0	0	0	11.2	11.5	11.3	11.5	20	16	14.2	10.4

		Cherry	Avenu	е	I-10	Eastboo	und On	Ramp		Cherry	/ Avenu	е	I-10	Eastbo	und Off	Ramp	
		South	bound			West	bound	·		North	nbound			East	bound		
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1 Peak Hour for Entire Intersection Begins at 07:00 AM																	
Peak Hour for I	Entire In	tersecti	on Beg	ins at 07:	00 AM												
07:00 AM	72	323	0	395	0	0	0	0	0	212	71	283	58	0	133	191	869
07:15 AM	71	327	0	398	0	0	0	0	0	271	77	348	69	0	93	162	908
07:30 AM	84	206	0	290	0	0	0	0	0	313	95	408	59	0	99	158	856
07:45 AM	74	238	0	312	0	0	0	0	0	227	95	322	79	1	105	185	819
Total Volume	301	1094	0	1395	0	0	0	0	0	1023	338	1361	265	1	430	696	3452
_ % App. Total	21.6	78.4	0		0	0	0		0	75.2	24.8		38.1	0.1	61.8		
PHF	.896	.836	.000	.876	.000	.000	.000	.000	.000	.817	.889	.834	.839	.250	.808	.911	.950

E/W: I-10 Éastbound Ramps

Weather: Clear

File Name: FONCH10EAM Site Code : 20116023 Start Date : 1/12/2016 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for	Each Approach Begins at:
	07:00 AM

Peak Hour for	Each A	pproac	h Begin	s at:												
	07:00 AN	Л			07:00 AM	1			07:00 AM	И			07:30 AM	I		
+0 mins.	72	323	0	395	0	0	0	0	0	212	71	283	59	0	99	158
+15 mins.	71	327	0	398	0	0	0	0	0	271	77	348	79	1	105	185
+30 mins.	84	206	0	290	0	0	0	0	0	313	95	408	74	0	105	179
+45 mins.	74	238	0	312	0	0	0	0	0	227	95	322	70	2	106	178
Total Volume	301	1094	0	1395	0	0	0	0	0	1023	338	1361	282	3	415	700
% App. Total	21.6	78.4	0		0	0	0		0	75.2	24.8		40.3	0.4	59.3	
PHF	.896	.836	.000	.876	.000	.000	.000	.000	.000	.817	.889	.834	.892	.375	.979	.946

City of Fontana N/S: Cherry Avenue

E/W: I-10 Éastbound Ramps

Weather: Clear

File Name: FONCH10EAM Site Code: 20116023

Start Date : 1/12/2016 Page No : 1

Groups Printed- Passenger Vehicles

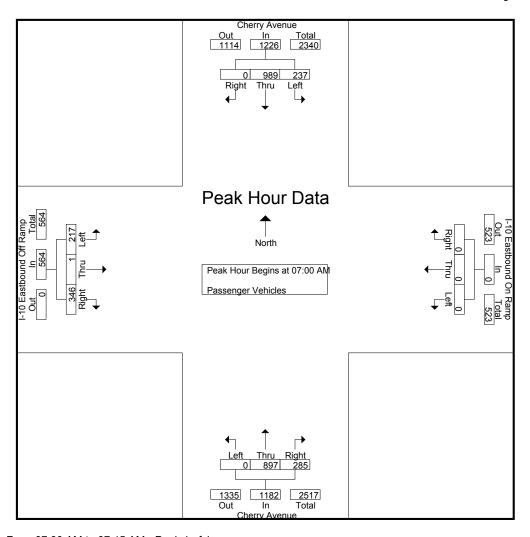
	Groups Printed- Passenger venicles																
		Cherry	Avenu	e	I-10 Eastbound On Ramp					Cherry	/ Avenu	е	I-10 E				
		South	nbound					North	nbound								
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	61	305	0	366	0	0	0	0	0	194	61	255	46	0	105	151	772
07:15 AM	55	301	0	356	0	0	0	0	0	237	66	303	51	0	78	129	788
07:30 AM	60	175	0	235	0	0	0	0	0	282	81	363	54	0	78	132	730
07:45 AM	61	208	0	269	0	0	0	0	0	184	77	261	66	1	85	152	682
Total	237	989	0	1226	0	0	0	0	0	897	285	1182	217	1	346	564	2972
08:00 AM	46	171	0	217	0	0	0	0	0	154	54	208	62	0	86	148	573
08:15 AM	64	138	0	202	0	0	0	0	0	140	49	189	60	2	73	135	526
08:30 AM	69	133	0	202	0	0	0	0	0	125	53	178	54	0	49	103	483
08:45 AM	43	125	0	168	0	0	0	0	0	134	40	174	48	1	61	110	452
Total	222	567	0	789	0	0	0	0	0	553	196	749	224	3	269	496	2034
Grand Total	459	1556	0	2015	0	0	0	0	0	1450	481	1931	441	4	615	1060	5006
Apprch %	22.8	77.2	0		0	0	0		0	75.1	24.9		41.6	0.4	58		
Total %	9.2	31.1	0	40.3	0	0	0	0	0	29	9.6	38.6	8.8	0.1	12.3	21.2	

		Cherry	Avenue	9	I-10 Eastbound On Ramp (Avenu	е	I-10 I				
		South	bound		Westbound					North	nbound						
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	61	305	0	366	0	0	0	0	0	194	61	255	46	0	105	151	772
07:15 AM	55	301	0	356	0	0	0	0	0	237	66	303	51	0	78	129	788
07:30 AM	60	175	0	235	0	0	0	0	0	282	81	363	54	0	78	132	730
07:45 AM	61	208	0	269	0	0	0	0	0	184	77	261	66	1	85	152	682
Total Volume	237	989	0	1226	0	0	0	0	0	897	285	1182	217	1	346	564	2972
% App. Total	19.3	80.7	0		0	0	0		0	75.9	24.1		38.5	0.2	61.3		
PHF	.971	.811	.000	.837	.000	.000	.000	.000	.000	.795	.880	.814	.822	.250	.824	.928	.943

E/W: I-10 Éastbound Ramps

Weather: Clear

File Name: FONCH10EAM Site Code : 20116023 Start Date : 1/12/2016 Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1

Peak Hour for	Peak Hour for Each Approach Begins at:															
	07:00 AM	1			07:00 AM	I			07:00 AN	1			07:00 AM			
+0 mins.	61	305	0	366	0	0	0	0	0	194	61	255	46	0	105	151
+15 mins.	55	301	0	356	0	0	0	0	0	237	66	303	51	0	78	129
+30 mins.	60	175	0	235	0	0	0	0	0	282	81	363	54	0	78	132
+45 mins.	61	208	0	269	0	0	0	0	0	184	77	261	66	1	85	152
Total Volume	237	989	0	1226	0	0	0	0	0	897	285	1182	217	1	346	564
% App. Total	19.3	80.7	0		0	0	0		0	75.9	24.1		38.5	0.2	61.3	
PHF	971	811	000	837	000	000	000	000	000	795	880	814	822	250	824	928

City of Fontana N/S: Cherry Avenue

E/W: I-10 Éastbound Ramps

Weather: Clear

File Name: FONCH10EAM Site Code: 20116023 Start Date : 1/12/2016 Page No : 1

Groups Printed- Large 2 Axle Vehicles

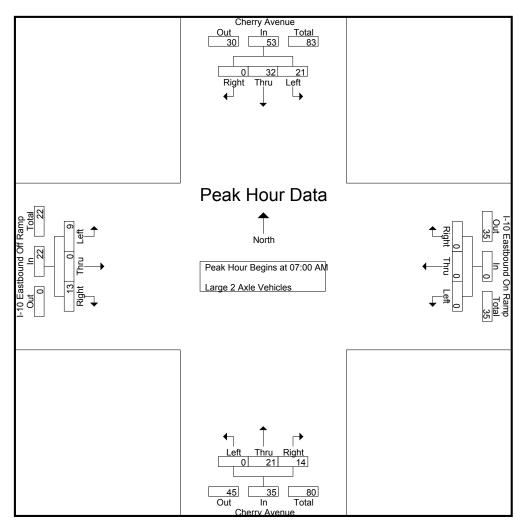
						Grou	ps Printe	ea- Larg	e z Axie	e venic	ies						
		Cherry	Avenu	e	I-10 I	Eastbo	und On I	Ramp		Cherry	Avenu	е	I-10 I				
		Sout	nbound			West	bound	-		North	nbound						
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	6	6	0	12	0	0	0	0	0	2	1	3	1	0	2	3	18
07:15 AM	5	8	0	13	0	0	0	0	0	5	3	8	4	0	2	6	27
07:30 AM	7	9	0	16	0	0	0	0	0	7	6	13	0	0	4	4	33
07:45 AM	3	9	0	12	0	0	0	0	0	7	4	11	4	0	5	9	32
Total	21	32	0	53	0	0	0	0	0	21	14	35	9	0	13	22	110
08:00 AM	4	12	0	16	0	0	0	0	0	9	0	9	3	0	4	7	32
08:15 AM	5	11	0	16	0	0	0	0	0	9	3	12	3	0	4	7	35
08:30 AM	5	7	0	12	0	0	0	0	0	7	4	11	2	0	3	5	28
08:45 AM	4	12	0	16	0	0	0	0	0	9	2	11	4	0	7	11	38
Total	18	42	0	60	0	0	0	0	0	34	9	43	12	0	18	30	133
Grand Total	39	74	0	113	0	0	0	0	0	55	23	78	21	0	31	52	243
Apprch %	34.5	65.5	0		0	0	0		0	70.5	29.5		40.4	0	59.6		
Total %	16	30.5	0	46.5	0	0	0	0	0	22.6	9.5	32.1	8.6	0	12.8	21.4	

			Cherry	Avenu	е	I-10 Eastbound On Ramp Cherry Avenue I-10 Eastbound Off F								Ramp				
		Southbound				Westbound					North	nbound						
	Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																		
	Peak Hour for I	Entire In	tersecti	on Beg	ins at 07:	00 AM												
	07:00 AM	6	6	0	12	0	0	0	0	0	2	1	3	1	0	2	3	18
	07:15 AM	5	8	0	13	0	0	0	0	0	5	3	8	4	0	2	6	27
	07:30 AM	7	9	0	16	0	0	0	0	0	7	6	13	0	0	4	4	33
	07:45 AM	3	9	0	12	0	0	0	0	0	7	4	11	4	0	5	9	32
	Total Volume	21	32	0	53	0	0	0	0	0	21	14	35	9	0	13	22	110
	% App. Total	39.6	60.4	0		0	0	0		0	60	40		40.9	0	59.1		
	PHF	.750	.889	.000	.828	.000	.000	.000	.000	.000	.750	.583	.673	.563	.000	.650	.611	.833

E/W: I-10 Éastbound Ramps

Weather: Clear

File Name: FONCH10EAM Site Code : 20116023 Start Date : 1/12/2016 Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1

reak Houl loi	Lacii	pproaci	i begin	o at.												
	07:00 AM	1			07:00 AM	1			07:00 AN	Л			07:00 AM	1		
+0 mins.	6	6	0	12	0	0	0	0	0	2	1	3	1	0	2	3
+15 mins.	5	8	0	13	0	0	0	0	0	5	3	8	4	0	2	6
+30 mins.	7	9	0	16	0	0	0	0	0	7	6	13	0	0	4	4
+45 mins.	3	9	0	12	0	0	0	0	0	7	4	11	4	0	5	9
Total Volume	21	32	0	53	0	0	0	0	0	21	14	35	9	0	13	22
% App. Total	39.6	60.4	0		0	0	0		0	60	40		40.9	0	59.1	
PHF	.750	.889	.000	.828	.000	.000	.000	.000	.000	.750	.583	.673	.563	.000	.650	.611

City of Fontana N/S: Cherry Avenue

E/W: I-10 Éastbound Ramps

Weather: Clear

File Name: FONCH10EAM Site Code: 20116023

Start Date : 1/12/2016 Page No : 1

Groups Printed- 3 Axle Vehicles

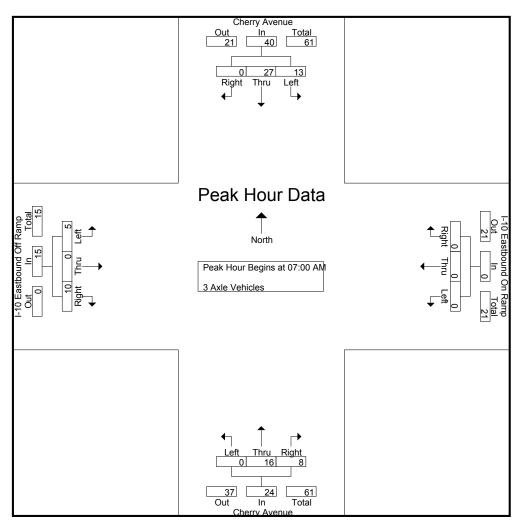
						<u>G</u>	<u>roups r</u>	Tillieu- S	AXIE V	enicies							
		Cherry	Avenu	e	I-10 I	Eastbo	und On	Ramp		Cherry	/ Avenu	е	I-10	Eastbo	und Off	Ramp	
		South	nbound			West	bound	•		North	nbound			East	tbound	-	
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	1	5	0	6	0	0	0	0	0	1	2	3	1	0	4	5	14
07:15 AM	2	6	0	8	0	0	0	0	0	3	1	4	1	0	2	3	15
07:30 AM	7	7	0	14	0	0	0	0	0	2	1	3	1	0	3	4	21
07:45 AM	3	9	0	12	0	0	0	0	0	10	4	14	2	0	1	3	29
Total	13	27	0	40	0	0	0	0	0	16	8	24	5	0	10	15	79
08:00 AM	3	5	0	8	0	0	0	0	0	5	2	7	2	0	2	4	19
08:15 AM	1	6	0	7	0	0	0	0	0	5	1	6	0	0	6	6	19
08:30 AM	2	12	0	14	0	0	0	0	0	6	0	6	3	0	5	8	28
08:45 AM	2	15	0	17	0	0	0	0	0	10	1	11	5	0	4	9	37
Total	8	38	0	46	0	0	0	0	0	26	4	30	10	0	17	27	103
Grand Total	21	65	0	86	0	0	0	0	0	42	12	54	15	0	27	42	182
Apprch %	24.4	75.6	0		0	0	0		0	77.8	22.2		35.7	0	64.3		
Total %	11.5	35.7	0	47.3	0	0	0	0	0	23.1	6.6	29.7	8.2	0	14.8	23.1	

		Cherry	Avenu	е	I-10	Eastbo	und On	Ramp		Cherry	Avenu	е	I-10	Eastbo	und Off	Ramp	
		South	nbound			West	tbound			North	nbound			East	bound	-	
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Ana	alysis Fr	om 07:0	00 AM t	o 07:45 A	M - Pea												
Peak Hour for	Entire Ir	tersect	ion Beg	ins at 07:	00 AM												
07:00 AM	1	5	0	6	0	0	0	0	0	1	2	3	1	0	4	5	14
07:15 AM	2	6	0	8	0	0	0	0	0	3	1	4	1	0	2	3	15
07:30 AM	7	7	0	14	0	0	0	0	0	2	1	3	1	0	3	4	21
07:45 AM	3	9	0	12	0	0	0	0	0	10	4	14	2	0	1	3	29
Total Volume	13	27	0	40	0	0	0	0	0	16	8	24	5	0	10	15	79
% App. Total	32.5	67.5	0		0	0	0		0	66.7	33.3		33.3	0	66.7		
PHF	.464	.750	.000	.714	.000	.000	.000	.000	.000	.400	.500	.429	.625	.000	.625	.750	.681

E/W: I-10 Éastbound Ramps

Weather: Clear

File Name: FONCH10EAM Site Code : 20116023 Start Date : 1/12/2016 Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1

Peak Hour for	Each Ap	oproact	n Begins	s at:												
	07:00 AM				07:00 AM	I			07:00 AN	Л			07:00 AM	1		
+0 mins.	1	5	0	6	0	0	0	0	0	1	2	3	1	0	4	5
+15 mins.	2	6	0	8	0	0	0	0	0	3	1	4	1	0	2	3
+30 mins.	7	7	0	14	0	0	0	0	0	2	1	3	1	0	3	4
+45 mins.	3	9	0	12	0	0	0	0	0	10	4	14	2	0	1	3
Total Volume	13	27	0	40	0	0	0	0	0	16	8	24	5	0	10	15
% App. Total	32.5	67.5	0		0	0	0		0	66.7	33.3		33.3	0	66.7	
PHF	464	750	000	714	000	000	000	000	000	400	500	429	625	000	625	750

City of Fontana N/S: Cherry Avenue

E/W: I-10 Éastbound Ramps

Weather: Clear

File Name: FONCH10EAM Site Code: 20116023

Start Date : 1/12/2016 Page No : 1

Groups Printed- 4+ Axle Trucks

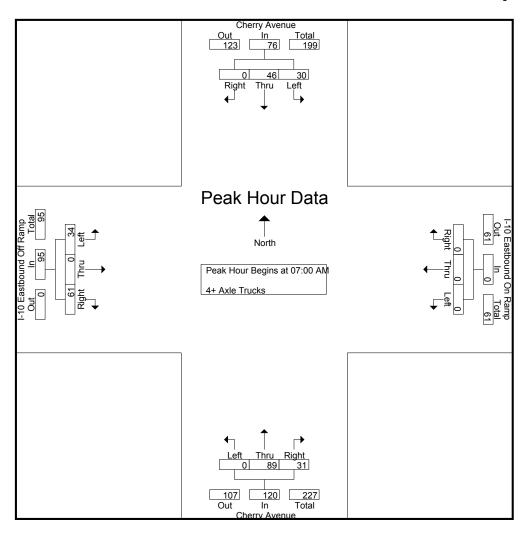
						G	roups r	rintea- 4	+ Axie	TTUCKS							
		Cherry	Avenu	e	I-10 I	Eastbo	und On	Ramp		Cherry	Avenu	е	I-10	Eastbo	und Off	Ramp	
		South	nbound			West	bound	-		North	nbound			East	bound	Ť	
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	4	7	0	11	0	0	0	0	0	15	7	22	10	0	22	32	65
07:15 AM	9	12	0	21	0	0	0	0	0	26	7	33	13	0	11	24	78
07:30 AM	10	15	0	25	0	0	0	0	0	22	7	29	4	0	14	18	72
07:45 AM	7	12	0	19	0	0	0	0	0	26	10	36	7	0	14	21	76
Total	30	46	0	76	0	0	0	0	0	89	31	120	34	0	61	95	291
08:00 AM	8	18	0	26	0	0	0	0	0	25	8	33	7	0	13	20	79
08:15 AM	8	13	0	21	0	0	0	0	0	30	7	37	7	0	23	30	88
08:30 AM	14	10	0	24	0	0	0	0	0	25	12	37	10	1	13	24	85
08:45 AM	12	15	0	27	0	0	0	0	0	27	9	36	4	0	18	22	85
Total	42	56	0	98	0	0	0	0	0	107	36	143	28	1	67	96	337
Grand Total	72	102	0	174	0	0	0	0	0	196	67	263	62	1	128	191	628
Apprch %	41.4	58.6	0		0	0	0		0	74.5	25.5		32.5	0.5	67		
Total %	11.5	16.2	0	27.7	0	0	0	0	0	31.2	10.7	41.9	9.9	0.2	20.4	30.4	

		Cherry	Avenu	е	I-10	Eastboo	und On	Ramp		Cherry	/ Avenu	е	I-10	Eastbo	und Off	Ramp	
		South	bound			West	bound			North	nbound			East	bound		
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Ana	alysis Fr	om 07:0	00 AM t	o 07:45 A	M - Pea	ak 1 of 1	1				_				_		
Peak Hour for	Entire In	tersecti	on Beg	ins at 07:	00 AM												
07:00 AM	4	7	0	11	0	0	0	0	0	15	7	22	10	0	22	32	65
07:15 AM	9	12	0	21	0	0	0	0	0	26	7	33	13	0	11	24	78
07:30 AM	10	15	0	25	0	0	0	0	0	22	7	29	4	0	14	18	72
07:45 AM	7	12	0	19	0	0	0	0	0	26	10	36	7	0	14	21	76
Total Volume	30	46	0	76	0	0	0	0	0	89	31	120	34	0	61	95	291
% App. Total	39.5	60.5	0		0	0	0		0	74.2	25.8		35.8	0	64.2		
PHF	.750	.767	.000	.760	.000	.000	.000	.000	.000	.856	.775	.833	.654	.000	.693	.742	.933

E/W: I-10 Éastbound Ramps

Weather: Clear

File Name: FONCH10EAM Site Code : 20116023 Start Date : 1/12/2016 Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:
--

Peak Hour for	Each A	pproacl	า Begins	s at:												
	07:00 AM	I			07:00 AM	1			07:00 AN	Л			07:00 AN	1		
+0 mins.	4	7	0	11	0	0	0	0	0	15	7	22	10	0	22	32
+15 mins.	9	12	0	21	0	0	0	0	0	26	7	33	13	0	11	24
+30 mins.	10	15	0	25	0	0	0	0	0	22	7	29	4	0	14	18
+45 mins.	7	12	0	19	0	0	0	0	0	26	10	36	7	0	14	21
Total Volume	30	46	0	76	0	0	0	0	0	89	31	120	34	0	61	95
% App. Total	39.5	60.5	0		0	0	0		0	74.2	25.8		35.8	0	64.2	
PHF	.750	.767	.000	.760	.000	.000	.000	.000	.000	.856	.775	.833	.654	.000	.693	.742

City of Fontana N/S: Cherry Avenue

E/W: I-10 Éastbound Ramps

Weather: Clear

File Name: FONCH10EPM

Site Code : 20116023 Start Date : 1/12/2016 Page No : 1

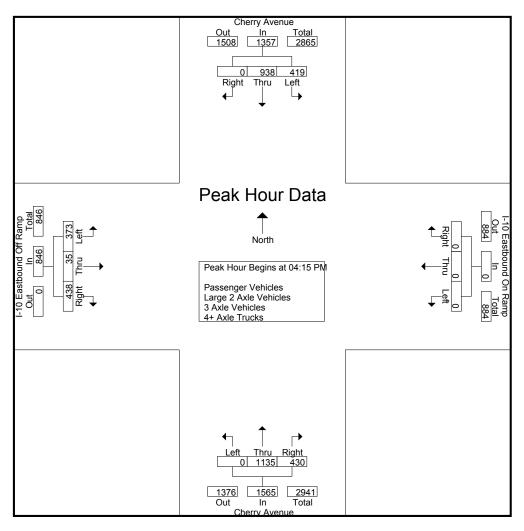
		Gr	oups P	rinted- Pa	assenge	er Vehic	cles - La	arge 2 Ax	le Vehi	cles - 3	3 Axle V	ehicles -	4+ Axle	Trucks	S		
		Cherry	Avenu	е	I-10 I	Eastbo	und On	Ramp		Cherry	/ Avenu	е	I-10 I	Eastbo	und Off	Ramp	
		South	nbound			West	tbound			Norti	hbound			East	bound		
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	108	227	0	335	0	0	0	0	0	277	106	383	98	3	126	227	945
04:15 PM	124	234	0	358	0	0	0	0	0	261	93	354	88	4	114	206	918
04:30 PM	85	216	0	301	0	0	0	0	0	271	101	372	102	6	118	226	899
04:45 PM	102	245	0	347	0	0	0	0	0	314	119	433	71	18	101	190	970
Total	419	922	0	1341	0	0	0	0	0	1123	419	1542	359	31	459	849	3732
05:00 PM	108	243	0	351	0	0	0	0	0	289	117	406	112	7	105	224	981
05:15 PM	103	250	0	353	0	0	0	0	0	275	76	351	76	4	74	154	858
05:30 PM	103	221	0	324	0	0	0	0	0	229	96	325	91	7	110	208	857
05:45 PM	62	189	0	251	0	0	0	0	0	228	68	296	94	10	94	198	745
Total	376	903	0	1279	0	0	0	0	0	1021	357	1378	373	28	383	784	3441
Grand Total	795	1825	0	2620	0	0	0	0	0	2144	776	2920	732	59	842	1633	7173
Apprch %	30.3	69.7	0		0	0	0		0	73.4	26.6		44.8	3.6	51.6		
Total %	11.1	25.4	0	36.5	0	0	0	0	0	29.9	10.8	40.7	10.2	8.0	11.7	22.8	
Passenger Vehicles	708	1620	0	2328	0	0	0	0	0	1970	679	2649	664	59	716	1439	6416
% Passenger Vehicles	89.1	88.8	0	88.9	0	0	0	0	0	91.9	87.5	90.7	90.7	100	85	88.1	89.4
Large 2 Axle Vehicles	22	57	0	79	0	0	0	0	0	41	25	66	17	0	31	48	193
% Large 2 Axle Vehicles	2.8	3.1	0	3	0	0	0	0	0	1.9	3.2	2.3	2.3	0	3.7	2.9	2.7
3 Axle Vehicles	14	53	0	67	0	0	0	0	0	39	16	55	9	0	15	24	146
% 3 Axle Vehicles	1.8	2.9	0	2.6	0	0	0	0	0	1.8	2.1	1.9	1.2	0	1.8	1.5	2
4+ Axle Trucks	51	95	0	146	0	0	0	0	0	94	56	150	42	0	80	122	418
% 4+ Axle Trucks	6.4	5.2	0	5.6	0	0	0	0	0	4.4	7.2	5.1	5.7	0	9.5	7.5	5.8

		Cherry	Avenu	е	I-10	Eastbou	und On	Ramp		Cherry	Avenu	е	I-10	Eastbo	und Off	Ramp	
		South	bound			West	bound	·		North	nbound			East	bound		
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Ana	alysis Fr	om 04:0	00 PM t	o 05:45 P	M - Pea	k 1 of 1											
Peak Hour for I	Entire In	tersecti	on Beg	ins at 04:	15 PM												
04:15 PM	124	234	0	358	0	0	0	0	0	261	93	354	88	4	114	206	918
04:30 PM	85	216	0	301	0	0	0	0	0	271	101	372	102	6	118	226	899
04:45 PM	102	245	0	347	0	0	0	0	0	314	119	433	71	18	101	190	970
05:00 PM	108	243	0	351	0	0	0	0	0	289	117	406	112	7	105	224	981
Total Volume	419	938	0	1357	0	0	0	0	0	1135	430	1565	373	35	438	846	3768
_ % App. Total	30.9	69.1	0		0	0	0		0	72.5	27.5		44.1	4.1	51.8		
PHF	.845	.957	.000	.948	.000	.000	.000	.000	.000	.904	.903	.904	.833	.486	.928	.936	.960

E/W: I-10 Éastbound Ramps

Weather: Clear

File Name: FONCH10EPM Site Code : 20116023 Start Date : 1/12/2016 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for	Each A	oproacl	า Begins	s at:												
	04:45 PM				04:00 PM	1			04:15 PN	Л			04:00 PM	1		
+0 mins.	102	245	0	347	0	0	0	0	0	261	93	354	98	3	126	227
+15 mins.	108	243	0	351	0	0	0	0	0	271	101	372	88	4	114	206
+30 mins.	103	250	0	353	0	0	0	0	0	314	119	433	102	6	118	226
+45 mins.	103	221	0	324	0	0	0	0	0	289	117	406	71	18	101	190
Total Volume	416	959	0	1375	0	0	0	0	0	1135	430	1565	359	31	459	849
% App. Total	30.3	69.7	0		0	0	0		0	72.5	27.5		42.3	3.7	54.1	
PHF	.963	.959	.000	.974	.000	.000	.000	.000	.000	.904	.903	.904	.880	.431	.911	.935

City of Fontana N/S: Cherry Avenue

E/W: I-10 Éastbound Ramps

Weather: Clear

File Name: FONCH10EPM Site Code: 20116023 Start Date : 1/12/2016 Page No : 1

Groups Printed- Passenger Vehicles

						GIO	ups Prii	nied- Pas	senger	venici	<u>es </u>						
		Cherry	Avenue	е	I-10 I	Eastbo	und On	Ramp		Cherry	/ Avenu	е	I-10 E	Eastbo	und Off	Ramp	
		South	nbound			West	bound			Norti	hbound			East	bound	•	
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	101	190	0	291	0	0	0	0	0	250	91	341	86	3	103	192	824
04:15 PM	104	207	0	311	0	0	0	0	0	229	80	309	78	4	101	183	803
04:30 PM	71	179	0	250	0	0	0	0	0	251	89	340	90	6	91	187	777
04:45 PM	88	234	0	322	0	0	0	0	0	296	103	399	68	18	91	177	898
Total	364	810	0	1174	0	0	0	0	0	1026	363	1389	322	31	386	739	3302
05:00 PM	98	220	0	318	0	0	0	0	0	272	102	374	104	7	89	200	892
05:15 PM	96	222	0	318	0	0	0	0	0	246	70	316	73	4	63	140	774
05:30 PM	97	200	0	297	0	0	0	0	0	216	86	302	84	7	92	183	782
05:45 PM	53	168	0	221	0	0	0	0	0	210	58	268	81	10	86	177	666
Total	344	810	0	1154	0	0	0	0	0	944	316	1260	342	28	330	700	3114
Grand Total	708	1620	0	2328	0	0	0	0	0	1970	679	2649	664	59	716	1439	6416
Apprch %	30.4	69.6	0		0	0	0		0	74.4	25.6		46.1	4.1	49.8		
Total %	11	25.2	0	36.3	0	0	0	0	0	30.7	10.6	41.3	10.3	0.9	11.2	22.4	

		Cherry	Avenue	9	I-10 I	Eastbou	und On	Ramp		Cherry	Avenu	е	I-10	Eastbo	und Off	Ramp	
		South	bound			West	bound			North	nbound			East	bound	-	
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Ana	alysis Fro	om 04:1	5 PM to	05:00 P	M - Pea	k 1 of 1	1										
Peak Hour for I	Entire In	tersecti	on Begi	ins at 04:	15 PM												
04:15 PM	104	207	0	311	0	0	0	0	0	229	80	309	78	4	101	183	803
04:30 PM	71	179	0	250	0	0	0	0	0	251	89	340	90	6	91	187	777
04:45 PM	88	234	0	322	0	0	0	0	0	296	103	399	68	18	91	177	898
05:00 PM	98	220	0	318	0	0	0	0	0	272	102	374	104	7	89	200	892
Total Volume	361	840	0	1201	0	0	0	0	0	1048	374	1422	340	35	372	747	3370
% App. Total	30.1	69.9	0		0	0	0		0	73.7	26.3		45.5	4.7	49.8		
PHF	.868	.897	.000	.932	.000	.000	.000	.000	.000	.885	.908	.891	.817	.486	.921	.934	.938

E/W: I-10 Eastbound Ramps

Weather: Clear

File Name: FONCH10EPM Site Code : 20116023 Start Date : 1/12/2016 Page No : 2

04:15 PM

78

90

68

104

340

45.5

.817

101

91

91

89

372

49.8

.921

6

18

35

4.7

183

187

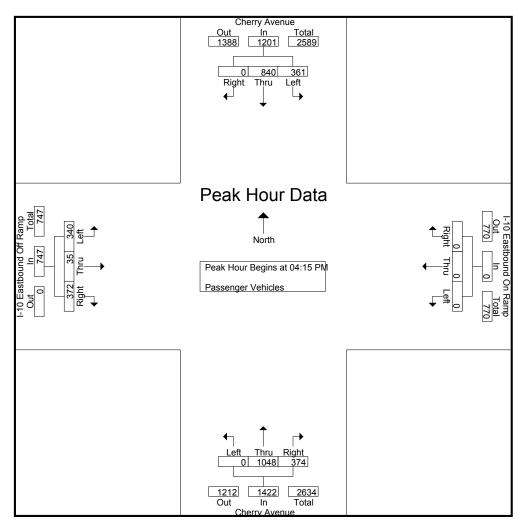
177

200

747

.934

.891



Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1 Peak Hour for Each Approach Begins at:

PHF .868

_	04:15 PM				04:1	5 PM				04:15 PM			
+0 mins.	104	207	() 31	1	0	0	0	0	0	229	80	309
+15 mins.	71	179	() 25	50	0	0	0	0	0	251	89	340
+30 mins.	88	234	(32	22	0	0	0	0	0	296	103	399
+45 mins.	98	220	(3	8	0	0	0	0	0	272	102	374
Total Volume	361	840	(120)1	0	0	0	0	0	1048	374	1422
% App. Total	30.1	69.9	()		0	0	0		0	73.7	26.3	

.000

.000

City of Fontana N/S: Cherry Avenue

E/W: I-10 Éastbound Ramps

Weather: Clear

File Name: FONCH10EPM Site Code: 20116023 Start Date : 1/12/2016 Page No : 1

Groups Printed- Large 2 Axle Vehicles

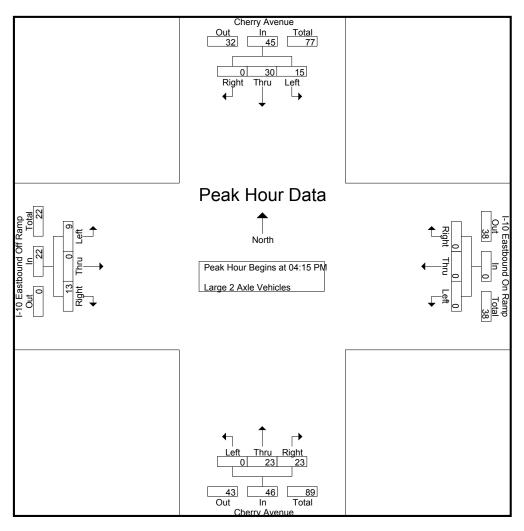
							Grou	<u>ps Prin</u>	<u>tea- Larg</u>	e z Axie	e venic	ies						
			Cherry	Avenue		I-10 I	Eastbo	und On	Ramp		Cherry	/ Avenu	е	I-10 E	Eastbo	und Off	Ramp	
			South	nbound			West	bound			North	nbound			East	bound	-	
	Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
	04:00 PM	3	13	0	16	0	0	0	0	0	7	1	8	4	0	10	14	38
	04:15 PM	6	8	0	14	0	0	0	0	0	7	5	12	3	0	1	4	30
	04:30 PM	3	8	0	11	0	0	0	0	0	3	2	5	5	0	6	11	27
	04:45 PM	6	7	0	13	0	0	0	0	0	8	11	19	0	0	3	3	35
	Total	18	36	0	54	0	0	0	0	0	25	19	44	12	0	20	32	130
	05:00 PM	0	7	0	7	0	0	0	0	0	5	5	10	1	0	3	4	21
	05:15 PM	2	6	0	8	0	0	0	0	0	6	0	6	1	0	5	6	20
	05:30 PM	2	3	0	5	0	0	0	0	0	4	1	5	0	0	3	3	13
	05:45 PM	0	5	0	5	0	0	0	0	0	1	0	1	3	0	0	3	9
	Total	4	21	0	25	0	0	0	0	0	16	6	22	5	0	11	16	63
C	Frand Total	22	57	0	79	0	0	0	0	0	41	25	66	17	0	31	48	193
	Apprch %	27.8	72.2	0		0	0	0		0	62.1	37.9		35.4	0	64.6		
	Total %	11.4	29.5	0	40.9	0	0	0	0	0	21.2	13	34.2	8.8	0	16.1	24.9	

		Cherry	Avenu	е	I-10	Eastboo	und On	Ramp		Cherry	Avenu	е	I-10	Eastbo	und Off	Ramp	
		South	nbound			West	bound			North	nbound			East	bound		
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Ana	ilysis Fr	om 04:	15 PM t	o 05:00 P	M - Pea	ak 1 of 1	1				_				_		
Peak Hour for I	Entire In	tersect	ion Beg	ins at 04:	15 PM												
04:15 PM	6	8	0	14	0	0	0	0	0	7	5	12	3	0	1	4	30
04:30 PM	3	8	0	11	0	0	0	0	0	3	2	5	5	0	6	11	27
04:45 PM	6	7	0	13	0	0	0	0	0	8	11	19	0	0	3	3	35
05:00 PM	0	7	0	7	0	0	0	0	0	5	5	10	1	0	3	4	21
Total Volume	15	30	0	45	0	0	0	0	0	23	23	46	9	0	13	22	113
% App. Total	33.3	66.7	0		0	0	0		0	50	50		40.9	0	59.1		
PHF	.625	.938	.000	.804	.000	.000	.000	.000	.000	.719	.523	.605	.450	.000	.542	.500	.807

E/W: I-10 Éastbound Ramps

Weather: Clear

File Name: FONCH10EPM Site Code : 20116023 Start Date : 1/12/2016 Page No : 2



Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1

Peak Hour for	Each A	.pproact	<u>n Begins</u>	s at:												
	04:15 PM	1			04:15 PM	I			04:15 PM	1			04:15 PM	1		
+0 mins.	6	8	0	14	0	0	0	0	0	7	5	12	3	0	1	4
+15 mins.	3	8	0	11	0	0	0	0	0	3	2	5	5	0	6	11
+30 mins.	6	7	0	13	0	0	0	0	0	8	11	19	0	0	3	3
+45 mins.	0	7	0	7	0	0	0	0	0	5	5	10	1	0	3	4
Total Volume	15	30	0	45	0	0	0	0	0	23	23	46	9	0	13	22
% App. Total	33.3	66.7	0		0	0	0		0	50	50		40.9	0	59.1	
PHF	625	938	000	804	000	000	000	000	000	719	523	605	450	000	542	500

City of Fontana N/S: Cherry Avenue

E/W: I-10 Éastbound Ramps

Weather: Clear

File Name: FONCH10EPM

Site Code : 20116023 Start Date : 1/12/2016 Page No : 1

Groups Printed- 3 Axle Vehicles

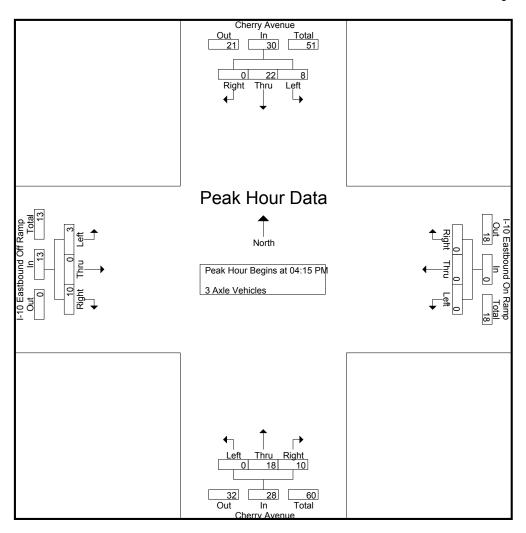
							i oups i	iiiileu- o	AVIC A								
		Cherry	Avenu	e	I-10	Eastbo	und On	Ramp		Cherry	Avenue	Э	I-10 I	Eastbo	und Off	Ramp	
		South	nbound			West	bound			North	nbound			East	bound		
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	1	12	0	13	0	0	0	0	0	6	0	6	2	0	1	3	22
04:15 PM	2	10	0	12	0	0	0	0	0	6	1	7	1	0	3	4	23
04:30 PM	6	6	0	12	0	0	0	0	0	6	5	11	1	0	7	8	31
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	9	28	0	37	0	0	0	0	0	18	6	24	4	0	11	15	76
05:00 PM	0	6	0	6	0	0	0	0	0	6	4	10	1	0	0	1	17
05:15 PM	2	10	0	12	0	0	0	0	0	6	0	6	1	0	1	2	20
05:30 PM	2	7	0	9	0	0	0	0	0	4	2	6	1	0	3	4	19
05:45 PM	1	2	0	3	0	0	0	0	0	5	4	9	2	0	0	2	14
Total	5	25	0	30	0	0	0	0	0	21	10	31	5	0	4	9	70
Grand Total	14	53	0	67	0	0	0	0	0	39	16	55	9	0	15	24	146
Apprch %	20.9	79.1	0		0	0	0		0	70.9	29.1		37.5	0	62.5		
Total %	9.6	36.3	0	45.9	0	0	0	0	0	26.7	11	37.7	6.2	0	10.3	16.4	

		Cherry	Avenue	Э	I-10	Eastbo	und On	Ramp		Cherry	Avenu	е	I-10	Eastbou	und Off	Ramp	
		South	bound			West	tbound			North	bound			East	bound	•	
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Ana	lysis Fr	om 04:1	5 PM to	o 05:00 P	M - Pea	k 1 of 1	1										
Peak Hour for I	Entire In	tersecti	on Beg	ins at 04:	15 PM												
04:15 PM	2	10	0	12	0	0	0	0	0	6	1	7	1	0	3	4	23
04:30 PM	6	6	0	12	0	0	0	0	0	6	5	11	1	0	7	8	31
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	6	0	6	0	0	0	0	0	6	4	10	1	0	0	1	17
Total Volume	8	22	0	30	0	0	0	0	0	18	10	28	3	0	10	13	71
% App. Total	26.7	73.3	0		0	0	0		0	64.3	35.7		23.1	0	76.9		
PHF	.333	.550	.000	.625	.000	.000	.000	.000	.000	.750	.500	.636	.750	.000	.357	.406	.573

E/W: I-10 Éastbound Ramps

Weather: Clear

File Name: FONCH10EPM Site Code : 20116023 Start Date : 1/12/2016 Page No : 2



Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1

Peak Hour for	Each A	pproact	n Begins	s at:												
	04:15 PM	I			04:15 PM	I			04:15 PN	Л			04:15 PM	1		
+0 mins.	2	10	0	12	0	0	0	0	0	6	1	7	1	0	3	4
+15 mins.	6	6	0	12	0	0	0	0	0	6	5	11	1	0	7	8
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	6	0	6	0	0	0	0	0	6	4	10	1	0	0	1
Total Volume	8	22	0	30	0	0	0	0	0	18	10	28	3	0	10	13
_ % App. Total	26.7	73.3	0		0	0	0		0	64.3	35.7		23.1	0	76.9	
PHF	333	550	000	625	000	000	000	000	000	750	500	636	750	000	357	406

City of Fontana N/S: Cherry Avenue E/W: I-10 Eastbound Ramps

Weather: Clear

File Name: FONCH10EPM Site Code: 20116023 Start Date : 1/12/2016 Page No : 1

Groups Printed- 4+ Axle Trucks

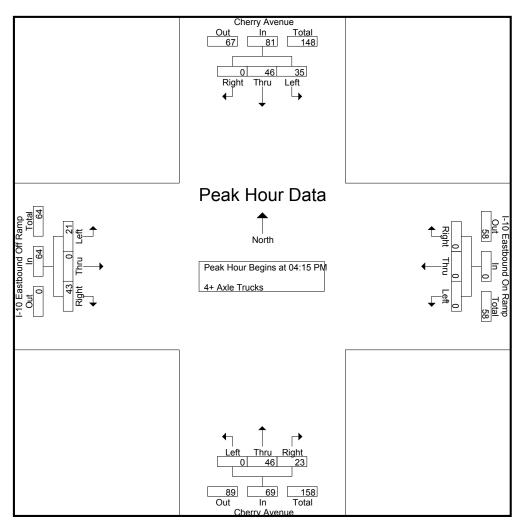
Groups Printed- 4+ Axie Trucks																	
		Cherry	Avenue	•	I-10 E	Ξastboι	und On	Ramp		Cherry	Avenu	е	I-10 I	Eastbo	und Off	Ramp	
		Sout	nbound			Westbound			Northbound				Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	3	12	0	15	0	0	0	0	0	14	14	28	6	0	12	18	61
04:15 PM	12	9	0	21	0	0	0	0	0	19	7	26	6	0	9	15	62
04:30 PM	5	23	0	28	0	0	0	0	0	11	5	16	6	0	14	20	64
04:45 PM	8	4	0	12	0	0	0	0	0	10	5	15	3	0	7	10	37
Total	28	48	0	76	0	0	0	0	0	54	31	85	21	0	42	63	224
05:00 PM	10	10	0	20	0	0	0	0	0	6	6	12	6	0	13	19	51
05:15 PM	3	12	0	15	0	0	0	0	0	17	6	23	1	0	5	6	44
05:30 PM	2	11	0	13	0	0	0	0	0	5	7	12	6	0	12	18	43
05:45 PM	8	14	0	22	0	0	0	0	0	12	6	18	8	0	8	16	56
Total	23	47	0	70	0	0	0	0	0	40	25	65	21	0	38	59	194
Grand Total	51	95	0	146	0	0	0	0	0	94	56	150	42	0	80	122	418
Apprch %	34.9	65.1	0		0	0	0		0	62.7	37.3		34.4	0	65.6		
Total %	12.2	22.7	0	34.9	0	0	0	0	0	22.5	13.4	35.9	10	0	19.1	29.2	

		Cherry	Avenu	е	I-10	I-10 Eastbound On Ramp				Cherry Avenue				I-10 Eastbound Off Ramp			
		South	nbound			Westbound				Northbound				Eastbound			
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for	Entire In	tersect	ion Beg	ins at 04:	15 PM												
04:15 PM	12	9	0	21	0	0	0	0	0	19	7	26	6	0	9	15	62
04:30 PM	5	23	0	28	0	0	0	0	0	11	5	16	6	0	14	20	64
04:45 PM	8	4	0	12	0	0	0	0	0	10	5	15	3	0	7	10	37
05:00 PM	10	10	0	20	0	0	0	0	0	6	6	12	6	0	13	19	51
Total Volume	35	46	0	81	0	0	0	0	0	46	23	69	21	0	43	64	214
% App. Total	43.2	56.8	0		0	0	0		0	66.7	33.3		32.8	0	67.2		
PHF	.729	.500	.000	.723	.000	.000	.000	.000	.000	.605	.821	.663	.875	.000	.768	.800	.836

E/W: I-10 Éastbound Ramps

Weather: Clear

File Name: FONCH10EPM Site Code : 20116023 Start Date : 1/12/2016 Page No : 2



Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1

Peak Hour for	Each A	pproact	n Begins	s at:												
	04:15 PM	I			04:15 PM	I			04:15 PN	Л			04:15 PM	1		
+0 mins.	12	9	0	21	0	0	0	0	0	19	7	26	6	0	9	15
+15 mins.	5	23	0	28	0	0	0	0	0	11	5	16	6	0	14	20
+30 mins.	8	4	0	12	0	0	0	0	0	10	5	15	3	0	7	10
+45 mins.	10	10	0	20	0	0	0	0	0	6	6	12	6	0	13	19
Total Volume	35	46	0	81	0	0	0	0	0	46	23	69	21	0	43	64
% App. Total	43.2	56.8	0		0	0	0		0	66.7	33.3		32.8	0	67.2	
PHF	729	500	000	723	000	000	000	000	000	605	821	663	875	000	768	800

Location: Fontana N/S: Cherry Avenue E/W: I-10 Eastbound Ramps



Site Code: 201-16023 Date: 1/12/2016 Weather: Clear

PEDESTRIANS

	North Leg Cherry Avenue	East Leg I-10 Eastbound Ramps	South Leg Cherry Avenue	West Leg I-10 Eastbound Ramps	TOTAL
7:00 AM	0	0	0	1	1
7:15 AM	0	0	0	0	0
7:30 AM	0	1	0	1	2
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	1	1
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	1	0	3	4

	North Leg Cherry Avenue	East Leg I-10 Eastbound Ramps	South Leg Cherry Avenue	West Leg I-10 Eastbound Ramps	TOTAL
4:00 PM	0	0	0	1	1
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	1	1
5:00 PM	0	0	0	1	1
5:15 PM	0	0	0	1	1
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	4	4

Location: Fontana N/S: Cherry Avenue E/W: I-10 Eastbound Ramps



Site Code: 201-16023 Date: 1/12/2016 Weather: Clear

BICYCLES

	North Leg Cherry Avenue	East Leg I-10 Eastbound Ramps	South Leg Cherry Avenue	West Leg I-10 Eastbound Ramps	TOTAL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	1	0	0	1
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	1	0	0	1

	North Leg Cherry Avenue	East Leg I-10 Eastbound Ramps	South Leg Cherry Avenue	West Leg I-10 Eastbound Ramps	TOTAL
4:00 PM	0	0	0	1	1
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	1	1
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	1	1
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	3	3

2014

Annual Average Daily Truck Traffic on the California State Highway System

Compiled by Traffic Data Branch

State of California California State Transportation Agency Department of Transportation

Prepared in cooperation with the U.S. Department of Transportation Federal Highway Administration

YEAR	v.c.ry EST	10E	10V	10E	10E	05E	05E	05E	05E	05E	06E	06E	N90	780	06E	06E	990
EAL	(1000)	3,643	3,617	3,604	3,604	3,652	3,756	3,785	3,830	3,965	5,998	5,998	5,134	5,083	4,862	4,714	4,757
	2+	57.58	57.58	57.58	57.58	57.79	57.79	57.79	57.79	57.79	61.44	61.44	61.44	60.23	62.39	62.00	63.00
AADT		4.67	4.67	4.67	4.67	3.61	3.61	3.61	3.61	3.61	2.91	2.91	2.91	2.95	2.94	3.00	3.00
% TRUCK	3	10.34	10.34	10.34	10.34	9.51	9.51	9.51	9.51	9.51	10.19	10.19	10.19	10.16	10.45	10.00	9.50
%	2	27.41	27.41	27.41	27.41	29.09	29.09	29.09	29.09	29.09	25.46	25.46	25.46	26.66	24.21	25.00	24.50
TOTAL	2+	9,339	9,273	9,240	9,240	9,439	9,708	9,782	9,897	10,246	15,713	15,713	13,450	13,263	12,765	12,371	12,535
AADT		757	752	749	749	290	909	611	618	640	744	744	637	650	602	299	597
TRUCK		1,677	1,665	1,659	1,659	1,553	1,598	1,610	1,629	1,686	2,606	2,606	2,231	2,237	2,138	1,995	1,890
F	2 3	4,446 1	4,414 1	4,399 1	4,399 1	4,752 1	4,887	4,924 1	4,982	5,157 1	6,511 2	6,511 2	5,574 2	5,871 2	4,953 2	4,988 1	4,875 1
TRUCK		6.73	09.9	6.55	6.55	6.64	6.64	69.9	69.9	69.9	10.23	10.23	10.23	10.29	10.23	10.18	10.10
TRUCK	TOTAL	16,219	16,104	16,047	16,047	16,334	16,799	16,927	17,126	17,729	25,574	25,574	21,892	22,021	20,458	19,953	19,897
VEHICLE 1		241,000	244,000	245,000	245,000	246,000	253,000	253,000	256,000	265,000	250,000	250,000	214,000	214,000	200,000	196,000	197,000
	DESCRIPTION	POMONA, JCT. RTES. 57/71	POMONA, INDIAN HILL BLVD	LOS ANGELES/SAN BERNARDINO COUNTY LINE	LOS ANGELES/SAN BERNARDINO COUNTY LINE	MONTCLAIR, CENTRAL AVE	MONTCLAIR, CENTRALAVE	UPLAND, JCT. RTE. 83	UPLAND, JCT. RTE. 83	ONTARIO, JCT. RTE. 15	ONTARIO, JCT. RTE. 15	ETIWANDA AVE	ETIWANDA AVE	FONTANA, CHERRY AVE	BLOOMINGTON, CEDAR AVE	BLOOMINGTON, CEDAR AVE	PEPPER AVE
_ 4	ט ר	∢	В	0	0	В	∢	В	4	В	∢	В	∢	B	2 B	5 P	В
TOOG		42.443	47.737	48.265	0	1.229	1.229	3.468	3.468	9.936	9.936	11.132	11.132	13.169	R18.492	R18.492	20.965
	CNTY	₹	4	4	SBD	SBD	SBD	SBD	SBD	SBD	SBD	SBD	SBD	SBD	SBD	SBD	SBD
	DIST	07	07	07	80	80	80	80	80	80	80	80	80	80	80	80	80
	RTE	010	010	010	010	010	010	010	010	010	010	010	010	010	010	010	010

Caltrans Performance Measurement System (PeMS) Freeway Mainline Volumes

I-10 Westbound, East of Cherry Avenue

	DA	ILY		Data Quality				
Time	1/12/2016	1/13/2016	1/14/2016	# Lane Points	% Observed			
0:00	1251	1311	1216	144	0.0			
1:00	1211	1214	1249	144	0.0			
2:00	1330	1326	1324	144	0.0			
3:00	1886	1859	1905	144	0.0			
4:00	3490	3499	3429	144	0.0			
5:00	4231	4263	4384	144	0.0			
6:00	4450	4584	4528	144	0.0			
7:00	5087	5030	5189	144	0.0			
8:00	4193	4002	4269	144	0.0			
9:00	3744	3565	3754	144	0.0			
10:00	3585	3506	5178	144	0.0			
11:00	3895	3650	4943	144	0.0			
12:00	3921	3845	3872	144	0.0			
13:00	3844	3787	3885	144	0.0			
14:00	4043	3883	4287	144	0.0			
15:00	3836	4134	4114	144	0.0			
16:00	4255	3872	4012	144	0.0			
17:00	4096	4162	4101	144	0.0			
18:00	3220	3443	3343	144	0.0			
19:00	2772	2777	2845	144	0.0			
20:00	2256	2370	2330	144	0.0			
21:00	2055	2047	2260	144	0.0			
22:00	1721	1702	1781	144	0.0			
23:00	1471	1439	1535	144	0.0			
Total	75,843	75,270	79,733	3,456	0.0			

Daily Peak	79,733	1/14/2016
------------	--------	-----------

	PEAK		Data Quality				
Time	Minimum	Mean	Maximum	# Lane Points	% Observed		
7:00	5030	5102	5189	144	0.0		
8:00	4002	4154.67	4269	144	0.0		
9:00	3565	3687.67	3754	144	0.0		
16:00	3872	4046.33	4255	144	0.0		
17:00	4096	4119.67	4162	144	0.0		
18:00	3220	3335.33	3443	144	0.0		

AM Peak	5,189	7:00
PM Peak	4,255	16:00

I-10 Eastbound, West of Cherry Avenue

	DA	ILY		Data Qu	ality		
Time	1/12/2016	1/13/2016	1/14/2016	# Lane Points	% Observed		
0:00	2321	2371	2414	144	0.0		
1:00	2113	2123	2192	144	0.0		
2:00	1924	1964	1998	144	0.0		
3:00	2045	2041	2014	144	0.0		
4:00	2371	2316	2314	144	0.0		
5:00	3190	3218	3219	144	0.0		
6:00	4400	4466	4512	144	0.0		
7:00	5251	5275	5344	144	0.0		
8:00	4849	5183	5067	144	0.0		
9:00	4306	4412	4230	4230 144			
10:00	4453	4407	4312	144	0.0		
11:00	4474	4392	4414	144	0.0		
12:00	4792	4718	4942	144	0.0		
13:00	5146	4995	4651	144	0.0		
14:00	5407	5385	5622	144	0.0		
15:00	4835	5466	5472	144	0.0		
16:00	4869	5072	4606	144	0.0		
17:00	4893	4952	4866	144	0.0		
18:00	4925	5074	5046	144	0.0		
19:00	4476	4520	4682	144	0.0		
20:00	4321	4148	4258	144	0.0		
21:00	3923	3833	4016	144	0.0		
22:00	3413	3414	3623	144	0.0		
23:00	2995	2890	2819	144	0.0		
Total	95,692	96,635	96,633	3,456	0.0		

Daily Peak	96,635	1/13/2016
------------	--------	-----------

	PEAK	HOUR		Data Quality			
Time	Minimum	Mean	Maximum	# Lane Points	% Observed		
7:00	5251	5290	5344	144	0.0		
8:00	4849	5033	5183	144	0.0		
9:00	4230	4316	4412	144	0.0		
16:00	3414	3496.67	3579	144	0.0		
17:00	3492	3560.33	3611	144	0.0		
18:00	3447	3513.33	3559	144	0.0		

AM Peak	5,344	7:00
PM Peak	3,611	17:00

FREEWAY TO RAMP AM PEAK HOUR VOLUMES

	I-10 WB Ramps											
Location	Existing (2016) Raw	Project Total	Cumulative Total	EA (2017) Total	EAP (2017) Total	EAPC (2017) Total						
East of Cherry Ave.	5,189	9	5	5,293	5,302	5,307						
Off-Ramp	1,096	9	5	1,118	1,127	1,132						
Between	4,093	0	0	4,175	4,175	4,175						
Loop On-Ramp	513	0	0	523	523	523						
Between	4,606	0	0	4,698	4,698	4,698						
Slip On-Ramp	479	1	1	489	490	491						
West of Cherry Ave.	5,085	1	1 5,187 5,188		5,189							
		I-10 E	B Ramps									
	Existing (2016)	Project	Cumulative	EA (2017)	EAP (2017)	EAPC (2017)						
Location	Raw	Total	Total	Total	Total	Total						
West of Cherry Ave.	5,344	9	4	5,451	5,460	5,464						
Off-Ramp	912	9	4	930	939	943						
Between	4,432	0	0	4,521	4,521	4,521						
On-Ramp	800	1	2	816	817	819						
East of Cherry Ave.	5,232	1	2	5,337	5,338	5,340						

Note: Freeway Mainline Truck %: 10.29 - Based on 2014 Annual Average Daily Truck Traffic (Source: Caltrans)

FREEWAY TO RAMP PM PEAK HOUR VOLUMES

		I-10 W	/B Ramps			
	Existing (2016)	Project	Cumulative	EA (2017)	EAP (2017)	EAPC (2017)
Location	Raw	Total	Total	Total	Total	Total
East of Cherry Ave.	4,255	1	2	4,340	4,341	4,343
Off-Ramp	872	1	2	890	891	893
Between	3,383	0	0	3,450	3,450	3,450
Loop On-Ramp	399	0	0	407	407	407
Between	3,782	0	0	3,857	3,857	3,857
Slip On-Ramp	440	22	4	449	471	475
West of Cherry Ave.	4,222	22	4	4,306	4,328	4,332
		I-10 E	B Ramps			
	Existing (2016)	Project	Cumulative	EA (2017)	EAP (2017)	EAPC (2017)
Location	Raw	Total	Total	Total	Total	Total
West of Cherry Ave.	3,611	1	1	3,683	3,684	3,685
Off-Ramp	964	1	1	983	984	985
Between	2,647	0	0	2,700	2,700	2,700
On-Ramp	1,003	22	5	1,023	1,045	1,050
East of Cherry Ave.	3,650	22	5	3,723	3,745	3,750

Note: Freeway Mainline Truck %: 10.29 - Based on 2014 Annual Average Daily Truck Traffic (Source: Caltrans)

XX = PeMS Data for Week of January 12-14, 2016 (consistent with count data).

XX = Flow Conserved Volumes.

XX = PeMS Data for Week of January 12-14, 2016 (consistent with count data).

XX = Flow Conserved Volumes.

APPENDIX 3.2

EXISTING (2016) CONDITIONS INTERSECTION ANALYSIS CALCULATION WORKSHEETS

	•	→	\rightarrow	•	•	•	4	†	/	>	ţ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4	7		ર્ન	7	¥	† †	7	¥	† †	7
Volume (vph)	0	0	0	178	0	230	1	733	107	144	1118	0
Ideal Flow (vphpl)	1800	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Storage Length (ft)	0		0	0		130	270		0	60		275
Storage Lanes	0		1	0		1	1		1	1		1
Taper Length (ft)	60			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			40			50			40	
Link Distance (ft)		506			600			1582			1080	
Travel Time (s)		13.8			10.2			21.6			18.4	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Turn Type			Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	8.0	20.0	20.0	8.0	20.0	20.0
Total Split (s)	24.0	24.0	24.0	24.0	24.0	24.0	8.0	37.0	37.0	19.0	48.0	48.0
Total Split (%)	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	10.0%	46.3%	46.3%	23.8%	60.0%	60.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 55

Control Type: Actuated-Coordinated

Splits and Phases: 1: Cherry Av. & Merrill Av.



Lane Configurations Image: Configuration of the confi	BT SBR 118 0 6 16 0 0 1.00 .00 1.00 .765 1765 153 0 2 1 .97 0.97 2 2 330 990 .66 0.00
Volume (veh/h) 0 0 0 178 0 230 1 733 107 144 1 Number 7 4 14 3 8 18 5 2 12 1 Initial Q (Qb), veh 0 1.00<	118 0 6 16 0 0 1.00 .00 1.00 765 1765 153 0 2 1 .97 0.97 2 2
Number 7 4 14 3 8 18 5 2 12 1 Initial Q (Qb), veh 0 1.00	6 16 0 0 1.00 .00 1.00 765 1765 153 0 2 1 .97 0.97 2 2 330 990
Initial Q (Ob), veh	0 0 1.00 .00 1.00 765 1765 153 0 2 1 .97 0.97 2 2 330 990
Ped-Bike Adj(A_pbT) 1.00 </td <td>1.00 .00 1.00 765 1765 153 0 2 1 .97 0.97 2 2 330 990</td>	1.00 .00 1.00 765 1765 153 0 2 1 .97 0.97 2 2 330 990
Parking Bus, Adj 1.00 1.1 1 2 1.1 1 2 1 1 1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 <td>.00 1.00 765 1765 153 0 2 1 .97 0.97 2 2 330 990</td>	.00 1.00 765 1765 153 0 2 1 .97 0.97 2 2 330 990
Adj Sat Flow, veh/h/ln 1800 1765 1765 1765 1765 1765 1667 1765 1667 1765 1667 1765 1667 1765 1667 1 Adj No. of Lanes 0 1 1 0 1 1 1 2 1 1 Peak Hour Factor 0.97	765 1765 153 0 2 1 .97 0.97 2 2 330 990
Adj Flow Rate, veh/h 0 0 0 184 0 237 1 756 110 148 1 Adj No. of Lanes 0 1 1 0 1 1 1 2 1 1 Peak Hour Factor 0.97	153 0 2 1 .97 0.97 2 2 330 990
Adj No. of Lanes 0 1 1 0 1 1 1 2 1 1 Peak Hour Factor 0.97 <td>2 1 .97 0.97 2 2 330 990</td>	2 1 .97 0.97 2 2 330 990
Peak Hour Factor 0.97 0.93 0.93 0.93 0.93 0.93	.97 0.97 2 2 330 990
Percent Heavy Veh, % 2	2 2 330 990
Cap, veh/h 0 333 283 356 0 283 2 1933 821 181 2 Arrive On Green 0.00 0.00 0.019 0.00 0.19 0.00 0.55 0.55 0.11 0 Sat Flow, veh/h 0 1765 1500 1412 0 1500 1587 3529 1500 1587 3 Grp Volume(v), veh/h 0 0 0 184 0 237 1 756 110 148 1 Grp Sat Flow(s), veh/h/ln 0 1765 1500 1412 0 1500 1587 1765 1500 1587 1	330 990
Arrive On Green 0.00 0.00 0.00 0.19 0.00 0.19 0.00 0.55 0.55 0.11 0 Sat Flow, veh/h 0 1765 1500 1412 0 1500 1587 3529 1500 1587 3 Grp Volume(v), veh/h 0 0 0 184 0 237 1 756 110 148 1 Grp Sat Flow(s), veh/h/ln 0 1765 1500 1412 0 1500 1587 1765 1500 1587 1	
Sat Flow, veh/h 0 1765 1500 1412 0 1500 1587 3529 1500 1587 3 Grp Volume(v), veh/h 0 0 0 184 0 237 1 756 110 148 1 Grp Sat Flow(s), veh/h/ln 0 1765 1500 1412 0 1500 1587 1765 1500 1587 1	66 0.00
Grp Volume(v), veh/h 0 0 0 184 0 237 1 756 110 148 1 Grp Sat Flow(s), veh/h/ln 0 1765 1500 1412 0 1500 1587 1765 1500 1587 1	
Grp Sat Flow(s),veh/h/ln 0 1765 1500 1412 0 1500 1587 1765 1500 1587 1	529 1500
	153 0
O Serve(a, s), s 0.0 0.0 0.0 9.7 0.0 12.2 0.1 9.9 2.9 7.3 7	765 1500
10— /·	3.2 0.0
	3.2 0.0
Prop In Lane 0.00 1.00 1.00 1.00 1.00 1.00 1.00	1.00
	330 990
, <i>,</i>	.49 0.00
$1 \cdot 1 \cdot$	330 990
	.00 1.00
•	.00 0.00
Uniform Delay (d), s/veh 0.0 0.0 0.0 30.3 0.0 31.3 39.9 10.4 8.8 34.6	6.9 0.0
Incr Delay (d2), s/veh 0.0 0.0 0.0 1.2 0.0 11.9 126.9 0.6 0.3 8.8	0.0
Initial Q Delay(d3),s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0
%ile BackOfQ(50%),veh/ln 0.0 0.0 0.0 3.9 0.0 5.9 0.1 4.9 1.2 3.6	6.5 0.0
LnGrp Delay(d),s/veh 0.0 0.0 31.4 0.0 43.2 166.9 11.0 9.2 43.5	7.6 0.0
LnGrp LOS C D F B A D	A
	301
	1.7
Approach LOS D B	В
Timer 1 2 3 4 5 6 7 8	
Assigned Phs 1 2 4 5 6 8	
Phs Duration (G+Y+Rc), s 13.1 47.8 19.1 4.1 56.8 19.1	
Change Period (Y+Rc), s 4.0 4.0 4.0 4.0 4.0 4.0	
Max Green Setting (Gmax), s 15.0 33.0 20.0 4.0 44.0 20.0	
Max Q Clear Time (g_c+l1), s 9.3 11.9 0.0 2.1 15.2 14.2	
Green Ext Time (p_c), s 0.2 13.5 0.0 0.0 16.3 0.9	
Intersection Summary	
HCM 2010 Ctrl Delay 15.7	
HCM 2010 LOS B	

	•	→	•	•	←	•	4	†	/	>	ļ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		र्स	7		ર્ન	7	¥	ተተተ		7	ተተተ	7
Volume (vph)	1	0	0	199	3	112	22	781	86	98	1116	8
Ideal Flow (vphpl)	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Storage Length (ft)	0		0	0		50	260		0	70		200
Storage Lanes	0		1	0		1	1		0	1		1
Taper Length (ft)	60			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		589			331			2702			1062	
Travel Time (s)		13.4			7.5			36.8			14.5	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						6
Detector Phase	4	4	4	8	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	8.0	20.0		8.0	20.0	20.0
Total Split (s)	29.0	29.0	29.0	29.0	29.0	29.0	12.0	32.0		19.0	39.0	39.0
Total Split (%)	36.3%	36.3%	36.3%	36.3%	36.3%	36.3%	15.0%	40.0%		23.8%	48.8%	48.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		4.0	4.0		4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	C-Max

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 8 (10%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 50

Control Type: Actuated-Coordinated

Splits and Phases: 2: Cherry Av. & Randall Av.



	≯	→	•	•	—	•	•	†	~	/	↓	
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		र्स	7		र्स	7	ሻ	ተተተ		ሻ	^ ^	7
Volume (veh/h)	1	0	0	199	3	112	22	781	86	98	1116	8
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	1700	1765	1765	1700	1765	1765	1667	1765	1800	1667	1765	1765
Adj Flow Rate, veh/h	1	0	0	205	3	115	23	805	89	101	1151	8
Adj No. of Lanes	0	1	1	0	1	1	1	3	0	1	3	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	143	0	240	344	4	240	32	2861	314	126	3546	1005
Arrive On Green	0.16	0.00	0.00	0.16	0.16	0.16	0.04	1.00	1.00	80.0	0.67	0.67
Sat Flow, veh/h	330	0	1500	1591	23	1500	1587	4688	515	1587	5294	1500
Grp Volume(v), veh/h	1	0	0	208	0	115	23	605	289	101	1151	8
Grp Sat Flow(s),veh/h/ln	330	0	1500	1614	0	1500	1587	1765	1674	1587	1765	1500
Q Serve(g_s), s	0.1	0.0	0.0	0.0	0.0	5.6	1.1	0.0	0.0	5.0	7.3	0.1
Cycle Q Clear(g_c), s	9.5	0.0	0.0	9.5	0.0	5.6	1.1	0.0	0.0	5.0	7.3	0.1
Prop In Lane	1.00		1.00	0.99		1.00	1.00		0.31	1.00		1.00
Lane Grp Cap(c), veh/h	143	0	240	348	0	240	32	2154	1021	126	3546	1005
V/C Ratio(X)	0.01	0.00	0.00	0.60	0.00	0.48	0.72	0.28	0.28	0.80	0.32	0.01
Avail Cap(c_a), veh/h	336	0	469	564	0	469	159	2154	1021	298	3546	1005
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.89	0.89	0.89	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.7	0.0	0.0	32.2	0.0	30.6	38.2	0.0	0.0	36.2	5.6	4.4
Incr Delay (d2), s/veh	0.0	0.0	0.0	1.6	0.0	1.5	24.1	0.3	0.6	11.0	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	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	4.6	0.0	2.4	0.7	0.1	0.2	2.6	3.6	0.1
LnGrp Delay(d),s/veh	36.8	0.0	0.0	33.8	0.0	32.0	62.3	0.3	0.6	47.2	5.8	4.4
LnGrp LOS	D	0.0	0.0	С	0.0	C	E	А	A	D	A	Α
Approach Vol, veh/h		1		-	323	-		917			1260	
Approach Delay, s/veh		36.7			33.2			2.0			9.1	
Approach LOS		D			C			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.4	52.8		16.8	5.6	57.6		16.8				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	15.0	28.0		25.0	8.0	35.0		25.0				
Max Q Clear Time (g_c+l1), s	7.0	2.0		11.5	3.1	9.3		11.5				
Green Ext Time (p_c), s	0.1	14.9		1.3	0.0	14.8		1.3				
Intersection Summary												
HCM 2010 Ctrl Delay			9.6									
HCM 2010 LOS			A									
			, ,									

	•	→	•	•	←	•	4	†	/	-	ţ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	7	^	7	7	∱ ∱		ሻ	ተተኈ		ሻ	ተተተ	7
Volume (vph)	178	69	93	143	337	86	83	731	87	74	831	372
Ideal Flow (vphpl)	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Storage Length (ft)	300		285	50		0	220		0	210		300
Storage Lanes	1		1	1		0	1		0	1		1
Taper Length (ft)	60			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		555			705			459			2702	
Travel Time (s)		12.6			16.0			6.3			36.8	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases			4									6
Detector Phase	7	4	4	3	8		5	2		1	6	7
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	8.0	20.0	20.0	8.0	20.0		8.0	20.0		8.0	20.0	8.0
Total Split (s)	20.0	23.0	23.0	17.0	20.0		13.0	27.0		13.0	27.0	20.0
Total Split (%)	25.0%	28.8%	28.8%	21.3%	25.0%		16.3%	33.8%		16.3%	33.8%	25.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5		0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lead/Lag	Lag	Lead	Lead	Lag	Lead		Lag	Lead		Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	None

Area Type: Other

Cycle Length: 80

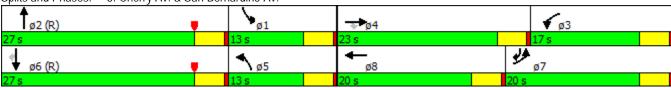
Actuated Cycle Length: 80

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 60

Control Type: Actuated-Coordinated

Splits and Phases: 3: Cherry Av. & San Bernardino Av.



	۶	→	•	•	←	•	•	†	~	/	+	✓
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	7	^	7	ሻ	∱ ∱		ሻ	ተተኈ		ሻ	ተተተ	7
Volume (veh/h)	178	69	93	143	337	86	83	731	87	74	831	372
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	1667	1765	1765	1667	1765	1800	1667	1765	1800	1667	1765	1765
Adj Flow Rate, veh/h	184	71	0	147	347	89	86	754	90	76	857	384
Adj No. of Lanes	1	2	1	1	2	0	1	3	0	1	3	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	220	176	75	397	440	111	337	1336	158	337	1522	639
Arrive On Green	0.14	0.05	0.00	0.25	0.16	0.16	0.21	0.29	0.29	0.07	0.09	0.09
Sat Flow, veh/h	1587	3529	1500	1587	2720	688	1587	4646	550	1587	5294	1500
Grp Volume(v), veh/h	184	71	0	147	223	213	86	571	273	76	857	384
Grp Sat Flow(s),veh/h/ln	1587	1765	1500	1587	1765	1643	1587	1765	1668	1587	1765	1500
Q Serve(g_s), s	9.0	1.6	0.0	6.1	9.7	10.0	3.6	11.0	11.1	3.6	12.4	8.1
Cycle Q Clear(g_c), s	9.0	1.6	0.0	6.1	9.7	10.0	3.6	11.0	11.1	3.6	12.4	8.1
Prop In Lane	1.00		1.00	1.00		0.42	1.00		0.33	1.00		1.00
Lane Grp Cap(c), veh/h	220	176	75	397	285	266	337	1015	479	337	1522	639
V/C Ratio(X)	0.84	0.40	0.00	0.37	0.78	0.80	0.26	0.56	0.57	0.23	0.56	0.60
Avail Cap(c_a), veh/h	317	838	356	397	353	329	337	1015	479	337	1522	639
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.96	0.96	0.96
Uniform Delay (d), s/veh	33.6	36.8	0.0	24.8	32.2	32.3	26.2	24.2	24.3	31.0	31.4	24.3
Incr Delay (d2), s/veh	12.2	1.5	0.0	0.6	8.9	10.8	0.4	2.3	4.8	0.3	1.4	4.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	8.0	0.0	2.8	5.4	5.3	1.6	5.6	5.7	1.6	6.3	4.1
LnGrp Delay(d),s/veh	45.7	38.3	0.0	25.3	41.1	43.1	26.6	26.5	29.1	31.3	32.8	28.2
LnGrp LOS	D	D		С	D	D	С	С	С	С	С	С
Approach Vol, veh/h		255			583			930			1317	
Approach Delay, s/veh		43.7			37.9			27.3			31.4	
Approach LOS		D			D			С			С	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	21.0	27.0	24.0	8.0	21.0	27.0	15.1	16.9				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	9.0	23.0	13.0	19.0	9.0	23.0	16.0	16.0				
Max Q Clear Time (g_c+I1), s	5.6	13.1	8.1	3.6	5.6	14.4	11.0	12.0				
Green Ext Time (p_c), s	0.1	3.4	0.5	0.3	0.1	4.2	0.3	1.0				
Intersection Summary												
LICM 2010 Ctrl Dolov			32.4									
HCM 2010 Ctrl Delay			32.4									

	•	→	•	•	←	•	1	†	/	-	ļ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	44	^	7	1,1	↑ ↑		1,4	^	7	ሻ	^	7
Volume (vph)	58	128	184	413	277	59	416	853	332	67	964	88
Ideal Flow (vphpl)	1600	1800	1800	1600	1800	1800	1600	1800	1800	1700	1800	1800
Storage Length (ft)	250		160	250		0	420		220	170		0
Storage Lanes	2		1	2		0	2		0	1		1
Taper Length (ft)	120			120			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		845			1019			968			718	
Travel Time (s)		19.2			23.2			13.2			9.8	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Shared Lane Traffic (%)												
Turn Type	Prot	NA	pm+ov	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4	5	3	8		5	2		1	6	
Permitted Phases			4						2			6
Detector Phase	7	4	5	3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	20.0	8.0	8.0	20.0		8.0	20.0	20.0	8.0	20.0	20.0
Total Split (s)	8.0	20.0	16.0	16.0	28.0		16.0	34.0	34.0	10.0	28.0	28.0
Total Split (%)	10.0%	25.0%	20.0%	20.0%	35.0%		20.0%	42.5%	42.5%	12.5%	35.0%	35.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max

Area Type: Other

Cycle Length: 80

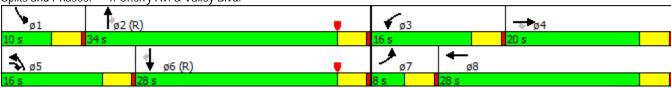
Actuated Cycle Length: 80

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow, Master Intersection

Natural Cycle: 80

Control Type: Actuated-Coordinated

Splits and Phases: 4: Cherry Av. & Valley Blvd.



	۶	→	•	•	←	•	1	†	<i>></i>	\		✓
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	14.14	^	7	ሻሻ	∱ β		ሻሻ	^	7	7	^	7
Volume (veh/h)	58	128	184	413	277	59	416	853	332	67	964	88
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	1569	1765	1765	1569	1765	1800	1569	1765	1765	1667	1765	1765
Adj Flow Rate, veh/h	60	133	192	430	289	61	433	889	346	70	1004	92
Adj No. of Lanes	2	2	1	2	2	0	2	2	1	1	2	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	110	532	451	448	748	156	448	1571	668	86	1233	524
Arrive On Green	0.04	0.15	0.15	0.15	0.26	0.26	0.30	0.89	0.89	0.05	0.35	0.35
Sat Flow, veh/h	2988	3529	1500	2988	2836	590	2988	3529	1500	1587	3529	1500
Grp Volume(v), veh/h	60	133	192	430	178	172	433	889	346	70	1004	92
Grp Sat Flow(s), veh/h/ln	1494	1765	1500	1494	1765	1661	1494	1765	1500	1587	1765	1500
Q Serve(g_s), s	1.6	2.7	8.2	11.4	6.6	6.8	11.4	4.5	3.8	3.5	20.7	3.4
Cycle Q Clear(g_c), s	1.6	2.7	8.2	11.4	6.6	6.8	11.4	4.5	3.8	3.5	20.7	3.4
Prop In Lane	1.00		1.00	1.00		0.36	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	110	532	451	448	466	438	448	1571	668	86	1233	524
V/C Ratio(X)	0.55	0.25	0.43	0.96	0.38	0.39	0.97	0.57	0.52	0.81	0.81	0.18
Avail Cap(c_a), veh/h	149	706	525	448	529	498	448	1571	668	119	1233	524
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.81	0.81	0.81	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.9	30.0	22.4	33.8	24.1	24.2	27.8	2.7	2.6	37.4	23.7	18.0
Incr Delay (d2), s/veh	4.2	0.2	0.6	32.2	0.5	0.6	29.8	1.2	2.3	24.9	6.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	1.3	3.5	6.7	3.3	3.2	6.5	2.0	1.7	2.1	11.1	1.5
LnGrp Delay(d),s/veh	42.0	30.2	23.1	65.9	24.6	24.7	57.6	3.9	5.0	62.4	29.6	18.8
LnGrp LOS	D	С	С	Ε	С	С	Ε	Α	Α	Е	С	В
Approach Vol, veh/h		385			780			1668			1166	
Approach Delay, s/veh		28.5			47.4			18.0			30.8	
Approach LOS		С			D			В			С	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.3	39.6	16.0	16.1	16.0	31.9	6.9	25.1				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	6.0	30.0	12.0	16.0	12.0	24.0	4.0	24.0				
Max Q Clear Time (g_c+I1), s	5.5	6.5	13.4	10.2	13.4	22.7	3.6	8.8				
Green Ext Time (p_c), s	0.0	15.1	0.0	1.8	0.0	1.2	0.0	3.2				
Intersection Summary												
HCM 2010 Ctrl Delay			28.5									
HCM 2010 LOS			С									
TIGINI ZOTO LOG			C									

TEC Traffic Impact Analysis C:\TRAMES\0255-0001\Synchro\01 - Existing AM.syn

Trames Solutions, Inc. Synchro 8 Report

	•	*	†	~	-	ļ
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	14.14	7	ተተተ	7		1111
Volume (vph)	525	571	1070	513	0	1568
Ideal Flow (vphpl)	1600	1800	1800	1800	1800	1800
Storage Length (ft)	0	0		200	0	
Storage Lanes	2	1		1	0	
Taper Length (ft)	60				60	
Right Turn on Red		Yes		Yes		
Link Speed (mph)	30		45			45
Link Distance (ft)	252		337			968
Travel Time (s)	5.7		5.1			14.7
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Turn Type	Prot	Perm	NA	Free		NA
Protected Phases	8		2			6
Permitted Phases		8		Free		
Detector Phase	8	8	2			6
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0			4.0
Minimum Split (s)	20.0	20.0	20.0			20.0
Total Split (s)	48.0	48.0	32.0			32.0
Total Split (%)	60.0%	60.0%	40.0%			40.0%
Yellow Time (s)	3.5	3.5	3.5			3.5
All-Red Time (s)	0.5	0.5	0.5			0.5
Lost Time Adjust (s)	0.0	0.0	0.0			0.0
Total Lost Time (s)	4.0	4.0	4.0			4.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	C-Max			C-Max
ll						

Area Type: Other

Cycle Length: 80

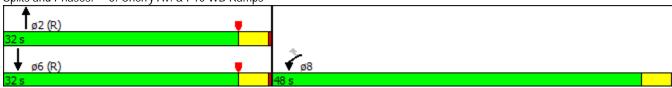
Actuated Cycle Length: 80

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 40

Control Type: Actuated-Coordinated

Splits and Phases: 5: Cherry Av. & I-10 WB Ramps



	•	•	†	~	\	ţ		
Movement	WBL	WBR	NBT	NBR	SBL	SBT		
ane Configurations	A.A.	7	ተተተ	7		1111		
/olume (veh/h)	525	571	1070	513	0	1568		
Number	3	18	2	12	1	6		
nitial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1569	1765	1765	1765	0	1765		
Adj Flow Rate, veh/h	553	601	1126	0	0	1651		
Adj No. of Lanes	2	1	3	1	0	4		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	2	2	2	2	0	2		
Cap, veh/h	1329	667	2410	683	0	3214		
Arrive On Green	0.44	0.44	0.91	0.00	0.00	0.91		
Sat Flow, veh/h	2988	1500	5294	1500	0	7059		
Grp Volume(v), veh/h	553	601	1126	0	0	1651		
Grp Sat Flow(s),veh/h/ln	1494	1500	1765	1500	0	1765		
2 Serve(g_s), s	10.1	29.7	2.6	0.0	0.0	3.1		
Cycle Q Clear(g_c), s	10.1	29.7	2.6	0.0	0.0	3.1		
Prop In Lane	1.00	1.00		1.00	0.00			
ane Grp Cap(c), veh/h	1329	667	2410	683	0	3214		
//C Ratio(X)	0.42	0.90	0.47	0.00	0.00	0.51		
Avail Cap(c_a), veh/h	1643	825	2410	683	0	3214		
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	2.00		
Jpstream Filter(I)	1.00	1.00	1.00	0.00	0.00	0.54		
Jniform Delay (d), s/veh	15.1	20.6	2.1	0.0	0.0	2.1		
ncr Delay (d2), s/veh	0.2	11.2	0.7	0.0	0.0	0.3		
nitial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	4.2	14.3	1.2	0.0	0.0	1.2		
_nGrp Delay(d),s/veh	15.3	31.8	2.7	0.0	0.0	2.4		
_nGrp LOS	В	С	Α			Α		
Approach Vol, veh/h	1154		1126			1651		
Approach Delay, s/veh	23.9		2.7			2.4		
Approach LOS	С		А			Α		
Fimer	1	2	3	4	5	6	7 8	
Assigned Phs		2				6	8	
Phs Duration (G+Y+Rc), s		40.4				40.4	39.6	
Change Period (Y+Rc), s		4.0				4.0	4.0	
Max Green Setting (Gmax), s		28.0				28.0	44.0	
Max Q Clear Time (g_c+l1), s		4.6				5.1	31.7	
Green Ext Time (p_c), s		19.1				18.7	3.9	
$q = \gamma$								
ntersection Summary								
·			8.8					

	•	→	\rightarrow	•	←	•	•	†	/	>	ţ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	Ť	4	7					ተተተ	7	ሻሻ	ተተተ	
Volume (vph)	343	0	569	0	0	0	0	1240	415	385	1229	0
Ideal Flow (vphpl)	1700	1800	1800	1800	1800	1800	1800	1800	1800	1600	1800	1800
Storage Length (ft)	0		350	0		0	0		0	300		0
Storage Lanes	1		1	0		0	0		1	2		0
Taper Length (ft)	120			60			60			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		722			861			873			429	
Travel Time (s)		16.4			19.6			13.2			6.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)	10%		47%									
Turn Type	Perm	NA	Perm					NA	Perm	Prot	NA	
Protected Phases		4						2		1	6	
Permitted Phases	4		4						2			
Detector Phase	4	4	4					2	2	1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0					4.0	4.0	4.0	4.0	
Minimum Split (s)	20.0	20.0	20.0					20.0	20.0	8.0	20.0	
Total Split (s)	29.0	29.0	29.0					31.0	31.0	20.0	51.0	
Total Split (%)	36.3%	36.3%	36.3%					38.8%	38.8%	25.0%	63.8%	
Yellow Time (s)	3.5	3.5	3.5					3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5	0.5					0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0					0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0					4.0	4.0	4.0	4.0	
Lead/Lag								Lead	Lead	Lag		
Lead-Lag Optimize?								Yes	Yes	Yes		
Recall Mode	None	None	None					C-Max	C-Max	None	C-Max	

Area Type: Other

Cycle Length: 80

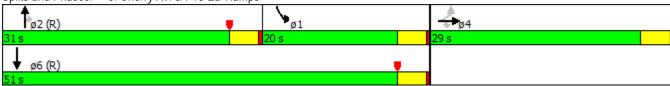
Actuated Cycle Length: 80

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 55

Control Type: Actuated-Coordinated

Splits and Phases: 6: Cherry Av. & I-10 EB Ramps



	۶	→	•	•	←	•	1	†	/	/	+	1
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ň	4	7					ተተተ	7	ሻሻ	ተተተ	
Volume (veh/h)	343	0	569	0	0	0	0	1240	415	385	1229	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1765	1765				0	1765	1765	1569	1765	0
Adj Flow Rate, veh/h	241	0	728				0	1305	437	405	1294	0
Adj No. of Lanes	1	0	2				0	3	1	2	3	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	442	0	836				0	1787	506	699	3290	0
Arrive On Green	0.28	0.00	0.28				0.00	0.34	0.34	0.47	1.00	0.00
Sat Flow, veh/h	1587	0	3000				0	5294	1500	2988	5294	0
Grp Volume(v), veh/h	241	0	728				0	1305	437	405	1294	0
Grp Sat Flow(s),veh/h/ln	1587	0	1500				0	1765	1500	1494	1765	0
Q Serve(g_s), s	10.3	0.0	18.5				0.0	17.3	21.8	7.9	0.0	0.0
Cycle Q Clear(g_c), s	10.3	0.0	18.5				0.0	17.3	21.8	7.9	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	442	0	836				0	1787	506	699	3290	0
V/C Ratio(X)	0.54	0.00	0.87				0.00	0.73	0.86	0.58	0.39	0.00
Avail Cap(c_a), veh/h	496	0	938				0	1787	506	699	3290	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	24.5	0.0	27.5				0.0	23.3	24.8	18.4	0.0	0.0
Incr Delay (d2), s/veh	1.0	0.0	8.3				0.0	2.7	17.5	1.2	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
%ile BackOfQ(50%),veh/ln	4.6	0.0	8.6				0.0	8.9	11.4	3.3	0.1	0.0
LnGrp Delay(d),s/veh	25.6	0.0	35.8				0.0	26.0	42.2	19.6	0.4	0.0
LnGrp LOS	С		D					С	D	В	Α	
Approach Vol, veh/h		969						1742			1699	
Approach Delay, s/veh		33.2						30.1			4.9	
Approach LOS		С						С			Α	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	22.7	31.0		26.3		53.7						
Change Period (Y+Rc), s	4.0	4.0		4.0		4.0						
Max Green Setting (Gmax), s	16.0	27.0		25.0		47.0						
Max Q Clear Time (g_c+I1), s	9.9	23.8		20.5		2.0						
Green Ext Time (p_c), s	4.3	2.5		1.8		14.1						
Intersection Summary												
HCM 2010 Ctrl Delay			21.1									
HCM 2010 LOS			С									
Notes			-									

TEC Traffic Impact Analysis
C:\TRAMES\0255-0001\Synchro\01 - Existing AM.syn

User approved volume balancing among the lanes for turning movement.

Trames Solutions, Inc. Synchro 8 Report

	۶	→	•	•	←	•	4	†	/	/	Ţ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4	7		ર્ન	7	ř	^	7	ř	† †	7
Volume (vph)	0	0	0	99	0	173	0	1229	160	209	803	0
Ideal Flow (vphpl)	1800	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Storage Length (ft)	0		0	0		130	270		0	60		275
Storage Lanes	0		1	0		1	1		1	1		1
Taper Length (ft)	60			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			40			50			40	
Link Distance (ft)		506			600			1582			1080	
Travel Time (s)		13.8			10.2			21.6			18.4	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Turn Type			Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	8.0	20.0	20.0	8.0	20.0	20.0
Total Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	8.0	40.0	40.0	20.0	52.0	52.0
Total Split (%)	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	10.0%	50.0%	50.0%	25.0%	65.0%	65.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 58 (73%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 60

Control Type: Actuated-Coordinated

Splits and Phases: 1: Cherry Av. & Merrill Av.



	ၨ	→	•	•	←	•	•	†	<i>></i>	/		✓
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4	7		4	7	7	^	7	7	^	7
Volume (veh/h)	0	0	0	99	0	173	0	1229	160	209	803	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1800	1765	1765	1700	1765	1765	1667	1765	1765	1667	1765	1765
Adj Flow Rate, veh/h	0	0	0	105	0	184	0	1307	170	222	854	0
Adj No. of Lanes	0	1	1	0	1	1	1	2	1	1	2	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	264	224	301	0	224	2	1900	808	258	2649	1126
Arrive On Green	0.00	0.00	0.00	0.15	0.00	0.15	0.00	0.54	0.54	0.16	0.75	0.00
Sat Flow, veh/h	0	1765	1500	1412	0	1500	1587	3529	1500	1587	3529	1500
Grp Volume(v), veh/h	0	0	0	105	0	184	0	1307	170	222	854	0
Grp Sat Flow(s),veh/h/ln	0	1765	1500	1412	0	1500	1587	1765	1500	1587	1765	1500
Q Serve(g_s), s	0.0	0.0	0.0	5.5	0.0	9.5	0.0	21.7	4.7	10.9	6.4	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	5.5	0.0	9.5	0.0	21.7	4.7	10.9	6.4	0.0
Prop In Lane	0.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	0	264	224	301	0	224	2	1900	808	258	2649	1126
V/C Ratio(X)	0.00	0.00	0.00	0.35	0.00	0.82	0.00	0.69	0.21	0.86	0.32	0.00
Avail Cap(c_a), veh/h	0	353	300	372	0	300	79	1900	808	317	2649	1126
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	31.3	0.0	33.0	0.0	13.5	9.6	32.6	3.3	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.7	0.0	12.6	0.0	2.1	0.6	17.9	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	2.2	0.0	4.7	0.0	11.1	2.1	6.0	3.2	0.0
LnGrp Delay(d),s/veh	0.0	0.0	0.0	32.0	0.0	45.6	0.0	15.6	10.2	50.5	3.6	0.0
LnGrp LOS				С		D		В	В	D	Α	
Approach Vol, veh/h		0			289			1477			1076	
Approach Delay, s/veh		0.0			40.6			15.0			13.3	
Approach LOS					D			В			В	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	17.0	47.1		15.9	0.0	64.1		15.9				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	16.0	36.0		16.0	4.0	48.0		16.0				
Max Q Clear Time (g_c+l1), s	12.9	23.7		0.0	0.0	8.4		11.5				
Green Ext Time (p_c), s	0.2	9.8		0.0	0.0	22.9		0.5				
Intersection Summary												
HCM 2010 Ctrl Delay			16.9									
HCM 2010 LOS			В									
			_									

	۶	→	•	•	←	•	4	†	/	>	ļ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		र्स	7		ર્ન	7	ሻ	ተተተ		ሻ	ተተተ	7
Volume (vph)	11	4	23	90	0	89	9	1327	151	110	831	4
Ideal Flow (vphpl)	1700	1800	1800	1800	1800	1800	1700	1800	1800	1700	1800	1800
Storage Length (ft)	0		0	0		50	260		0	70		200
Storage Lanes	0		1	0		1	1		0	1		1
Taper Length (ft)	60			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		589			331			2702			1062	
Travel Time (s)		13.4			7.5			36.8			14.5	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						6
Detector Phase	4	4	4	8	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	8.0	20.0		8.0	20.0	20.0
Total Split (s)	22.0	22.0	22.0	22.0	22.0	22.0	8.0	41.0		17.0	50.0	50.0
Total Split (%)	27.5%	27.5%	27.5%	27.5%	27.5%	27.5%	10.0%	51.3%		21.3%	62.5%	62.5%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		4.0	4.0		4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	C-Max

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 23 (29%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 55

Control Type: Actuated-Coordinated

Splits and Phases: 2: Cherry Av. & Randall Av.



	۶	→	•	•	←	•	1	†	~	/	Ţ	√
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		र्स	7		4	7	ሻ	ተተተ		ሻ	^ ^	7
Volume (veh/h)	11	4	23	90	0	89	9	1327	151	110	831	4
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	1700	1765	1765	1800	1765	1765	1667	1765	1800	1667	1765	1765
Adj Flow Rate, veh/h	12	4	25	99	0	98	10	1458	166	121	913	4
Adj No. of Lanes	0	1	1	0	1	1	1	3	0	1	3	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	79	15	338	90	0	338	16	2478	282	150	3256	923
Arrive On Green	0.22	0.22	0.22	0.22	0.00	0.22	0.02	1.00	1.00	0.09	0.62	0.62
Sat Flow, veh/h	0	65	1500	0	0	1500	1587	4669	531	1587	5294	1500
Grp Volume(v), veh/h	16	0	25	99	0	98	10	1102	522	121	913	4
Grp Sat Flow(s),veh/h/ln	65	0	1500	0	0	1500	1587	1765	1671	1587	1765	1500
Q Serve(g_s), s	0.0	0.0	1.1	0.0	0.0	4.3	0.5	0.0	0.0	6.0	6.4	0.1
Cycle Q Clear(g_c), s	18.0	0.0	1.1	18.0	0.0	4.3	0.5	0.0	0.0	6.0	6.4	0.1
Prop In Lane	0.75		1.00	1.00		1.00	1.00		0.32	1.00		1.00
Lane Grp Cap(c), veh/h	93	0	338	90	0	338	16	1873	887	150	3256	923
V/C Ratio(X)	0.17	0.00	0.07	1.10	0.00	0.29	0.63	0.59	0.59	0.81	0.28	0.00
Avail Cap(c_a), veh/h	93	0	338	90	0	338	79	1873	887	258	3256	923
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.69	0.69	0.69	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.1	0.0	24.4	40.0	0.0	25.7	39.1	0.0	0.0	35.5	7.2	5.9
Incr Delay (d2), s/veh	0.9	0.0	0.1	124.5	0.0	0.5	25.3	0.9	2.0	9.9	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.4	5.1	0.0	1.8	0.3	0.2	0.5	3.0	3.2	0.0
LnGrp Delay(d),s/veh	27.0	0.0	24.5	164.6	0.0	26.2	64.4	0.9	2.0	45.4	7.4	6.0
LnGrp LOS	С		С	F		С	E	A	A	D	A	A
Approach Vol, veh/h		41			197			1634			1038	
Approach Delay, s/veh		25.5			95.7			1.7			11.8	
Approach LOS		С			F			Α			В	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.5	46.5		22.0	4.8	53.2		22.0				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	13.0	37.0		18.0	4.0	46.0		18.0				
Max Q Clear Time (g_c+I1), s	8.0	2.0		20.0	2.5	8.4		20.0				
Green Ext Time (p_c), s	0.1	22.9		0.0	0.0	24.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			12.0									
HCM 2010 LOS			В									

	۶	→	\rightarrow	•	←	•	4	†	/	>	ļ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	7	^	7	ሻ	∱ ⊅		ሻ	ተተኈ		ሻ	ተተተ	7
Volume (vph)	291	601	152	72	147	83	58	960	125	93	775	258
Ideal Flow (vphpl)	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Storage Length (ft)	300		285	50		0	220		0	210		300
Storage Lanes	1		1	1		0	1		0	1		1
Taper Length (ft)	60			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		555			705			459			2702	
Travel Time (s)		12.6			16.0			6.3			36.8	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases			4									6
Detector Phase	7	4	4	3	8		5	2		1	6	7
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	8.0	20.0	20.0	8.0	20.0		8.0	20.0		8.0	20.0	8.0
Total Split (s)	23.0	30.0	30.0	13.0	20.0		10.0	25.0		12.0	27.0	23.0
Total Split (%)	28.8%	37.5%	37.5%	16.3%	25.0%		12.5%	31.3%		15.0%	33.8%	28.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5		0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	None

Area Type: Other

Cycle Length: 80

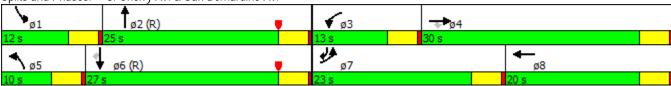
Actuated Cycle Length: 80

Offset: 46 (58%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 70

Control Type: Actuated-Coordinated





	•	→	•	•	←	•	•	†	~	/	+	✓
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	7	^	7	7	∱β		7	ተተኈ		ሻ	ተተተ	7
Volume (veh/h)	291	601	152	72	147	83	58	960	125	93	775	258
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	1667	1765	1765	1667	1765	1800	1667	1765	1800	1667	1765	1765
Adj Flow Rate, veh/h	320	660	0	79	162	91	64	1055	137	102	852	284
Adj No. of Lanes	1	2	1	1	2	0	1	3	0	1	3	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	354	1078	458	98	313	167	78	1625	211	125	2030	910
Arrive On Green	0.22	0.31	0.00	0.06	0.14	0.14	0.05	0.35	0.35	0.11	0.51	0.51
Sat Flow, veh/h	1587	3529	1500	1587	2169	1156	1587	4593	596	1587	5294	1500
Grp Volume(v), veh/h	320	660	0	79	130	123	64	810	382	102	852	284
Grp Sat Flow(s), veh/h/ln	1587	1765	1500	1587	1765	1561	1587	1765	1660	1587	1765	1500
Q Serve(g_s), s	15.7	12.8	0.0	3.9	5.5	5.8	3.2	15.4	15.4	5.0	8.0	6.3
Cycle Q Clear(g_c), s	15.7	12.8	0.0	3.9	5.5	5.8	3.2	15.4	15.4	5.0	8.0	6.3
Prop In Lane	1.00		1.00	1.00		0.74	1.00		0.36	1.00		1.00
Lane Grp Cap(c), veh/h	354	1078	458	98	255	225	78	1249	587	125	2030	910
V/C Ratio(X)	0.90	0.61	0.00	0.81	0.51	0.55	0.82	0.65	0.65	0.81	0.42	0.31
Avail Cap(c_a), veh/h	377	1147	488	179	353	312	119	1249	587	159	2030	910
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99
Uniform Delay (d), s/veh	30.3	23.7	0.0	37.1	31.6	31.8	37.7	21.7	21.7	35.2	14.0	5.9
Incr Delay (d2), s/veh	23.7	0.9	0.0	14.2	1.6	2.1	22.2	2.6	5.5	21.6	0.6	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.2	6.4	0.0	2.1	2.8	2.7	1.9	7.9	7.9	2.9	4.0	2.7
LnGrp Delay(d),s/veh	54.0	24.6	0.0	51.3	33.2	33.8	59.9	24.3	27.2	56.8	14.7	6.8
LnGrp LOS	D	С		D	С	С	Ε	С	С	Е	В	Α
Approach Vol, veh/h		980			332			1256			1238	
Approach Delay, s/veh		34.2			37.7			27.0			16.3	
Approach LOS		С			D			С			В	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.3	32.3	8.9	28.4	7.9	34.7	21.8	15.5				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	8.0	21.0	9.0	26.0	6.0	23.0	19.0	16.0				
Max Q Clear Time (g_c+l1), s	7.0	17.4	5.9	14.8	5.2	10.0	17.7	7.8				
Green Ext Time (p_c), s	0.0	3.1	0.0	4.6	0.0	9.8	0.1	3.7				
Intersection Summary												
HCM 2010 Ctrl Delay			26.3									
HCM 2010 LOS			C									
			•									

	۶	→	•	•	←	•	•	†	<i>></i>	>	ţ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻሻ	^	7	16.5%	∱ ∱		ሻሻ	^	7	ሻ	^	7
Volume (vph)	199	710	324	344	263	96	301	918	484	130	937	58
Ideal Flow (vphpl)	1600	1800	1800	1600	1800	1800	1600	1800	1800	1700	1800	1800
Storage Length (ft)	250		160	250		0	420		220	170		0
Storage Lanes	2		1	2		0	2		0	1		1
Taper Length (ft)	120			120			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		845			1019			968			718	
Travel Time (s)		19.2			23.2			13.2			9.8	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Shared Lane Traffic (%)												
Turn Type	Prot	NA	pm+ov	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4	5	3	8		5	2		1	6	
Permitted Phases			4						2			6
Detector Phase	7	4	5	3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	20.0	8.0	8.0	20.0		8.0	20.0	20.0	8.0	20.0	20.0
Total Split (s)	14.0	22.0	13.0	14.0	22.0		13.0	32.0	32.0	12.0	31.0	31.0
Total Split (%)	17.5%	27.5%	16.3%	17.5%	27.5%		16.3%	40.0%	40.0%	15.0%	38.8%	38.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max

Area Type: Other

Cycle Length: 80

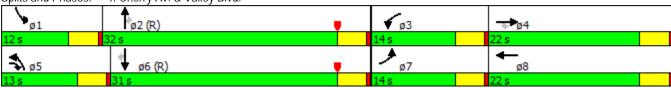
Actuated Cycle Length: 80

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow, Master Intersection

Natural Cycle: 70

Control Type: Actuated-Coordinated

Splits and Phases: 4: Cherry Av. & Valley Blvd.



	۶	→	•	•	←	•	•	†	~	/	+	-√
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1,1	^	7	ሻሻ	ħβ		ሻሻ	^	7	7	^	7
Volume (veh/h)	199	710	324	344	263	96	301	918	484	130	937	58
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	1569	1765	1765	1569	1765	1800	1569	1765	1765	1667	1765	1765
Adj Flow Rate, veh/h	207	740	338	358	274	100	314	956	504	135	976	60
Adj No. of Lanes	2	2	1	2	2	0	2	2	1	1	2	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	280	794	506	373	638	227	336	1235	525	159	1191	506
Arrive On Green	0.09	0.22	0.22	0.13	0.26	0.26	0.04	0.12	0.12	0.10	0.34	0.34
Sat Flow, veh/h	2988	3529	1500	2988	2487	886	2988	3529	1500	1587	3529	1500
Grp Volume(v), veh/h	207	740	338	358	192	182	314	956	504	135	976	60
Grp Sat Flow(s),veh/h/ln	1494	1765	1500	1494	1765	1608	1494	1765	1500	1587	1765	1500
Q Serve(g_s), s	5.4	16.4	15.4	9.5	7.3	7.6	8.4	21.0	26.7	6.7	20.3	2.2
Cycle Q Clear(g_c), s	5.4	16.4	15.4	9.5	7.3	7.6	8.4	21.0	26.7	6.7	20.3	2.2
Prop In Lane	1.00		1.00	1.00		0.55	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	280	794	506	373	452	412	336	1235	525	159	1191	506
V/C Ratio(X)	0.74	0.93	0.67	0.96	0.43	0.44	0.93	0.77	0.96	0.85	0.82	0.12
Avail Cap(c_a), veh/h	373	794	506	373	452	412	336	1235	525	159	1191	506
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.82	0.82	0.82	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.3	30.4	22.7	34.8	24.8	24.9	38.2	32.3	34.8	35.4	24.3	18.3
Incr Delay (d2), s/veh	5.3	17.6	3.3	35.7	0.6	0.7	28.5	3.9	27.0	33.1	6.4	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	10.0	6.9	5.8	3.6	3.4	4.8	10.9	15.0	4.4	10.8	1.0
LnGrp Delay(d),s/veh	40.6	48.0	26.0	70.5	25.5	25.7	66.7	36.2	61.8	68.5	30.6	18.8
LnGrp LOS	D	D	С	Е	С	С	Е	D	Е	Е	С	В
Approach Vol, veh/h		1285			732			1774			1171	
Approach Delay, s/veh		41.0			47.6			48.9			34.4	
Approach LOS		D			D			D			С	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.0	32.0	14.0	22.0	13.0	31.0	11.5	24.5				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	8.0	28.0	10.0	18.0	9.0	27.0	10.0	18.0				
Max Q Clear Time (q_c+l1), s	8.7	28.7	11.5	18.4	10.4	22.3	7.4	9.6				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	4.2	0.2	5.2				
Intersection Summary												
HCM 2010 Ctrl Delay			43.2									
HCM 2010 LOS			D									

TEC Traffic Impact Analysis C:\TRAMES\0255-0001\Synchro\01 - Existing PM.syn

	•	*	†	~	-	ļ
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	1/4	7	^	7		1111
Volume (vph)	393	479	1281	399	0	1619
Ideal Flow (vphpl)	1600	1800	1800	1800	1800	1800
Storage Length (ft)	0	0		200	0	
Storage Lanes	2	1		1	0	
Taper Length (ft)	60				60	
Right Turn on Red		Yes		Yes		
Link Speed (mph)	30		45			45
Link Distance (ft)	252		337			968
Travel Time (s)	5.7		5.1			14.7
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Turn Type	Prot	Perm	NA	Free		NA
Protected Phases	8		2			6
Permitted Phases		8		Free		
Detector Phase	8	8	2			6
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0			4.0
Minimum Split (s)	20.0	20.0	20.0			20.0
Total Split (s)	43.0	43.0	37.0			37.0
Total Split (%)	53.8%	53.8%	46.3%			46.3%
Yellow Time (s)	3.5	3.5	3.5			3.5
All-Red Time (s)	0.5	0.5	0.5			0.5
Lost Time Adjust (s)	0.0	0.0	0.0			0.0
Total Lost Time (s)	4.0	4.0	4.0			4.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	C-Max			C-Max
Interception Cummers						

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 39 (49%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 40

Control Type: Actuated-Coordinated

Splits and Phases: 5: Cherry Av. & I-10 WB Ramps



	•	•	†	<i>></i>	\			
Movement	WBL	WBR	NBT	NBR	SBL	SBT		
Lane Configurations	ሻሻ	7	ተተተ	7		1111		
Volume (veh/h)	393	479	1281	399	0	1619		
Number	3	18	2	12	1	6		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1569	1765	1765	1765	0	1765		
Adj Flow Rate, veh/h	414	504	1348	0	0	1704		
Adj No. of Lanes	2	1	3	1	0	4		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	2	2	2	2	0	2		
Cap, veh/h	1126	565	2769	785	0	3692		
Arrive On Green	0.38	0.38	1.00	0.00	0.00	0.17		
Sat Flow, veh/h	2988	1500	5294	1500	0	7059		
Grp Volume(v), veh/h	414	504	1348	0	0	1704		
Grp Sat Flow(s),veh/h/ln	1494	1500	1765	1500	0	1765		
Q Serve(g_s), s	8.0	25.2	0.0	0.0	0.0	17.4		
Cycle Q Clear(g_c), s	8.0	25.2	0.0	0.0	0.0	17.4		
Prop In Lane	1.00	1.00		1.00	0.00			
Lane Grp Cap(c), veh/h	1126	565	2769	785	0	3692		
V/C Ratio(X)	0.37	0.89	0.49	0.00	0.00	0.46		
Avail Cap(c_a), veh/h	1457	731	2769	785	0	3692		
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	0.33		
Upstream Filter(I)	1.00	1.00	1.00	0.00	0.00	0.57		
Uniform Delay (d), s/veh	18.0	23.4	0.0	0.0	0.0	23.0		
Incr Delay (d2), s/veh	0.2	11.0	0.6	0.0	0.0	0.2		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	3.3	12.1	0.2	0.0	0.0	8.6		
LnGrp Delay(d),s/veh	18.2	34.3	0.6	0.0	0.0	23.2		
LnGrp LOS	В	С	А			С		
Approach Vol, veh/h	918		1348			1704		
Approach Delay, s/veh	27.1		0.6			23.2		
Approach LOS	С		А			С		
Timer	1	2	3	4	5	6	7 8	
Assigned Phs		2				6	8	
Phs Duration (G+Y+Rc), s		45.8				45.8	34.2	
Change Period (Y+Rc), s		4.0				4.0	4.0	
Max Green Setting (Gmax), s		33.0				33.0	39.0	
Max Q Clear Time (g_c+l1), s		2.0				19.4	27.2	
Green Ext Time (p_c), s		25.7				12.4	2.9	
Intersection Summary								
HCM 2010 Ctrl Delay			16.4					
HCM 2010 LOS			В					

	ၨ	→	\rightarrow	•	←	•	•	†	/	>	ţ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	Ť	4	7					ተተተ	7	ሻሻ	ተተተ	
Volume (vph)	423	0	541	0	0	0	0	1257	498	505	1067	0
Ideal Flow (vphpl)	1700	1800	1800	1800	1800	1800	1800	1800	1800	1600	1800	1800
Storage Length (ft)	0		350	0		0	0		0	300		0
Storage Lanes	1		1	0		0	0		1	2		0
Taper Length (ft)	120			60			60			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		722			861			873			429	
Travel Time (s)		16.4			19.6			13.2			6.5	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Shared Lane Traffic (%)	21%		43%									
Turn Type	Perm	NA	Perm					NA	Perm	Prot	NA	
Protected Phases		4						2		1	6	
Permitted Phases	4		4						2			
Detector Phase	4	4	4					2	2	1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0					4.0	4.0	4.0	4.0	
Minimum Split (s)	20.0	20.0	20.0					20.0	20.0	8.0	20.0	
Total Split (s)	28.0	28.0	28.0					30.0	30.0	22.0	52.0	
Total Split (%)	35.0%	35.0%	35.0%					37.5%	37.5%	27.5%	65.0%	
Yellow Time (s)	3.5	3.5	3.5					3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5	0.5					0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0					0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0					4.0	4.0	4.0	4.0	
Lead/Lag								Lead	Lead	Lag		
Lead-Lag Optimize?								Yes	Yes	Yes		
Recall Mode	None	None	None					C-Max	C-Max	None	C-Max	

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 28 (35%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 55

Control Type: Actuated-Coordinated

Splits and Phases: 6: Cherry Av. & I-10 EB Ramps



Lane Configurations Volume (vehrh) 423 0 541 0 0 0 0 1257 498 505 1067 0 0 107 1067 107 107 1087		۶	→	•	•	←	•	1	†	<i>></i>	/	+	4
Volume (vehrh)	Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Number	Lane Configurations	7	4	7					ተተተ	7	ሻሻ	ተተተ	
Initial O (20b), weh Ped-Bike Adj(A_phT) 1.00 Parking Bus, Adj 1.00	Volume (veh/h)	423	0	541	0	0	0	0	1257		505	1067	0
Ped-Bike Adj(A_pbT)	Number	7	4	14				5	2	12	1	6	16
Parking Bus, Adj	Initial Q (Qb), veh	0	0						0	0	0	0	0
Adj Flow Rate, vehrhûn 1667 1765 1765 1765 0 1765 1765 1569 1765 1509 1765 0 1765 1765 1765 1765 1765 1765 1765 1765	Ped-Bike Adj(A_pbT)							1.00		1.00			1.00
Adj Flow Rate, vehi/h	Parking Bus, Adj	1.00	1.00					1.00	1.00	1.00	1.00	1.00	1.00
Adj No. of Lanes 2 0 1 1 0 3 1 2 3 0 Peak Hour Factor 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96	Adj Sat Flow, veh/h/ln		1765					0					0
Peak Hour Factor	Adj Flow Rate, veh/h	636	0	356				0	1309	519	526	1111	0
Percent Heavy Veh, % 2 2 2 2 2 0 0 2 2 2 2 2 0 0 2 0 2 2 2 2 2 0 0 2 0 2 0 0 2 0 0 2 0	Adj No. of Lanes			-									0
Cap, veh/h 861 0 407 0 1721 488 758 3329 0 Arrive On Green 0.27 0.00 0.27 0.00 0.32 0.32 0.51 1.00 0.00 Sat Flow, veh/h 3175 0 1500 0 5294 1500 2988 5294 0 Grp Volume(v), veh/h 636 0 3356 0 1309 519 526 1111 0 Grp Sal Flow(s), veh/h/ln 1887 0 1500 0 1765 1500 1494 1765 0 0 0 1777 26.0 10.7 0.0 0.0 0 1777 26.0 10.7 0.0 0.0 0 0 0 0 0.0 0 <th< td=""><td>Peak Hour Factor</td><td></td><td>0.96</td><td></td><td></td><td></td><td></td><td>0.96</td><td></td><td></td><td></td><td></td><td>0.96</td></th<>	Peak Hour Factor		0.96					0.96					0.96
Arrive On Green	Percent Heavy Veh, %		2					0		2			0
Sat Flow, veh/h 3175 0 1500 0 5294 1500 2988 5294 0 Grp Volume(v), veh/h 636 0 356 0 1309 519 526 1111 0 Grp Sat Flow(s), veh/h/In 1587 0 1500 0 1765 1500 1494 1765 0 O Serve(g.S.), s 14.6 0.0 18.1 0.0 17.7 26.0 10.7 0.0 0.0 Cycle Q Clear(g.c.), s 14.6 0.0 18.1 0.0 17.7 26.0 10.7 0.0 0.0 Prop In Lane 1.00 1.00 1.00 0.00 1.00 1.00 0.0 Julia Region (S.) 861 0 407 0.1721 488 758 3329 0 VIC Ratio(X) 0.74 0.00 0.87 0.00 0.76 1.06 0.69 0.33 0.00 HCM Pallon Ratio 1.00 1.00 1.00 1.00	Cap, veh/h	861	0					0		488	758	3329	0
Grp Volume(v), veh/h Grp Sat Flow(s), veh/h/ln 1587 0 1500 0 0 1765 1500 1494 1765 0 0 0 0 0 0 1765 1500 1494 1765 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Arrive On Green		0.00	0.27				0.00	0.32	0.32	0.51	1.00	0.00
Grp Sat Flow(s),veh/h/ln 1587 0 1500 0 1765 1500 1494 1765 0 O Serve(g_s), s 14.6 0.0 18.1 0.0 17.7 26.0 10.7 0.0 0.0 Cycle Q Clear(g_c), s 14.6 0.0 18.1 0.0 17.7 26.0 10.7 0.0 0.0 Prop In Lane 1.00 1.00 0.00 1.00 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 0.	Sat Flow, veh/h	3175	0	1500				0	5294	1500	2988	5294	0
Q Serve(g_s), s	Grp Volume(v), veh/h	636	0	356				0	1309	519	526	1111	0
Cycle Q Člear(g_c), s 14.6 0.0 18.1 0.0 17.7 26.0 10.7 0.0 0.0 Prop In Lane 1.00 1.00 0.00 1.00 1.00 0.00 Lane Grp Cap(c), veh/h 861 0 407 0.00 0.76 1.06 0.69 0.33 0.00 Avail Cap(c_a), veh/h 952 0 450 0 1721 488 758 3329 0 HCM Platoon Ratio 1.00 1.00 1.00 1.00 1.00 1.00 1.00 2.00 2.00 1.00 Upstream Filter(f) 1.00 0.00 1.00	Grp Sat Flow(s), veh/h/ln	1587	0	1500				0	1765	1500	1494	1765	0
Cycle Q Člear(g_c), s 14.6 0.0 18.1 0.0 17.7 26.0 10.7 0.0 0.0 Prop In Lane 1.00 1.00 0.00 1.00 1.00 0.00 Lane Grp Cap(c), veh/h 861 0 407 0.1721 488 758 3329 0 V/C Ratio(X) 0.74 0.00 0.87 0.00 0.76 1.06 0.69 0.33 0.00 Avail Cap(c_a), veh/h 952 0 450 0 1721 488 758 3329 0 HCM Platoon Ratio 1.00 1.	Q Serve(q_s), s	14.6	0.0	18.1				0.0	17.7	26.0	10.7	0.0	0.0
Prop In Lane 1.00 1.00 0.00 1.00 1.00 0.00 Lane Grp Cap(c), veh/h 861 0 407 0 1721 488 758 3329 0 V/C Ratio(X) 0.74 0.00 0.87 0.00 0.76 1.06 0.69 0.33 0.00 Avail Cap(c_a), veh/h 952 0 450 0 1721 488 758 3329 0 HCM Platoon Ratio 1.00		14.6	0.0	18.1				0.0	17.7	26.0	10.7	0.0	0.0
Lane Grp Cap(c), veh/h 861 0 407 0 1721 488 758 3329 0 V/C Ratio(X) 0 0 74 0 0 0 0 76 1 06 0 6 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		1.00		1.00				0.00		1.00	1.00		0.00
V/C Ratio(X) 0.74 0.00 0.87 0.00 0.76 1.06 0.69 0.33 0.00 Avail Cap(c_a), veh/h 952 0 450 0 1721 488 758 3329 0 HCM Platoon Ratio 1.00 1.00 1.00 1.00 1.00 1.00 1.00 2.00 2.00 2.00 1.00 Upstream Filter(I) 1.00 0.00 1.00 0.00 1.00 <th< td=""><td></td><td></td><td>0</td><td></td><td></td><td></td><td></td><td></td><td>1721</td><td></td><td></td><td>3329</td><td>0</td></th<>			0						1721			3329	0
HCM Platoon Ratio 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	V/C Ratio(X)	0.74	0.00	0.87				0.00	0.76	1.06	0.69	0.33	0.00
HCM Platoon Ratio	Avail Cap(c_a), veh/h	952	0	450				0	1721	488	758	3329	0
Upstream Filter(I) 1.00 0.00 1.00 0.00 1.00 1.00 1.00 0.00 Uniform Delay (d), s/veh 26.6 0.0 27.9 0.0 24.2 27.0 17.3 0.0 0.0 Incr Delay (d2), s/veh 2.8 0.0 16.2 0.0 3.2 59.0 2.7 0.3 0.0 Initial Q Delay(d3), s/veh 0.0<	HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Uniform Delay (d), s/veh 26.6 0.0 27.9 0.0 24.2 27.0 17.3 0.0 0.0 Incr Delay (d2), s/veh 2.8 0.0 16.2 0.0 3.2 59.0 2.7 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.	Upstream Filter(I)	1.00	0.00	1.00					1.00	1.00	1.00	1.00	0.00
Incr Delay (d2), s/veh		26.6	0.0	27.9				0.0	24.2	27.0	17.3	0.0	0.0
Initial Q Delay(d3),s/veh								0.0					0.0
%ile BackOfQ(50%),veh/ln 6.7 0.0 9.3 0.0 9.1 18.7 4.5 0.1 0.0 LnGrp Delay(d),s/veh 29.3 0.0 44.0 0.0 27.4 86.0 20.1 0.3 0.0 LnGrp LOS C D C F C A Approach Vol, veh/h 992 1828 1637 Approach Delay, s/veh 34.6 44.1 6.6 Approach LOS C D A Timer 1 2 3 4 5 6 7 8 Assigned Phs 1 2 3 4 6 7 8 8 8 1 1 2 4 6 6 7 8 8 1 2 4 6 7 8 8 1 2 4 6 7 8 8 1 2 4 6 7 8 1 2 4 6 8 1 2 4 4 6 8 1 4 4		0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
LnGrp Delay(d),s/veh 29.3 0.0 44.0 0.0 27.4 86.0 20.1 0.3 0.0 LnGrp LOS C D C F C A Approach Vol, veh/h 992 1828 1637 Approach Delay, s/veh 34.6 44.1 6.6 Approach LOS C D A Timer 1 2 3 4 5 6 7 8 Assigned Phs 1 2 4 6 7 8 8 8 9 9 9 9 9 9 9 9 9 9 9 9 1 9 9 9 9 1 9				9.3				0.0	9.1	18.7	4.5		0.0
LnGrp LOS C D C F C A Approach Vol, veh/h 992 1828 1637 Approach Delay, s/veh 34.6 44.1 6.6 Approach LOS C D A Timer 1 2 3 4 5 6 7 8 Assigned Phs 1 2 4 6 6 Phs Duration (G+Y+Rc), s 24.3 30.0 25.7 54.3 <td></td> <td>29.3</td> <td>0.0</td> <td>44.0</td> <td></td> <td></td> <td></td> <td>0.0</td> <td>27.4</td> <td>86.0</td> <td>20.1</td> <td>0.3</td> <td>0.0</td>		29.3	0.0	44.0				0.0	27.4	86.0	20.1	0.3	0.0
Approach Vol, veh/h 992 1828 1637 Approach Delay, s/veh 34.6 44.1 6.6 Approach LOS C D D A Timer 1 2 3 4 5 6 7 8 Assigned Phs 1 2 4 6 Phs Duration (G+Y+Rc), s 24.3 30.0 25.7 54.3 Change Period (Y+Rc), s 4.0 4.0 4.0 4.0 Max Green Setting (Gmax), s 18.0 26.0 24.0 48.0 Max Q Clear Time (g_c+I1), s 12.7 28.0 20.1 2.0 Green Ext Time (p_c), s 3.7 0.0 1.6 12.5 Intersection Summary HCM 2010 Ctrl Delay 28.2 HCM 2010 LOS C													
Approach Delay, s/veh Approach LOS C D A Approach LOS C D A A Timer 1 2 3 4 5 6 7 8 Assigned Phs 1 2 4 6 Phs Duration (G+Y+Rc), s 24.3 30.0 25.7 54.3 Change Period (Y+Rc), s 4.0 4.0 4.0 4.0 Max Green Setting (Gmax), s 18.0 26.0 24.0 48.0 Max Q Clear Time (g_c+I1), s 12.7 28.0 20.1 2.0 Green Ext Time (p_c), s 3.7 0.0 1.6 12.5 Intersection Summary HCM 2010 Ctrl Delay 44.1 6.6 Approach LOS C D A 44.1 6.6 A A Assigned Phs A B A B A B A B A B A B A B A B A B A			992						1828			1637	
Approach LOS C D A Timer 1 2 3 4 5 6 7 8 Assigned Phs 1 2 4 6 Phs Duration (G+Y+Rc), s 24.3 30.0 25.7 54.3 Change Period (Y+Rc), s 4.0 4.0 4.0 4.0 Max Green Setting (Gmax), s 18.0 26.0 24.0 48.0 Max Q Clear Time (g_c+l1), s 12.7 28.0 20.1 2.0 Green Ext Time (p_c), s 3.7 0.0 1.6 12.5 Intersection Summary HCM 2010 Ctrl Delay 28.2 HCM 2010 LOS C													
Assigned Phs 1 2 4 6 Phs Duration (G+Y+Rc), s 24.3 30.0 25.7 54.3 Change Period (Y+Rc), s 4.0 4.0 4.0 Max Green Setting (Gmax), s 18.0 26.0 24.0 48.0 Max Q Clear Time (g_c+I1), s 12.7 28.0 20.1 2.0 Green Ext Time (p_c), s 3.7 0.0 1.6 12.5 Intersection Summary HCM 2010 Ctrl Delay 28.2 HCM 2010 LOS C	Approach LOS												
Assigned Phs 1 2 4 6 Phs Duration (G+Y+Rc), s 24.3 30.0 25.7 54.3 Change Period (Y+Rc), s 4.0 4.0 4.0 4.0 Max Green Setting (Gmax), s 18.0 26.0 24.0 48.0 Max Q Clear Time (g_c+I1), s 12.7 28.0 20.1 2.0 Green Ext Time (p_c), s 3.7 0.0 1.6 12.5 Intersection Summary HCM 2010 Ctrl Delay 28.2 HCM 2010 LOS C	Timer	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s 24.3 30.0 25.7 54.3 Change Period (Y+Rc), s 4.0 4.0 4.0 Max Green Setting (Gmax), s 18.0 26.0 24.0 48.0 Max Q Clear Time (g_c+I1), s 12.7 28.0 20.1 2.0 Green Ext Time (p_c), s 3.7 0.0 1.6 12.5 Intersection Summary HCM 2010 Ctrl Delay 28.2 HCM 2010 LOS C		1			4		6						
Change Period (Y+Rc), s 4.0 4.0 4.0 4.0 Max Green Setting (Gmax), s 18.0 26.0 24.0 48.0 Max Q Clear Time (g_c+I1), s 12.7 28.0 20.1 2.0 Green Ext Time (p_c), s 3.7 0.0 1.6 12.5 Intersection Summary HCM 2010 Ctrl Delay 28.2 HCM 2010 LOS C		24.3											
Max Green Setting (Gmax), s 18.0 26.0 24.0 48.0 Max Q Clear Time (g_c+l1), s 12.7 28.0 20.1 2.0 Green Ext Time (p_c), s 3.7 0.0 1.6 12.5 Intersection Summary HCM 2010 Ctrl Delay 28.2 HCM 2010 LOS C	, ,												
Max Q Clear Time (g_c+l1), s 12.7 28.0 20.1 2.0 Green Ext Time (p_c), s 3.7 0.0 1.6 12.5 Intersection Summary HCM 2010 Ctrl Delay 28.2 HCM 2010 LOS C													
Green Ext Time (p_c), s 3.7 0.0 1.6 12.5 Intersection Summary HCM 2010 Ctrl Delay 28.2 HCM 2010 LOS C													
HCM 2010 Ctrl Delay 28.2 HCM 2010 LOS C	Green Ext Time (p_c), s												
HCM 2010 Ctrl Delay 28.2 HCM 2010 LOS C	Intersection Summary												
HCM 2010 LOS C	· · · · · · · · · · · · · · · · · · ·			28.2									
	HCM 2010 LOS												

TEC Traffic Impact Analysis C:\TRAMES\0255-0001\Synchro\01 - Existing PM.syn

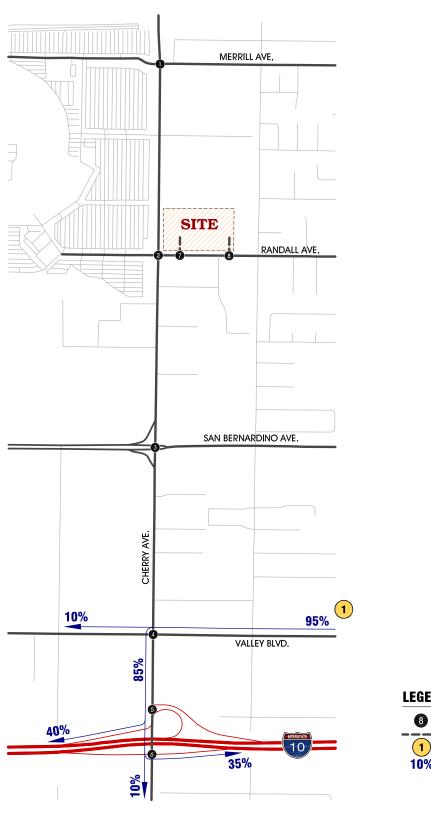
User approved volume balancing among the lanes for turning movement.

Trames Solutions, Inc. Synchro 8 Report

APPENDIX 4.1

CUMULATIVE DEVELOPMENT PROJECTS
TRIP DISTRIBUTION PATTERNS

FIGURE 1 HIGH CUBE WAREHOUSE PASSENGER CAR TRIP DISTRIBUTION





= INTERSECTION ID = PROJECT DRIVEWAY = HIGH CUBE WAREHOUSE

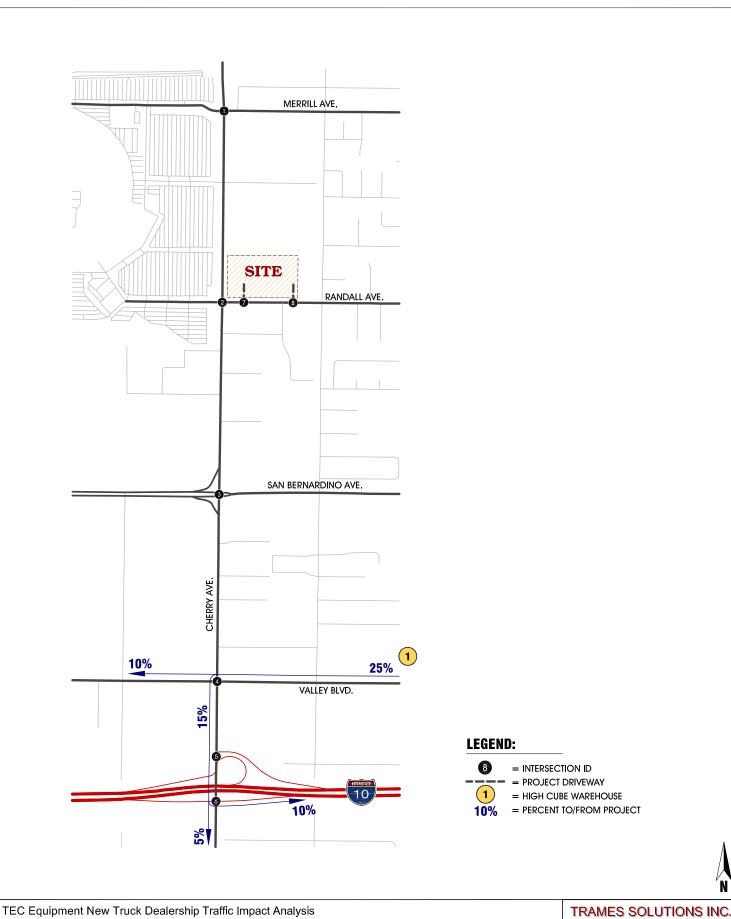
= PERCENT TO/FROM PROJECT



TEC Equipment New Truck Dealership Traffic Impact Analysis San Bernardino, CA (0255-0001:01.dwg)

TRAMES SOLUTIONS INC.

FIGURE 2 HIGH CUBE WAREHOUSE TRUCK TRIP DISTRIBUTION



41

San Bernardino, CA (0255-0001:01.dwg)

APPENDIX 5.1

EXISTING PLUS PROJECT (E+P) CONDITIONS INTERSECTION ANALYSIS CALCULATION WORKSHEETS

	ᄼ	→	•	•	←	•	•	†	<i>></i>	>	ļ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		ની	7		ની	7	ሻ	^	7	ሻ	^	7
Volume (vph)	0	0	0	180	0	230	1	734	107	144	1125	0
Ideal Flow (vphpl)	1800	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Storage Length (ft)	0		0	0		130	270		0	60		275
Storage Lanes	0		1	0		1	1		1	1		1
Taper Length (ft)	60			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			40			50			40	
Link Distance (ft)		506			600			1582			1080	
Travel Time (s)		13.8			10.2			21.6			18.4	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Turn Type			Perm	Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4		8	8		5	2		1	6	
Permitted Phases	4		4			8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	8.0	20.0	20.0	8.0	20.0	20.0
Total Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	8.0	26.0	26.0	14.0	32.0	32.0
Total Split (%)	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	10.0%	32.5%	32.5%	17.5%	40.0%	40.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max

Area Type: Other

Cycle Length: 80

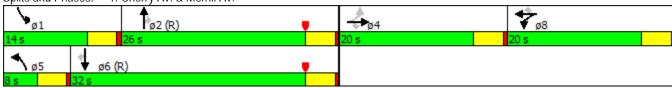
Actuated Cycle Length: 80

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 75

Control Type: Actuated-Coordinated

Splits and Phases: 1: Cherry Av. & Merrill Av.



-	۶	→	•	•	←	•	1	†	<i>></i>	/	ļ	
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		र्स	7		र्स	7	ሻ	^	7	ሻ	^	7
Volume (veh/h)	0	0	0	180	0	230	1	734	107	144	1125	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1800	1765	1765	1700	1765	1765	1667	1765	1765	1667	1765	1765
Adj Flow Rate, veh/h	0	0	0	186	0	237	1	757	110	148	1160	0
Adj No. of Lanes	0	1	1	0	1	1	1	2	1	1	2	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	2	2	307	0	274	2	1959	833	178	2351	999
Arrive On Green	0.00	0.00	0.00	0.18	0.00	0.18	0.00	0.56	0.56	0.11	0.67	0.00
Sat Flow, veh/h	0	1765	1500	1681	0	1500	1587	3529	1500	1587	3529	1500
Grp Volume(v), veh/h	0	0	0	186	0	237	1	757	110	148	1160	0
Grp Sat Flow(s),veh/h/ln	0	1765	1500	1681	0	1500	1587	1765	1500	1587	1765	1500
Q Serve(g_s), s	0.0	0.0	0.0	8.1	0.0	12.3	0.1	9.7	2.8	7.3	13.1	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	8.1	0.0	12.3	0.1	9.7	2.8	7.3	13.1	0.0
Prop In Lane	0.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	0	2	2	307	0	274	2	1959	833	178	2351	999
V/C Ratio(X)	0.00	0.00	0.00	0.61	0.00	0.86	0.50	0.39	0.13	0.83	0.49	0.00
Avail Cap(c_a), veh/h	0	353	300	336	0	300	79	1959	833	198	2351	999
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	30.0	0.0	31.7	39.9	10.1	8.5	34.8	6.6	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	2.7	0.0	21.0	126.9	0.6	0.3	22.9	0.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	4.0	0.0	6.7	0.1	4.9	1.2	4.3	6.5	0.0
LnGrp Delay(d),s/veh	0.0	0.0	0.0	32.7	0.0	52.7	166.9	10.7	8.9	57.7	7.4	0.0
LnGrp LOS				С		D	F	В	А	E	А	
Approach Vol, veh/h		0			423			868			1308	
Approach Delay, s/veh		0.0			43.9			10.6			13.1	
Approach LOS					D			В			В	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.0	48.4		0.0	4.1	57.3		18.6				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
May Croop Cotting (Cmay)		22.0		16.0	4.0	28.0		16.0				_
Max Green Setting (Gmax), s	10.0	22.0										
Max Q Clear Time (g_c+l1), s	9.3	11.7		0.0	2.1	15.1		14.3				
					2.1 0.0	15.1 9.4		14.3 0.3				
Max Q Clear Time (g_c+l1), s	9.3	11.7		0.0								
Max Q Clear Time (g_c+l1), s Green Ext Time (p_c), s	9.3	11.7	17.3	0.0								

	ᄼ	→	•	•	←	•	4	†	/	>	ļ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4	7		ર્ન	7	Ţ	ተተተ		7	ተተተ	7
Volume (vph)	1	0	0	203	3	113	22	781	120	107	1116	8
Ideal Flow (vphpl)	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Storage Length (ft)	0		0	0		50	260		0	70		200
Storage Lanes	0		1	0		1	1		0	1		1
Taper Length (ft)	60			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		589			331			2702			1062	
Travel Time (s)		13.4			7.5			36.8			14.5	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						6
Detector Phase	4	4	4	8	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	8.0	20.0		8.0	20.0	20.0
Total Split (s)	28.0	28.0	28.0	28.0	28.0	28.0	11.0	33.0		19.0	41.0	41.0
Total Split (%)	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	13.8%	41.3%		23.8%	51.3%	51.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		4.0	4.0		4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	C-Max

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 8 (10%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 50

Control Type: Actuated-Coordinated

Splits and Phases: 2: Cherry Av. & Randall Av.



-	•	→	•	•	←	•	•	†	<i>></i>	\	+	✓
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4	7		4	7	7	ተተተ		ሻ	^ ^	7
Volume (veh/h)	1	0	0	203	3	113	22	781	120	107	1116	8
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	1700	1765	1765	1700	1765	1765	1667	1765	1800	1667	1765	1765
Adj Flow Rate, veh/h	1	0	0	209	3	116	23	805	124	110	1151	8
Adj No. of Lanes	0	1	1	0	1	1	1	3	0	1	3	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	142	0	243	347	4	243	32	2699	413	137	3536	1002
Arrive On Green	0.16	0.00	0.00	0.16	0.16	0.16	0.04	1.00	1.00	0.09	0.67	0.67
Sat Flow, veh/h	322	0	1500	1593	23	1500	1587	4487	686	1587	5294	1500
Grp Volume(v), veh/h	1	0	0	212	0	116	23	632	297	110	1151	8
Grp Sat Flow(s),veh/h/ln	322	0	1500	1615	0	1500	1587	1765	1644	1587	1765	1500
Q Serve(g_s), s	0.1	0.0	0.0	0.0	0.0	5.6	1.1	0.0	0.0	5.4	7.4	0.1
Cycle Q Clear(g_c), s	9.7	0.0	0.0	9.7	0.0	5.6	1.1	0.0	0.0	5.4	7.4	0.1
Prop In Lane	1.00		1.00	0.99		1.00	1.00		0.42	1.00		1.00
Lane Grp Cap(c), veh/h	142	0	243	351	0	243	32	2123	989	137	3536	1002
V/C Ratio(X)	0.01	0.00	0.00	0.60	0.00	0.48	0.72	0.30	0.30	0.80	0.33	0.01
Avail Cap(c_a), veh/h	317	0	450	546	0	450	139	2123	989	298	3536	1002
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.89	0.89	0.89	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.8	0.0	0.0	32.1	0.0	30.4	38.2	0.0	0.0	35.9	5.6	4.4
Incr Delay (d2), s/veh	0.0	0.0	0.0	1.7	0.0	1.5	23.9	0.3	0.7	10.3	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	4.6	0.0	2.4	0.7	0.1	0.2	2.8	3.6	0.1
LnGrp Delay(d),s/veh	36.8	0.0	0.0	33.8	0.0	31.9	62.1	0.3	0.7	46.2	5.9	4.4
LnGrp LOS	D			С		С	Е	Α	A	D	Α	A
Approach Vol, veh/h		1			328			952			1269	
Approach Delay, s/veh		36.8			33.1			1.9			9.4	
Approach LOS		D			С			Α			Α	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.9	52.1		17.0	5.6	57.4		17.0				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	15.0	29.0		24.0	7.0	37.0		24.0				
Max Q Clear Time (g_c+l1), s	7.4	2.0		11.7	3.1	9.4		11.7				
Green Ext Time (p_c), s	0.1	15.6		1.2	0.0	15.8		1.3				
Intersection Summary												
HCM 2010 Ctrl Delay			9.7									
HCM 2010 LOS			Α									

	۶	→	•	•	←	•	4	†	/	>	ţ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	*	† †	7	Ţ	∱ }		ň	ተተ _ጉ		, j	ተተተ	7
Volume (vph)	180	69	93	143	337	88	83	760	87	74	834	372
Ideal Flow (vphpl)	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Storage Length (ft)	300		285	50		0	220		0	210		300
Storage Lanes	1		1	1		0	1		0	1		1
Taper Length (ft)	60			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		555			705			459			2702	
Travel Time (s)		12.6			16.0			6.3			36.8	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases			4									6
Detector Phase	7	4	4	3	8		5	2		1	6	7
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	8.0	20.0	20.0	8.0	20.0		8.0	20.0		8.0	20.0	8.0
Total Split (s)	20.0	23.0	23.0	17.0	20.0		14.0	27.0		13.0	26.0	20.0
Total Split (%)	25.0%	28.8%	28.8%	21.3%	25.0%		17.5%	33.8%		16.3%	32.5%	25.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5		0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lead/Lag	Lag	Lead	Lead	Lag	Lead		Lag	Lead		Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	None

Area Type: Other

Cycle Length: 80

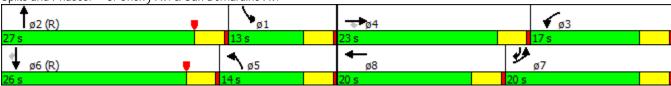
Actuated Cycle Length: 80

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 60

Control Type: Actuated-Coordinated





	۶	→	•	•	←	•	1	†	~	/	Ţ	✓
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻ	^	7	ሻ	∱ ∱		ሻ	ተተኈ		ሻ	^	7
Volume (veh/h)	180	69	93	143	337	88	83	760	87	74	834	372
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	1667	1765	1765	1667	1765	1800	1667	1765	1800	1667	1765	1765
Adj Flow Rate, veh/h	186	71	0	147	347	91	86	784	90	76	860	384
Adj No. of Lanes	1	2	1	1	2	0	1	3	0	1	3	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	222	176	75	400	439	114	354	1342	153	334	1456	623
Arrive On Green	0.14	0.05	0.00	0.25	0.16	0.16	0.22	0.29	0.29	0.07	0.09	0.09
Sat Flow, veh/h	1587	3529	1500	1587	2706	700	1587	4668	532	1587	5294	1500
Grp Volume(v), veh/h	186	71	0	147	225	213	86	592	282	76	860	384
Grp Sat Flow(s),veh/h/ln	1587	1765	1500	1587	1765	1641	1587	1765	1671	1587	1765	1500
Q Serve(g_s), s	9.1	1.6	0.0	6.1	9.8	10.0	3.6	11.5	11.6	3.6	12.5	8.1
Cycle Q Clear(g_c), s	9.1	1.6	0.0	6.1	9.8	10.0	3.6	11.5	11.6	3.6	12.5	8.1
Prop In Lane	1.00		1.00	1.00		0.43	1.00		0.32	1.00		1.00
Lane Grp Cap(c), veh/h	222	176	75	400	286	266	354	1015	480	334	1456	623
V/C Ratio(X)	0.84	0.40	0.00	0.37	0.78	0.80	0.24	0.58	0.59	0.23	0.59	0.62
Avail Cap(c_a), veh/h	317	838	356	400	353	328	354	1015	480	334	1456	623
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.96	0.96	0.96
Uniform Delay (d), s/veh	33.5	36.8	0.0	24.6	32.2	32.3	25.5	24.4	24.4	31.1	32.0	24.8
Incr Delay (d2), s/veh	12.5	1.5	0.0	0.6	9.0	11.0	0.4	2.4	5.2	0.3	1.7	4.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	0.8	0.0	2.7	5.5	5.3	1.6	5.9	6.0	1.6	6.3	4.1
LnGrp Delay(d),s/veh	46.0	38.3	0.0	25.2	41.2	43.2	25.9	26.8	29.6	31.4	33.7	29.1
LnGrp LOS	D	D		С	D	D	С	С	С	С	С	С
Approach Vol, veh/h		257			585			960			1320	
Approach Delay, s/veh		43.9			37.9			27.6			32.3	
Approach LOS		D			D			С			С	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.8	27.0	24.2	8.0	21.8	26.0	15.2	17.0				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	9.0	23.0	13.0	19.0	10.0	22.0	16.0	16.0				
Max Q Clear Time (g_c+l1), s	5.6	13.6	8.1	3.6	5.6	14.5	11.1	12.0				
Green Ext Time (p_c), s	0.1	3.5	0.5	0.3	0.1	3.9	0.3	1.0				
Intersection Summary												
HCM 2010 Ctrl Delay			32.8									
HCM 2010 LOS			С									

	•	→	•	•	←	•	4	†	<i>></i>	>	ļ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻሻ	^	7	1,1	∱ ∱		ሻሻ	† †	7	7	^	7
Volume (vph)	63	128	184	413	277	64	416	873	332	68	966	89
Ideal Flow (vphpl)	1600	1800	1800	1600	1800	1800	1600	1800	1800	1700	1800	1800
Storage Length (ft)	250		160	250		0	420		220	170		0
Storage Lanes	2		1	2		0	2		0	1		1
Taper Length (ft)	120			120			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		845			1019			968			718	
Travel Time (s)		19.2			23.2			13.2			9.8	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Shared Lane Traffic (%)												
Turn Type	Prot	NA	pm+ov	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4	5	3	8		5	2		1	6	
Permitted Phases			4						2			6
Detector Phase	7	4	5	3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	20.0	8.0	8.0	20.0		8.0	20.0	20.0	8.0	20.0	20.0
Total Split (s)	8.0	20.0	16.0	16.0	28.0		16.0	34.0	34.0	10.0	28.0	28.0
Total Split (%)	10.0%	25.0%	20.0%	20.0%	35.0%		20.0%	42.5%	42.5%	12.5%	35.0%	35.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow, Master Intersection

Natural Cycle: 80

Control Type: Actuated-Coordinated

Splits and Phases: 4: Cherry Av. & Valley Blvd.



	•	→	•	•	←	•	•	†	<i>></i>	/	+	✓
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	14.14	^	7	44	∱ ∱		ሻሻ	^	7	7	^	7
Volume (veh/h)	63	128	184	413	277	64	416	873	332	68	966	89
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	1569	1765	1765	1569	1765	1800	1569	1765	1765	1667	1765	1765
Adj Flow Rate, veh/h	66	133	192	430	289	67	433	909	346	71	1006	93
Adj No. of Lanes	2	2	1	2	2	0	2	2	1	1	2	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	115	533	451	448	730	167	448	1567	666	87	1232	524
Arrive On Green	0.04	0.15	0.15	0.15	0.26	0.26	0.30	0.89	0.89	0.06	0.35	0.35
Sat Flow, veh/h	2988	3529	1500	2988	2783	635	2988	3529	1500	1587	3529	1500
Grp Volume(v), veh/h	66	133	192	430	182	174	433	909	346	71	1006	93
Grp Sat Flow(s),veh/h/ln	1494	1765	1500	1494	1765	1653	1494	1765	1500	1587	1765	1500
Q Serve(g_s), s	1.7	2.7	8.2	11.4	6.8	7.0	11.4	4.8	3.8	3.5	20.8	3.4
Cycle Q Clear(g_c), s	1.7	2.7	8.2	11.4	6.8	7.0	11.4	4.8	3.8	3.5	20.8	3.4
Prop In Lane	1.00		1.00	1.00		0.38	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	115	533	451	448	463	434	448	1567	666	87	1232	524
V/C Ratio(X)	0.57	0.25	0.43	0.96	0.39	0.40	0.97	0.58	0.52	0.81	0.82	0.18
Avail Cap(c_a), veh/h	149	706	525	448	529	496	448	1567	666	119	1232	524
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.80	0.80	0.80	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.8	30.0	22.4	33.8	24.3	24.3	27.8	2.8	2.7	37.4	23.7	18.1
Incr Delay (d2), s/veh	4.5	0.2	0.6	32.2	0.5	0.6	29.6	1.3	2.3	25.3	6.1	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	1.3	3.5	6.7	3.3	3.2	6.5	2.3	1.7	2.2	11.1	1.5
LnGrp Delay(d),s/veh	42.3	30.2	23.1	65.9	24.8	24.9	57.4	4.0	5.0	62.7	29.8	18.8
LnGrp LOS	D	C	С	E	C	С	E	A	А	E	C	В
Approach Vol, veh/h		391			786			1688			1170	
Approach Delay, s/veh		28.7			47.3			17.9			30.9	
Approach LOS		С			D			В			С	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.4	39.5	16.0	16.1	16.0	31.9	7.1	25.0				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	6.0	30.0	12.0	16.0	12.0	24.0	4.0	24.0				
Max Q Clear Time (g_c+l1), s	5.5	6.8	13.4	10.2	13.4	22.8	3.7	9.0				
Green Ext Time (p_c), s	0.0	15.2	0.0	1.9	0.0	1.1	0.0	3.2				
Intersection Summary												
HCM 2010 Ctrl Delay			28.5									
HCM 2010 LOS			С									

Lane Group WBL WBR NBT NBR SBL SBT Lane Configurations 11 7 111 7 1111
Volume (vph) 525 580 1081 513 0 1570 Ideal Flow (vphpl) 1600 1800 1800 1800 1800 1800 Storage Length (ft) 0 0 200 0 0 Storage Lanes 2 1 1 0
Volume (vph) 525 580 1081 513 0 1570 Ideal Flow (vphpl) 1600 1800 1800 1800 1800 1800 Storage Length (ft) 0 0 200 0
Storage Length (ft) 0 0 200 0 Storage Lanes 2 1 1 0 Taper Length (ft) 60 60 Right Turn on Red Yes Yes Link Speed (mph) 30 45 45
Storage Lanes 2 1 1 0 Taper Length (ft) 60 60 Right Turn on Red Yes Yes Link Speed (mph) 30 45 45
Taper Length (ft) 60 60 Right Turn on Red Yes Yes Link Speed (mph) 30 45 45
Right Turn on Red Yes Yes Link Speed (mph) 30 45 45
Link Speed (mph) 30 45 45
Link Distance (ft) 252 337 968
Travel Time (s) 5.7 5.1 14.7
Peak Hour Factor 0.95 0.95 0.95 0.95 0.95
Shared Lane Traffic (%)
Turn Type Prot Perm NA Perm NA
Protected Phases 8 2 6
Permitted Phases 8 2
Detector Phase 8 8 2 2 6
Switch Phase
Minimum Initial (s) 4.0 4.0 4.0 4.0 4.0
Minimum Split (s) 20.0 20.0 20.0 20.0 20.0
Total Split (s) 48.0 48.0 32.0 32.0 32.0
Total Split (%) 60.0% 60.0% 40.0% 40.0% 40.0%
Yellow Time (s) 3.5 3.5 3.5 3.5
All-Red Time (s) 0.5 0.5 0.5 0.5
Lost Time Adjust (s) 0.0 0.0 0.0 0.0 0.0
Total Lost Time (s) 4.0 4.0 4.0 4.0 4.0
Lead/Lag
Lead-Lag Optimize?
Recall Mode None None C-Max C-Max C-Max

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 40

Control Type: Actuated-Coordinated

Splits and Phases: 5: Cherry Av. & I-10 WB Ramps



ane Configurations olume (veh/h) 525 580 1081 513 0 1570 with the column (veh/h) 525 580 1081 513 0 1570 with the column (veh/h) 525 580 1081 513 0 1570 with the column (veh/h) 525 580 1081 513 0 1570 with the column (veh/h) 100 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		•	•	†	<i>></i>	\			
olume (velvh)	Movement	WBL	WBR	NBT	NBR	SBL	SBT		
olume (veh/h)	Lane Configurations	1,1	7	ተተተ	7		1111		
itital Q (Ob), veh	Volume (veh/h)		580		513	0			
ed-Bike Adj(A_pbT)	Number	3	18	2	12	1	6		
arking Bus, Adj	Initial Q (Qb), veh	0	0	0	0	0	0		
dj Saf Flow, veh/h/ln	Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00			
dj Flow Rate, veh/h 553 611 1138 0 0 1653 dj No. of Lanes 2 1 3 1 0 4 eak Hour Factor 0.95 0.95 0.95 0.95 0.95 0.95 ercent Heavy Veh, % 2 2 2 2 0 2 ap, yeh/h 1347 676 2379 674 0 3172 rrive On Green 0.45 0.45 0.90 0.00 0.00 0.90 at Flow, yeh/h 2988 1500 5294 1500 0 7059 rip Volume(v), veh/h 553 611 1138 0 0 1653 rip Volume(v), veh/h 1503 1010 30.2 3.1 0.0 0.0 3.6 rip Volume(v), veh/h 1503 10165 1500 0 1765 1500 0 1765 1500 0 0.0 3.6 ror plant 1500 100 0 0 <td< td=""><td>Parking Bus, Adj</td><td>1.00</td><td>1.00</td><td>1.00</td><td>1.00</td><td>1.00</td><td>1.00</td><td></td><td></td></td<>	Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
dj No. of Lanes	Adj Sat Flow, veh/h/ln	1569	1765	1765	1765	0	1765		
eak Hour Factor	Adj Flow Rate, veh/h	553	611	1138	0	0	1653		
recrent Heavy Veh, % 2 2 2 2 0 2 0 2 rap, veh/h 1347 676 2379 674 0 3172 rrive On Green 0.45 0.45 0.90 0.00 0.00 0.90 rat Flow, veh/h 2988 1500 5294 1500 0 7059 rrive Olume(v), veh/h 553 611 1138 0 0 1653 rrp Sat Flow(s), veh/h/ln 1494 1500 1765 1500 0 1765 reserve(g_s), s 10.0 30.2 3.1 0.0 0.0 3.6 rycle Q Clear(g_c), s 10.0 30.2 3.1 0.0 0.0 3.6 rop In Lane 1.00 1.00 1.00 0.00 rane Grp Cap(c), veh/h 1347 676 2379 674 0 3172 r/C Ratio(X) 0.41 0.90 0.48 0.00 0.00 0.52 rvail Cap(c_a), veh/h 1643 825 2379 674 0 3172 recompliance Filter(I) 1.00 1.00 2.00 2.00 1.00 2.00 repstream Filter(I) 1.00 1.00 1.00 0.00 0.54 rificon Delay (d), s/veh 14.8 20.4 2.4 0.0 0.0 0.54 rificon Delay (d), s/veh 14.8 20.4 2.4 0.0 0.0 0.0 rificon Delay (d2), s/veh 0.2 11.7 0.7 0.0 0.0 0.0 rificon Delay(d3), s/veh 15.0 32.1 3.1 0.0 0.0 2.7 recomplex B C A A recomplex B C A A reproach Vol, veh/h 1164 1138 1653 reproach Vol, veh/h 1164 1138 1653 reproach LOS C A B recomplex B C A A reproach Vol, veh/h 1164 1138 1653 reproach LOS C A B recomplex B C A A reproach Vol, veh/h 1164 1138 1653 reproach Vol, veh/h 150 32.1 3.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	Adj No. of Lanes	2	1	3	1	0	4		
rap, veh/h rrive On Green 0.45 0.45 0.49 0.00 0.00 0.00 0.90 at Flow, veh/h 2988 1500 5294 1500 0 7059 arp Volume(v), veh/h 553 611 1138 0 0 1653 arg Sat Flow(s), veh/h 1494 1500 1765 1500 0 1765 0 1765 1500 0 1765 1765 1765 1765 1765 1765 1765 1765	Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95		
rrive On Green	Percent Heavy Veh, %	2	2	2	2	0	2		
at Flow, veh/h irp Volume(v), veh/h irp Sat Flow(s), veh/h/in 1494 1500 1765 1500 0 1765 0 1766 0 1765 0 1766 0 1767 0	Cap, veh/h		676						
Gry Volume(v), veh/h 553 611 1138 0 0 1653 Jery Sat Flow(s), veh/h/ln 1494 1500 1765 1500 0 1765 Jery Sat Flow(s), veh/h/ln 1494 1500 1765 1500 0 1765 Jery Sat Flow(s), veh/h/ln 1494 1500 1765 1500 0 1765 Jery Sat Flow(s), veh/h/ln 1400 30.2 3.1 0.0 0.0 3.6 rop In Lane 1.00 1.00 1.00 0.00 0.00 3.6 rop In Lane 1.00 1.00 1.00 0.00 0.00 3.6 rop In Lane 1.00 1.00 1.00 0.00 0.00 0.00 0.00 Jer Carl Ger Cap(c), veh/h 1347 676 2379 674 0 3172 Jer Cap Cap (c), veh/h 1643 825 2379 674 0 3172 Jer Cap Cap (c), veh/h 1643 825 2379 674 0	Arrive On Green					0.00			
Serve(g_s), veh/h/ln	Sat Flow, veh/h	2988	1500	5294	1500	0	7059		
Serve(g_s), veh/h/ln	Grp Volume(v), veh/h	553	611	1138	0	0	1653		
sycle Q Clear(g_c), s	Grp Sat Flow(s), veh/h/ln	1494	1500	1765	1500	0	1765		
rop In Lane	Q Serve(g_s), s	10.0	30.2	3.1	0.0	0.0	3.6		
ane Grp Cap(c), veh/h	Cycle Q Clear(g_c), s	10.0	30.2	3.1	0.0	0.0	3.6		
AC Ratio(X) 0.41 0.90 0.48 0.00 0.00 0.52 vail Cap(c_a), veh/h 1643 825 2379 674 0 3172 ICM Platoon Ratio 1.00 1.00 2.00 2.00 1.00 2.00 Ipstream Filter(I) 1.00 1.00 1.00 0.00 0.00 0.00 0.54 Inifigrom Delay (d), s/veh 14.8 20.4 2.4 0.0 0.0 0.52 Inifical Q Delay(d3), s/veh 0.2 11.7 0.7 0.0 0.0 0.3 Initial Q Delay(d3), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Iside BackOfQ(50%), veh/ln 4.1 14.6 1.4 0.0 0.0 1.4 0.0 0.0 1.4 InGrp Delay(d), s/veh 15.0 32.1 3.1 0.0 0.0 2.7 0.0 0.0 0.0 0.0 1.4 0.0 0.0 1.4 0.0 0.0 1.4 0.0 0.0 2.7 0.0 0.0 0.0 2.7 0.0 0.0 <th< td=""><td>Prop In Lane</td><td>1.00</td><td>1.00</td><td></td><td>1.00</td><td>0.00</td><td></td><td></td><td></td></th<>	Prop In Lane	1.00	1.00		1.00	0.00			
Valid Cap(c_a), veh/h	Lane Grp Cap(c), veh/h	1347	676	2379	674	0	3172		
CM Platoon Ratio	V/C Ratio(X)	0.41	0.90	0.48	0.00	0.00	0.52		
pstream Filter(I) 1.00 1.00 1.00 0.00 0.00 0.54 Iniform Delay (d), s/veh 14.8 20.4 2.4 0.0 0.0 2.4 Iniform Delay (d2), s/veh 0.2 11.7 0.7 0.0 0.0 0.0 Initial Q Delay(d3),s/veh 0.0 0.0 0.0 0.0 0.0 Initial Q Delay(d3),s/veh 15.0 32.1 3.1 0.0 0.0 1.4 InGrp Delay(d),s/veh 15.0 32.1 3.1 0.0 0.0 2.7 InGrp LOS B C A A Ingroach Vol, veh/h 1164 1138 1653 Ingroach Delay, s/veh 24.0 3.1 2.7 Ingroach LOS C A A A Ingr	Avail Cap(c_a), veh/h	1643	825	2379	674	0	3172		
Iniform Delay (d), s/veh 14.8 20.4 2.4 0.0 0.0 2.4 and Delay (d2), s/veh 0.2 11.7 0.7 0.0 0.0 0.0 0.3 and Delay (d3), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	2.00		
ncr Delay (d2), s/veh 0.2 11.7 0.7 0.0 0.0 0.3 nitial Q Delay(d3),s/veh 0.0	Jpstream Filter(I)	1.00	1.00	1.00	0.00	0.00	0.54		
nitial Q Delay(d3),s/veh 0.0 1.4 0.0 0.0 0.0 1.4 0.0 0.0 0.0 1.4 0.0 0.0 1.4 0.0 0.0 1.4 0.0 0.0 1.4 0.0 0.0 1.4 0.0 0.0 1.4 0.0 0.0 1.4 0.0 0.0 1.4 0.0 0.0 2.7 0.0 0.0 2.7 0.0 0.0 2.7 0.0 0.0 2.7 0.0 0.0 2.7 0.0 0.0 1.5 0.0 0.0 2.7 0.0 0.0 1.0 0.0 0.0 1.0 0.0 <td< td=""><td>Uniform Delay (d), s/veh</td><td></td><td></td><td></td><td>0.0</td><td></td><td></td><td></td><td></td></td<>	Uniform Delay (d), s/veh				0.0				
Sile BackOfQ(50%),veh/ln 4.1 14.6 1.4 0.0 0.0 1.4 nGrp Delay(d),s/veh 15.0 32.1 3.1 0.0 0.0 2.7 nGrp LOS B C A A A pproach Vol, veh/h 1164 1138 1653 pproach Delay, s/veh 24.0 3.1 2.7 pproach LOS C A A imer 1 2 3 4 5 6 7 8 ssigned Phs 2 6 8 8 8 9 40.1	Incr Delay (d2), s/veh	0.2	11.7	0.7	0.0	0.0	0.3		
nGrp Delay(d),s/veh 15.0 32.1 3.1 0.0 0.0 2.7 nGrp LOS B C A A pproach Vol, veh/h 1164 1138 1653 pproach Delay, s/veh 24.0 3.1 2.7 pproach LOS C A A imer 1 2 3 4 5 6 7 8 ssigned Phs 2 6 8 hs Duration (G+Y+Rc), s 39.9 39.9 40.1 thange Period (Y+Rc), s 4.0 4.0 flax Green Setting (Gmax), s 28.0 28.0 44.0 flax Q Clear Time (g_c+I1), s 5.1 5.6 32.2 freen Ext Time (p_c), s 18.8 18.5 3.8 intersection Summary	Initial Q Delay(d3),s/veh		0.0		0.0				
### B C A A	%ile BackOfQ(50%),veh/ln		14.6		0.0	0.0			
nGrp LOS B C A A pproach Vol, veh/h 1164 1138 1653 pproach Delay, s/veh 24.0 3.1 2.7 pproach LOS C A A imer 1 2 3 4 5 6 7 8 ssigned Phs 2 6 8 8 8 9.9 40.1 4.0 <t< td=""><td>LnGrp Delay(d),s/veh</td><td>15.0</td><td></td><td>3.1</td><td>0.0</td><td>0.0</td><td>2.7</td><td></td><td></td></t<>	LnGrp Delay(d),s/veh	15.0		3.1	0.0	0.0	2.7		
pproach Delay, s/veh 24.0 3.1 2.7 pproach LOS C A A A imer 1 2 3 4 5 6 7 8 ssigned Phs 2 6 8 hs Duration (G+Y+Rc), s 39.9 39.9 40.1 change Period (Y+Rc), s 4.0 4.0 4.0 dax Green Setting (Gmax), s 28.0 28.0 44.0 dax Q Clear Time (g_c+l1), s 5.1 5.6 32.2 ireen Ext Time (p_c), s 18.8 18.5 3.8 intersection Summary	LnGrp LOS	В	С	Α			Α		
pproach Delay, s/veh 24.0 3.1 2.7 pproach LOS C A A A imer 1 2 3 4 5 6 7 8 ssigned Phs 2 6 8 hs Duration (G+Y+Rc), s 39.9 39.9 40.1 change Period (Y+Rc), s 4.0 4.0 4.0 lax Green Setting (Gmax), s 28.0 28.0 44.0 lax Q Clear Time (g_c+I1), s 5.1 5.6 32.2 sreen Ext Time (p_c), s 18.8 18.5 3.8 httersection Summary	Approach Vol, veh/h	1164		1138			1653		
imer 1 2 3 4 5 6 7 8 ssigned Phs 2 6 8 hs Duration (G+Y+Rc), s 39.9 40.1 hange Period (Y+Rc), s 4.0 4.0 hax Green Setting (Gmax), s 28.0 28.0 hax Q Clear Time (g_c+I1), s 5.1 5.6 hareen Ext Time (p_c), s 18.8 18.5 hatersection Summary	Approach Delay, s/veh	24.0		3.1					
ssigned Phs 2 6 8 hs Duration (G+Y+Rc), s 39.9 39.9 40.1 hange Period (Y+Rc), s 4.0 4.0 4.0 lax Green Setting (Gmax), s 28.0 28.0 44.0 lax Q Clear Time (g_c+l1), s 5.1 5.6 32.2 Green Ext Time (p_c), s 18.8 18.5 3.8 Intersection Summary	Approach LOS	С		Α			Α		
ssigned Phs 2 6 8 hs Duration (G+Y+Rc), s 39.9 39.9 40.1 change Period (Y+Rc), s 4.0 4.0 4.0 dax Green Setting (Gmax), s 28.0 28.0 44.0 dax Q Clear Time (g_c+l1), s 5.1 5.6 32.2 Green Ext Time (p_c), s 18.8 18.5 3.8 attersection Summary	Timer	1	2	3	4	5	6	7 8	
hs Duration (G+Y+Rc), s 39.9 40.1 hange Period (Y+Rc), s 4.0 4.0 4.0 dax Green Setting (Gmax), s 28.0 28.0 44.0 dax Q Clear Time (g_c+l1), s 5.1 5.6 32.2 Green Ext Time (p_c), s 18.8 18.5 3.8 httersection Summary	Assigned Phs						6		
change Period (Y+Rc), s 4.0 4.0 4.0 chax Green Setting (Gmax), s 28.0 28.0 44.0 chax Q Clear Time (g_c+l1), s 5.1 5.6 32.2 circen Ext Time (p_c), s 18.8 18.5 3.8 Intersection Summary									
flax Green Setting (Gmax), s 28.0 44.0 flax Q Clear Time (g_c+l1), s 5.1 5.6 32.2 freen Ext Time (p_c), s 18.8 18.5 3.8 htersection Summary									
lax Q Clear Time (g_c+l1), s 5.1 5.6 32.2 sireen Ext Time (p_c), s 18.8 18.5 3.8 ntersection Summary									
ireen Ext Time (p_c), s 18.8 18.5 3.8 Itersection Summary									
	Green Ext Time (p_c), s								
	Intersection Summary								
	HCM 2010 Ctrl Delay			9.1					
J	HCM 2010 LOS								

	ᄼ	→	\rightarrow	•	←	•	•	†	/	>	ţ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ň	4	7					ተተተ	7	ሻሻ	ተተተ	
Volume (vph)	352	0	569	0	0	0	0	1242	415	386	1229	0
Ideal Flow (vphpl)	1700	1800	1800	1800	1800	1800	1800	1800	1800	1600	1800	1800
Storage Length (ft)	0		350	0		0	0		0	300		0
Storage Lanes	1		1	0		0	0		1	2		0
Taper Length (ft)	120			60			60			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		722			861			873			429	
Travel Time (s)		16.4			19.6			13.2			6.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)	10%		47%									
Turn Type	Perm	NA	Perm					NA	Perm	Prot	NA	
Protected Phases		4						2		1	6	
Permitted Phases	4		4						2			
Detector Phase	4	4	4					2	2	1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0					4.0	4.0	4.0	4.0	
Minimum Split (s)	20.0	20.0	20.0					20.0	20.0	8.0	20.0	
Total Split (s)	30.0	30.0	30.0					30.0	30.0	20.0	50.0	
Total Split (%)	37.5%	37.5%	37.5%					37.5%	37.5%	25.0%	62.5%	
Yellow Time (s)	3.5	3.5	3.5					3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5	0.5					0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0					0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0					4.0	4.0	4.0	4.0	
Lead/Lag								Lead	Lead	Lag		
Lead-Lag Optimize?								Yes	Yes	Yes		
Recall Mode	None	None	None					C-Max	C-Max	None	C-Max	

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 55

Control Type: Actuated-Coordinated

Splits and Phases: 6: Cherry Av. & I-10 EB Ramps



	۶	→	•	•	←	•	1	†	<i>></i>	/	ţ	4
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻ	4	7					ተተተ	7	14.54	ተተተ	
Volume (veh/h)	352	0	569	0	0	0	0	1242	415	386	1229	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1765	1765				0	1765	1765	1569	1765	0
Adj Flow Rate, veh/h	247	0	732				0	1307	437	406	1294	0
Adj No. of Lanes	1	0	2				0	3	1	2	3	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	449	0	848				0	1721	488	724	3268	0
Arrive On Green	0.28	0.00	0.28				0.00	0.32	0.32	0.48	1.00	0.00
Sat Flow, veh/h	1587	0	3000				0	5294	1500	2988	5294	0
Grp Volume(v), veh/h	247	0	732				0	1307	437	406	1294	0
Grp Sat Flow(s), veh/h/ln	1587	0	1500				0	1765	1500	1494	1765	0
Q Serve(g_s), s	10.6	0.0	18.5				0.0	17.7	22.2	7.7	0.0	0.0
Cycle Q Clear(g_c), s	10.6	0.0	18.5				0.0	17.7	22.2	7.7	0.0	0.0
Prop In Lane	1.00	0	1.00				0.00	1701	1.00	1.00	22/0	0.00
Lane Grp Cap(c), veh/h	449	0	848				0	1721	488	724	3268	0
V/C Ratio(X)	0.55	0.00	0.86				0.00	0.76	0.90	0.56	0.40	0.00
Avail Cap(c_a), veh/h	516	1.00	975				1.00	1721	488	724	3268	1.00
HCM Platoon Ratio	1.00 1.00	1.00	1.00 1.00				1.00	1.00 1.00	1.00 1.00	2.00 1.00	2.00 1.00	1.00
Upstream Filter(I) Uniform Delay (d), s/veh	24.4	0.00	27.2				0.00	24.2	25.7	17.6	0.0	0.00
Incr Delay (d2), s/veh	1.1	0.0	7.3				0.0	3.2	21.8	17.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.4	0.0
%ile BackOfQ(50%),veh/ln	4.7	0.0	8.5				0.0	9.1	12.1	3.3	0.0	0.0
LnGrp Delay(d),s/veh	25.4	0.0	34.5				0.0	27.4	47.5	18.6	0.1	0.0
LnGrp LOS	23.4 C	0.0	34.5 C				0.0	27.4 C	47.5 D	В	Α	0.0
	C	979	C					1744	D	D	1700	
Approach Vol, veh/h Approach Delay, s/veh		32.2						32.4			4.7	
Approach LOS		32.2 C						32.4 C			4.7 A	
•••	_						_				Α	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	20.0		4		6						
Phs Duration (G+Y+Rc), s	23.4	30.0		26.6		53.4						
Change Period (Y+Rc), s	4.0	4.0		4.0		4.0						
Max Green Setting (Gmax), s	16.0	26.0		26.0		46.0						
Max Q Clear Time (g_c+l1), s	9.7	24.2		20.5		2.0						
Green Ext Time (p_c), s	4.5	1.5		2.1		14.0						
Intersection Summary												
HCM 2010 Ctrl Delay			21.7									
HCM 2010 LOS			С									
Notes												
User approved volume balanci	ing amor	ng the lan	es for turr	ning move	ement.							

TEC Traffic Impact Analysis C:\TRAMES\0255-0001\Synchro\06 - EP AM.syn

Trames Solutions, Inc. Synchro 8 Report

	•	→	•	•	\	1		
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations		↑	↑		W			
Volume (vph)	32	195	315	0	0	4		
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800		
Link Speed (mph)		30	30		30			
Link Distance (ft)		331	684		288			
Travel Time (s)		7.5	15.5		6.5			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95		
Shared Lane Traffic (%)								
Sign Control		Free	Free		Stop			
Intersection Summary								
Area Type:	Other							
Control Type: Unsignalized								

Intersection								
Int Delay, s/veh	0.5							
Movement	EBL	EBT			WBT	WBR	SBL	SBR
Vol, veh/h	32	195			315	0	0	4
Conflicting Peds, #/hr	0	0			0	0	0	0
Sign Control	Free	Free			Free	Free	Stop	Stop
RT Channelized	-	None			-	None	'-	None
Storage Length	-	-			-	-	0	-
Veh in Median Storage, #	# -	0			0	-	0	-
Grade, %	-	0			0	-	0	-
Peak Hour Factor	95	95			95	95	95	95
Heavy Vehicles, %	2	2			2	2	2	2
Mvmt Flow	34	205			332	0	0	4
Major/Minor	Major1				Major2		Minor2	
Conflicting Flow All	332	0			- Iviajoiz	0	605	332
Stage 1	- 332	-				-	332	- 332
Stage 2		_			_	_	273	_
Critical Hdwy	4.12	_			_	_	6.42	6.22
Critical Hdwy Stg 1		_			_	_	5.42	-
Critical Hdwy Stg 2	-	_			_	_	5.42	-
Follow-up Hdwy	2.218	-			_	-	3.518	3.318
Pot Cap-1 Maneuver	1227	-			_	-	461	710
Stage 1	-	-			_	-	727	-
Stage 2	-	_			-	-	773	-
Platoon blocked, %		-			-	-		
Mov Cap-1 Maneuver	1227	-			-	-	447	710
Mov Cap-2 Maneuver	-	-			_	-	447	-
Stage 1	-	-			-	-	727	-
Stage 2	-	-			-	-	749	-
Approach	EB				WB		SB	
HCM Control Delay, s	1.1				0		10.1	
HCM LOS	1.1						В	
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR SBLn	1			
Capacity (veh/h)	1227	-	-	- 71				
HCM Lane V/C Ratio	0.027	_	_	- 0.00				
HCM Control Delay (s)	8	0	_	- 10.				
HCM Lane LOS	A	A	_		В			
HCM 95th %tile Q(veh)	0.1	-	-		0			
1101VI 73111 /01110 (VCII)	0.1	-	-	-	U			

	•	→	•	•	\	1		
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations	LDL	<u> </u>		WDIX	₩.	JUIN		
Volume (vph)	11	184	314	2	0	1		
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800		
Link Speed (mph)		30	30		30			
Link Distance (ft)		684	436		304			
Travel Time (s)		15.5	9.9		6.9			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95		
Shared Lane Traffic (%)								
Sign Control		Free	Free		Stop			
Intersection Summary								
Area Type:	Other							
Control Type: Unsignalized								

Intersection								
Int Delay, s/veh	0.2							
Movement	EBL	EBT			WBT	WBR	SBL	SBR
Vol, veh/h	11	184			314	2	0	1
Conflicting Peds, #/hr	0	0			0	0	0	0
Sign Control	Free	Free			Free	Free	Stop	Stop
RT Channelized	-	None			-	None	-	None
Storage Length	-	-			-	-	0	-
Veh in Median Storage, #	# -	0			0	-	0	-
Grade, %	-	0			0	-	0	-
Peak Hour Factor	95	95			95	95	95	95
Heavy Vehicles, %	2	2			2	2	2	2
Mvmt Flow	12	194			331	2	0	1
Major/Minor	Major1				Major2		Minor2	
Conflicting Flow All	333	0			iviajoi 2	0	549	332
Stage 1	- 333	-				-	332	- 332
Stage 2		_			_	_	217	_
Critical Hdwy	4.12	_			_	_	6.42	6.22
Critical Hdwy Stg 1		_			_	_	5.42	-
Critical Hdwy Stg 2	_	_			_	_	5.42	_
Follow-up Hdwy	2.218	-			_	_	3.518	3.318
Pot Cap-1 Maneuver	1226	_			_	_	497	710
Stage 1	-	-			_	-	727	-
Stage 2	-	_			-	-	819	-
Platoon blocked, %		-			-	-		
Mov Cap-1 Maneuver	1226	-			-	-	492	710
Mov Cap-2 Maneuver	-	-			-	-	492	-
Stage 1	-	-			-	-	727	-
Stage 2	-	-			-	-	810	-
<u> </u>								
Approach	EB				WB		SB	
HCM Control Delay, s	0.4				0		10.1	
HCM LOS	0.7				0		В	
TOM LOO								
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR SBLn	1			
Capacity (veh/h)	1226	-	- 100	- 71				
HCM Lane V/C Ratio	0.009	-	-	- 0.00				
HCM Control Delay (s)	8	0	-	- 10.				
HCM Lane LOS	A	A	-		В			
HCM 95th %tile Q(veh)	0	-	-		0			
1101VI 73111 701110 (VCII)	U	-	-	-	U			

	•	→	•	•	←	•	4	†	<i>></i>	>	ļ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		ની	7		ની	7	ሻ	^	7	ሻ	^	7
Volume (vph)	0	0	0	99	0	173	0	1246	166	209	804	0
Ideal Flow (vphpl)	1800	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Storage Length (ft)	0		0	0		130	270		0	60		275
Storage Lanes	0		1	0		0	1		1	1		1
Taper Length (ft)	60			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			40			50			40	
Link Distance (ft)		506			600			1582			1080	
Travel Time (s)		13.8			10.2			21.6			18.4	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Turn Type			Perm	Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4		8	8		5	2		1	6	
Permitted Phases	4		4			8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	8.0	20.0	20.0	8.0	20.0	20.0
Total Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	8.0	28.0	28.0	12.0	32.0	32.0
Total Split (%)	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	10.0%	35.0%	35.0%	15.0%	40.0%	40.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max

Area Type: Other

Cycle Length: 80

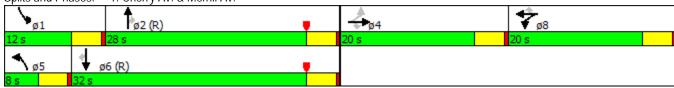
Actuated Cycle Length: 80

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 90

Control Type: Actuated-Coordinated

Splits and Phases: 1: Cherry Av. & Merrill Av.



	۶	→	•	•	←	•	4	†	<u> </u>	/	Ţ	√
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4	7		ર્ન	7	ሻ	44	7	ሻ	^	7
Volume (veh/h)	0	0	0	99	0	173	0	1246	166	209	804	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1800	1765	1765	1700	1765	1765	1667	1765	1765	1667	1765	1765
Adj Flow Rate, veh/h	0	0	0	105	0	184	0	1326	177	222	855	0
Adj No. of Lanes	0	1	1	0	1	1	1	2	1	1	2	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	2	2	251	0	224	2	2120	901	159	2649	1126
Arrive On Green	0.00	0.00	0.00	0.15	0.00	0.15	0.00	0.60	0.60	0.10	0.75	0.00
Sat Flow, veh/h	0	1765	1500	1681	0	1500	1587	3529	1500	1587	3529	1500
Grp Volume(v), veh/h	0	0	0	105	0	184	0	1326	177	222	855	0
Grp Sat Flow(s), veh/h/ln	0	1765	1500	1681	0	1500	1587	1765	1500	1587	1765	1500
Q Serve(g_s), s	0.0	0.0	0.0	4.5	0.0	9.5	0.0	19.2	4.3	8.0	6.4	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	4.5	0.0	9.5	0.0	19.2	4.3	8.0	6.4	0.0
Prop In Lane	0.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	0	2	2	251	0	224	2	2120	901	159	2649	1126
V/C Ratio(X)	0.00	0.00	0.00	0.42	0.00	0.82	0.00	0.63	0.20	1.40	0.32	0.00
Avail Cap(c_a), veh/h	0	353	300	336	0	300	79	2120	901	159	2649	1126
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	30.9	0.0	33.0	0.0	10.2	7.2	36.0	3.3	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	1.1	0.0	12.5	0.0	1.4	0.5	212.9	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	2.2	0.0	4.7	0.0	9.6	1.9	12.9	3.2	0.0
LnGrp Delay(d),s/veh	0.0	0.0	0.0	32.0	0.0	45.5	0.0	11.6	7.7	248.9	3.6	0.0
LnGrp LOS				С		D		В	Α	F	Α	
Approach Vol, veh/h		0			289			1503			1077	
Approach Delay, s/veh		0.0			40.6			11.2			54.2	
Approach LOS		0.0			D			В			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.0	52.0		0.0	0.0	64.0		16.0				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	8.0	24.0		16.0	4.0	28.0		16.0				
Max Q Clear Time (g_c+l1), s	10.0	21.2		0.0	0.0	8.4		11.5				
Green Ext Time (p_c), s	0.0	2.5		0.0	0.0	14.4		0.5				
Intersection Summary												
HCM 2010 Ctrl Delay			30.3									
HCM 2010 LOS			С									

	۶	→	•	•	←	•	4	†	/	>	ļ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		र्स	7		ર્ન	7	*	ተተተ		7	ተተተ	7
Volume (vph)	11	4	23	174	0	111	9	1327	156	111	831	4
Ideal Flow (vphpl)	1700	1800	1800	1800	1800	1800	1700	1800	1800	1700	1800	1800
Storage Length (ft)	0		0	0		50	260		0	70		200
Storage Lanes	0		1	0		1	1		0	1		1
Taper Length (ft)	60			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		589			331			2702			1062	
Travel Time (s)		13.4			7.5			36.8			14.5	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						6
Detector Phase	4	4	4	8	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	8.0	20.0		8.0	20.0	20.0
Total Split (s)	22.0	22.0	22.0	22.0	22.0	22.0	8.0	41.0		17.0	50.0	50.0
Total Split (%)	27.5%	27.5%	27.5%	27.5%	27.5%	27.5%	10.0%	51.3%		21.3%	62.5%	62.5%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		4.0	4.0		4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	C-Max

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 23 (29%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 55

Control Type: Actuated-Coordinated

Splits and Phases: 2: Cherry Av. & Randall Av.



		→	•	•	—	•	•	†	~	/	+	✓
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4	7		र्स	7	ሻ	ተተተ		ሻ	ተተተ	7
Volume (veh/h)	11	4	23	174	0	111	9	1327	156	111	831	4
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	1700	1765	1765	1800	1765	1765	1667	1765	1800	1667	1765	1765
Adj Flow Rate, veh/h	12	4	25	191	0	122	10	1458	171	122	913	4
Adj No. of Lanes	0	1	1	0	1	1	1	3	0	1	3	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	79	15	338	90	0	338	16	2466	289	151	3256	923
Arrive On Green	0.22	0.22	0.22	0.22	0.00	0.22	0.02	1.00	1.00	0.09	0.62	0.62
Sat Flow, veh/h	0	65	1500	0	0	1500	1587	4653	545	1587	5294	1500
Grp Volume(v), veh/h	16	0	25	191	0	122	10	1106	523	122	913	4
Grp Sat Flow(s),veh/h/ln	65	0	1500	0	0	1500	1587	1765	1668	1587	1765	1500
Q Serve(g_s), s	0.0	0.0	1.1	0.0	0.0	5.5	0.5	0.0	0.0	6.0	6.4	0.1
Cycle Q Clear(g_c), s	18.0	0.0	1.1	18.0	0.0	5.5	0.5	0.0	0.0	6.0	6.4	0.1
Prop In Lane	0.75		1.00	1.00		1.00	1.00		0.33	1.00		1.00
Lane Grp Cap(c), veh/h	93	0	338	90	0	338	16	1871	884	151	3256	923
V/C Ratio(X)	0.17	0.00	0.07	2.12	0.00	0.36	0.63	0.59	0.59	0.81	0.28	0.00
Avail Cap(c_a), veh/h	93	0	338	90	0	338	79	1871	884	258	3256	923
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.68	0.68	0.68	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.1	0.0	24.4	40.0	0.0	26.2	39.1	0.0	0.0	35.5	7.2	5.9
Incr Delay (d2), s/veh	0.9	0.0	0.1	540.3	0.0	0.7	25.1	0.9	2.0	9.8	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.4	15.5	0.0	2.3	0.3	0.2	0.5	3.1	3.2	0.0
LnGrp Delay(d),s/veh	27.0	0.0	24.5	580.3	0.0	26.8	64.2	0.9	2.0	45.3	7.4	6.0
LnGrp LOS	С		С	F		С	Е	Α	Α	D	Α	Α
Approach Vol, veh/h		41			313			1639			1039	
Approach Delay, s/veh		25.5			364.6			1.7			11.8	
Approach LOS		С			F			А			В	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.6	46.4		22.0	4.8	53.2		22.0				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	13.0	37.0		18.0	4.0	46.0		18.0				
Max Q Clear Time (g_c+l1), s	8.0	2.0		20.0	2.5	8.4		20.0				
Green Ext Time (p_c), s	0.1	23.0		0.0	0.0	24.1		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			42.9									
HCM 2010 LOS			D									

	•	→	•	•	←	•	4	†	/	>	ţ	✓
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻ	^	7	ሻ	ħβ		ሻ	ተተኈ		ሻ	ተተተ	7
Volume (vph)	291	601	152	72	147	83	58	965	125	99	848	264
Ideal Flow (vphpl)	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Storage Length (ft)	300		285	50		0	220		0	210		300
Storage Lanes	1		1	1		0	1		0	1		1
Taper Length (ft)	60			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		555			705			459			2702	
Travel Time (s)		12.6			16.0			6.3			36.8	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases			4									6
Detector Phase	7	4	4	3	8		5	2		1	6	7
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	8.0	20.0	20.0	8.0	20.0		8.0	20.0		8.0	20.0	8.0
Total Split (s)	23.0	30.0	30.0	13.0	20.0		10.0	25.0		12.0	27.0	23.0
Total Split (%)	28.8%	37.5%	37.5%	16.3%	25.0%		12.5%	31.3%		15.0%	33.8%	28.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5		0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	None

Area Type: Other

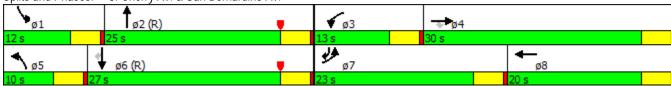
Cycle Length: 80

Actuated Cycle Length: 80

Offset: 46 (58%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 70





Lane Configurations		۶	→	•	•	←	•	1	†	<i>></i>	/	+	✓
Volume (vel/h) Volume	Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL		NBR	SBL	SBT	SBR
Volume (vel/h) Volume	Lane Configurations		^	7	ነ	∱β		ሻ	↑ ↑₽		ሻ	ተተተ	7
Initial Q (Qb), veh	Volume (veh/h)	291	601	152	72	147	83	58		125	99		264
Ped-Bike Adj(A_pbT)	Number	7	4	14	3	8	18	5	2	12	1	6	16
Parking Bus, Adj	Initial Q (Qb), veh		0			0			0			0	
Adj Saí Flow, veh/h/ln 1667 1765 1765 1667 1765 1800 1667 1765 1800 1667 1765 1800 1667 1765 1765 1765 1765 1765 1765 1765	3												
Adj Flow Rate, veh/h Adj Flow Rate, veh/h Adj No. of Lanes 1 2 1 1 2 0 1 3 0 1 3 0 1 3 1 109 932 290 Adj No. of Lanes 1 2 1 1 2 0 1 1 3 0 1 3 1 1 3 1 1 Percak Hour Factor 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91	Parking Bus, Adj												
Adj No. of Lanes	,												
Peak Hour Factor 0.91	•			0	79						109		290
Percent Heavy Veh, % 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Adj No. of Lanes			-							· · · · · · · · · · · · · · · · · · ·		
Cap, veh/h Cap, v													
Arrive On Green 0.22 0.31 0.00 0.06 0.14 0.14 0.05 0.35 0.35 0.11 0.51 0.51 Sat Flow, veh/h 1587 3529 1500 1587 2169 1156 1587 4596 593 1587 5294 1500 Grp Vat Flow(s), veh/h/h 320 660 0 79 130 123 64 814 383 109 932 290 Grp Sat Flow(s), veh/h/h/ln 1587 1765 1501 1587 1765 1561 1587 1765 1660 1587 1765 150 1587 1765 1561 1587 1765 1660 1587 1765 150 5.8 3.2 15.6 15.6 5.4 9.0 6.5 Cycle Q Clear(g_c), s 15.7 12.8 0.0 3.9 5.5 5.8 3.2 15.6 15.6 5.4 9.0 6.5 Prop In Lane 1.00 1.00 1.00													
Sat Flow, veh/h 1587 3529 1500 1587 2169 1156 1587 4596 593 1587 5294 1500 Grp Volume(v), veh/h 320 660 0 79 130 123 64 814 383 109 932 290 Grp Sat Flow(s), veh/h/In 1587 1765 1500 1587 1765 1561 1587 1765 1660 1587 1765 1500 Q Serve(g_s), s 15.7 12.8 0.0 3.9 5.5 5.8 3.2 15.6 15.6 5.4 9.0 6.5 Cycle Q Clear(g_c), s 15.7 12.8 0.0 3.9 5.5 5.8 3.2 15.6 15.6 5.4 9.0 6.5 Prop In Lane 1.00 1.00 1.00 0.74 1.00 0.36 1.00 1.00 VC Ratio(X) 0.90 0.61 0.00 0.81 0.51 0.55 0.82 0.66 0.66 0.6													
Gry Volume(v), veh/h 320 660 0 79 130 123 64 814 383 109 932 290 Grp Sat Flow(s),veh/h/ln 1587 1765 1500 1587 1765 1561 1587 1765 1660 1587 1765 1500 O Serve(g_s), s 15.7 12.8 0.0 3.9 5.5 5.8 3.2 15.6 15.6 5.4 9.0 6.5 Cycle O Clear(g_c), s 15.7 12.8 0.0 3.9 5.5 5.8 3.2 15.6 15.6 5.4 9.0 6.5 Cycle O Clear(g_c), s 15.7 12.8 0.0 3.9 5.5 5.8 3.2 15.6 15.6 5.4 9.0 6.5 Cycle O Clear(g_c), s 15.7 12.8 0.0 3.9 5.5 5.8 3.2 15.6 15.6 5.4 9.0 6.5 Open Collegion 3.0 3.7 1.00 1.00 1.00 1.0													
Grp Sat Flow(s),veh/h/ln				1500		2169		1587					
Q Serve(g_s), s 15.7 12.8 0.0 3.9 5.5 5.8 3.2 15.6 15.6 5.4 9.0 6.5 Cycle Q Clear(g_c), s 15.7 12.8 0.0 3.9 5.5 5.8 3.2 15.6 15.6 5.4 9.0 6.5 Prop In Lane 1.00 1.00 1.00 0.74 1.00 0.36 1.00 1.00 Lane Grp Cap(c), veh/h 354 1078 458 98 255 225 78 1231 579 133 2030 910 V/C Ratio(X) 0.90 0.61 0.00 0.81 0.51 0.55 0.66 0.66 0.60 0.60 0.82 0.46 0.32 Avail Cap(c_a), veh/h 377 1147 488 179 353 312 119 1231 579 159 2030 910 HCM Platoon Ratio 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00<													
Cycle Q Clear(g_c), s 15.7 12.8 0.0 3.9 5.5 5.8 3.2 15.6 15.6 5.4 9.0 6.5 Prop In Lane 1.00 1.00 1.00 0.74 1.00 0.36 1.00 1.00 Lane Grp Cap(c), veh/h 354 1078 458 98 255 225 78 1231 579 133 2030 910 V/C Ratio(X) 0.90 0.61 0.00 0.81 0.51 0.55 0.82 0.66 0.66 0.82 0.46 0.32 Avail Cap(c_a), veh/h 377 1147 488 179 353 312 119 1231 579 159 2030 910 HCM Platoon Ratio 1.00<	Grp Sat Flow(s),veh/h/ln												
Prop In Lane 1.00 1.00 1.00 0.74 1.00 0.36 1.00 1.00 Lane Grp Cap(c), veh/h 354 1078 458 98 255 225 78 1231 579 133 2030 910 V/C Ratio(X) 0.90 0.61 0.00 0.81 0.51 0.55 0.82 0.66 0.66 0.82 0.46 0.32 Avail Cap(c_a), veh/h 377 1147 488 179 353 312 119 1231 579 159 2030 910 HCM Platoon Ratio 1.00	Q Serve(g_s), s												
Lane Grp Cap(c), veh/h 354 1078 458 98 255 225 78 1231 579 133 2030 910 V/C Ratio(X) 0.90 0.61 0.00 0.81 0.51 0.55 0.82 0.66 0.66 0.82 0.46 0.32 Avail Cap(c_a), veh/h 377 1147 488 179 353 312 119 1231 579 159 2030 910 HCM Platoon Ratio 1.00	Cycle Q Clear(g_c), s		12.8			5.5			15.6			9.0	
V/C Ratio(X) 0.90 0.61 0.00 0.81 0.51 0.55 0.82 0.66 0.66 0.82 0.46 0.32 Avail Cap(c_a), veh/h 377 1147 488 179 353 312 119 1231 579 159 2030 910 HCM Platoon Ratio 1.00 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>													
Avail Cap(c_a), veh/h 377 1147 488 179 353 312 119 1231 579 159 2030 910 HCM Platoon Ratio 1.00 1.0													
HCM Platoon Ratio 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0													
Upstream Filter(I) 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00 0.98 0.98 0.98 0.98 Uniform Delay (d), s/veh 30.3 23.7 0.0 37.1 31.6 31.8 37.7 22.0 22.1 34.9 14.3 5.9 Incr Delay (d2), s/veh 23.7 0.9 0.0 14.2 1.6 2.1 22.2 2.8 5.9 23.4 0.7 0.9 Initial Q Delay(d3),s/veh 0.0													
Uniform Delay (d), s/veh 30.3 23.7 0.0 37.1 31.6 31.8 37.7 22.0 22.1 34.9 14.3 5.9 Incr Delay (d2), s/veh 23.7 0.9 0.0 14.2 1.6 2.1 22.2 2.8 5.9 23.4 0.7 0.9 Initial Q Delay(d3),s/veh 0.0 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>													
Incr Delay (d2), s/veh 23.7 0.9 0.0 14.2 1.6 2.1 22.2 2.8 5.9 23.4 0.7 0.9 Initial Q Delay(d3),s/veh 0.0 <td></td>													
Initial Q Delay(d3),s/veh 0.0 <td></td>													
%ile BackOfQ(50%),veh/ln 9.2 6.4 0.0 2.1 2.8 2.7 1.9 8.0 8.1 3.2 4.5 2.9 LnGrp Delay(d),s/veh 54.0 24.6 0.0 51.3 33.2 33.8 59.9 24.8 27.9 58.3 15.0 6.9 LnGrp LOS D C C E C C E B A Approach Vol, veh/h 980 332 1261 1331 Approach Delay, s/veh 34.2 37.7 27.6 16.8 Approach LOS C D C B Timer 1 2 3 4 5 6 7 8 Assigned Phs 1 2 3 4 5 6 7 8 Phs Duration (G+Y+Rc), s 10.7 31.9 8.9 28.4 7.9 34.7 21.8 15.5 Change Period (Y+Rc), s 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0													
LnGrp Delay(d),s/veh 54.0 24.6 0.0 51.3 33.2 33.8 59.9 24.8 27.9 58.3 15.0 6.9 LnGrp LOS D C D C E C C E B A Approach Vol, veh/h 980 332 1261 1331 1331 1331 1331 1331 143													
LnGrp LOS D C D C C E C C E B A Approach Vol, veh/h 980 332 1261 1331 Approach Delay, s/veh 34.2 37.7 27.6 16.8 Approach LOS C D C B Timer 1 2 3 4 5 6 7 8 Assigned Phs 1 2 3 4 5 6 7 8 Phs Duration (G+Y+Rc), s 10.7 31.9 8.9 28.4 7.9 34.7 21.8 15.5 Change Period (Y+Rc), s 4.0 4.0 4.0 4.0 4.0 4.0 4.0													
Approach Vol, veh/h 980 332 1261 1331 Approach Delay, s/veh 34.2 37.7 27.6 16.8 Approach LOS C D C B Timer 1 2 3 4 5 6 7 8 Assigned Phs 1 2 3 4 5 6 7 8 Phs Duration (G+Y+Rc), s 10.7 31.9 8.9 28.4 7.9 34.7 21.8 15.5 Change Period (Y+Rc), s 4.0 4.0 4.0 4.0 4.0 4.0 4.0				0.0									
Approach Delay, s/veh 34.2 37.7 27.6 16.8 Approach LOS C D C B Timer 1 2 3 4 5 6 7 8 Assigned Phs 1 2 3 4 5 6 7 8 Phs Duration (G+Y+Rc), s 10.7 31.9 8.9 28.4 7.9 34.7 21.8 15.5 Change Period (Y+Rc), s 4.0 4.0 4.0 4.0 4.0 4.0 4.0		D			D		С	Ł		С	Ł		A
Approach LOS C D C B Timer 1 2 3 4 5 6 7 8 Assigned Phs 1 2 3 4 5 6 7 8 Phs Duration (G+Y+Rc), s 10.7 31.9 8.9 28.4 7.9 34.7 21.8 15.5 Change Period (Y+Rc), s 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0													
Timer 1 2 3 4 5 6 7 8 Assigned Phs 1 2 3 4 5 6 7 8 Phs Duration (G+Y+Rc), s 10.7 31.9 8.9 28.4 7.9 34.7 21.8 15.5 Change Period (Y+Rc), s 4.0 4.0 4.0 4.0 4.0 4.0													
Assigned Phs 1 2 3 4 5 6 7 8 Phs Duration (G+Y+Rc), s 10.7 31.9 8.9 28.4 7.9 34.7 21.8 15.5 Change Period (Y+Rc), s 4.0 4.0 4.0 4.0 4.0 4.0 4.0	Approach LOS		С			D			С			В	
Phs Duration (G+Y+Rc), s 10.7 31.9 8.9 28.4 7.9 34.7 21.8 15.5 Change Period (Y+Rc), s 4.0 4.0 4.0 4.0 4.0 4.0 4.0	Timer												
Change Period (Y+Rc), s 4.0 4.0 4.0 4.0 4.0 4.0 4.0													
May Croon Sotting (Cmay) s 20 210 00 260 60 220 100 160		4.0	4.0	4.0	4.0	4.0	4.0	4.0					
	Max Green Setting (Gmax), s	8.0	21.0	9.0	26.0	6.0	23.0	19.0	16.0				
	Max Q Clear Time (g_c+I1), s												
Green Ext Time (p_c), s 0.0 3.0 0.0 4.6 0.0 9.4 0.1 3.7	Green Ext Time (p_c), s	0.0	3.0	0.0	4.6	0.0	9.4	0.1	3.7				
Intersection Summary	Intersection Summary												
HCM 2010 Ctrl Delay 26.4	HCM 2010 Ctrl Delay			26.4									
HCM 2010 LOS C	HCM 2010 LOS			С									

	•	→	•	•	←	•	1	†	<i>></i>	>	ţ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	44	^	7	44	↑ ↑		1,4	^	7	¥	† †	7
Volume (vph)	200	710	324	344	263	97	301	921	484	141	987	69
Ideal Flow (vphpl)	1600	1800	1800	1600	1800	1800	1600	1800	1800	1700	1800	1800
Storage Length (ft)	250		160	250		0	420		220	170		0
Storage Lanes	2		1	2		0	2		0	1		1
Taper Length (ft)	120			120			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		845			1019			968			718	
Travel Time (s)		19.2			23.2			13.2			9.8	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Shared Lane Traffic (%)												
Turn Type	Prot	NA	pm+ov	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4	5	3	8		5	2		1	6	
Permitted Phases			4						2			6
Detector Phase	7	4	5	3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	20.0	8.0	8.0	20.0		8.0	20.0	20.0	8.0	20.0	20.0
Total Split (s)	14.0	22.0	13.0	14.0	22.0		13.0	31.0	31.0	13.0	31.0	31.0
Total Split (%)	17.5%	27.5%	16.3%	17.5%	27.5%		16.3%	38.8%	38.8%	16.3%	38.8%	38.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow, Master Intersection

Natural Cycle: 75

Control Type: Actuated-Coordinated

Splits and Phases: 4: Cherry Av. & Valley Blvd.



	•	→	•	•	←	•	•	†	<i>></i>	/	+	✓
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1,1	^	7	ሻሻ	ħβ		ሻሻ	^	7	7	^	7
Volume (veh/h)	200	710	324	344	263	97	301	921	484	141	987	69
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	1569	1765	1765	1569	1765	1800	1569	1765	1765	1667	1765	1765
Adj Flow Rate, veh/h	208	740	338	358	274	101	314	959	504	147	1028	72
Adj No. of Lanes	2	2	1	2	2	0	2	2	1	1	2	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	281	794	506	373	635	228	336	1195	508	177	1191	506
Arrive On Green	0.09	0.22	0.22	0.13	0.26	0.26	0.04	0.11	0.11	0.11	0.34	0.34
Sat Flow, veh/h	2988	3529	1500	2988	2480	892	2988	3529	1500	1587	3529	1500
Grp Volume(v), veh/h	208	740	338	358	193	182	314	959	504	147	1028	72
Grp Sat Flow(s),veh/h/ln	1494	1765	1500	1494	1765	1607	1494	1765	1500	1587	1765	1500
Q Serve(g_s), s	5.4	16.4	15.4	9.5	7.3	7.6	8.4	21.2	26.9	7.3	21.8	2.7
Cycle Q Clear(g_c), s	5.4	16.4	15.4	9.5	7.3	7.6	8.4	21.2	26.9	7.3	21.8	2.7
Prop In Lane	1.00		1.00	1.00		0.56	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	281	794	506	373	452	412	336	1195	508	177	1191	506
V/C Ratio(X)	0.74	0.93	0.67	0.96	0.43	0.44	0.93	0.80	0.99	0.83	0.86	0.14
Avail Cap(c_a), veh/h	373	794	506	373	452	412	336	1195	508	179	1191	506
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.82	0.82	0.82	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.3	30.4	22.7	34.8	24.9	25.0	38.2	32.9	35.4	34.8	24.8	18.4
Incr Delay (d2), s/veh	5.4	17.6	3.3	35.7	0.6	0.7	28.5	4.7	34.2	26.9	8.4	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	10.0	6.9	5.8	3.6	3.5	4.8	11.2	16.0	4.5	12.0	1.2
LnGrp Delay(d),s/veh	40.7	48.0	26.0	70.5	25.5	25.7	66.7	37.7	69.7	61.7	33.2	19.0
LnGrp LOS	D	D	С	Е	С	С	Е	D	E	E	С	В
Approach Vol, veh/h		1286			733			1777			1247	
Approach Delay, s/veh		41.0			47.5			51.9			35.7	
Approach LOS		D			D			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.9	31.1	14.0	22.0	13.0	31.0	11.5	24.5				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	9.0	27.0	10.0	18.0	9.0	27.0	10.0	18.0				
Max Q Clear Time (g_c+l1), s	9.3	28.9	11.5	18.4	10.4	23.8	7.4	9.6				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	2.9	0.2	5.2				
Intersection Summary												
HCM 2010 Ctrl Delay			44.5									
HCM 2010 LOS			D									

	•	•	†	~	-	↓
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	1/4	7	ተተተ	7		1111
Volume (vph)	393	480	1283	399	0	1669
Ideal Flow (vphpl)	1600	1800	1800	1800	1800	1800
Storage Length (ft)	0	0		200	0	
Storage Lanes	2	1		1	0	
Taper Length (ft)	60				60	
Right Turn on Red		Yes		Yes		
Link Speed (mph)	30		45			45
Link Distance (ft)	252		337			968
Travel Time (s)	5.7		5.1			14.7
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Turn Type	Prot	Perm	NA	Free		NA
Protected Phases	8		2			6
Permitted Phases		8		Free		
Detector Phase	8	8	2			6
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0			4.0
Minimum Split (s)	20.0	20.0	20.0			20.0
Total Split (s)	43.0	43.0	37.0			37.0
Total Split (%)	53.8%	53.8%	46.3%			46.3%
Yellow Time (s)	3.5	3.5	3.5			3.5
All-Red Time (s)	0.5	0.5	0.5			0.5
Lost Time Adjust (s)	0.0	0.0	0.0			0.0
Total Lost Time (s)	4.0	4.0	4.0			4.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	C-Max			C-Max

Area Type: Other

Cycle Length: 80

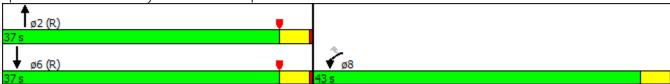
Actuated Cycle Length: 80

Offset: 39 (49%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 40

Control Type: Actuated-Coordinated

Splits and Phases: 5: Cherry Av. & I-10 WB Ramps



	•	•	†	/	\	↓		
Movement	WBL	WBR	NBT	NBR	SBL	SBT		
Lane Configurations	ሻሻ	7	ተተተ	7		1111		
Volume (veh/h)	393	480	1283	399	0	1669		
Number	3	18	2	12	1	6		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1569	1765	1765	1765	0	1765		
Adj Flow Rate, veh/h	414	505	1351	0	0	1757		
Adj No. of Lanes	2	1	3	1	0	4		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	2	2	2	2	0	2		
Cap, veh/h	1128	566	2766	784	0	3688		
Arrive On Green	0.38	0.38	1.00	0.00	0.00	0.17		
Sat Flow, veh/h	2988	1500	5294	1500	0	7059		
Grp Volume(v), veh/h	414	505	1351	0	0	1757		
Grp Sat Flow(s),veh/h/ln	1494	1500	1765	1500	0	1765		
Q Serve(g_s), s	8.0	25.3	0.0	0.0	0.0	18.0		
Cycle Q Clear(g_c), s	8.0	25.3	0.0	0.0	0.0	18.0		
Prop In Lane	1.00	1.00		1.00	0.00			
Lane Grp Cap(c), veh/h	1128	566	2766	784	0	3688		
V/C Ratio(X)	0.37	0.89	0.49	0.00	0.00	0.48		
Avail Cap(c_a), veh/h	1457	731	2766	784	0	3688		
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	0.33		
Jpstream Filter(I)	1.00	1.00	1.00	0.00	0.00	0.53		
Uniform Delay (d), s/veh	18.0	23.4	0.0	0.0	0.0	23.2		
Incr Delay (d2), s/veh	0.2	11.0	0.6	0.0	0.0	0.2		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	3.3	12.1	0.2	0.0	0.0	8.9		
LnGrp Delay(d),s/veh	18.2	34.4	0.6	0.0	0.0	23.5		
LnGrp LOS	В	С	Α			С		
Approach Vol, veh/h	919		1351			1757		
Approach Delay, s/veh	27.1		0.6			23.5		
Approach LOS	С		А			С		
Timer	1	2	3	4	5	6	7 8	
Assigned Phs		2				6	8	
Phs Duration (G+Y+Rc), s		45.8				45.8	34.2	
Change Period (Y+Rc), s		4.0				4.0	4.0	
Max Green Setting (Gmax), s		33.0				33.0	39.0	
Max Q Clear Time (g_c+l1), s		2.0				20.0	27.3	
Green Ext Time (p_c), s		26.1				12.0	2.9	
Intersection Summary								
HCM 2010 Ctrl Delay			16.6					
HCM 2010 LOS			В					

	ᄼ	→	\rightarrow	•	←	•	•	†	<i>></i>	>	ţ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	Ť	4	7					ተተተ	7	ሻሻ	ተተተ	
Volume (vph)	424	0	541	0	0	0	0	1257	498	527	1073	0
Ideal Flow (vphpl)	1700	1800	1800	1800	1800	1800	1800	1800	1800	1600	1800	1800
Storage Length (ft)	0		350	0		0	0		0	300		0
Storage Lanes	1		1	0		0	0		1	2		0
Taper Length (ft)	120			60			60			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		722			861			873			429	
Travel Time (s)		16.4			19.6			13.2			6.5	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Shared Lane Traffic (%)	21%		43%									
Turn Type	Perm	NA	Perm					NA	Perm	Prot	NA	
Protected Phases		4						2		1	6	
Permitted Phases	4		4						2			
Detector Phase	4	4	4					2	2	1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0					4.0	4.0	4.0	4.0	
Minimum Split (s)	20.0	20.0	20.0					20.0	20.0	8.0	20.0	
Total Split (s)	28.0	28.0	28.0					29.0	29.0	23.0	52.0	
Total Split (%)	35.0%	35.0%	35.0%					36.3%	36.3%	28.8%	65.0%	
Yellow Time (s)	3.5	3.5	3.5					3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5	0.5					0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0					0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0					4.0	4.0	4.0	4.0	
Lead/Lag								Lead	Lead	Lag		
Lead-Lag Optimize?								Yes	Yes	Yes		
Recall Mode	None	None	None					C-Max	C-Max	None	C-Max	

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 28 (35%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 60





	۶	→	•	•	←	•	1	†	/	/	Ţ	4
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻ	4	7					^ ^	7	ሻሻ	^ ^	
Volume (veh/h)	424	0	541	0	0	0	0	1257	498	527	1073	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1765	1765				0	1765	1765	1569	1765	0
Adj Flow Rate, veh/h	636	0	356				0	1309	519	549	1118	0
Adj No. of Lanes	2	0	1				0	3	1	2	3	0
Peak Hour Factor	0.96	0.96	0.96				0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	861	0	407				0	1654	469	796	3329	0
Arrive On Green	0.27	0.00	0.27				0.00	0.31	0.31	0.53	1.00	0.00
Sat Flow, veh/h	3175	0	1500				0	5294	1500	2988	5294	0
Grp Volume(v), veh/h	636	0	356				0	1309	519	549	1118	0
Grp Sat Flow(s), veh/h/ln	1587	0	1500				0	1765	1500	1494	1765	0
Q Serve(g_s), s	14.6	0.0	18.1				0.0	18.1	25.0	10.9	0.0	0.0
Cycle Q Clear(g_c), s	14.6	0.0	18.1				0.0	18.1	25.0	10.9	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	861	0	407				0	1654	469	796	3329	0
V/C Ratio(X)	0.74	0.00	0.87				0.00	0.79	1.11	0.69	0.34	0.00
Avail Cap(c_a), veh/h	952	0	450				0	1654	469	796	3329	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	26.6	0.0	27.9				0.0	25.1	27.5	16.3	0.0	0.0
Incr Delay (d2), s/veh	2.8	0.0	16.2				0.0	4.0	74.1	2.5	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
%ile BackOfQ(50%),veh/ln	6.7	0.0	9.3				0.0	9.3	19.9	4.6	0.1	0.0
LnGrp Delay(d),s/veh	29.3	0.0	44.0				0.0	29.1	101.6	18.8	0.3	0.0
LnGrp LOS	С		D					С	F	В	Α	
Approach Vol, veh/h		992						1828	•		1667	
Approach Delay, s/veh		34.6						49.7			6.4	
Approach LOS		C						D			A	
•••	1	2	3	4	5	6	7					
Timer Assigned Phs	1	2	3	4	5	6	1	8				
Phs Duration (G+Y+Rc), s	25.3	29.0		25.7		54.3						
Change Period (Y+Rc), s	4.0	4.0		4.0		4.0						
Max Green Setting (Gmax), s	19.0	25.0		24.0		48.0						
Max Q Clear Time (g_c+l1), s	12.9	27.0		20.1		2.0						
Green Ext Time (p_c), s	4.2	0.0		1.6		12.8						
4-7	1.2	0.0		1.0		12.0						
Intersection Summary			20.2									
HCM 2010 Ctrl Delay			30.2									
HCM 2010 LOS			С									
Notes												

TEC Traffic Impact Analysis C:\TRAMES\0255-0001\Synchro\06 - EP PM.syn

User approved volume balancing among the lanes for turning movement.

Trames Solutions, Inc. Synchro 8 Report

	•	-	←	•	\	1
						_
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		¥	
Volume (vph)	5	267	207	0	0	78
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Link Speed (mph)		30	30		30	
Link Distance (ft)		331	684		288	
Travel Time (s)		7.5	15.5		6.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type: Unsignalize	d					

Intersection									
Int Delay, s/veh	1.4								
Movement	EBL	EBT			WB [*]	T W	BR	SBL	SBR
Vol, veh/h	5	267			20		0	0	78
Conflicting Peds, #/hr	0	0				0	0	0	0
Sign Control	Free	Free			Fre		ree	Stop	Stop
RT Channelized	-	None			110		one	-	None
Storage Length	_	-				-	-	0	-
Veh in Median Storage, #	_	0				0	_	0	_
Grade, %	_	0				0	_	0	-
Peak Hour Factor	95	95			9		95	95	95
Heavy Vehicles, %	2	2				2	2	2	2
Mvmt Flow	5	281			21		0	0	82
Major/Minor	Major1				Major	2		Minor2	
Conflicting Flow All	218	0				_	0	510	218
Stage 1	- 210	-				_	-	218	- 210
Stage 2	-	_				_	_	292	_
Critical Hdwy	4.12	_				_		6.42	6.22
Critical Hdwy Stg 1		_				-	-	5.42	-
Critical Hdwy Stg 2	-					-		5.42	-
Follow-up Hdwy	2.218	-				-	-	3.518	3.318
Pot Cap-1 Maneuver	1352	_				_	_	523	822
Stage 1	-	-				-	-	818	-
Stage 2	-	_				_	_	758	-
Platoon blocked, %		-				-	-		
Mov Cap-1 Maneuver	1352	_				-	-	521	822
Mov Cap-2 Maneuver	-	-				-	-	521	-
Stage 1	-	_				-	-	818	-
Stage 2	-	-				-	-	755	-
J									
Approach	EB				WI	3		SB	
HCM Control Delay, s	0.1					0		9.9	
HCM LOS	0.1					-		A	
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR SE	BLn1				
Capacity (veh/h)	1352	-	-	-	822				
HCM Lane V/C Ratio	0.004	_	-	_	0.1				
HCM Control Delay (s)	7.7	0	_	-	9.9				
HCM Lane LOS	Α.,	A	-	_	Α				
	- '	- ' '							

0

HCM 95th %tile Q(veh)

0.3

	•	_	←	•	\	1
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		W	
Volume (vph)	2	265	179	0	6	28
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Link Speed (mph)		30	30		30	
Link Distance (ft)		684	436		304	
Travel Time (s)		15.5	9.9		6.9	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type: Unsignalize	ed					

Intersection								
Int Delay, s/veh	0.8							
,								
Movement	EBL	EBT			WBT	WBR	SBL	SBR
Vol, veh/h	2	265			179	0	6	28
Conflicting Peds, #/hr	0	0			0	0	0	0
Sign Control	Free	Free			Free	Free	Stop	Stop
RT Channelized	-	None			-	None	-	None
Storage Length	-	-			_	-	0	-
Veh in Median Storage, #	· _	0			0	_	0	-
Grade, %	-	0			0	_	0	_
Peak Hour Factor	95	95			95	95	95	95
Heavy Vehicles, %	2	2			2	2	2	2
Mvmt Flow	2	279			188	0	6	29
		_,,			.00	J		27
Major/Minor	Major1				Major2		Minor2	
Conflicting Flow All	188	0			iviajoi z	0	471	188
Stage 1	- 100	-			_	-	188	100
Stage 2	<u> </u>	-			-	-	283	-
Critical Hdwy	4.12				-	_	6.42	6.22
Critical Hdwy Stg 1	4.12	-			-	-	5.42	0.22
Critical Hdwy Stg 2		-			-		5.42	
Follow-up Hdwy	2.218	-			-	-	3.518	3.318
Pot Cap-1 Maneuver	1386	-			-		551	854
Stage 1	1300	-			-	-	844	004
Stage 2	-				-	_	765	-
Platoon blocked, %	-	-			-	-	700	-
Mov Cap-1 Maneuver	1386	-			-	-	550	854
Mov Cap-1 Maneuver	1380	-			-	-	550	804
Stage 1	-	-			-	-	844	-
	-	-			-	-	763	-
Stage 2	-	-			-	-	103	-
Approach	EB				WB		SB	
HCM Control Delay, s	0.1				0		9.9	
HCM LOS	U. I				U		9.9 A	
HOW LOS							A	
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR SBI	Ln1			
Capacity (veh/h)	1386	-			778			
HCM Lane V/C Ratio	0.002	_	_	- 0.0				
HCM Control Delay (s)	7.6	0	_		9.9			
HCM Lane LOS	7.0 A	A		-	Α			
HOW LANCED		\neg	_		71			

0

HCM 95th %tile Q(veh)

0.1

APPENDIX 5.2

EXISTING PLUS AMBIENT (E+A 2017) CONDITIONS INTERSECTION ANALYSIS CALCULATION WORKSHEETS

	۶	→	•	•	←	•	•	†	/	>	↓	✓
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4	7		ર્ન	7	ř	^	7	Ť	^	7
Volume (vph)	0	0	0	182	0	235	1	748	109	147	1140	0
Ideal Flow (vphpl)	1800	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Storage Length (ft)	0		0	0		130	270		0	60		275
Storage Lanes	0		1	0		1	1		1	1		1
Taper Length (ft)	60			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			40			50			40	
Link Distance (ft)		506			600			1582			1080	
Travel Time (s)		13.8			10.2			21.6			18.4	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Turn Type			Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	8.0	20.0	20.0	8.0	20.0	20.0
Total Split (s)	23.0	23.0	23.0	23.0	23.0	23.0	8.0	37.0	37.0	20.0	49.0	49.0
Total Split (%)	28.8%	28.8%	28.8%	28.8%	28.8%	28.8%	10.0%	46.3%	46.3%	25.0%	61.3%	61.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 55

Control Type: Actuated-Coordinated

Splits and Phases: 1: Cherry Av. & Merrill Av.



	•	→	•	•	—	•	•	†	<i>></i>	>	+	✓
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		र्स	7		सी	7	*	^	7	7	^	7
Volume (veh/h)	0	0	0	182	0	235	1	748	109	147	1140	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1800	1765	1765	1700	1765	1765	1667	1765	1765	1667	1765	1765
Adj Flow Rate, veh/h	0	0	0	188	0	242	1	771	112	152	1175	0
Adj No. of Lanes	0	1	1	0	1	1	1	2	1	1	2	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	336	286	359	0	286	2	1916	814	185	2324	988
Arrive On Green	0.00	0.00	0.00	0.19	0.00	0.19	0.00	0.54	0.54	0.12	0.66	0.00
Sat Flow, veh/h	0	1765	1500	1412	0	1500	1587	3529	1500	1587	3529	1500
Grp Volume(v), veh/h	0	0	0	188	0	242	1	771	112	152	1175	0
Grp Sat Flow(s),veh/h/ln	0	1765	1500	1412	0	1500	1587	1765	1500	1587	1765	1500
Q Serve(g_s), s	0.0	0.0	0.0	9.9	0.0	12.5	0.1	10.2	3.0	7.5	13.6	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	9.9	0.0	12.5	0.1	10.2	3.0	7.5	13.6	0.0
Prop In Lane	0.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	0	336	286	359	0	286	2	1916	814	185	2324	988
V/C Ratio(X)	0.00	0.00	0.00	0.52	0.00	0.85	0.50	0.40	0.14	0.82	0.51	0.00
Avail Cap(c_a), veh/h	0	419	356	425	0	356	79	1916	814	317	2324	988
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	30.2	0.0	31.3	39.9	10.7	9.0	34.5	7.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	1.2	0.0	14.3	126.9	0.6	0.4	8.6	0.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	4.0	0.0	6.3	0.1	5.1	1.3	3.7	6.8	0.0
LnGrp Delay(d),s/veh	0.0	0.0	0.0	31.4	0.0	45.6	166.9	11.3	9.4	43.2	7.8	0.0
LnGrp LOS				С	400	D	F	В	А	D	Α	
Approach Vol, veh/h		0			430			884			1327	
Approach Delay, s/veh		0.0			39.4			11.3			11.8	
Approach LOS					D			В			В	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.3	47.4		19.2	4.1	56.7		19.2				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	16.0	33.0		19.0	4.0	45.0		19.0				
Max Q Clear Time (g_c+I1), s	9.5	12.2		0.0	2.1	15.6		14.5				
Green Ext Time (p_c), s	0.2	13.6		0.0	0.0	16.9		0.8				
Intersection Summary												
HCM 2010 Ctrl Delay			16.1									
HCM 2010 LOS			В									

	۶	→	•	•	•	•	4	†	/	-	ļ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4	7		ર્ન	7	*	ተተተ		ሻ	ተተተ	7
Volume (vph)	1	0	0	203	3	114	22	797	88	100	1138	8
Ideal Flow (vphpl)	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Storage Length (ft)	0		0	0		50	260		0	70		200
Storage Lanes	0		1	0		1	1		0	1		1
Taper Length (ft)	60			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		589			331			2702			1062	
Travel Time (s)		13.4			7.5			36.8			14.5	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						6
Detector Phase	4	4	4	8	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	8.0	20.0		8.0	20.0	20.0
Total Split (s)	28.0	28.0	28.0	28.0	28.0	28.0	11.0	33.0		19.0	41.0	41.0
Total Split (%)	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	13.8%	41.3%		23.8%	51.3%	51.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		4.0	4.0		4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	C-Max

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 8 (10%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 50

Control Type: Actuated-Coordinated

Splits and Phases: 2: Cherry Av. & Randall Av.



Lane Configurations		≯	→	•	•	—	•	•	†	~	/	↓	√
Volume (veh/h)	Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (veh/h)	Lane Configurations		र्स	7		र्स	7	ሻ	ተተተ		ሻ	^	7
Initial Q (Qb), veh			0	0	203	3	114	22		88	100	1138	8
Ped-Bike Adj(A_pbT)													16
Parking Bus, Adi			0			0			0			0	0
Adj Saf Flow, veh/h/ln Adj Saf Flow, veh/h/ln Adj Na of Lanes 0 1 1 0 0 209 3 118 23 822 91 103 1173 8 Adj Na of Lanes 0 1 1 1 0 1 1 1 1 3 0 1 1 3 173 8 Peak Hour Factor 0,97 0,97 0,97 0,97 0,97 0,97 0,97 0,97													1.00
Adj Flow Rate, veh/h 1 0 0 209 3 118 23 822 91 103 1173 8 Adj No. of Lanes 0 1 1 0 1 1 1 3 0 1 3 1 Peak Hour Factor 0.97 0.07 0.07 0.07 0.07 0.07 0.07 0.07 0.07 0.07 0.07 0.07 0.07 0.07 0.07 0.0 5.7 1.1 0.0 </td <td></td> <td>1.00</td>													1.00
Adj No. of Lanes 0 1 1 0 1 1 1 3 0 1 3 1 Peak Hour Factor 0.97 0.07 0.07 0.07 0.0	,												1765
Peak Hour Factor 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97							118				103		8
Percent Heavy Veh, % 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2													1
Cap, veh/h 142 0 243 348 4 243 32 2844 313 129 3536 1002 Arrive On Green 0.16 0.00 0.00 0.00 0.016 0.16 0.04 1.00 1.00 0.08 0.67 0.67 Sal Flow, veh/h 322 0 1500 1592 23 1500 1587 594 1500 Grp Sat Flow(s), veh/h/In 322 0 1500 1615 0 1500 1587 168 295 103 1173 8 Grp Sat Flow(s), veh/h/In 322 0 1500 1615 0 1500 1587 1765 1674 1587 1765 1500 20 20 1500 1615 0 1500 1587 1765 1674 1587 1765 1500 20 20 20 1500 1590 1615 0 1500 1587 176 0 1500 1500 1500 1													0.97
Arrive On Green 0.16 0.00 0.00 0.16 0.16 0.16 0.16 0.04 1.00 1.00 0.08 0.67 0.67 Sat Flow, weh/h 322 0 1500 1592 23 1500 1587 4687 516 1587 5294 1500 Grp Voltume(V), veh/h 1 0 0 0.212 0 118 23 618 295 103 1173 80 100 100 100 100 100 100 100 100 100													2
Sat Flow, veh/h 322 0 1500 1592 23 1500 1587 4687 516 1587 5294 1500 Grp Volume(v), veh/h 1 0 0 212 0 118 23 618 295 103 1173 8 Grp Sat Flow(s), veh/h/ln 322 0 1500 1615 0 1500 1587 1765 1674 1587 1765 1600 0 0 0 1500 1587 1765 1674 1587 1765 160 0 0 0 1507 1.1 0.0 0.0 5.1 7.6 0.1 0 0 0 5.7 1.1 0.0 0.0 5.1 7.6 0.1 0<													1002
Grp Volume(v), veh/h 1 0 0 212 0 118 23 618 295 103 1173 8 Grp Sat Flow(s), veh/h/ln 322 0 1500 1615 0 1500 1587 1765 1674 1587 1765 1500 Q Serve(g_s), s 0.1 0.0 0.0 0.0 0.0 5.7 1.1 0.0 0.0 5.1 7.6 0.1 Cycle Q Clear(g_c), s 9.7 0.0 0.0 9.7 0.0 5.7 1.1 0.0 0.0 5.1 7.6 0.1 Prop In Lane 1.00 1.00 0.09 1.00 1.00 1.00 0.0 5.7 1.1 0.0 0.0 5.7 1.6 0.1 Lane Grp Cap(c), veh/h 142 0 243 351 0 243 32 2141 1015 129 3536 1000 V/C Ratio(X) 0.01 0.01 0.00 0.00 0.00													
Grp Sat Flow(s), veh/h/ln 322 0 1500 1615 0 1500 1587 1765 1674 1587 1765 1500 C Serve(g_S), s 0.1 0.0 0.0 0.0 0.0 5.7 1.1 0.0 0.0 5.1 7.6 0.1 Cycle O Clear(g_c), s 9.7 0.0 0.0 9.7 0.0 5.7 1.1 0.0 0.0 5.1 7.6 0.1 Cycle O Clear(g_c), s 9.7 0.0 0.0 9.7 0.0 5.7 1.1 0.0 0.0 5.1 7.6 0.1 Cycle O Clear(g_c), s 9.7 0.0 0.0 9.7 0.0 5.7 1.1 0.0 0.0 5.1 7.6 0.1 Cycle O Clear(g_c), s 9.7 0.0 0.0 9.7 0.0 5.7 1.1 0.0 0.0 0.31 1.00 1.00 Lane Grp Cap(c), veh/h 142 0 243 351 0 243 32 2141 1015 129 3536 1002 V/C Ratio(X) 0.01 0.00 0.00 0.60 0.00 0.49 0.72 0.29 0.29 0.80 0.33 0.01 Avail Cap(c_a), veh/h 317 0 450 546 0 450 139 2141 1015 298 3536 1002 Cycle Cap(c_a), veh/h 317 0 450 546 0 450 139 2141 1015 298 3536 1002 Upstream Filter(1) 1.00 0.00 0.00 1.00 1.00 1.00 2.00 2.00													1500
Q Serve(g_s), s 0.1 0.0 0.0 0.0 0.0 5.7 1.1 0.0 0.0 5.1 7.6 0.1 Cycle Q Clear(g_c), s 9.7 0.0 0.0 9.7 0.0 5.7 1.1 0.0 0.0 5.1 7.6 0.1 Prop In Lane 1.00 1.00 0.99 1.00 1.00 1.00 0.31 1.00 1.00 Lane Gro Cap(c), veh/h 142 0 243 351 0 243 32 2141 1015 129 3536 1002 V/C Ratio(X) 0.01 0.00 0.00 0.60 0.00 0.49 0.72 0.29 0.29 0.80 0.33 0.01 V/C Ratio(X) 0.01 0.00 1.0													8
Cycle Q Clear(g_c), s 9.7 0.0 0.0 9.7 0.0 5.7 1.1 0.0 0.0 5.1 7.6 0.1 Prop In Lane 1.00 1.00 0.99 1.00 1.00 0.31 1.00 1.00 Lane Grp Cap(c), veh/h 142 0 243 351 0 243 32 2141 1015 129 3536 1002 V/C Ratio(X) 0.01 0.00 0.00 0.60 0.00 0.49 0.72 0.29 0.80 0.33 0.01 Avail Cap(c_a), veh/h 317 0 450 546 0 450 139 2141 1015 298 3536 1002 HCM Platoon Ratio 1.00													1500
Prop In Lane 1.00 1.00 0.99 1.00 1.00 0.31 1.00 1.00 Lane Grp Cap(c), veh/h 142 0 243 351 0 243 32 2141 1015 129 3536 1002 V/C Ratio(X) 0.01 0.00 0.00 0.60 0.00 0.49 0.72 0.29 0.29 0.80 0.33 0.01 V/C Ratio(X) 0.01 1.00 1													0.1
Lane Grp Cap(c), veh/h 142 0 243 351 0 243 32 2141 1015 129 3536 1002 V/C Ratio(X) 0.01 0.00 0.00 0.60 0.00 0.49 0.72 0.29 0.29 0.80 0.33 0.01 Avail Cap(c_a), veh/h 317 0 450 546 0 450 139 2141 1015 298 3536 1002 HCM Platoon Ratio 1.00 1.00 1.00 1.00 1.00 1.00 2.00 2.00 1.00 <td< td=""><td></td><td></td><td>0.0</td><td></td><td></td><td>0.0</td><td></td><td></td><td>0.0</td><td></td><td></td><td>7.6</td><td>0.1</td></td<>			0.0			0.0			0.0			7.6	0.1
V/C Ratio(X) 0.01 0.00 0.00 0.60 0.00 0.49 0.72 0.29 0.29 0.80 0.33 0.01 Avail Cap(c_a), veh/h 317 0 450 546 0 450 139 2141 1015 298 3536 1002 HCM Platoon Ratio 1.00 1.00 1.00 1.00 1.00 1.00 1.00 2.00 2.00 2.00 1.00 1.00 1.00 Upstream Filter(I) 1.00 0.00 0.00 1.00 1.00 0.00 0.0 0.0 0.0 1.00													1.00
Avail Cap(c_a), veh/h 317 0 450 546 0 450 139 2141 1015 298 3536 1002 HCM Platoon Ratio 1.00 1.00 1.00 1.00 1.00 1.00 2.00 2.00													1002
HCM Platon Ratio 1.00 1.00 1.00 1.00 1.00 1.00 2.00 2.00 2.00 1.	` '		0.00										0.01
Upstream Filter(I) 1.00 0.00 0.00 1.00 0.00 1.00 0.89 0.89 0.89 1.00 1.00 1.00 Uniform Delay (d), s/veh 36.8 0.0 0.0 32.1 0.0 30.5 38.2 0.0 0.0 36.1 5.7 4.4 Incr Delay (d2), s/veh 0.0 0.0 0.0 1.7 0.0 1.5 23.9 0.3 0.6 10.8 0.3 0.0 Initial Q Delay(d3),s/veh 0.0 0													1002
Uniform Delay (d), s/veh 36.8 0.0 0.0 32.1 0.0 30.5 38.2 0.0 0.0 36.1 5.7 4.4 Incr Delay (d2), s/veh 0.0 0.0 0.0 1.7 0.0 1.5 23.9 0.3 0.6 10.8 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.													1.00
Incr Delay (d2), s/veh										0.89			1.00
Initial Q Delay(d3),s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.													4.4
%ile BackOfQ(50%),veh/ln 0.0 0.0 0.0 4.6 0.0 2.5 0.7 0.1 0.2 2.6 3.7 0.1 LnGrp Delay(d),s/veh 36.8 0.0 0.0 33.8 0.0 32.0 62.1 0.3 0.6 46.9 5.9 4.5 LnGrp LOS D C C E A A D A A Approach Vol, veh/h 1 330 936 1284 Approach Delay, s/veh 36.8 33.1 1.9 9.2 Approach LOS D C A A A Approach LOS D C A A A Timer 1 2 3 4 5 6 7 8 Assigned Phs 1 2 4 5 6 8 8 Phs Duration (G+Y+Rc), s 10.5 52.5 17.0 5.6 57.4 17.0 Change Period (Y+Rc), s 4.0 4.0 4.0 4.0 4.0 4.0 Max Q Clear Time (g_c+I)													0.0
LnGrp Delay(d),s/veh 36.8 0.0 0.0 33.8 0.0 32.0 62.1 0.3 0.6 46.9 5.9 4.5 LnGrp LOS D C C E A A D A A Approach Vol, veh/h 1 330 936 1284 Approach Delay, s/veh 36.8 33.1 1.9 9.2 Approach LOS D C A A A Timer 1 2 3 4 5 6 7 8 Assigned Phs 1 2 4 5 6 8 8 Phs Duration (G+Y+Rc), s 10.5 52.5 17.0 5.6 57.4 17.0 Change Period (Y+Rc), s 4.0 4.0 4.0 4.0 4.0 4.0 Max A Max Max Green Ext Time (g_c+l1), s 7.1 2.0 11.7 3.1 9.6 11.7 Green Ext Time (g_c-l1), s 7.1 2.0 11.7													0.0
LnGrp LOS D C C E A A D A A Approach Vol, veh/h 1 330 936 1284 Approach Delay, s/veh 36.8 33.1 1.9 9.2 Approach LOS D C A A A Timer 1 2 3 4 5 6 7 8 Assigned Phs 1 2 4 5 6 8 8 Phs Duration (G+Y+Rc), s 10.5 52.5 17.0 5.6 57.4 17.0													0.1
Approach Vol, veh/h 1 330 936 1284 Approach Delay, s/veh 36.8 33.1 1.9 9.2 Approach LOS D C A A Timer 1 2 3 4 5 6 7 8 Assigned Phs 1 2 4 5 6 8 8 Phs Duration (G+Y+Rc), s 10.5 52.5 17.0 5.6 57.4 17.0 Change Period (Y+Rc), s 4.0 4.0 4.0 4.0 4.0 Max Green Setting (Gmax), s 15.0 29.0 24.0 7.0 37.0 24.0 Max Q Clear Time (g_c+l1), s 7.1 2.0 11.7 3.1 9.6 11.7 Green Ext Time (p_c), s 0.1 15.6 1.3 0.0 15.8 1.3 Intersection Summary HCM 2010 Ctrl Delay 9.6			0.0	0.0		0.0							4.5
Approach Delay, s/veh 36.8 33.1 1.9 9.2 Approach LOS D C A A Timer 1 2 3 4 5 6 7 8 Assigned Phs 1 2 4 5 6 8 Phs Duration (G+Y+Rc), s 10.5 52.5 17.0 5.6 57.4 17.0 Change Period (Y+Rc), s 4.0 4.0 4.0 4.0 4.0 Max Green Setting (Gmax), s 15.0 29.0 24.0 7.0 37.0 24.0 Max Q Clear Time (g_c+l1), s 7.1 2.0 11.7 3.1 9.6 11.7 Green Ext Time (p_c), s 0.1 15.6 1.3 0.0 15.8 1.3 Intersection Summary HCM 2010 Ctrl Delay 9.6		D			С		С	E		А	D		А
Approach LOS D C A A A Timer 1 2 3 4 5 6 7 8 Assigned Phs 1 2 4 5 6 8 Phs Duration (G+Y+Rc), s 10.5 52.5 17.0 5.6 57.4 17.0 Change Period (Y+Rc), s 4.0 4.0 4.0 4.0 4.0 4.0 Max Green Setting (Gmax), s 15.0 29.0 24.0 7.0 37.0 24.0 Max Q Clear Time (g_c+I1), s 7.1 2.0 11.7 3.1 9.6 11.7 Green Ext Time (p_c), s 0.1 15.6 1.3 0.0 15.8 1.3 Intersection Summary HCM 2010 Ctrl Delay 9.6													
Timer 1 2 3 4 5 6 7 8 Assigned Phs 1 2 4 5 6 8 Phs Duration (G+Y+Rc), s 10.5 52.5 17.0 5.6 57.4 17.0 Change Period (Y+Rc), s 4.0 4.0 4.0 4.0 4.0 Max Green Setting (Gmax), s 15.0 29.0 24.0 7.0 37.0 24.0 Max Q Clear Time (g_c+l1), s 7.1 2.0 11.7 3.1 9.6 11.7 Green Ext Time (p_c), s 0.1 15.6 1.3 0.0 15.8 1.3 Intersection Summary HCM 2010 Ctrl Delay 9.6	Approach Delay, s/veh		36.8						1.9			9.2	
Assigned Phs 1 2 4 5 6 8 Phs Duration (G+Y+Rc), s 10.5 52.5 17.0 5.6 57.4 17.0 Change Period (Y+Rc), s 4.0 4.0 4.0 4.0 4.0 4.0 Max Green Setting (Gmax), s 15.0 29.0 24.0 7.0 37.0 24.0 Max Q Clear Time (g_c+I1), s 7.1 2.0 11.7 3.1 9.6 11.7 Green Ext Time (p_c), s 0.1 15.6 1.3 0.0 15.8 1.3 Intersection Summary HCM 2010 Ctrl Delay 9.6	Approach LOS		D			С			Α			Α	
Phs Duration (G+Y+Rc), s 10.5 52.5 17.0 5.6 57.4 17.0 Change Period (Y+Rc), s 4.0 4.0 4.0 4.0 4.0 Max Green Setting (Gmax), s 15.0 29.0 24.0 7.0 37.0 24.0 Max Q Clear Time (g_c+l1), s 7.1 2.0 11.7 3.1 9.6 11.7 Green Ext Time (p_c), s 0.1 15.6 1.3 0.0 15.8 1.3 Intersection Summary HCM 2010 Ctrl Delay 9.6	Timer	1	2	3	4		6	7	8				
Change Period (Y+Rc), s 4.0 4.0 4.0 4.0 4.0 4.0 4.0 Max Green Setting (Gmax), s 15.0 29.0 24.0 7.0 37.0 24.0 Max Q Clear Time (g_c+l1), s 7.1 2.0 11.7 3.1 9.6 11.7 Green Ext Time (p_c), s 0.1 15.6 1.3 0.0 15.8 1.3 Intersection Summary HCM 2010 Ctrl Delay 9.6		1	2		4		6		8				
Max Green Setting (Gmax), s 15.0 29.0 24.0 7.0 37.0 24.0 Max Q Clear Time (g_c+l1), s 7.1 2.0 11.7 3.1 9.6 11.7 Green Ext Time (p_c), s 0.1 15.6 1.3 0.0 15.8 1.3 Intersection Summary HCM 2010 Ctrl Delay 9.6	Phs Duration (G+Y+Rc), s	10.5	52.5		17.0	5.6	57.4		17.0				
Max Q Clear Time (g_c+l1), s 7.1 2.0 11.7 3.1 9.6 11.7 Green Ext Time (p_c), s 0.1 15.6 1.3 0.0 15.8 1.3 Intersection Summary HCM 2010 Ctrl Delay 9.6	Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Green Ext Time (p_c), s 0.1 15.6 1.3 0.0 15.8 1.3 Intersection Summary HCM 2010 Ctrl Delay 9.6	Max Green Setting (Gmax), s	15.0	29.0		24.0	7.0	37.0		24.0				
Intersection Summary HCM 2010 Ctrl Delay 9.6	Max Q Clear Time (g_c+l1), s	7.1	2.0		11.7	3.1	9.6						
HCM 2010 Ctrl Delay 9.6		0.1	15.6		1.3	0.0	15.8		1.3				
,	Intersection Summary												
,	HCM 2010 Ctrl Delay			9.6									
HCM 2010 LOS A	HCM 2010 LOS			A									

	•	→	•	•	←	•	4	†	/	-	ļ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	7	^	7	7	∱ ∱		ሻ	ተተኈ		ሻ	ተተተ	7
Volume (vph)	182	70	95	146	344	88	85	746	89	75	848	379
Ideal Flow (vphpl)	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Storage Length (ft)	300		285	50		0	220		0	210		300
Storage Lanes	1		1	1		0	1		0	1		1
Taper Length (ft)	60			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		555			705			459			2702	
Travel Time (s)		12.6			16.0			6.3			36.8	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases			4									6
Detector Phase	7	4	4	3	8		5	2		1	6	7
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	8.0	20.0	20.0	8.0	20.0		8.0	20.0		8.0	20.0	8.0
Total Split (s)	20.0	23.0	23.0	17.0	20.0		14.0	27.0		13.0	26.0	20.0
Total Split (%)	25.0%	28.8%	28.8%	21.3%	25.0%		17.5%	33.8%		16.3%	32.5%	25.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5		0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lead/Lag	Lag	Lead	Lead	Lag	Lead		Lag	Lead		Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	None

Area Type: Other

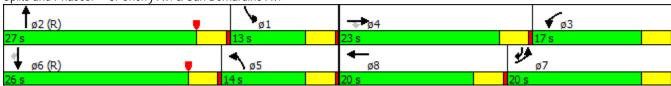
Cycle Length: 80

Actuated Cycle Length: 80

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 60





Movement BBL EBT EBR WBL WBT WBR NBL NBT NBR SBL SBT SBR Lane Configurations 1		۶	→	•	•	←	•	1	†	~	/	Ţ	4
Volume (veh/h)	Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Number 7 4 14 14 3 8 8 18 5 2 12 12 1 6 16 16 initial Q (Qb), veh 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Lane Configurations	ሻ	^	7	ሻ	ተ ኈ		ሻ	ተተኈ		ሻ	^	7
Initial O (Ob), weh	Volume (veh/h)	182		95	146	344	88	85		89	75		379
Ped-Bike Adji(A_pbT)	Number	7	4	14	3	8	18	5	2	12	1	6	16
Parking Bus, Adj 1.00	Initial Q (Qb), veh		0			0			0			0	
Adj Saf Flow, veh/h/ln 1667 1765 1765 1667 1765 1800 1667 1765 1800 1667 1765 1765 1765 1765 1765 1765 1765													
Adj Flow Rate, veh/h													
Adj No. of Lanes													
Peak Hour Factor 0.97 0.98 AMX OC CER CERT Time (p.) 5 5 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00	•			0	151					92	77		391
Percent Heavy Veh, % 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2													
Cap, veh/h Arrive On Green O.14 O.05 O.00 O.26 O.16 O.16 O.22 O.29 O.29 O.07 O.09 O.09 O.09 Sat Flow, veh/h 1587 3529 1500 1587 2720 688 1587 4645 552 1587 5294 1500 Grp Volume(v), veh/h 188 72 O.0 1511 229 217 88 563 278 77 874 391 Grp Sat Flow(s), veh/h/ln 1587 1765 1500 O.5 erve(g. s), s 9.2 1.6 O.0 O.6.3 O.0													
Arrive On Green 0.14 0.05 0.00 0.26 0.16 0.16 0.22 0.29 0.29 0.07 0.09 0.09 Sat Flow, veh/h 1587 3529 1500 1587 2720 688 1587 4645 552 1587 5294 1500 Grp Volume(v), veh/h 188 72 0 151 229 217 88 583 278 77 874 391 Grp Sat Flow(s), veh/hin 1587 1765 1500 1587 1765 1663 1587 1765 1660 0.0 6.3 10.0 10.2 3.7 11.3 11.4 3.7 12.7 8.4 Cycle O Clear(g_c), s 9.2 1.6 0.0 6.3 10.0 10.2 3.7 11.3 11.4 3.7 12.7 8.4 Cycle O Clear(g_c), s 9.2 1.6 0.0 6.3 10.0 10.2 3.7 11.3 11.4 3.7 12.7 8.4 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>													
Sat Flow, veh/h 1587 3529 1500 1587 2720 688 1587 4645 552 1587 5294 1500 Grp Volume(v), veh/h 188 72 0 151 229 217 88 583 278 77 874 391 Grp Sat Flow(s), veh/h/h 1587 1505 1500 1587 1765 1643 1587 1765 1667 1587 1765 1500 Oserve(g, s), s 9.2 1.6 0.0 6.3 10.0 10.2 3.7 11.3 11.4 3.7 12.7 8.4 Cycle Q Clear(g, c), s 9.2 1.6 0.0 6.3 10.0 10.2 3.7 11.3 11.4 3.7 12.7 8.4 Prop In Lane 1.00 1.00 1.00 0.42 1.00 0.33 1.00 1.00 VCR Ratio(X) 0.84 0.41 0.00 0.37 0.79 0.81 0.25 0.57 0.58 0.													
Grp Volume(v), veh/h 188 72 0 151 229 217 88 583 278 77 874 391 Grp Sat Flow(s), veh/h/ln 1587 1765 1500 1587 1765 1643 1587 1765 1667 1587 1765 1500 Q Serve(g_s), s 9.2 1.6 0.0 6.3 10.0 10.2 3.7 11.3 11.4 3.7 12.7 8.4 Cycle Q Clear(g_c), s 9.2 1.6 0.0 6.3 10.0 10.2 3.7 11.3 11.4 3.7 12.7 8.4 Cycle Q Colear(g_c), s 9.2 1.6 0.0 6.3 10.0 10.2 3.7 11.3 11.4 3.7 12.7 8.4 Voc Ratio(X) 0.84 0.41 0.00 0.0 270 348 1015 479 329 1456 624 ViC Ratio(X) 0.84 0.41 0.00 0.37 0.79 0.81 0.25 </td <td></td>													
Grp Sat Flow(s), veh/h/ln				1500									
O Šerve(g_s), s													
Cycle Q Clear(g_c), s 9.2 1.6 0.0 6.3 10.0 10.2 3.7 11.3 11.4 3.7 12.7 8.4 Prop In Lane 1.00 1.00 1.00 1.00 0.42 1.00 0.33 1.00 1.00 1.00 Lane Grp Cap(c), veh/h 224 176 75 406 290 270 348 1015 479 329 1456 624 V/C Ratio(X) 0.84 0.41 0.00 0.37 0.79 0.81 0.25 0.57 0.58 0.23 0.60 0.63 Avail Cap(c_a), veh/h 317 838 356 406 353 329 348 1015 479 329 1456 624 HCM Platoon Ratio 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0			1765										
Prop In Lane													
Lane Grp Cap(c), veh/h			1.6			10.0			11.3			12.7	
V/C Ratio(X) 0.84 0.41 0.00 0.37 0.79 0.81 0.25 0.57 0.58 0.23 0.60 0.63 Avail Cap(c_a), veh/h 317 838 356 406 353 329 348 1015 479 329 1456 624 HCM Platoon Ratio 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.33 0.33 0.33 Upstream Filter(I) 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.0 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.14 0.0 1.00 1.00 1.00 1.00 0.0 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.14 0.4 0.4													
Avail Cap(c_a), veh/h Avail Cap(c_a), veh Avail Cap(c_a),													
HCM Platoon Ratio													
Upstream Filter(I) 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00 0.95 1.14 0.4 2.4 31.3 32.1 24.8 1.6 3.8 1.0 0.0													
Uniform Delay (d), s/veh 33.5 36.9 0.0 24.5 32.1 32.2 25.8 24.3 24.4 31.3 32.1 24.8 Incr Delay (d2), s/veh 12.7 1.5 0.0 0.6 9.5 11.4 0.4 2.4 5.0 0.3 1.8 4.5 Initial Q Delay(d3),s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.													
Incr Delay (d2), s/veh 12.7 1.5 0.0 0.6 9.5 11.4 0.4 2.4 5.0 0.3 1.8 4.5 Initial Q Delay(d3), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Wile BackOfQ(50%), veh/ln 4.8 0.8 0.0 2.8 5.6 5.4 1.6 5.8 5.9 1.7 6.4 4.3 InGrp Delay(d), s/veh 46.2 38.4 0.0 25.1 41.6 43.7 26.2 26.7 29.4 31.6 33.9 29.3 InGrp LOS D D C D D C C C C C C C C C C C C C C													
Initial Q Delay(d3),s/veh													
%ile BackOfQ(50%), veh/ln 4.8 0.8 0.0 2.8 5.6 5.4 1.6 5.8 5.9 1.7 6.4 4.3 LnGrp Delay(d), s/veh 46.2 38.4 0.0 25.1 41.6 43.7 26.2 26.7 29.4 31.6 33.9 29.3 LnGrp LOS D D C D D C A													
LnGrp Delay(d),s/veh 46.2 38.4 0.0 25.1 41.6 43.7 26.2 26.7 29.4 31.6 33.9 29.3 LnGrp LOS D D C D D C A 3 2 2 3 4 5 6 <td></td>													
LnGrp LOS D D C D D C A A D A D													
Approach Vol, veh/h 260 597 949 1342 Approach Delay, s/veh 44.0 38.2 27.4 32.4 Approach LOS D D C C Timer 1 2 3 4 5 6 7 8 Assigned Phs 1 2 3 4 5 6 7 8 Phs Duration (G+Y+Rc), s 20.6 27.0 24.4 8.0 21.6 26.0 15.3 17.1 Change Period (Y+Rc), s 4.0 4.0 4.0 4.0 4.0 4.0 4.0 Max Green Setting (Gmax), s 9.0 23.0 13.0 19.0 10.0 22.0 16.0 16.0 Max Q Clear Time (g_c+l1), s 5.7 13.4 8.3 3.6 5.7 14.7 11.2 12.2 Green Ext Time (p_c), s 0.1 3.5 0.5 0.3 0.1 3.8 0.3 0.9 Intersection Summary				0.0									
Approach Delay, s/veh Approach LOS D D C C C Timer 1 2 3 4 5 6 7 8 Assigned Phs 1 2 3 4 5 6 7 8 Phs Duration (G+Y+Rc), s 20.6 27.0 24.4 8.0 21.6 26.0 15.3 17.1 Change Period (Y+Rc), s 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0		D			С		D	С		С	С		С
Approach LOS D D C C Timer 1 2 3 4 5 6 7 8 Assigned Phs 1 2 3 4 5 6 7 8 Phs Duration (G+Y+Rc), s 20.6 27.0 24.4 8.0 21.6 26.0 15.3 17.1 Change Period (Y+Rc), s 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 Max Green Setting (Gmax), s 9.0 23.0 13.0 19.0 10.0 22.0 16.0 16.0 Max Q Clear Time (g_c+11), s 5.7 13.4 8.3 3.6 5.7 14.7 11.2 12.2 Green Ext Time (p_c), s 0.1 3.5 0.5 0.3 0.1 3.8 0.3 0.9 Intersection Summary													
Timer 1 2 3 4 5 6 7 8 Assigned Phs 1 2 3 4 5 6 7 8 Phs Duration (G+Y+Rc), s 20.6 27.0 24.4 8.0 21.6 26.0 15.3 17.1 Change Period (Y+Rc), s 4.0 4.0 4.0 4.0 4.0 4.0 4.0 Max Green Setting (Gmax), s 9.0 23.0 13.0 19.0 10.0 22.0 16.0 16.0 Max Q Clear Time (g_c+l1), s 5.7 13.4 8.3 3.6 5.7 14.7 11.2 12.2 Green Ext Time (p_c), s 0.1 3.5 0.5 0.3 0.1 3.8 0.3 0.9 Intersection Summary													
Assigned Phs 1 2 3 4 5 6 7 8 Phs Duration (G+Y+Rc), s 20.6 27.0 24.4 8.0 21.6 26.0 15.3 17.1 Change Period (Y+Rc), s 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 Max Green Setting (Gmax), s 9.0 23.0 13.0 19.0 10.0 22.0 16.0 16.0 Max Q Clear Time (g_c+l1), s 5.7 13.4 8.3 3.6 5.7 14.7 11.2 12.2 Green Ext Time (p_c), s 0.1 3.5 0.5 0.3 0.1 3.8 0.3 0.9 Intersection Summary	Approach LOS		D			D			С			С	
Phs Duration (G+Y+Rc), s 20.6 27.0 24.4 8.0 21.6 26.0 15.3 17.1 Change Period (Y+Rc), s 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 Max Green Setting (Gmax), s 9.0 23.0 13.0 19.0 10.0 22.0 16.0 16.0 Max Q Clear Time (g_c+I1), s 5.7 13.4 8.3 3.6 5.7 14.7 11.2 12.2 Green Ext Time (p_c), s 0.1 3.5 0.5 0.3 0.1 3.8 0.3 0.9 Intersection Summary		1					6						
Change Period (Y+Rc), s 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0	Assigned Phs	1	2	3	4	5	6	7	8				
Max Green Setting (Gmax), s 9.0 23.0 13.0 19.0 10.0 22.0 16.0 16.0 Max Q Clear Time (g_c+l1), s 5.7 13.4 8.3 3.6 5.7 14.7 11.2 12.2 Green Ext Time (p_c), s 0.1 3.5 0.5 0.3 0.1 3.8 0.3 0.9 Intersection Summary	Phs Duration (G+Y+Rc), s	20.6	27.0	24.4	8.0	21.6	26.0	15.3	17.1				
Max Q Clear Time (g_c+l1), s 5.7 13.4 8.3 3.6 5.7 14.7 11.2 12.2 Green Ext Time (p_c), s 0.1 3.5 0.5 0.3 0.1 3.8 0.3 0.9 Intersection Summary		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Green Ext Time (p_c), s 0.1 3.5 0.5 0.3 0.1 3.8 0.3 0.9 Intersection Summary													
Intersection Summary													
	Green Ext Time (p_c), s	0.1	3.5	0.5	0.3	0.1	3.8	0.3	0.9				
	Intersection Summary												
HCM 2010 Ctrl Delay 33.0	HCM 2010 Ctrl Delay			33.0									
HCM 2010 LOS C				С									

	•	→	•	•	←	•	1	†	<i>></i>	>	ţ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	44	^	7	1,1	↑ ↑		14.54	^	7	¥	† †	7
Volume (vph)	59	131	188	421	283	60	424	870	339	68	983	90
Ideal Flow (vphpl)	1600	1800	1800	1600	1800	1800	1600	1800	1800	1700	1800	1800
Storage Length (ft)	250		160	250		0	420		220	170		0
Storage Lanes	2		1	2		0	2		0	1		1
Taper Length (ft)	120			120			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		845			1019			968			718	
Travel Time (s)		19.2			23.2			13.2			9.8	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Shared Lane Traffic (%)												
Turn Type	Prot	NA	pm+ov	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4	5	3	8		5	2		1	6	
Permitted Phases			4						2			6
Detector Phase	7	4	5	3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	20.0	8.0	8.0	20.0		8.0	20.0	20.0	8.0	20.0	20.0
Total Split (s)	8.0	20.0	16.0	16.0	28.0		16.0	34.0	34.0	10.0	28.0	28.0
Total Split (%)	10.0%	25.0%	20.0%	20.0%	35.0%		20.0%	42.5%	42.5%	12.5%	35.0%	35.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow, Master Intersection

Natural Cycle: 80

Control Type: Actuated-Coordinated

Splits and Phases: 4: Cherry Av. & Valley Blvd.



	•	→	•	•	—	•	•	†	<i>></i>	>		✓
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1,4	^	7	ሻሻ	∱ ∱		ሻሻ	^	7	ሻ	^	7
Volume (veh/h)	59	131	188	421	283	60	424	870	339	68	983	90
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	1569	1765	1765	1569	1765	1800	1569	1765	1765	1667	1765	1765
Adj Flow Rate, veh/h	61	136	196	439	295	62	442	906	353	71	1024	94
Adj No. of Lanes	2	2	1	2	2	0	2	2	1	1	2	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	111	539	454	448	754	156	448	1561	663	87	1225	521
Arrive On Green	0.04	0.15	0.15	0.15	0.27	0.27	0.30	0.88	0.88	0.06	0.35	0.35
Sat Flow, veh/h	2988	3529	1500	2988	2838	588	2988	3529	1500	1587	3529	1500
Grp Volume(v), veh/h	61	136	196	439	182	175	442	906	353	71	1024	94
Grp Sat Flow(s),veh/h/ln	1494	1765	1500	1494	1765	1661	1494	1765	1500	1587	1765	1500
Q Serve(g_s), s	1.6	2.7	8.4	11.7	6.7	6.9	11.8	4.9	4.1	3.5	21.3	3.5
Cycle Q Clear(g_c), s	1.6	2.7	8.4	11.7	6.7	6.9	11.8	4.9	4.1	3.5	21.3	3.5
Prop In Lane	1.00		1.00	1.00		0.35	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	111	539	454	448	469	441	448	1561	663	87	1225	521
V/C Ratio(X)	0.55	0.25	0.43	0.98	0.39	0.40	0.99	0.58	0.53	0.81	0.84	0.18
Avail Cap(c_a), veh/h	149	706	525	448	529	498	448	1561	663	119	1225	521
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.80	0.80	0.80	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.9	29.9	22.4	33.9	24.0	24.1	27.9	2.9	2.8	37.4	24.0	18.2
Incr Delay (d2), s/veh	4.2	0.2	0.6	37.0	0.5	0.6	34.4	1.3	2.4	25.3	6.8	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	1.3	3.6	7.1	3.4	3.2	6.9	2.3	1.9	2.2	11.5	1.6
LnGrp Delay(d),s/veh	42.1	30.1	23.0	70.9	24.6	24.7	62.3	4.1	5.3	62.7	30.9	18.9
LnGrp LOS	D	С	С	E	С	С	E	А	А	E	С	В
Approach Vol, veh/h		393			796			1701			1189	
Approach Delay, s/veh		28.4			50.2			19.5			31.8	
Approach LOS		С			D			В			С	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.4	39.4	16.0	16.2	16.0	31.8	7.0	25.3				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	6.0	30.0	12.0	16.0	12.0	24.0	4.0	24.0				
Max Q Clear Time (g_c+l1), s	5.5	6.9	13.7	10.4	13.8	23.3	3.6	8.9				
Green Ext Time (p_c), s	0.0	15.3	0.0	1.8	0.0	0.6	0.0	3.3				
Intersection Summary												
HCM 2010 Ctrl Delay			29.9									
HCM 2010 LOS			С									

	•	•	†	~	>	ļ
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	ሻሻ	7	ተተተ	7		1111
Volume (vph)	536	582	1091	523	0	1599
Ideal Flow (vphpl)	1600	1800	1800	1800	1800	1800
Storage Length (ft)	0	0		200	0	
Storage Lanes	2	1		1	0	
Taper Length (ft)	60				60	
Right Turn on Red		Yes		Yes		
Link Speed (mph)	30		45			45
Link Distance (ft)	252		337			968
Travel Time (s)	5.7		5.1			14.7
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Turn Type	Prot	Perm	NA	Free		NA
Protected Phases	8		2			6
Permitted Phases		8		Free		
Detector Phase	8	8	2			6
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0			4.0
Minimum Split (s)	20.0	20.0	20.0			20.0
Total Split (s)	48.0	48.0	32.0			32.0
Total Split (%)	60.0%	60.0%	40.0%			40.0%
Yellow Time (s)	3.5	3.5	3.5			3.5
All-Red Time (s)	0.5	0.5	0.5			0.5
Lost Time Adjust (s)	0.0	0.0	0.0			0.0
Total Lost Time (s)	4.0	4.0	4.0			4.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	C-Max			C-Max
Intercaction Cummery						

Area Type: Other

Cycle Length: 80

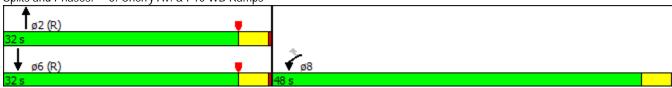
Actuated Cycle Length: 80

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 40

Control Type: Actuated-Coordinated

Splits and Phases: 5: Cherry Av. & I-10 WB Ramps



	•	•	†	<i>></i>	>			
Movement	WBL	WBR	NBT	NBR	SBL	SBT		
Lane Configurations	ሻሻ	7	ተተተ	7		1111		
Volume (veh/h)	536	582	1091	523	0	1599		
Number	3	18	2	12	1	6		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1569	1765	1765	1765	0	1765		
Adj Flow Rate, veh/h	564	613	1148	0	0	1683		
Adj No. of Lanes	2	1	3	1	0	4		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	2	2	2	2	0	2		
Cap, veh/h	1351	678	2371	672	0	3161		
Arrive On Green	0.45	0.45	0.90	0.00	0.00	0.90		
Sat Flow, veh/h	2988	1500	5294	1500	0	7059		
Grp Volume(v), veh/h	564	613	1148	0	0	1683		
Grp Sat Flow(s), veh/h/ln	1494	1500	1765	1500	0	1765		
Q Serve(g_s), s	10.2	30.3	3.2	0.0	0.0	3.8		
Cycle Q Clear(g_c), s	10.2	30.3	3.2	0.0	0.0	3.8		
Prop In Lane	1.00	1.00		1.00	0.00			
Lane Grp Cap(c), veh/h	1351	678	2371	672	0	3161		
V/C Ratio(X)	0.42	0.90	0.48	0.00	0.00	0.53		
Avail Cap(c_a), veh/h	1643	825	2371	672	0	3161		
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	2.00		
Upstream Filter(I)	1.00	1.00	1.00	0.00	0.00	0.51		
Uniform Delay (d), s/veh	14.8	20.3	2.5	0.0	0.0	2.5		
Incr Delay (d2), s/veh	0.2	11.7	0.7	0.0	0.0	0.3		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	4.2	14.6	1.4	0.0	0.0	1.7		
LnGrp Delay(d),s/veh	15.0	32.0	3.2	0.0	0.0	2.8		
LnGrp LOS	В	С	Α			Α		
Approach Vol, veh/h	1177		1148			1683		
Approach Delay, s/veh	23.9		3.2			2.8		
Approach LOS	С		А			А		
Timer	1	2	3	4	5	6	7 8	
Assigned Phs		2				6	8	
Phs Duration (G+Y+Rc), s		39.8				39.8	40.2	
Change Period (Y+Rc), s		4.0				4.0	4.0	
Max Green Setting (Gmax), s		28.0				28.0	44.0	
Max Q Clear Time (g_c+l1), s		5.2				5.8	32.3	
Green Ext Time (p_c), s		18.9				18.5	3.9	
Interception Cummers								
intersection Summary								
Intersection Summary HCM 2010 Ctrl Delay			9.1					

	ၨ	→	\rightarrow	•	←	•	•	†	/	>	ţ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	Ť	4	7					ተተተ	7	ሻሻ	ተተተ	
Volume (vph)	350	0	580	0	0	0	0	1265	423	393	1254	0
Ideal Flow (vphpl)	1700	1800	1800	1800	1800	1800	1800	1800	1800	1600	1800	1800
Storage Length (ft)	0		350	0		0	0		0	300		0
Storage Lanes	1		1	0		0	0		1	2		0
Taper Length (ft)	120			60			60			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		722			861			873			429	
Travel Time (s)		16.4			19.6			13.2			6.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)	10%		47%									
Turn Type	Perm	NA	Perm					NA	Perm	Prot	NA	
Protected Phases		4						2		1	6	
Permitted Phases	4		4						2			
Detector Phase	4	4	4					2	2	1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0					4.0	4.0	4.0	4.0	
Minimum Split (s)	20.0	20.0	20.0					20.0	20.0	8.0	20.0	
Total Split (s)	29.0	29.0	29.0					31.0	31.0	20.0	51.0	
Total Split (%)	36.3%	36.3%	36.3%					38.8%	38.8%	25.0%	63.8%	
Yellow Time (s)	3.5	3.5	3.5					3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5	0.5					0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0					0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0					4.0	4.0	4.0	4.0	
Lead/Lag								Lead	Lead	Lag		
Lead-Lag Optimize?								Yes	Yes	Yes		
Recall Mode	None	None	None					C-Max	C-Max	None	C-Max	

Area Type: Other

Cycle Length: 80

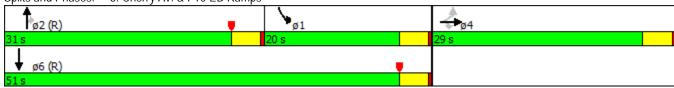
Actuated Cycle Length: 80

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 55

Control Type: Actuated-Coordinated

Splits and Phases: 6: Cherry Av. & I-10 EB Ramps



	<u></u>	→	•	•	←	•	1	†	/	/	+	4
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ħ	4	7					ተተተ	7	ሻሻ	ተተተ	
Volume (veh/h)	350	0	580	0	0	0	0	1265	423	393	1254	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1765	1765				0	1765	1765	1569	1765	0
Adj Flow Rate, veh/h	245	0	742				0	1332	445	414	1320	0
Adj No. of Lanes	1	0	2				0	3	1	2	3	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	448	0	847				0	1787	506	688	3270	0
Arrive On Green	0.28	0.00	0.28				0.00	0.34	0.34	0.46	1.00	0.00
Sat Flow, veh/h	1587	0	3000				0	5294	1500	2988	5294	0
Grp Volume(v), veh/h	245	0	742				0	1332	445	414	1320	0
Grp Sat Flow(s),veh/h/ln	1587	0	1500				0	1765	1500	1494	1765	0
Q Serve(g_s), s	10.5	0.0	18.9				0.0	17.8	22.4	8.3	0.0	0.0
Cycle Q Clear(g_c), s	10.5	0.0	18.9				0.0	17.8	22.4	8.3	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	448	0	847				0	1787	506	688	3270	0
V/C Ratio(X)	0.55	0.00	0.88				0.00	0.75	0.88	0.60	0.40	0.00
Avail Cap(c_a), veh/h	496	0	938				0	1787	506	688	3270	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	24.4	0.0	27.4				0.0	23.5	25.0	18.8	0.0	0.0
Incr Delay (d2), s/veh	1.0	0.0	8.8				0.0	2.9	19.1	1.5	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
%ile BackOfQ(50%),veh/ln	4.7	0.0	8.9				0.0	9.1	11.8	3.5	0.1	0.0
LnGrp Delay(d),s/veh	25.4	0.0	36.1				0.0	26.3	44.1	20.3	0.4	0.0
LnGrp LOS	С		D					С	D	С	Α	
Approach Vol, veh/h		987						1777			1734	
Approach Delay, s/veh		33.5						30.8			5.1	
Approach LOS		С						С			А	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	22.4	31.0		26.6		53.4						
Change Period (Y+Rc), s	4.0	4.0		4.0		4.0						
Max Green Setting (Gmax), s	16.0	27.0		25.0		47.0						
Max Q Clear Time (g_c+l1), s	10.3	24.4		20.9		2.0						
Green Ext Time (p_c), s	4.2	2.1		1.7		14.5						
Intersection Summary												
HCM 2010 Ctrl Delay			21.5									
HCM 2010 LOS			C									

TEC Traffic Impact Analysis C:\TRAMES\0255-0001\Synchro\02 - EA AM.syn

User approved volume balancing among the lanes for turning movement.

Trames Solutions, Inc. Synchro 8 Report

	۶	→	•	•	←	•	•	†	/	>	ţ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		ર્ન	7		ર્ન	7	ሻ	^	7	ሻ	^	7
Volume (vph)	0	0	0	101	0	176	0	1254	163	213	819	0
Ideal Flow (vphpl)	1800	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Storage Length (ft)	0		0	0		130	270		0	60		275
Storage Lanes	0		1	0		1	1		1	1		1
Taper Length (ft)	60			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			40			50			40	
Link Distance (ft)		506			600			1582			1080	
Travel Time (s)		13.8			10.2			21.6			18.4	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Turn Type			Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	8.0	20.0	20.0	8.0	20.0	20.0
Total Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	8.0	40.0	40.0	20.0	52.0	52.0
Total Split (%)	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	10.0%	50.0%	50.0%	25.0%	65.0%	65.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 58 (73%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 65

Control Type: Actuated-Coordinated

Splits and Phases: 1: Cherry Av. & Merrill Av.



	۶	→	•	•	←	•	1	†	~	/	+	4
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		र्स	7		र्स	7	ሻ	^	7	ሻ	^	7
Volume (veh/h)	0	0	0	101	0	176	0	1254	163	213	819	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1800	1765	1765	1700	1765	1765	1667	1765	1765	1667	1765	1765
Adj Flow Rate, veh/h	0	0	0	107	0	187	0	1334	173	227	871	0
Adj No. of Lanes	0	1	1	0	1	1	1	2	1	1	2	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	267	227	304	0	227	2	1882	800	263	2643	1123
Arrive On Green	0.00	0.00	0.00	0.15	0.00	0.15	0.00	0.53	0.53	0.17	0.75	0.00
Sat Flow, veh/h	0	1765	1500	1412	0	1500	1587	3529	1500	1587	3529	1500
Grp Volume(v), veh/h	0	0	0	107	0	187	0	1334	173	227	871	0
Grp Sat Flow(s),veh/h/ln	0	1765	1500	1412	0	1500	1587	1765	1500	1587	1765	1500
Q Serve(g_s), s	0.0	0.0	0.0	5.6	0.0	9.7	0.0	22.7	4.9	11.1	6.6	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	5.6	0.0	9.7	0.0	22.7	4.9	11.1	6.6	0.0
Prop In Lane	0.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	0	267	227	304	0	227	2	1882	800	263	2643	1123
V/C Ratio(X)	0.00	0.00	0.00	0.35	0.00	0.82	0.00	0.71	0.22	0.86	0.33	0.00
Avail Cap(c_a), veh/h	0	353	300	372	0	300	79	1882	800	317	2643	1123
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	31.2	0.0	32.9	0.0	14.0	9.8	32.5	3.4	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.7	0.0	13.1	0.0	2.3	0.6	18.6	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	2.2	0.0	4.8	0.0	11.5	2.2	6.2	3.3	0.0
LnGrp Delay(d),s/veh	0.0	0.0	0.0	31.9	0.0	46.0	0.0	16.3	10.5	51.1	3.7	0.0
LnGrp LOS				С		D		В	В	D	А	
Approach Vol, veh/h		0			294			1507			1098	
Approach Delay, s/veh		0.0			40.8			15.6			13.5	
Approach LOS					D			В			В	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	17.2	46.7		16.1	0.0	63.9		16.1				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	16.0	36.0		16.0	4.0	48.0		16.0				
Max Q Clear Time (g_c+l1), s	13.1	24.7		0.0	0.0	8.6		11.7				
Green Ext Time (p_c), s	0.2	9.3		0.0	0.0	23.4		0.5				
Intersection Summary												
HCM 2010 Ctrl Delay			17.4									

	۶	→	•	•	←	•	4	†	/	>	ļ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		ર્ન	7		ર્ન	7	ሻ	ተተተ		7	ተተተ	7
Volume (vph)	11	4	23	92	0	91	9	1354	154	112	848	4
Ideal Flow (vphpl)	1700	1800	1800	1800	1800	1800	1700	1800	1800	1700	1800	1800
Storage Length (ft)	0		0	0		50	260		0	70		200
Storage Lanes	0		1	0		1	1		0	1		1
Taper Length (ft)	60			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		589			331			2702			1062	
Travel Time (s)		13.4			7.5			36.8			14.5	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)	_		_	_		_				_		_
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8	_					6
Detector Phase	4	4	4	8	8	8	5	2		1	6	6
Switch Phase		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	1.0
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	8.0	20.0		8.0	20.0	20.0
Total Split (s)	22.0	22.0	22.0	22.0	22.0	22.0	8.0	41.0		17.0	50.0	50.0
Total Split (%)	27.5%	27.5%	27.5%	27.5%	27.5%	27.5%	10.0%	51.3%		21.3%	62.5%	62.5%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		4.0	4.0		4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Nan	Na.	NI a sa c	Name	Na.	Na.	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	C-Max

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 23 (29%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 55

Control Type: Actuated-Coordinated

Splits and Phases: 2: Cherry Av. & Randall Av.



		→	•	•	←	•	•	†	<i>></i>	/	+	✓
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4	7		4	7	7	ተተተ		ሻ	ተተተ	7
Volume (veh/h)	11	4	23	92	0	91	9	1354	154	112	848	4
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	1700	1765	1765	1800	1765	1765	1667	1765	1800	1667	1765	1765
Adj Flow Rate, veh/h	12	4	25	101	0	100	10	1488	169	123	932	4
Adj No. of Lanes	0	1	1	0	1	1	1	3	0	1	3	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	79	15	338	90	0	338	16	2472	281	152	3256	923
Arrive On Green	0.22	0.22	0.22	0.22	0.00	0.22	0.02	1.00	1.00	0.10	0.62	0.62
Sat Flow, veh/h	0	65	1500	0	0	1500	1587	4671	530	1587	5294	1500
Grp Volume(v), veh/h	16	0	25	101	0	100	10	1124	533	123	932	4
Grp Sat Flow(s), veh/h/ln	65	0	1500	0	0	1500	1587	1765	1671	1587	1765	1500
Q Serve(g_s), s	0.0	0.0	1.1	0.0	0.0	4.4	0.5	0.0	0.0	6.1	6.6	0.1
Cycle Q Clear(g_c), s	18.0	0.0	1.1	18.0	0.0	4.4	0.5	0.0	0.0	6.1	6.6	0.1
Prop In Lane	0.75		1.00	1.00		1.00	1.00		0.32	1.00		1.00
Lane Grp Cap(c), veh/h	93	0	338	90	0	338	16	1868	885	152	3256	923
V/C Ratio(X)	0.17	0.00	0.07	1.12	0.00	0.30	0.63	0.60	0.60	0.81	0.29	0.00
Avail Cap(c_a), veh/h	93	0	338	90	0	338	79	1868	885	258	3256	923
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.67	0.67	0.67	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.1	0.0	24.4	40.0	0.0	25.7	39.1	0.0	0.0	35.5	7.2	5.9
Incr Delay (d2), s/veh	0.9	0.0	0.1	131.7	0.0	0.5	24.7	1.0	2.0	9.8	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.4	5.3	0.0	1.9	0.3	0.3	0.5	3.1	3.3	0.0
LnGrp Delay(d),s/veh	27.0	0.0	24.5	171.7	0.0	26.2	63.7	1.0	2.0	45.3	7.4	6.0
LnGrp LOS	С		С	F		С	Е	Α	Α	D	Α	Α
Approach Vol, veh/h		41			201			1667			1059	
Approach Delay, s/veh		25.5			99.3			1.7			11.8	
Approach LOS		С			F			А			В	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.7	46.3		22.0	4.8	53.2		22.0				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	13.0	37.0		18.0	4.0	46.0		18.0				
Max Q Clear Time (g_c+l1), s	8.1	2.0		20.0	2.5	8.6		20.0				
Green Ext Time (p_c), s	0.1	23.5		0.0	0.0	24.5		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			12.2									
HCM 2010 LOS			В									
			_									

	•	→	\rightarrow	•	←	•	\triangleleft	†	~	>	ţ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻ	^	7	7	∱ ⊅		ሻ	ተተኈ		ሻ	ተተተ	7
Volume (vph)	297	613	155	73	150	85	59	979	128	95	791	263
Ideal Flow (vphpl)	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Storage Length (ft)	300		285	50		0	220		0	210		300
Storage Lanes	1		1	1		0	1		0	1		1
Taper Length (ft)	60			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		555			705			459			2702	
Travel Time (s)		12.6			16.0			6.3			36.8	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases			4									6
Detector Phase	7	4	4	3	8		5	2		1	6	7
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	8.0	20.0	20.0	8.0	20.0		8.0	20.0		8.0	20.0	8.0
Total Split (s)	23.0	30.0	30.0	13.0	20.0		10.0	25.0		12.0	27.0	23.0
Total Split (%)	28.8%	37.5%	37.5%	16.3%	25.0%		12.5%	31.3%		15.0%	33.8%	28.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5		0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	None

Area Type: Other

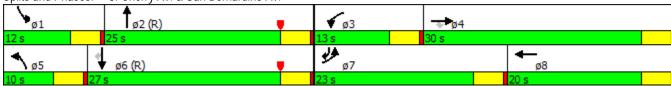
Cycle Length: 80

Actuated Cycle Length: 80

Offset: 46 (58%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 70





→ → ← ← ← ↑	 	✓
Movement EBL EBT EBR WBL WBT WBR NBL NBT NBR SBL	SBT :	SBR
Lane Configurations ነ ተተ	^ ^	7
Volume (veh/h) 297 613 155 73 150 85 59 979 128 95	791	263
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
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 1.0		1.00
Adj Sat Flow, veh/h/ln 1667 1765 1765 1667 1765 1800 1667 1765 1800 1667		1765
Adj Flow Rate, veh/h 326 674 0 80 165 93 65 1076 141 104	869	289
Adj No. of Lanes 1 2 1 1 2 0 1 3 0 1	3	1
Peak Hour Factor 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91		0.91
Percent Heavy Veh, % 2 2 2 2 2 2 2 2 2 2 2	2	2
Cap, veh/h 359 1094 465 99 317 169 80 1593 208 128	1998	906
Arrive On Green 0.23 0.31 0.00 0.06 0.15 0.15 0.05 0.35 0.31 0.11		0.50
Sat Flow, veh/h 1587 3529 1500 1587 2166 1159 1587 4588 600 1587		1500
Grp Volume(v), veh/h 326 674 0 80 133 125 65 827 390 104	869	289
Grp Sat Flow(s), veh/h/ln 1587 1765 1500 1587 1765 1560 1587 1765 1659 1587		1500
Q Serve(g_s), s 16.0 13.0 0.0 4.0 5.6 6.0 3.2 16.0 16.0 5.1	8.4	6.6
Cycle Q Clear(g_c), s 16.0 13.0 0.0 4.0 5.6 6.0 3.2 16.0 16.0 5.1	8.4	6.6
Prop In Lane 1.00 1.00 1.00 0.74 1.00 0.36 1.00		1.00
Lane Grp Cap(c), veh/h 359 1094 465 99 258 228 80 1225 576 128	1998	906
V/C Ratio(X) 0.91 0.62 0.00 0.81 0.51 0.55 0.82 0.68 0.68 0.81		0.32
Avail Cap(c_a), veh/h 377 1147 488 179 353 312 119 1225 576 159	1998	906
HCM Platoon Ratio 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0		1.33
Upstream Filter(I) 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.0		0.99
Uniform Delay (d), s/veh 30.1 23.5 0.0 37.0 31.5 31.7 37.6 22.3 22.3 35.1	14.5	6.1
Incr Delay (d2), s/veh 24.4 0.9 0.0 14.0 1.6 2.1 22.7 3.0 6.3 22.1	0.7	0.9
Initial Q Delay(d3),s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln 9.4 6.5 0.0 2.1 2.8 2.7 1.9 8.3 8.4 3.0	4.2	2.9
LnGrp Delay(d),s/veh 54.6 24.5 0.0 51.1 33.1 33.8 60.4 25.3 28.6 57.3	15.2	7.0
LnGrp LOS D C C E C C E	В	Α
Approach Vol, veh/h 1000 338 1282	1262	
Approach Delay, s/veh 34.3 37.6 28.0	16.8	
Approach LOS C D C	В	
Timer 1 2 3 4 5 6 7 8		
Assigned Phs 1 2 3 4 5 6 7 8		
Phs Duration (G+Y+Rc), s 10.4 31.8 9.0 28.8 8.0 34.2 22.1 15.7		
Change Period (Y+Rc), s 4.0 4.0 4.0 4.0 4.0 4.0 4.0		
Max Green Setting (Gmax), s 8.0 21.0 9.0 26.0 6.0 23.0 19.0 16.0		
Max Q Clear Time (g_c+I1), s 7.1 18.0 6.0 15.0 5.2 10.4 18.0 8.0		
Green Ext Time (p_c), s 0.0 2.6 0.0 4.6 0.0 9.7 0.1 3.7		
Intersection Summary		

	•	→	•	•	←	•	4	†	<i>></i>	>	ļ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	44	^	7	44	∱ }		1,1	† †	7	¥	† †	7
Volume (vph)	203	724	330	351	268	98	307	936	494	133	956	59
Ideal Flow (vphpl)	1600	1800	1800	1600	1800	1800	1600	1800	1800	1700	1800	1800
Storage Length (ft)	250		160	250		0	420		220	170		0
Storage Lanes	2		1	2		0	2		0	1		1
Taper Length (ft)	120			120			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		845			1019			968			718	
Travel Time (s)		19.2			23.2			13.2			9.8	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Shared Lane Traffic (%)												
Turn Type	Prot	NA	pm+ov	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4	5	3	8		5	2		1	6	
Permitted Phases			4						2			6
Detector Phase	7	4	5	3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	20.0	8.0	8.0	20.0		8.0	20.0	20.0	8.0	20.0	20.0
Total Split (s)	14.0	22.0	13.0	14.0	22.0		13.0	32.0	32.0	12.0	31.0	31.0
Total Split (%)	17.5%	27.5%	16.3%	17.5%	27.5%		16.3%	40.0%	40.0%	15.0%	38.8%	38.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow, Master Intersection

Natural Cycle: 80

Control Type: Actuated-Coordinated

Splits and Phases: 4: Cherry Av. & Valley Blvd.



Movement EBL EBT EBR WBL WBT WBR NBL NBT NBR SBL SBT Lane Configurations 11 11 11 11 11 11 11 11 11 12 12 13 14 13 18	SBR
Volume (veh/h) 203 724 330 351 268 98 307 936 494 133 956 Number 7 4 14 3 8 18 5 2 12 1 6	
Number 7 4 14 3 8 18 5 2 12 1 6	7
	59
	16
Initial Q (Qb), veh 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
Parking Bus, Adj 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	1.00
Adj Sat Flow, veh/h/ln 1569 1765 1765 1765 1765 1765 1765 1765 1765	1765
Adj Flow Rate, veh/h 211 754 344 366 279 102 320 975 515 139 996	61
Adj No. of Lanes 2 2 1 2 2 0 2 2 1 1 2	1
Peak Hour Factor 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96	0.96
Percent Heavy Veh, % 2 2 2 2 2 2 2 2 2 2 2 2	2
Cap, veh/h 284 794 506 373 634 226 336 1235 525 159 1191	506
Arrive On Green 0.09 0.22 0.22 0.13 0.26 0.26 0.04 0.12 0.12 0.10 0.34	0.34
Sat Flow, veh/h 2988 3529 1500 2988 2485 887 2988 3529 1500 1587 3529	1500
Grp Volume(v), veh/h 211 754 344 366 196 185 320 975 515 139 996	61
Grp Sat Flow(s), veh/h/ln 1494 1765 1500 1494 1765 1608 1494 1765 1500 1587 1765	1500
Q Serve(g_s), s 5.5 16.8 15.8 9.8 7.5 7.7 8.6 21.5 27.4 6.9 20.8	2.2
Cycle Q Clear(g_c), s 5.5 16.8 15.8 9.8 7.5 7.7 8.6 21.5 27.4 6.9 20.8	2.2
Prop In Lane 1.00 1.00 1.00 0.55 1.00 1.00 1.00	1.00
Lane Grp Cap(c), veh/h 284 794 506 373 450 410 336 1235 525 159 1191	506
V/C Ratio(X) 0.74 0.95 0.68 0.98 0.44 0.45 0.95 0.79 0.98 0.88 0.84	0.12
Avail Cap(c_a), veh/h 373 794 506 373 450 410 336 1235 525 159 1191	506
HCM Platoon Ratio 1.00 1.00 1.00 1.00 1.00 0.33 0.33 1.00 1.00	1.00
Upstream Filter(I) 1.00 1.00 1.00 1.00 0.81 0.81 0.81 1.00 1.00	1.00
Uniform Delay (d), s/veh 35.3 30.6 22.8 34.9 25.0 25.1 38.3 32.5 35.1 35.5 24.5	18.3
Incr Delay (d2), s/veh 5.6 20.6 3.7 41.1 0.7 0.8 32.0 4.2 31.0 38.2 7.0	0.5
Initial Q Delay(d3),s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	0.0
%ile BackOfQ(50%),veh/ln 2.5 10.4 7.0 6.1 3.7 3.5 5.0 11.2 15.9 4.7 11.3	1.0
LnGrp Delay(d),s/veh 40.8 51.1 26.4 76.0 25.6 25.9 70.3 36.7 66.1 73.7 31.5	18.8
LnGrp LOS D D C E C C E D E E C	В
Approach Vol, veh/h 1309 747 1810 1196	
Approach Delay, s/veh 43.0 50.4 51.0 35.8	
Approach LOS D D D	
Timer 1 2 3 4 5 6 7 8	
Assigned Phs 1 2 3 4 5 6 7 8	
Phs Duration (G+Y+Rc), s 12.0 32.0 14.0 22.0 13.0 31.0 11.6 24.4	
Change Period (Y+Rc), s 4.0 4.0 4.0 4.0 4.0 4.0 4.0	
Max Green Setting (Gmax), s 8.0 28.0 10.0 18.0 9.0 27.0 10.0 18.0	
Max Q Clear Time (g_c+l1), s 8.9 29.4 11.8 18.8 10.6 22.8 7.5 9.7	
Green Ext Time (p_c), s 0.0 0.0 0.0 0.0 3.7 0.2 5.2	
Intersection Summary	
HCM 2010 Ctrl Delay 45.2	
HCM 2010 LOS D	

	•	•	†	/	>	ļ
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	ሻሻ	7	ተተተ	7		1111
Volume (vph)	401	489	1307	407	0	1651
Ideal Flow (vphpl)	1600	1800	1800	1800	1800	1800
Storage Length (ft)	0	0		200	0	
Storage Lanes	2	1		1	0	
Taper Length (ft)	60				60	
Right Turn on Red		Yes		Yes		
Link Speed (mph)	30		45			45
Link Distance (ft)	252		337			968
Travel Time (s)	5.7		5.1			14.7
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Turn Type	Prot	Perm	NA	Free		NA
Protected Phases	8		2			6
Permitted Phases		8		Free		
Detector Phase	8	8	2			6
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0			4.0
Minimum Split (s)	20.0	20.0	20.0			20.0
Total Split (s)	43.0	43.0	37.0			37.0
Total Split (%)	53.8%	53.8%	46.3%			46.3%
Yellow Time (s)	3.5	3.5	3.5			3.5
All-Red Time (s)	0.5	0.5	0.5			0.5
Lost Time Adjust (s)	0.0	0.0	0.0			0.0
Total Lost Time (s)	4.0	4.0	4.0			4.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	C-Max			C-Max
Intersection Summary						

Area Type: Other

Cycle Length: 80

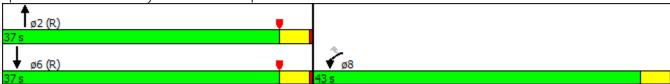
Actuated Cycle Length: 80

Offset: 39 (49%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 40

Control Type: Actuated-Coordinated

Splits and Phases: 5: Cherry Av. & I-10 WB Ramps



	•	•	†	~	<u> </u>	+		
Movement	WBL	WBR	NBT	NBR	SBL	SBT		
Lane Configurations	ሻሻ	7	^ ^	7		1111		
Volume (veh/h)	401	489	1307	407	0	1651		
Number	3	18	2	12	1	6		
nitial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00			
arking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
dj Sat Flow, veh/h/ln	1569	1765	1765	1765	0	1765		
dj Flow Rate, veh/h	422	515	1376	0	0	1738		
j No. of Lanes	2	1	3	1	0	4		
eak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95		
ercent Heavy Veh, %	2	2	2	2	0	2		
np, veh/h	1147	576	2733	774	0	3643		
rive On Green	0.38	0.38	1.00	0.00	0.00	0.17		
at Flow, veh/h	2988	1500	5294	1500	0	7059		
rp Volume(v), veh/h	422	515	1376	0	0	1738		
p Sat Flow(s), veh/h/ln	1494	1500	1765	1500	0	1765		
Serve(g_s), s	8.1	25.8	0.0	0.0	0.0	17.8		
cle Q Clear(g_c), s	8.1	25.8	0.0	0.0	0.0	17.8		
p In Lane	1.00	1.00		1.00	0.00			
ne Grp Cap(c), veh/h	1147	576	2733	774	0	3643		
C Ratio(X)	0.37	0.89	0.50	0.00	0.00	0.48		
nil Cap(c_a), veh/h	1457	731	2733	774	0	3643		
M Platoon Ratio	1.00	1.00	2.00	2.00	1.00	0.33		
stream Filter(I)	1.00	1.00	1.00	0.00	0.00	0.55		
form Delay (d), s/veh	17.7	23.1	0.0	0.0	0.0	23.4		
r Delay (d2), s/veh	0.2	11.4	0.7	0.0	0.0	0.2		
tial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
le BackOfQ(50%),veh/ln	3.4	12.4	0.2	0.0	0.0	8.8		
nGrp Delay(d),s/veh	17.9	34.6	0.7	0.0	0.0	23.7		
Grp LOS	В	С	Α			С		
proach Vol, veh/h	937		1376			1738		
proach Delay, s/veh	27.1		0.7			23.7		
proach LOS	С		Α			С		
mer	1	2	3	4	5	6	7 8	
signed Phs		2				6	8	
s Duration (G+Y+Rc), s		45.3				45.3	34.7	
ange Period (Y+Rc), s		4.0				4.0	4.0	
x Green Setting (Gmax), s		33.0				33.0	39.0	
x Q Clear Time (g_c+l1), s		2.0				19.8	27.8	
een Ext Time (p_c), s		26.1				12.1	2.9	
tersection Summary								
M 2010 Ctrl Delay			16.6					
CM 2010 LOS			В					

	•	→	\rightarrow	•	•	•	•	†	/	>	ļ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	*	4	7					ተተተ	7	ሻሻ	ተተተ	
Volume (vph)	431	0	552	0	0	0	0	1282	508	515	1088	0
Ideal Flow (vphpl)	1700	1800	1800	1800	1800	1800	1800	1800	1800	1600	1800	1800
Storage Length (ft)	0		350	0		0	0		0	300		0
Storage Lanes	1		1	0		0	0		1	2		0
Taper Length (ft)	120			60			60			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		722			861			873			429	
Travel Time (s)		16.4			19.6			13.2			6.5	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Shared Lane Traffic (%)	21%		43%									
Turn Type	Perm	NA	Perm					NA	Perm	Prot	NA	
Protected Phases		4						2		1	6	
Permitted Phases	4		4						2			
Detector Phase	4	4	4					2	2	1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0					4.0	4.0	4.0	4.0	
Minimum Split (s)	20.0	20.0	20.0					20.0	20.0	8.0	20.0	
Total Split (s)	28.0	28.0	28.0					30.0	30.0	22.0	52.0	
Total Split (%)	35.0%	35.0%	35.0%					37.5%	37.5%	27.5%	65.0%	
Yellow Time (s)	3.5	3.5	3.5					3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5	0.5					0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0					0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0					4.0	4.0	4.0	4.0	
Lead/Lag								Lead	Lead	Lag		
Lead-Lag Optimize?								Yes	Yes	Yes		
Recall Mode	None	None	None					C-Max	C-Max	None	C-Max	

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 28 (35%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 60

Control Type: Actuated-Coordinated

Splits and Phases: 6: Cherry Av. & I-10 EB Ramps



	۶	→	•	•	←	•	1	†	<i>></i>	/	Ţ	4
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻ	4	7					ተተተ	7	ሻሻ	^ ^	
Volume (veh/h)	431	0	552	0	0	0	0	1282	508	515	1088	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1765	1765				0	1765	1765	1569	1765	0
Adj Flow Rate, veh/h	647	0	362				0	1335	529	536	1133	0
Adj No. of Lanes	2	0	1				0	3	1	2	3	0
Peak Hour Factor	0.96	0.96	0.96				0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	871	0	411				0	1721	488	749	3312	0
Arrive On Green	0.27	0.00	0.27				0.00	0.32	0.32	0.50	1.00	0.00
Sat Flow, veh/h	3175	0	1500				0	5294	1500	2988	5294	0
Grp Volume(v), veh/h	647	0	362				0	1335	529	536	1133	0
Grp Sat Flow(s), veh/h/ln	1587	0	1500				0	1765	1500	1494	1765	0
Q Serve(g_s), s	14.9	0.0	18.5				0.0	18.2	26.0	11.2	0.0	0.0
Cycle Q Clear(g_c), s	14.9	0.0	18.5				0.0	18.2	26.0	11.2	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	871	0	411				0	1721	488	749	3312	0
V/C Ratio(X)	0.74	0.00	0.88				0.00	0.78	1.09	0.72	0.34	0.00
Avail Cap(c_a), veh/h	952	0	450				0	1721	488	749	3312	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	26.5	0.0	27.8				0.0	24.4	27.0	17.7	0.0	0.0
Incr Delay (d2), s/veh	2.9	0.0	16.9				0.0	3.5	65.7	3.3	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
%ile BackOfQ(50%),veh/ln	6.8	0.0	9.6				0.0	9.3	19.6	4.8	0.1	0.0
LnGrp Delay(d),s/veh	29.4	0.0	44.7				0.0	27.9	92.7	21.0	0.3	0.0
LnGrp LOS	C	0.0	D				0.0	C	72.7 F	C C	A	0.0
Approach Vol, veh/h		1009	<u> </u>					1864			1669	
Approach Delay, s/veh		34.9						46.3			6.9	
Approach LOS		34.7 C						40.3 D			0.7 A	
Approacti LOS		C						D			А	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	24.1	30.0		25.9		54.1						
Change Period (Y+Rc), s	4.0	4.0		4.0		4.0						
Max Green Setting (Gmax), s	18.0	26.0		24.0		48.0						
Max Q Clear Time (g_c+I1), s	13.2	28.0		20.5		2.0						
Green Ext Time (p_c), s	3.5	0.0		1.5		12.9						
Intersection Summary												
HCM 2010 Ctrl Delay			29.3									
HCM 2010 LOS			С									
Notes												

TEC Traffic Impact Analysis C:\TRAMES\0255-0001\Synchro\02 - EA PM.syn

User approved volume balancing among the lanes for turning movement.

Trames Solutions, Inc. Synchro 8 Report

APPENDIX 5.3

EXISTING PLUS AMBIENT PLUS PROJECT (EAP 2017) CONDITIONS INTERSECTION ANALYSIS CALCULATION WORKSHEETS

	۶	→	•	•	←	•	•	†	/	>	ţ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		ર્ન	7		ર્ન	7	ሻ	^	7	7	^	7
Volume (vph)	0	0	0	184	0	235	1	749	109	147	1147	0
Ideal Flow (vphpl)	1800	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Storage Length (ft)	0		0	0		130	270		0	60		275
Storage Lanes	0		1	0		1	1		1	1		1
Taper Length (ft)	60			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			40			50			40	
Link Distance (ft)		506			600			1582			1080	
Travel Time (s)		13.8			10.2			21.6			18.4	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Turn Type			Perm	Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4		8	8		5	2		1	6	
Permitted Phases	4		4			8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	8.0	20.0	20.0	8.0	20.0	20.0
Total Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	8.0	26.0	26.0	14.0	32.0	32.0
Total Split (%)	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	10.0%	32.5%	32.5%	17.5%	40.0%	40.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max

Area Type: Other

Cycle Length: 80

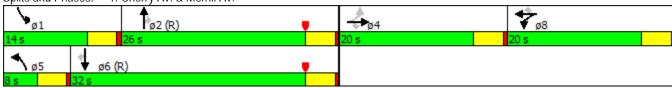
Actuated Cycle Length: 80

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 80

Control Type: Actuated-Coordinated

Splits and Phases: 1: Cherry Av. & Merrill Av.



	۶	→	•	•	←	•	1	†	<i>></i>	/	+	4
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		€Î	7		€Î	7	7	^	7	ሻ	^	7
Volume (veh/h)	0	0	0	184	0	235	1	749	109	147	1147	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1800	1765	1765	1700	1765	1765	1667	1765	1765	1667	1765	1765
Adj Flow Rate, veh/h	0	0	0	190	0	242	1	772	112	152	1182	0
Adj No. of Lanes	0	1	1	0	1	1	1	2	1	1	2	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	2	2	312	0	278	2	1940	824	182	2341	995
Arrive On Green	0.00	0.00	0.00	0.19	0.00	0.19	0.00	0.55	0.55	0.11	0.66	0.00
Sat Flow, veh/h	0	1765	1500	1681	0	1500	1587	3529	1500	1587	3529	1500
Grp Volume(v), veh/h	0	0	0	190	0	242	1	772	112	152	1182	0
Grp Sat Flow(s),veh/h/ln	0	1765	1500	1681	0	1500	1587	1765	1500	1587	1765	1500
Q Serve(g_s), s	0.0	0.0	0.0	8.3	0.0	12.5	0.1	10.1	2.9	7.5	13.6	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	8.3	0.0	12.5	0.1	10.1	2.9	7.5	13.6	0.0
Prop In Lane	0.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	0	2	2	312	0	278	2	1940	824	182	2341	995
V/C Ratio(X)	0.00	0.00	0.00	0.61	0.00	0.87	0.50	0.40	0.14	0.83	0.50	0.00
Avail Cap(c_a), veh/h	0	353	300	336	0	300	79	1940	824	198	2341	995
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	29.9	0.0	31.6	39.9	10.4	8.8	34.7	6.8	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	2.8	0.0	21.9	126.9	0.6	0.3	23.7	0.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	4.1	0.0	6.9	0.1	5.0	1.3	4.5	6.8	0.0
LnGrp Delay(d),s/veh	0.0	0.0	0.0	32.7	0.0	53.6	166.9	11.0	9.1	58.4	7.6	0.0
LnGrp LOS				С		D	F	В	А	Е	А	
Approach Vol, veh/h		0			432			885			1334	
Approach Delay, s/veh		0.0			44.4			10.9			13.4	
Approach LOS					D			В			В	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.2	48.0		0.0	4.1	57.1		18.8				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	10.0	22.0		16.0	4.0	28.0		16.0				
Max Q Clear Time (g_c+I1), s	9.5	12.1		0.0	2.1	15.6		14.5				
Green Ext Time (p_c), s	0.0	7.7		0.0	0.0	9.3		0.3				
Intersection Summary												
HCM 2010 Ctrl Delay			17.6									

	•	→	•	•	←	•	4	†	/	>	ļ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4	7		र्स	7	*	ተተተ		7	ተተተ	7
Volume (vph)	1	0	0	207	3	115	22	797	122	109	1138	8
Ideal Flow (vphpl)	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Storage Length (ft)	0		0	0		50	260		0	70		200
Storage Lanes	0		1	0		1	1		0	1		1
Taper Length (ft)	60			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		589			331			2702			1062	
Travel Time (s)		13.4			7.5			36.8			14.5	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						6
Detector Phase	4	4	4	8	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	8.0	20.0		8.0	20.0	20.0
Total Split (s)	28.0	28.0	28.0	28.0	28.0	28.0	11.0	33.0		19.0	41.0	41.0
Total Split (%)	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	13.8%	41.3%		23.8%	51.3%	51.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		4.0	4.0		4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	C-Max

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 8 (10%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 50

Control Type: Actuated-Coordinated

Splits and Phases: 2: Cherry Av. & Randall Av.



Lane Configurations Volume (veh/h) Number Initial Q (Qb), veh Ped-Bike Adj(A_pbT) 1. Parking Bus, Adj 1. Adj Sat Flow, veh/h/ln 17 Adj Flow Rate, veh/h Adj No. of Lanes Peak Hour Factor 0. Percent Heavy Veh, % Cap, veh/h 1 Arrive On Green 0. Sat Flow, veh/h 3 Grp Volume(v), veh/h Grp Sat Flow(s),veh/h/ln 3 Q Serve(g_s), s	1 7 0 0 0 0 1.C 0 176 1 0 0.97 0.9 2 42 116 0.C 0 19	0 0 0 4 14 0 0 1.00 0 1.00 5 1765 0 0 1 1 7 0.97 2 2 0 247	3 0 1.00 1.00 1700 213 0	WBT 3 8 0 1.00 1765 3 1 0.97	WBR 115 18 0 1.00 1.00 1765 119	NBL 22 5 0 1.00 1.00 1667 23	NBT ↑↑↑ 797 2 0 1.00 1765	122 12 0 1.00 1.00 1800	109 1 0 1.00 1.00 1.667	SBT ↑↑↑ 1138 6 0 1.00	SBR 8 16 0 1.00
Volume (veh/h) Number Initial Q (Qb), veh Ped-Bike Adj(A_pbT) Parking Bus, Adj Adj Sat Flow, veh/h/ln Adj Flow Rate, veh/h Adj No. of Lanes Peak Hour Factor Percent Heavy Veh, % Cap, veh/h Arrive On Green Sat Flow, veh/h Grp Volume(v), veh/h Grp Sat Flow(s),veh/h/ln Q Serve(g_s), s	1 7 0 0 0 0 1.C 0 176 1 0 0 97 0.9 2 42 116 0.C 119	0 0 4 14 0 0 1.00 0 1.00 5 1765 0 0 1 1 7 0.97 2 2 0 247	3 0 1.00 1.00 1700 213 0	3 8 0 1.00 1765 3 1	115 18 0 1.00 1.00 1765 119	22 5 0 1.00 1.00 1667	797 2 0 1.00 1765	12 0 1.00 1.00	109 1 0 1.00 1.00	1138 6 0	8 16 0
Number Initial Q (Qb), veh Ped-Bike Adj(A_pbT) 1. Parking Bus, Adj 1. Adj Sat Flow, veh/h/In 17 Adj Flow Rate, veh/h Adj No. of Lanes Peak Hour Factor 0. Percent Heavy Veh, % Cap, veh/h 1 Arrive On Green 0. Sat Flow, veh/h 3 Grp Volume(v), veh/h Grp Sat Flow(s),veh/h/In 3 Q Serve(g_s), s	7 0 00 00 1.0 100 176 1 0 97 0.9 2 42 16 0.0	4 14 0 0 1.00 0 1.00 5 1765 0 0 1 1 7 0.97 2 2 0 247	3 0 1.00 1.00 1700 213 0	1.00 1765 3	18 0 1.00 1.00 1765 119	5 0 1.00 1.00 1667	797 2 0 1.00 1765	12 0 1.00 1.00	1 0 1.00 1.00	6 0	16 0
Initial Q (Qb), veh Ped-Bike Adj(A_pbT) 1. Parking Bus, Adj 1. Adj Sat Flow, veh/h/ln 17 Adj Flow Rate, veh/h Adj No. of Lanes Peak Hour Factor 0. Percent Heavy Veh, % Cap, veh/h 1 Arrive On Green 0. Sat Flow, veh/h 3 Grp Volume(v), veh/h Grp Sat Flow(s),veh/h/ln 3 Q Serve(g_s), s	0 00 00 1.0 00 176 1 0 97 0.9 2 42 16 0.0	0 0 1.00 1.00 5 1765 0 0 1 1 7 0.97 2 2 0 247	0 1.00 1.00 1700 213 0 0.97	1.00 1765 3	0 1.00 1.00 1765 119	0 1.00 1.00 1667	1.00 1765	0 1.00 1.00	0 1.00 1.00	0	0
Ped-Bike Adj(A_pbT) 1. Parking Bus, Adj 1. Adj Sat Flow, veh/h/ln 17 Adj Flow Rate, veh/h Adj No. of Lanes Peak Hour Factor 0. Percent Heavy Veh, % Cap, veh/h 1 Arrive On Green 0. Sat Flow, veh/h 3 Grp Volume(v), veh/h Grp Sat Flow(s),veh/h/ln 3 Q Serve(g_s), s	00 00 1.0 10 1 0 97 2 42 16 0.0	1.00 0 1.00 5 1765 0 0 1 1 7 0.97 2 2 0 247	1.00 1.00 1700 213 0 0.97	1.00 1765 3 1	1.00 1.00 1765 119	1.00 1.00 1667	1.00 1765	1.00 1.00	1.00 1.00		
Parking Bus, Adj 1. Adj Sat Flow, veh/h/ln 17 Adj Flow Rate, veh/h Adj No. of Lanes Peak Hour Factor 0. Percent Heavy Veh, % Cap, veh/h 1 Arrive On Green 0. Sat Flow, veh/h 3 Grp Volume(v), veh/h Grp Sat Flow(s),veh/h/ln 3 Q Serve(g_s), s	00 1.0 100 176 1 0 97 0.9 2 42 16 0.0	0 1.00 5 1765 0 0 1 1 7 0.97 2 2 0 247	1.00 1700 213 0 0.97	1765 3 1	1.00 1765 119	1.00 1667	1765	1.00	1.00	1 00	1 00
Adj Sat Flow, veh/h/ln Adj Flow Rate, veh/h Adj No. of Lanes Peak Hour Factor Percent Heavy Veh, % Cap, veh/h Arrive On Green Sat Flow, veh/h Grp Volume(v), veh/h Grp Sat Flow(s),veh/h/ln Q Serve(g_s), s	100 176 1 0 97 0.9 2 42 16 0.0	5 1765 0 0 1 1 7 0.97 2 2 0 247	1700 213 0 0.97	1765 3 1	1765 119	1667	1765			1 00	
Adj Flow Rate, veh/h Adj No. of Lanes Peak Hour Factor O. Percent Heavy Veh, % Cap, veh/h Arrive On Green O. Sat Flow, veh/h Grp Volume(v), veh/h Grp Sat Flow(s),veh/h/ln O Serve(g_s), s	1 0 97 0.9 2 42 16 0.0	0 0 1 1 7 0.97 2 2 0 247	213 0 0.97	3	119			1800	1647	1.00	1.00
Adj No. of Lanes Peak Hour Factor Percent Heavy Veh, % Cap, veh/h Arrive On Green Sat Flow, veh/h Grp Volume(v), veh/h Grp Sat Flow(s),veh/h/ln Q Serve(g_s), s	0 97 0.9 2 42 .16 0.0	1 1 7 0.97 2 2 0 247	0 0.97	1		23	000			1765	1765
Peak Hour Factor 0. Percent Heavy Veh, % Cap, veh/h 1 Arrive On Green 0. Sat Flow, veh/h 3 Grp Volume(v), veh/h Grp Sat Flow(s),veh/h/ln 3 Q Serve(g_s), s	97 0.9 2 42 16 0.0	7 0.97 2 2 0 247	0.97			25	822	126	112	1173	8
Percent Heavy Veh, % Cap, veh/h 1 Arrive On Green 0. Sat Flow, veh/h 3 Grp Volume(v), veh/h Grp Sat Flow(s),veh/h/ln 3 Q Serve(g_s), s	2 42 .16 0.0	2 2 0 247		0.07	1	1	3	0	1	3	1
Cap, veh/h 1 Arrive On Green 0. Sat Flow, veh/h 3 Grp Volume(v), veh/h Grp Sat Flow(s), veh/h/ln 3 Q Serve(g_s), s 0	42 .16 0.0	0 247	2	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Arrive On Green 0. Sat Flow, veh/h 3 Grp Volume(v), veh/h Grp Sat Flow(s),veh/h/ln 3 Q Serve(g_s), s	.16 0.0 319			2	2	2	2	2	2	2	2
Sat Flow, veh/h Grp Volume(v), veh/h Grp Sat Flow(s), veh/h/ln Q Serve(g_s), s	19	n n n	352	4	247	32	2683	408	140	3523	998
Grp Volume(v), veh/h Grp Sat Flow(s),veh/h/ln 3 Q Serve(g_s), s				0.16	0.16	0.04	1.00	1.00	0.09	0.67	0.67
Grp Sat Flow(s),veh/h/ln 3 Q Serve(g_s), s	1	0 1500	1593	22	1500	1587	4490	684	1587	5294	1500
Q Serve(g_s), s		0 0	216	0	119	23	645	303	112	1173	8
	119	0 1500	1616	0	1500	1587	1765	1644	1587	1765	1500
	0.1	0.0	0.0	0.0	5.8	1.1	0.0	0.0	5.5	7.6	0.1
Oycic & Olcul (g_c), 3	9.9 0.	0.0	9.8	0.0	5.8	1.1	0.0	0.0	5.5	7.6	0.1
Prop In Lane 1.	.00	1.00	0.99		1.00	1.00		0.42	1.00		1.00
Lane Grp Cap(c), veh/h 1	42	0 247	355	0	247	32	2109	982	140	3523	998
V/C Ratio(X) 0.	.01 0.0	0.00	0.61	0.00	0.48	0.72	0.31	0.31	0.80	0.33	0.01
Avail Cap(c_a), veh/h 3	14	0 450	547	0	450	139	2109	982	298	3523	998
HCM Platoon Ratio 1.	.00 1.0	0 1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I) 1.	.00 0.0	0.00	1.00	0.00	1.00	0.88	0.88	0.88	1.00	1.00	1.00
Uniform Delay (d), s/veh 36	6.7 0.	0.0	32.0	0.0	30.3	38.2	0.0	0.0	35.8	5.8	4.5
Incr Delay (d2), s/veh (0.0	0.0	1.7	0.0	1.5	23.7	0.3	0.7	10.2	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	0.0
%ile BackOfQ(50%),veh/ln (0.0	0.0	4.7	0.0	2.5	0.7	0.1	0.2	2.8	3.8	0.1
LnGrp Delay(d),s/veh 36	6.8 0.	0.0	33.7	0.0	31.8	61.9	0.3	0.7	46.0	6.0	4.5
LnGrp LOS	D		С		С	Е	Α	Α	D	Α	Α
Approach Vol, veh/h		1		335			971			1293	
Approach Delay, s/veh	36	8		33.0			1.9			9.5	
Approach LOS		D		С			А			А	
Timer	1	2 3	4	5	6	7	8				
Assigned Phs	1	2	4	5	6		8				
	1.0 51	8	17.2	5.6	57.2		17.2				
	4.0 4.		4.0	4.0	4.0		4.0				
	5.0 29.	0	24.0	7.0	37.0		24.0				
3 · · · ·	7.5 2		11.9	3.1	9.6		11.8				
	0.1 15		1.3	0.0	16.1		1.3				
Intersection Summary											
HCM 2010 Ctrl Delay		9.7									
HCM 2010 LOS		А									

	•	→	•	•	←	•	4	†	~	>	ţ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻ	† †	7	J.	↑ ↑		7	ተተኈ		7	ተተተ	7
Volume (vph)	184	70	95	146	344	90	85	775	89	75	851	379
Ideal Flow (vphpl)	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Storage Length (ft)	300		285	50		0	220		0	210		300
Storage Lanes	1		1	1		0	1		0	1		1
Taper Length (ft)	60			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		555			705			459			2702	
Travel Time (s)		12.6			16.0			6.3			36.8	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases			4									6
Detector Phase	7	4	4	3	8		5	2		1	6	7
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	8.0	20.0	20.0	8.0	20.0		8.0	20.0		8.0	20.0	8.0
Total Split (s)	20.0	23.0	23.0	17.0	20.0		14.0	27.0		13.0	26.0	20.0
Total Split (%)	25.0%	28.8%	28.8%	21.3%	25.0%		17.5%	33.8%		16.3%	32.5%	25.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5		0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lead/Lag	Lag	Lead	Lead	Lag	Lead		Lag	Lead		Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	None

Area Type: Other

Cycle Length: 80

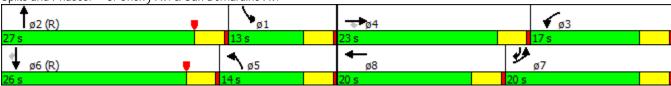
Actuated Cycle Length: 80

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 60

Control Type: Actuated-Coordinated





	•	→	•	•	←	•	•	†	<i>></i>	/	†	✓
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	7	^	7	7	ተ ኈ		ሻ	ተተ _ጉ		ሻ	ተተተ	7
Volume (veh/h)	184	70	95	146	344	90	85	775	89	75	851	379
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	1667	1765	1765	1667	1765	1800	1667	1765	1800	1667	1765	1765
Adj Flow Rate, veh/h	190	72	0	151	355	93	88	799	92	77	877	391
Adj No. of Lanes	1	2	1	1	2	0	1	3	0	1	3	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	226	176	75	409	446	115	345	1341	154	326	1456	626
Arrive On Green	0.14	0.05	0.00	0.26	0.16	0.16	0.22	0.29	0.29	0.07	0.09	0.09
Sat Flow, veh/h	1587	3529	1500	1587	2706	700	1587	4666	534	1587	5294	1500
Grp Volume(v), veh/h	190	72	0	151	230	218	88	603	288	77	877	391
Grp Sat Flow(s),veh/h/ln	1587	1765	1500	1587	1765	1641	1587	1765	1670	1587	1765	1500
Q Serve(g_s), s	9.3	1.6	0.0	6.2	10.0	10.2	3.7	11.7	11.9	3.7	12.7	8.3
Cycle Q Clear(g_c), s	9.3	1.6	0.0	6.2	10.0	10.2	3.7	11.7	11.9	3.7	12.7	8.3
Prop In Lane	1.00		1.00	1.00		0.43	1.00		0.32	1.00		1.00
Lane Grp Cap(c), veh/h	226	176	75	409	291	270	345	1015	480	326	1456	626
V/C Ratio(X)	0.84	0.41	0.00	0.37	0.79	0.81	0.25	0.59	0.60	0.24	0.60	0.62
Avail Cap(c_a), veh/h	317	838	356	409	353	328	345	1015	480	326	1456	626
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Uniform Delay (d), s/veh	33.4	36.9	0.0	24.4	32.1	32.2	25.9	24.5	24.5	31.4	32.2	24.7
Incr Delay (d2), s/veh	13.0	1.5	0.0	0.6	9.6	11.6	0.4	2.6	5.4	0.4	1.8	4.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	8.0	0.0	2.8	5.6	5.5	1.7	6.1	6.2	1.7	6.5	4.2
LnGrp Delay(d),s/veh	46.4	38.4	0.0	24.9	41.7	43.8	26.3	27.1	30.0	31.7	33.9	29.2
LnGrp LOS	D	D		С	D	D	С	С	С	С	С	С
Approach Vol, veh/h		262			599			979			1345	
Approach Delay, s/veh		44.2			38.2			27.8			32.4	
Approach LOS		D			D			С			С	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.4	27.0	24.6	8.0	21.4	26.0	15.4	17.2				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	9.0	23.0	13.0	19.0	10.0	22.0	16.0	16.0				
Max Q Clear Time (g_c+l1), s	5.7	13.9	8.2	3.6	5.7	14.7	11.3	12.2				
Green Ext Time (p_c), s	0.1	3.5	0.5	0.3	0.1	3.8	0.3	0.9				
Intersection Summary												
HCM 2010 Ctrl Delay			33.1									
HCM 2010 LOS			С									

	•	→	•	•	←	•	4	†	<i>></i>	>	ţ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	16.5%	^	7	77	∱ ∱		ሻሻ	^	7	Ţ	44	7
Volume (vph)	64	131	188	421	283	65	424	890	339	69	985	91
Ideal Flow (vphpl)	1600	1800	1800	1600	1800	1800	1600	1800	1800	1700	1800	1800
Storage Length (ft)	250		160	250		0	420		220	170		0
Storage Lanes	2		1	2		0	2		0	1		1
Taper Length (ft)	120			120			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		845			1019			968			718	
Travel Time (s)		19.2			23.2			13.2			9.8	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Shared Lane Traffic (%)												
Turn Type	Prot	NA	pm+ov	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4	5	3	8		5	2		1	6	
Permitted Phases			4						2			6
Detector Phase	7	4	5	3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	20.0	8.0	8.0	20.0		8.0	20.0	20.0	8.0	20.0	20.0
Total Split (s)	8.0	20.0	16.0	16.0	28.0		16.0	34.0	34.0	10.0	28.0	28.0
Total Split (%)	10.0%	25.0%	20.0%	20.0%	35.0%		20.0%	42.5%	42.5%	12.5%	35.0%	35.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max

Area Type: Other

Cycle Length: 80

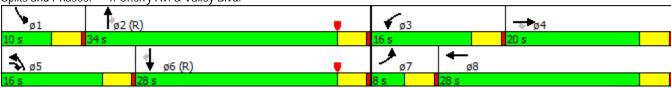
Actuated Cycle Length: 80

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow, Master Intersection

Natural Cycle: 80

Control Type: Actuated-Coordinated

Splits and Phases: 4: Cherry Av. & Valley Blvd.



	۶	→	•	√	←	•	•	†	~	/	Ţ	1
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	14.54	^	7	44	∱ î≽		ሻሻ	^	7	7	^	7
Volume (veh/h)	64	131	188	421	283	65	424	890	339	69	985	91
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	1569	1765	1765	1569	1765	1800	1569	1765	1765	1667	1765	1765
Adj Flow Rate, veh/h	67	136	196	439	295	68	442	927	353	72	1026	95
Adj No. of Lanes	2	2	1	2	2	0	2	2	1	1	2	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	116	540	455	448	736	167	448	1557	662	89	1225	520
Arrive On Green	0.04	0.15	0.15	0.15	0.26	0.26	0.30	0.88	0.88	0.06	0.35	0.35
Sat Flow, veh/h	2988	3529	1500	2988	2786	632	2988	3529	1500	1587	3529	1500
Grp Volume(v), veh/h	67	136	196	439	185	178	442	927	353	72	1026	95
Grp Sat Flow(s),veh/h/ln	1494	1765	1500	1494	1765	1653	1494	1765	1500	1587	1765	1500
Q Serve(g_s), s	1.8	2.7	8.4	11.7	6.9	7.1	11.8	5.2	4.2	3.6	21.4	3.5
Cycle Q Clear(g_c), s	1.8	2.7	8.4	11.7	6.9	7.1	11.8	5.2	4.2	3.6	21.4	3.5
Prop In Lane	1.00		1.00	1.00		0.38	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	116	540	455	448	466	437	448	1557	662	89	1225	520
V/C Ratio(X)	0.58	0.25	0.43	0.98	0.40	0.41	0.99	0.60	0.53	0.81	0.84	0.18
Avail Cap(c_a), veh/h	149	706	525	448	529	496	448	1557	662	119	1225	520
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.79	0.79	0.79	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.8	29.8	22.4	33.9	24.2	24.3	27.9	2.9	2.9	37.4	24.0	18.2
Incr Delay (d2), s/veh	4.5	0.2	0.6	37.0	0.5	0.6	34.2	1.3	2.4	25.7	6.9	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.0	1.3	3.6	7.1	3.4	3.3	6.9	2.3	2.0	2.2	11.6	1.6
LnGrp Delay(d),s/veh	42.3	30.1	23.0	70.9	24.7	24.9	62.1	4.3	5.3	63.1	31.0	19.0
LnGrp LOS	D	С	С	E	С	С	E	A	A	E	С	В
Approach Vol, veh/h		399			802			1722			1193	
Approach Delay, s/veh		28.7			50.0			19.3			32.0	
Approach LOS		С			D			В			С	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.5	39.3	16.0	16.2	16.0	31.8	7.1	25.1				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	6.0	30.0	12.0	16.0	12.0	24.0	4.0	24.0				
Max Q Clear Time (g_c+I1), s	5.6	7.2	13.7	10.4	13.8	23.4	3.8	9.1				
Green Ext Time (p_c), s	0.0	15.3	0.0	1.9	0.0	0.5	0.0	3.3				
Intersection Summary												
HCM 2010 Ctrl Delay			29.9									

	•	•	†	~	-	↓
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	1,4	7	ተተተ	7		1111
Volume (vph)	536	591	1102	523	0	1601
Ideal Flow (vphpl)	1600	1800	1800	1800	1800	1800
Storage Length (ft)	0	0		200	0	
Storage Lanes	2	1		1	0	
Taper Length (ft)	60				60	
Right Turn on Red		Yes		Yes		
Link Speed (mph)	30		45			45
Link Distance (ft)	252		337			968
Travel Time (s)	5.7		5.1			14.7
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Turn Type	Prot	Perm	NA	Perm		NA
Protected Phases	8		2			6
Permitted Phases		8		2		
Detector Phase	8	8	2	2		6
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0		4.0
Minimum Split (s)	20.0	20.0	20.0	20.0		20.0
Total Split (s)	48.0	48.0	32.0	32.0		32.0
Total Split (%)	60.0%	60.0%	40.0%	40.0%		40.0%
Yellow Time (s)	3.5	3.5	3.5	3.5		3.5
All-Red Time (s)	0.5	0.5	0.5	0.5		0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0		4.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	C-Max	C-Max		C-Max

Area Type: Other

Cycle Length: 80

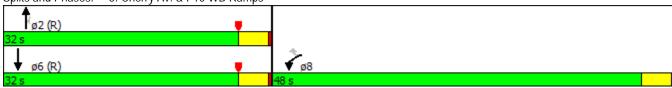
Actuated Cycle Length: 80

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 40

Control Type: Actuated-Coordinated

Splits and Phases: 5: Cherry Av. & I-10 WB Ramps



	•	•	†	~	\	Ţ	
Movement	WBL	WBR	NBT	NBR	SBL	SBT	
_ane Configurations	1,1	7	ተተተ	7		1111	
/olume (veh/h)	536	591	1102	523	0	1601	
Number	3	18	2	12	1	6	
nitial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	
Adj Sat Flow, veh/h/ln	1569	1765	1765	1765	0	1765	
Adj Flow Rate, veh/h	564	622	1160	0	0	1685	
Adj No. of Lanes	2	1	3	1	0	4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	
Percent Heavy Veh, %	2	2	2	2	0	2	
Cap, veh/h	1367	686	2343	664	0	3124	
Arrive On Green	0.46	0.46	0.89	0.00	0.00	0.89	
Sat Flow, veh/h	2988	1500	5294	1500	0	7059	
Grp Volume(v), veh/h	564	622	1160	0	0	1685	
Grp Sat Flow(s), veh/h/ln	1494	1500	1765	1500	0	1765	
2 Serve(g_s), s	10.1	30.8	3.6	0.0	0.0	4.2	
Cycle Q Clear(g_c), s	10.1	30.8	3.6	0.0	0.0	4.2	
Prop In Lane	1.00	1.00		1.00	0.00		
_ane Grp Cap(c), veh/h	1367	686	2343	664	0	3124	
V/C Ratio(X)	0.41	0.91	0.50	0.00	0.00	0.54	
Avail Cap(c_a), veh/h	1643	825	2343	664	0	3124	
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	2.00	
Jpstream Filter(I)	1.00	1.00	1.00	0.00	0.00	0.51	
Jniform Delay (d), s/veh	14.5	20.1	2.8	0.0	0.0	2.8	
ncr Delay (d2), s/veh	0.2	12.1	8.0	0.0	0.0	0.3	
nitial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	4.2	14.9	1.7	0.0	0.0	1.7	
_nGrp Delay(d),s/veh	14.7	32.2	3.5	0.0	0.0	3.1	
_nGrp LOS	В	С	Α			А	
Approach Vol, veh/h	1186		1160			1685	
Approach Delay, s/veh	23.9		3.5			3.1	
Approach LOS	С		А			Α	
Timer	1	2	3	4	5	6	7 8
Assigned Phs		2				6	8
Phs Duration (G+Y+Rc), s		39.4				39.4	40.6
Change Period (Y+Rc), s		4.0				4.0	4.0
Max Green Setting (Gmax), s		28.0				28.0	44.0
Max Q Clear Time (g_c+I1), s		5.6				6.2	32.8
Green Ext Time (p_c), s		18.7				18.3	3.8
ntersection Summary							
ntersection Summary HCM 2010 Ctrl Delay			9.4				

	•	→	\rightarrow	•	←	•	•	†	/	>	ļ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	*	4	7					ተተተ	7	ሻሻ	ተተተ	
Volume (vph)	359	0	580	0	0	0	0	1267	423	394	1254	0
Ideal Flow (vphpl)	1700	1800	1800	1800	1800	1800	1800	1800	1800	1600	1800	1800
Storage Length (ft)	0		350	0		0	0		0	300		0
Storage Lanes	1		1	0		0	0		1	2		0
Taper Length (ft)	120			60			60			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		722			861			873			429	
Travel Time (s)		16.4			19.6			13.2			6.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)	10%		47%									
Turn Type	Perm	NA	Perm					NA	Perm	Prot	NA	
Protected Phases		4						2		1	6	
Permitted Phases	4		4						2			
Detector Phase	4	4	4					2	2	1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0					4.0	4.0	4.0	4.0	
Minimum Split (s)	20.0	20.0	20.0					20.0	20.0	8.0	20.0	
Total Split (s)	30.0	30.0	30.0					30.0	30.0	20.0	50.0	
Total Split (%)	37.5%	37.5%	37.5%					37.5%	37.5%	25.0%	62.5%	
Yellow Time (s)	3.5	3.5	3.5					3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5	0.5					0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0					0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0					4.0	4.0	4.0	4.0	
Lead/Lag								Lead	Lead	Lag		
Lead-Lag Optimize?								Yes	Yes	Yes		
Recall Mode	None	None	None					C-Max	C-Max	None	C-Max	

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 55

Control Type: Actuated-Coordinated

Splits and Phases: 6: Cherry Av. & I-10 EB Ramps



Movement EBL Lane Configurations Volume (veh/h) 359 Number 7 Initial Q (Qb), veh 0 Ped-Bike Adj(A_pbT) 1.00 Parking Bus, Adj 1.00 Adj Sat Flow, veh/h/In 1667 Adj Flow Rate, veh/h 252 Adj No. of Lanes 1 Peak Hour Factor 0.95 Percent Heavy Veh, % 2 Cap, veh/h 455 Arrive On Green 0.29 Sat Flow, veh/h 1587	EBT 0 4 0 1.00 1765 0 0.95 2 0 0.00 0 0 0	580 14 0 1.00 1.00 1765 746 2 0.95 2 860 0.29 3000	WBL 0	WBT 0	WBR 0	NBL 0 5 0 1.00 1.00 0 0 0 0 0.95	NBT 1267 2 0 1.00 1765 1334 3 0.95 2	NBR 423 12 0 1.00 1.00 1765 445 1 0.95 2	SBL 394 1 0 1.00 1.00 1569 415 2 0.95 2	SBT 1254 6 0 1.00 1765 1320 3 0.95 2	SBR 0 16 0 1.00 1.00 0 0 0 0.95
Volume (veh/h) 359 Number 7 Initial Q (Qb), veh 0 Ped-Bike Adj(A_pbT) 1.00 Parking Bus, Adj 1.00 Adj Sat Flow, veh/h/ln 1667 Adj Flow Rate, veh/h 252 Adj No. of Lanes 1 Peak Hour Factor 0.95 Percent Heavy Veh, % 2 Cap, veh/h 455 Arrive On Green 0.29	0 4 0 1.00 1765 0 0 0.95 2 0 0.00 0	580 14 0 1.00 1.00 1765 746 2 0.95 2 860 0.29	0	0	0	5 0 1.00 1.00 0 0 0	1267 2 0 1.00 1765 1334 3 0.95	423 12 0 1.00 1.00 1765 445 1 0.95	394 1 0 1.00 1.00 1569 415 2 0.95	1254 6 0 1.00 1765 1320 3 0.95	16 0 1.00 1.00 0 0
Number 7 Initial Q (Qb), veh 0 Ped-Bike Adj(A_pbT) 1.00 Parking Bus, Adj 1.00 Adj Sat Flow, veh/h/In 1667 Adj Flow Rate, veh/h 252 Adj No. of Lanes 1 Peak Hour Factor 0.95 Percent Heavy Veh, % 2 Cap, veh/h 455 Arrive On Green 0.29	4 0 1.00 1765 0 0 0.95 2 0 0.00 0	14 0 1.00 1.00 1765 746 2 0.95 2 860 0.29	0	0	0	5 0 1.00 1.00 0 0 0	1.00 1765 1334 3 0.95	12 0 1.00 1.00 1765 445 1 0.95	1 0 1.00 1.00 1569 415 2 0.95	1.00 1765 1320 3 0.95	16 0 1.00 1.00 0 0
Initial Q (Qb), veh 0 Ped-Bike Adj(A_pbT) 1.00 Parking Bus, Adj 1.00 Adj Sat Flow, veh/h/ln 1667 Adj Flow Rate, veh/h 252 Adj No. of Lanes 1 Peak Hour Factor 0.95 Percent Heavy Veh, % 2 Cap, veh/h 455 Arrive On Green 0.29	1.00 1765 0 0.95 2 0 0.00 0	0 1.00 1.00 1765 746 2 0.95 2 860 0.29				0 1.00 1.00 0 0 0	1.00 1765 1334 3 0.95	0 1.00 1.00 1765 445 1 0.95	0 1.00 1.00 1569 415 2 0.95	1.00 1765 1320 3 0.95	0 1.00 1.00 0 0
Ped-Bike Adj(A_pbT) 1.00 Parking Bus, Adj 1.00 Adj Sat Flow, veh/h/ln 1667 Adj Flow Rate, veh/h 252 Adj No. of Lanes 1 Peak Hour Factor 0.95 Percent Heavy Veh, % 2 Cap, veh/h 455 Arrive On Green 0.29	1.00 1765 0 0 0.95 2 0 0.00 0	1.00 1.00 1765 746 2 0.95 2 860 0.29				1.00 1.00 0 0 0 0	1.00 1765 1334 3 0.95	1.00 1.00 1765 445 1 0.95	1.00 1.00 1569 415 2 0.95	1.00 1765 1320 3 0.95	1.00 1.00 0 0
Parking Bus, Adj 1.00 Adj Sat Flow, veh/h/ln 1667 Adj Flow Rate, veh/h 252 Adj No. of Lanes 1 Peak Hour Factor 0.95 Percent Heavy Veh, % 2 Cap, veh/h 455 Arrive On Green 0.29	1765 0 0 0.95 2 0 0.00 0	1.00 1765 746 2 0.95 2 860 0.29				1.00 0 0 0 0 0.95	1765 1334 3 0.95	1.00 1765 445 1 0.95	1.00 1569 415 2 0.95	1765 1320 3 0.95	1.00 0 0
Adj Sat Flow, veh/h/ln Adj Flow Rate, veh/h 252 Adj No. of Lanes 1 Peak Hour Factor 0.95 Percent Heavy Veh, % 2 Cap, veh/h 455 Arrive On Green 0.29	1765 0 0 0.95 2 0 0.00 0	1765 746 2 0.95 2 860 0.29				0 0 0 0.95	1765 1334 3 0.95	1765 445 1 0.95	1569 415 2 0.95	1765 1320 3 0.95	0 0 0
Adj Flow Rate, veh/h 252 Adj No. of Lanes 1 Peak Hour Factor 0.95 Percent Heavy Veh, % 2 Cap, veh/h 455 Arrive On Green 0.29	0 0 0.95 2 0 0.00 0	746 2 0.95 2 860 0.29				0 0 0.95	1334 3 0.95	445 1 0.95	415 2 0.95	1320 3 0.95	0
Adj No. of Lanes 1 Peak Hour Factor 0.95 Percent Heavy Veh, % 2 Cap, veh/h 455 Arrive On Green 0.29	0 0.95 2 0 0.00 0	2 0.95 2 860 0.29				0 0.95	3 0.95	1 0.95	2 0.95	3 0.95	0
Peak Hour Factor 0.95 Percent Heavy Veh, % 2 Cap, veh/h 455 Arrive On Green 0.29	0.95 2 0 0.00 0	0.95 2 860 0.29				0.95	0.95	0.95	0.95	0.95	
Percent Heavy Veh, % 2 Cap, veh/h 455 Arrive On Green 0.29	2 0 0.00 0	2 860 0.29									0.95
Cap, veh/h 455 Arrive On Green 0.29	0 0.00 0	860 0.29				0	2	2	2	2	
Arrive On Green 0.29	0.00	0.29									0
	0					0	1721	488	713	3248	0
Sat Flow, veh/h 1587	0	3000				0.00	0.32	0.32	0.48	1.00	0.00
						0	5294	1500	2988	5294	0
Grp Volume(v), veh/h 252	Λ	746				0	1334	445	415	1320	0
Grp Sat Flow(s), veh/h/ln 1587	U	1500				0	1765	1500	1494	1765	0
Q Serve(g_s), s 10.8	0.0	18.9				0.0	18.2	22.8	8.0	0.0	0.0
Cycle Q Clear(g_c), s 10.8	0.0	18.9				0.0	18.2	22.8	8.0	0.0	0.0
Prop In Lane 1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h 455	0	860				0	1721	488	713	3248	0
V/C Ratio(X) 0.55	0.00	0.87				0.00	0.78	0.91	0.58	0.41	0.00
Avail Cap(c_a), veh/h 516	0	975				0	1721	488	713	3248	0
HCM Platoon Ratio 1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I) 1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh 24.2	0.0	27.1				0.0	24.4	25.9	18.0	0.0	0.0
Incr Delay (d2), s/veh 1.1	0.0	7.7				0.0	3.5	24.0	1.2	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
%ile BackOfQ(50%),veh/ln 4.8	0.0	8.7				0.0	9.3	12.6	3.3	0.1	0.0
LnGrp Delay(d),s/veh 25.3	0.0	34.8				0.0	27.9	49.9	19.2	0.4	0.0
LnGrp LOS C		С					С	D	В	Α	
Approach Vol, veh/h	998						1779			1735	
Approach Delay, s/veh	32.4						33.4			4.9	
Approach LOS	С						С			Α	
Timer 1	2	3	4	5	6	7	8				
Assigned Phs 1	2		4		6						
Phs Duration (G+Y+Rc), s 23.1	30.0		26.9		53.1						
Change Period (Y+Rc), s 4.0	4.0		4.0		4.0						
Max Green Setting (Gmax), s 16.0	26.0		26.0		46.0						
Max Q Clear Time (g_c+l1), s 10.0	24.8		20.9		2.0						
Green Ext Time (p_c), s 4.3	1.0		2.0		14.5						
Intersection Summary											
HCM 2010 Ctrl Delay		22.2									
HCM 2010 LOS		C									
Notes											

TEC Traffic Impact Analysis C:\TRAMES\0255-0001\Synchro\03 - EAP AM.syn

User approved volume balancing among the lanes for turning movement.

Trames Solutions, Inc. Synchro 8 Report

	•	_	←	•	\	1
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		N/	
Volume (vph)	32	199	321	0	0	4
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Link Speed (mph)		30	30		30	
Link Distance (ft)		331	684		288	
Travel Time (s)		7.5	15.5		6.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type: Unsignalize	ed					

Intersection								
Int Delay, s/veh	0.5							
Movement	EBL	EBT			WBT	WBR	SBL	SBR
Vol, veh/h	32	199			321	0	0	4
Conflicting Peds, #/hr	0	0			0	0	0	0
Sign Control	Free	Free			Free	Free	Stop	Stop
RT Channelized	-	None			-	None	-	None
Storage Length	-	-			-	-	0	-
Veh in Median Storage, #	ŧ -	0			0	-	0	-
Grade, %	-	0			0	-	0	-
Peak Hour Factor	95	95			95	95	95	95
Heavy Vehicles, %	2	2			2	2	2	2
Mvmt Flow	34	209			338	0	0	4
Major/Minor	Major1				Major2		Minor2	
Conflicting Flow All	338	0			-	0	615	338
Stage 1	-	-			-	-	338	-
Stage 2	-	-			-	-	277	-
Critical Hdwy	4.12	-			-	-	6.42	6.22
Critical Hdwy Stg 1	-	-			-	-	5.42	-
Critical Hdwy Stg 2	-	-			-	-	5.42	-
Follow-up Hdwy	2.218	-			-	-	3.518	3.318
Pot Cap-1 Maneuver	1221	-			-	-	455	704
Stage 1	-	-			-	-	722	-
Stage 2	-	-			-	-	770	-
Platoon blocked, %		-			-	-		
Mov Cap-1 Maneuver	1221	-			-	-	440	704
Mov Cap-2 Maneuver	-	-			-	-	440	-
Stage 1	-	-			-	-	722	-
Stage 2	-	-			-	-	745	-
Approach	EB				WB		SB	
HCM Control Delay, s	1.1				0		10.1	
HCM LOS							В	
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR SBLr	า1			
Capacity (veh/h)	1221	-	-	- 70				
HCM Lane V/C Ratio	0.028	-	-	- 0.00				
HCM Control Delay (s)	8	0	-	- 10				
HCM Lane LOS	A	A	-	-	В			
HCM 95th %tile Q(veh)	0.1	-	-	-	0			
` '								

	•	→	•	•	\	1
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		†	†		W	
Volume (vph)	11	188	320	2	0	1
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Link Speed (mph)		30	30		30	
Link Distance (ft)		684	436		304	
Travel Time (s)		15.5	9.9		6.9	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type: Unsignalize	ed					

Intersection								
Int Delay, s/veh	0.2							
Movement	EBL	EBT			WBT	WBR	SBL	SBR
Vol, veh/h	11	188			320	2	0	1
Conflicting Peds, #/hr	0	0			0	0	0	0
Sign Control	Free	Free			Free	Free	Stop	Stop
RT Channelized	-	None			-	None	-	None
Storage Length	-	-			-	-	0	-
Veh in Median Storage, #	# -	0			0	-	0	-
Grade, %	-	0			0	-	0	-
Peak Hour Factor	95	95			95	95	95	95
Heavy Vehicles, %	2	2			2	2	2	2
Mvmt Flow	12	198			337	2	0	1
Major/Minor	Major1				Major2		Minor2	
Conflicting Flow All	339	0			- Iviajoiz	0	559	338
Stage 1	- 337	-				-	338	- 330
Stage 2		_			_	_	221	_
Critical Hdwy	4.12	_			_	_	6.42	6.22
Critical Hdwy Stg 1		_			_	_	5.42	-
Critical Hdwy Stg 2	_	_			_	_	5.42	_
Follow-up Hdwy	2.218	-			_	-	3.518	3.318
Pot Cap-1 Maneuver	1220	_			_	_	490	704
Stage 1	-	-			_	-	722	-
Stage 2	-	_			-	-	816	-
Platoon blocked, %		-			-	-	2.70	
Mov Cap-1 Maneuver	1220	-			-	-	485	704
Mov Cap-2 Maneuver	-	-			_	-	485	-
Stage 1	-	-			-	-	722	-
Stage 2	-	-			_	-	807	-
3								
Approach	EB				WB		SB	
HCM Control Delay, s	0.4				0		10.1	
HCM LOS	0.4				0		В	
HOW LOS								
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR SBLn	1			
Capacity (veh/h)	1220	-	- 100	- 70				
HCM Lane V/C Ratio	0.009	-		- 0.00				
HCM Control Delay (s)	0.009	0	-	- 10.				
HCM Lane LOS	A	A	-		В			
HCM 95th %tile Q(veh)	0	- A	-		0			
HOW FOUT MILE CE(VEII)	U	-	-	-	U			

	۶	→	•	•	←	•	•	†	/	>	ţ	✓
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		ર્ન	7		ર્ન	7	ř	^	7	ř	^	7
Volume (vph)	0	0	0	101	0	176	0	1271	169	213	820	0
Ideal Flow (vphpl)	1800	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Storage Length (ft)	0		0	0		130	270		0	60		275
Storage Lanes	0		1	0		0	1		1	1		1
Taper Length (ft)	60			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			40			50			40	
Link Distance (ft)		506			600			1582			1080	
Travel Time (s)		13.8			10.2			21.6			18.4	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Turn Type			Perm	Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4		8	8		5	2		1	6	
Permitted Phases	4		4			8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	8.0	20.0	20.0	8.0	20.0	20.0
Total Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	8.0	28.0	28.0	12.0	32.0	32.0
Total Split (%)	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	10.0%	35.0%	35.0%	15.0%	40.0%	40.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max

Area Type: Other

Cycle Length: 80

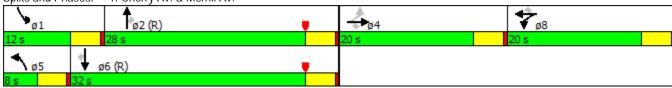
Actuated Cycle Length: 80

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 90

Control Type: Actuated-Coordinated

Splits and Phases: 1: Cherry Av. & Merrill Av.



	۶	→	•	•	←	•	1	†	~	/	+	4
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		र्स	7		र्स	7	ሻ	44	7	ሻ	^	7
Volume (veh/h)	0	0	0	101	0	176	0	1271	169	213	820	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1800	1765	1765	1700	1765	1765	1667	1765	1765	1667	1765	1765
Adj Flow Rate, veh/h	0	0	0	107	0	187	0	1352	180	227	872	0
Adj No. of Lanes	0	1	1	0	1	1	1	2	1	1	2	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	2	2	254	0	227	2	2113	898	159	2642	1123
Arrive On Green	0.00	0.00	0.00	0.15	0.00	0.15	0.00	0.60	0.60	0.10	0.75	0.00
Sat Flow, veh/h	0	1765	1500	1681	0	1500	1587	3529	1500	1587	3529	1500
Grp Volume(v), veh/h	0	0	0	107	0	187	0	1352	180	227	872	0
Grp Sat Flow(s),veh/h/ln	0	1765	1500	1681	0	1500	1587	1765	1500	1587	1765	1500
Q Serve(g_s), s	0.0	0.0	0.0	4.6	0.0	9.7	0.0	19.9	4.4	8.0	6.6	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	4.6	0.0	9.7	0.0	19.9	4.4	8.0	6.6	0.0
Prop In Lane	0.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	0	2	2	254	0	227	2	2113	898	159	2642	1123
V/C Ratio(X)	0.00	0.00	0.00	0.42	0.00	0.82	0.00	0.64	0.20	1.43	0.33	0.00
Avail Cap(c_a), veh/h	0	353	300	336	0	300	79	2113	898	159	2642	1123
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	30.8	0.0	32.9	0.0	10.4	7.3	36.0	3.4	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	1.1	0.0	13.0	0.0	1.5	0.5	225.9	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	2.2	0.0	4.8	0.0	10.0	1.9	13.4	3.3	0.0
LnGrp Delay(d),s/veh	0.0	0.0	0.0	31.9	0.0	45.9	0.0	11.9	7.8	261.9	3.7	0.0
LnGrp LOS				С		D		В	А	F	Α	
Approach Vol, veh/h		0			294			1532			1099	
Approach Delay, s/veh		0.0			40.8			11.5			57.0	
Approach LOS					D			В			Е	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.0	51.9		0.0	0.0	63.9		16.1				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	8.0	24.0		16.0	4.0	28.0		16.0				
Max Q Clear Time (g_c+l1), s	10.0	21.9		0.0	0.0	8.6		11.7				
Green Ext Time (p_c), s	0.0	1.9		0.0	0.0	14.6		0.5				
Intersection Summary												
HCM 2010 Ctrl Delay			31.5									
HCM 2010 LOS			С									

	•	→	•	•	←	•	4	†	/	>	ļ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		ર્ન	7		ર્ન	7	7	ተተተ		7	ተተተ	7
Volume (vph)	11	4	23	176	0	113	9	1354	159	113	848	4
Ideal Flow (vphpl)	1700	1800	1800	1800	1800	1800	1700	1800	1800	1700	1800	1800
Storage Length (ft)	0		0	0		50	260		0	70		200
Storage Lanes	0		1	0		1	1		0	1		1
Taper Length (ft)	60			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		589			331			2702			1062	
Travel Time (s)		13.4			7.5			36.8			14.5	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						6
Detector Phase	4	4	4	8	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	8.0	20.0		8.0	20.0	20.0
Total Split (s)	22.0	22.0	22.0	22.0	22.0	22.0	8.0	41.0		17.0	50.0	50.0
Total Split (%)	27.5%	27.5%	27.5%	27.5%	27.5%	27.5%	10.0%	51.3%		21.3%	62.5%	62.5%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		4.0	4.0		4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	C-Max

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 23 (29%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 55

Control Type: Actuated-Coordinated

Splits and Phases: 2: Cherry Av. & Randall Av.



	۶	→	•	•	←	•	•	†	~	/	+	✓
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		र्स	7		र्स	7	ሻ	ተተተ		ሻ	^	7
Volume (veh/h)	11	4	23	176	0	113	9	1354	159	113	848	4
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	1700	1765	1765	1800	1765	1765	1667	1765	1800	1667	1765	1765
Adj Flow Rate, veh/h	12	4	25	193	0	124	10	1488	175	124	932	4
Adj No. of Lanes	0	1	1	0	1	1	1	3	0	1	3	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	79	15	338	90	0	338	16	2459	289	153	3256	923
Arrive On Green	0.22	0.22	0.22	0.22	0.00	0.22	0.02	1.00	1.00	0.10	0.62	0.62
Sat Flow, veh/h	0	65	1500	0	0	1500	1587	4651	547	1587	5294	1500
Grp Volume(v), veh/h	16	0	25	193	0	124	10	1129	534	124	932	4
Grp Sat Flow(s),veh/h/ln	65	0	1500	0	0	1500	1587	1765	1668	1587	1765	1500
Q Serve(g_s), s	0.0	0.0	1.1	0.0	0.0	5.6	0.5	0.0	0.0	6.1	6.6	0.1
Cycle Q Clear(g_c), s	18.0	0.0	1.1	18.0	0.0	5.6	0.5	0.0	0.0	6.1	6.6	0.1
Prop In Lane	0.75		1.00	1.00		1.00	1.00		0.33	1.00		1.00
Lane Grp Cap(c), veh/h	93	0	338	90	0	338	16	1866	882	153	3256	923
V/C Ratio(X)	0.17	0.00	0.07	2.14	0.00	0.37	0.63	0.61	0.61	0.81	0.29	0.00
Avail Cap(c_a), veh/h	93	0	338	90	0	338	79	1866	882	258	3256	923
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.66	0.66	0.66	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.1	0.0	24.4	40.0	0.0	26.2	39.1	0.0	0.0	35.4	7.2	5.9
Incr Delay (d2), s/veh	0.9	0.0	0.1	550.1	0.0	0.7	24.5	1.0	2.1	9.8	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.4	15.7	0.0	2.4	0.3	0.3	0.5	3.1	3.3	0.0
LnGrp Delay(d),s/veh	27.0	0.0	24.5	590.1	0.0	26.9	63.5	1.0	2.1	45.2	7.4	6.0
LnGrp LOS	С		С	F		С	E	А	А	D	А	А
Approach Vol, veh/h		41			317			1673			1060	
Approach Delay, s/veh		25.5			369.8			1.7			11.8	
Approach LOS		С			F			Α			В	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.7	46.3		22.0	4.8	53.2		22.0				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	13.0	37.0		18.0	4.0	46.0		18.0				
Max Q Clear Time (g_c+I1), s	8.1	2.0		20.0	2.5	8.6		20.0				
Green Ext Time (p_c), s	0.1	23.5		0.0	0.0	24.6		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			43.2									
HCM 2010 LOS			D									
-			_									

	•	→	•	•	←	•	•	†	_	>	ţ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	*	† †	7	7	∱ }		*	ተተኈ		7	ተተተ	7
Volume (vph)	297	613	155	73	150	85	59	984	128	101	864	269
Ideal Flow (vphpl)	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Storage Length (ft)	300		285	50		0	220		0	210		300
Storage Lanes	1		1	1		0	1		0	1		1
Taper Length (ft)	60			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		555			705			459			2702	
Travel Time (s)		12.6			16.0			6.3			36.8	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases			4									6
Detector Phase	7	4	4	3	8		5	2		1	6	7
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	8.0	20.0	20.0	8.0	20.0		8.0	20.0		8.0	20.0	8.0
Total Split (s)	23.0	30.0	30.0	13.0	20.0		10.0	25.0		12.0	27.0	23.0
Total Split (%)	28.8%	37.5%	37.5%	16.3%	25.0%		12.5%	31.3%		15.0%	33.8%	28.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5		0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	None

Area Type: Other

Cycle Length: 80

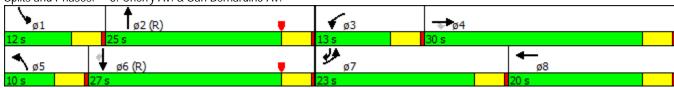
Actuated Cycle Length: 80

Offset: 46 (58%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 70

Control Type: Actuated-Coordinated

Splits and Phases: 3: Cherry Av. & San Bernardino Av.



	•	→	•	•	←	•	1	†	<u>/*</u>	\		✓
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	7	^	7	7	∱ î≽		7	ተተኈ		ሻ	ተተተ	7
Volume (veh/h)	297	613	155	73	150	85	59	984	128	101	864	269
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	1667	1765	1765	1667	1765	1800	1667	1765	1800	1667	1765	1765
Adj Flow Rate, veh/h	326	674	0	80	165	93	65	1081	141	111	949	296
Adj No. of Lanes	1	2	1	1	2	0	1	3	0	1	3	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	359	1094	465	99	317	169	80	1570	205	136	1998	906
Arrive On Green	0.23	0.31	0.00	0.06	0.15	0.15	0.05	0.34	0.34	0.11	0.50	0.50
Sat Flow, veh/h	1587	3529	1500	1587	2166	1159	1587	4591	598	1587	5294	1500
Grp Volume(v), veh/h	326	674	0	80	133	125	65	831	391	111	949	296
Grp Sat Flow(s), veh/h/ln	1587	1765	1500	1587	1765	1560	1587	1765	1659	1587	1765	1500
Q Serve(q_s), s	16.0	13.0	0.0	4.0	5.6	6.0	3.2	16.2	16.2	5.5	9.4	6.8
Cycle Q Clear(g_c), s	16.0	13.0	0.0	4.0	5.6	6.0	3.2	16.2	16.2	5.5	9.4	6.8
Prop In Lane	1.00		1.00	1.00		0.74	1.00		0.36	1.00		1.00
Lane Grp Cap(c), veh/h	359	1094	465	99	258	228	80	1207	567	136	1998	906
V/C Ratio(X)	0.91	0.62	0.00	0.81	0.51	0.55	0.82	0.69	0.69	0.82	0.47	0.33
Avail Cap(c_a), veh/h	377	1147	488	179	353	312	119	1207	567	159	1998	906
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.98	0.98
Uniform Delay (d), s/veh	30.1	23.5	0.0	37.0	31.5	31.7	37.6	22.6	22.7	34.8	14.7	6.1
Incr Delay (d2), s/veh	24.4	0.9	0.0	14.0	1.6	2.1	22.7	3.2	6.7	23.8	0.8	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.4	6.5	0.0	2.1	2.8	2.7	1.9	8.4	8.4	3.3	4.6	3.0
LnGrp Delay(d),s/veh	54.6	24.5	0.0	51.1	33.1	33.8	60.4	25.9	29.4	58.7	15.5	7.0
LnGrp LOS	D	С		D	С	С	Ε	С	С	Е	В	Α
Approach Vol, veh/h		1000			338			1287			1356	
Approach Delay, s/veh		34.3			37.6			28.7			17.2	
Approach LOS		С			D			С			В	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.8	31.4	9.0	28.8	8.0	34.2	22.1	15.7				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	8.0	21.0	9.0	26.0	6.0	23.0	19.0	16.0				
Max Q Clear Time (g_c+l1), s	7.5	18.2	6.0	15.0	5.2	11.4	18.0	8.0				
Green Ext Time (p_c), s	0.0	2.5	0.0	4.6	0.0	9.3	0.1	3.7				
Intersection Summary												
intersection summary												
HCM 2010 Ctrl Delay			26.9									

TEC Traffic Impact Analysis C:\TRAMES\0255-0001\Synchro\03 - EAP PM.syn

	۶	→	•	•	←	•	4	†	<i>></i>	>	ļ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻሻ	^	7	1,1	↑ ↑		14.54	† †	7	ř	† †	7
Volume (vph)	204	724	330	351	268	99	307	939	494	144	1006	70
Ideal Flow (vphpl)	1600	1800	1800	1600	1800	1800	1600	1800	1800	1700	1800	1800
Storage Length (ft)	250		160	250		0	420		220	170		0
Storage Lanes	2		1	2		0	2		0	1		1
Taper Length (ft)	120			120			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		845			1019			968			718	
Travel Time (s)		19.2			23.2			13.2			9.8	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Shared Lane Traffic (%)												
Turn Type	Prot	NA	pm+ov	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4	5	3	8		5	2		1	6	
Permitted Phases			4						2			6
Detector Phase	7	4	5	3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	20.0	8.0	8.0	20.0		8.0	20.0	20.0	8.0	20.0	20.0
Total Split (s)	14.0	22.0	13.0	14.0	22.0		13.0	31.0	31.0	13.0	31.0	31.0
Total Split (%)	17.5%	27.5%	16.3%	17.5%	27.5%		16.3%	38.8%	38.8%	16.3%	38.8%	38.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow, Master Intersection

Natural Cycle: 80

Control Type: Actuated-Coordinated

Splits and Phases: 4: Cherry Av. & Valley Blvd.



	۶	→	•	•	←	•	•	†	~	/	+	✓
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻሻ	^	7	ሻሻ	ħβ		ሻሻ	^	7	7	^↑	7
Volume (veh/h)	204	724	330	351	268	99	307	939	494	144	1006	70
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1569	1765	1765	1569	1765	1800	1569	1765	1765	1667	1765	1765
Adj Flow Rate, veh/h	212	754	344	366	279	103	320	978	515	150	1048	73
Adj No. of Lanes	2	2	1	2	2	0	2	2	1	1	2	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	285	794	506	373	631	228	336	1191	506	179	1191	506
Arrive On Green	0.10	0.22	0.22	0.13	0.25	0.25	0.04	0.11	0.11	0.11	0.34	0.34
Sat Flow, veh/h	2988	3529	1500	2988	2478	893	2988	3529	1500	1587	3529	1500
Grp Volume(v), veh/h	212	754	344	366	197	185	320	978	515	150	1048	73
Grp Sat Flow(s),veh/h/ln	1494	1765	1500	1494	1765	1607	1494	1765	1500	1587	1765	1500
Q Serve(g_s), s	5.5	16.8	15.8	9.8	7.5	7.8	8.6	21.7	27.0	7.4	22.4	2.7
Cycle Q Clear(g_c), s	5.5	16.8	15.8	9.8	7.5	7.8	8.6	21.7	27.0	7.4	22.4	2.7
Prop In Lane	1.00		1.00	1.00		0.56	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	285	794	506	373	449	409	336	1191	506	179	1191	506
V/C Ratio(X)	0.74	0.95	0.68	0.98	0.44	0.45	0.95	0.82	1.02	0.84	0.88	0.14
Avail Cap(c_a), veh/h	373	794	506	373	449	409	336	1191	506	179	1191	506
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.81	0.81	0.81	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.2	30.6	22.8	34.9	25.0	25.1	38.3	33.2	35.5	34.8	25.0	18.5
Incr Delay (d2), s/veh	5.7	20.6	3.7	41.1	0.7	8.0	32.0	5.3	40.4	28.4	9.4	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	10.4	7.0	6.1	3.7	3.5	5.0	11.5	16.9	4.7	12.3	1.2
LnGrp Delay(d),s/veh	40.9	51.1	26.4	76.0	25.7	25.9	70.3	38.4	75.9	63.2	34.4	19.1
LnGrp LOS	D	D	С	Е	С	С	Е	D	F	Е	С	В
Approach Vol, veh/h		1310			748			1813			1271	
Approach Delay, s/veh		43.0			50.3			54.7			36.9	
Approach LOS		D			D			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.0	31.0	14.0	22.0	13.0	31.0	11.6	24.4				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	9.0	27.0	10.0	18.0	9.0	27.0	10.0	18.0				
Max Q Clear Time (q_c+l1), s	9.4	29.0	11.8	18.8	10.6	24.4	7.5	9.8				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	2.4	0.2	5.1				
Intersection Summary												
HCM 2010 Ctrl Delay			46.7									
HCM 2010 LOS			D									

	•	•	†	/	>	ļ
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	ሻሻ	7	ተተተ	7		1111
Volume (vph)	401	490	1309	407	0	1701
Ideal Flow (vphpl)	1600	1800	1800	1800	1800	1800
Storage Length (ft)	0	0		200	0	
Storage Lanes	2	1		1	0	
Taper Length (ft)	60				60	
Right Turn on Red		Yes		Yes		
Link Speed (mph)	30		45			45
Link Distance (ft)	252		337			968
Travel Time (s)	5.7		5.1			14.7
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Turn Type	Prot	Perm	NA	Free		NA
Protected Phases	8		2			6
Permitted Phases		8		Free		
Detector Phase	8	8	2			6
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0			4.0
Minimum Split (s)	20.0	20.0	20.0			20.0
Total Split (s)	43.0	43.0	37.0			37.0
Total Split (%)	53.8%	53.8%	46.3%			46.3%
Yellow Time (s)	3.5	3.5	3.5			3.5
All-Red Time (s)	0.5	0.5	0.5			0.5
Lost Time Adjust (s)	0.0	0.0	0.0			0.0
Total Lost Time (s)	4.0	4.0	4.0			4.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	C-Max			C-Max

Area Type: Other

Cycle Length: 80

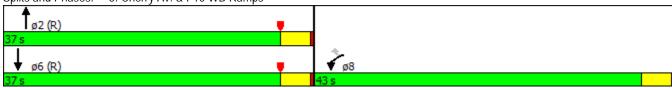
Actuated Cycle Length: 80

Offset: 39 (49%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 40

Control Type: Actuated-Coordinated

Splits and Phases: 5: Cherry Av. & I-10 WB Ramps



	•	•	†	/	\		
Movement	WBL	WBR	NBT	NBR	SBL	SBT	
Lane Configurations	ሻሻ	7	ተተተ	7		1111	
Volume (veh/h)	401	490	1309	407	0	1701	
Number	3	18	2	12	1	6	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	
Adj Sat Flow, veh/h/ln	1569	1765	1765	1765	0	1765	
Adj Flow Rate, veh/h	422	516	1378	0	0	1791	
Adj No. of Lanes	2	1	3	1	0	4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	
Percent Heavy Veh, %	2	2	2	2	0	2	
Cap, veh/h	1149	577	2729	773	0	3639	
Arrive On Green	0.38	0.38	1.00	0.00	0.00	0.17	
Sat Flow, veh/h	2988	1500	5294	1500	0	7059	
Grp Volume(v), veh/h	422	516	1378	0	0	1791	
Grp Sat Flow(s),veh/h/ln	1494	1500	1765	1500	0	1765	
Q Serve(g_s), s	8.1	25.8	0.0	0.0	0.0	18.4	
Cycle Q Clear(g_c), s	8.1	25.8	0.0	0.0	0.0	18.4	
Prop In Lane	1.00	1.00		1.00	0.00		
Lane Grp Cap(c), veh/h	1149	577	2729	773	0	3639	
V/C Ratio(X)	0.37	0.89	0.50	0.00	0.00	0.49	
Avail Cap(c_a), veh/h	1457	731	2729	773	0	3639	
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	0.33	
Upstream Filter(I)	1.00	1.00	1.00	0.00	0.00	0.51	
Uniform Delay (d), s/veh	17.6	23.1	0.0	0.0	0.0	23.7	
Incr Delay (d2), s/veh	0.2	11.5	0.7	0.0	0.0	0.2	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	3.4	12.4	0.2	0.0	0.0	9.1	
LnGrp Delay(d),s/veh	17.8	34.6	0.7	0.0	0.0	24.0	
LnGrp LOS	В	С	Α			С	
Approach Vol, veh/h	938		1378			1791	
Approach Delay, s/veh	27.1		0.7			24.0	
Approach LOS	С		А			С	
Timer	1	2	3	4	5	6	7 8
Assigned Phs		2				6	8
Phs Duration (G+Y+Rc), s		45.2				45.2	34.8
Change Period (Y+Rc), s		4.0				4.0	4.0
Max Green Setting (Gmax), s		33.0				33.0	39.0
Max Q Clear Time (g_c+l1), s		2.0				20.4	27.8
Green Ext Time (p_c), s		26.4				11.7	2.9
Intersection Summary							
HCM 2010 Ctrl Delay			16.9				
HCM 2010 LOS			В				

	ᄼ	→	\rightarrow	•	←	•	•	†	<i>></i>	>	ţ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ň	4	7					ተተተ	7	ሻሻ	ተተተ	
Volume (vph)	432	0	552	0	0	0	0	1282	508	537	1094	0
Ideal Flow (vphpl)	1700	1800	1800	1800	1800	1800	1800	1800	1800	1600	1800	1800
Storage Length (ft)	0		350	0		0	0		0	300		0
Storage Lanes	1		1	0		0	0		1	2		0
Taper Length (ft)	120			60			60			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		722			861			873			429	
Travel Time (s)		16.4			19.6			13.2			6.5	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Shared Lane Traffic (%)	21%		43%									
Turn Type	Perm	NA	Perm					NA	Perm	Prot	NA	
Protected Phases		4						2		1	6	
Permitted Phases	4		4						2			
Detector Phase	4	4	4					2	2	1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0					4.0	4.0	4.0	4.0	
Minimum Split (s)	20.0	20.0	20.0					20.0	20.0	8.0	20.0	
Total Split (s)	28.0	28.0	28.0					29.0	29.0	23.0	52.0	
Total Split (%)	35.0%	35.0%	35.0%					36.3%	36.3%	28.8%	65.0%	
Yellow Time (s)	3.5	3.5	3.5					3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5	0.5					0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0					0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0					4.0	4.0	4.0	4.0	
Lead/Lag								Lead	Lead	Lag		
Lead-Lag Optimize?								Yes	Yes	Yes		
Recall Mode	None	None	None					C-Max	C-Max	None	C-Max	

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 28 (35%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 60

Control Type: Actuated-Coordinated

Splits and Phases: 6: Cherry Av. & I-10 EB Ramps



	۶	→	•	•	←	•	1	†	/	/	+	1
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ň	4	7					^	7	ቪቪ	ተተተ	
Volume (veh/h)	432	0	552	0	0	0	0	1282	508	537	1094	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1765	1765				0	1765	1765	1569	1765	0
Adj Flow Rate, veh/h	648	0	362				0	1335	529	559	1140	0
Adj No. of Lanes	2	0	1				0	3	1	2	3	0
Peak Hour Factor	0.96	0.96	0.96				0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	871	0	411				0	1654	469	786	3312	0
Arrive On Green	0.27	0.00	0.27				0.00	0.31	0.31	0.53	1.00	0.00
Sat Flow, veh/h	3175	0	1500				0	5294	1500	2988	5294	0
Grp Volume(v), veh/h	648	0	362				0	1335	529	559	1140	0
Grp Sat Flow(s),veh/h/ln	1587	0	1500				0	1765	1500	1494	1765	0
Q Serve(g_s), s	14.9	0.0	18.5				0.0	18.5	25.0	11.3	0.0	0.0
Cycle Q Clear(g_c), s	14.9	0.0	18.5				0.0	18.5	25.0	11.3	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	871	0	411				0	1654	469	786	3312	0
V/C Ratio(X)	0.74	0.00	0.88				0.00	0.81	1.13	0.71	0.34	0.00
Avail Cap(c_a), veh/h	952	0	450				0	1654	469	786	3312	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	26.5	0.0	27.8				0.0	25.3	27.5	16.6	0.0	0.0
Incr Delay (d2), s/veh	2.9	0.0	16.9				0.0	4.3	81.7	3.0	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
%ile BackOfQ(50%),veh/ln	6.8	0.0	9.6				0.0	9.7	20.9	4.8	0.1	0.0
LnGrp Delay(d),s/veh	29.4	0.0	44.7				0.0	29.6	109.2	19.7	0.3	0.0
LnGrp LOS	С		D					С	F	В	Α	
Approach Vol, veh/h		1010						1864			1699	
Approach Delay, s/veh		34.9						52.2			6.7	
Approach LOS		С						D			А	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	-	6						
Phs Duration (G+Y+Rc), s	25.1	29.0		25.9		54.1						
Change Period (Y+Rc), s	4.0	4.0		4.0		4.0						
Max Green Setting (Gmax), s	19.0	25.0		24.0		48.0						
Max Q Clear Time (g_c+l1), s	13.3	27.0		20.5		2.0						
Green Ext Time (p_c), s	4.0	0.0		1.5		13.2						
Intersection Summary												
HCM 2010 Ctrl Delay			31.5									
HCM 2010 LOS			С									
Notes												

TEC Traffic Impact Analysis C:\TRAMES\0255-0001\Synchro\03 - EAP PM.syn

User approved volume balancing among the lanes for turning movement.

Trames Solutions, Inc. Synchro 8 Report

	•	-	←	•	\	1
						-
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		•	↑		W	
Volume (vph)	5	272	211	0	0	78
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Link Speed (mph)		30	30		30	
Link Distance (ft)		331	684		288	
Travel Time (s)		7.5	15.5		6.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type: Unsignalize	d					

Intersection								
Int Delay, s/veh	1.4							
Movement	EBL	EBT			WBT	WBR	SBL	SBR
Vol, veh/h	5	272			211	0	0	78
Conflicting Peds, #/hr	0	0			0	0	0	0
Sign Control	Free	Free			Free	Free	Stop	Stop
RT Channelized	-	None			-	None	·-	None
Storage Length	-	-			-	-	0	-
Veh in Median Storage, #	<u>.</u>	0			0	-	0	-
Grade, %	-	0			0	-	0	-
Peak Hour Factor	95	95			95	95	95	95
Heavy Vehicles, %	2	2			2	2	2	2
Mvmt Flow	5	286			222	0	0	82
Major/Minor	Major1				Major2		Minor2	
Conflicting Flow All	222	0			- Wajorz	0	519	222
Stage 1		-			-	-	222	-
Stage 2	-	-			-	-	297	-
Critical Hdwy	4.12	_			-	-	6.42	6.22
Critical Hdwy Stg 1	-	-			-	-	5.42	-
Critical Hdwy Stg 2	-	-			-	-	5.42	-
Follow-up Hdwy	2.218	-			-	-	3.518	3.318
Pot Cap-1 Maneuver	1347	-			-	-	517	818
Stage 1	-	-			-	-	815	-
Stage 2	-	-			-	-	754	-
Platoon blocked, %		-			-	-		
Mov Cap-1 Maneuver	1347	-			-	-	515	818
Mov Cap-2 Maneuver	-	-			-	-	515	-
Stage 1	-	-			-	-	815	-
Stage 2	-	-			-	-	751	-
Approach	EB				WB		SB	
HCM Control Delay, s	0.1				0		9.9	
HCM LOS	3.1						A	
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR SE	2l n1			
	1347				818			
Capacity (veh/h) HCM Lane V/C Ratio	0.004	-	-	-	0.1			
HCM Control Delay (s)	7.7	0	-	-	9.9			
HCM Lane LOS	7.7 A	A	-	-	9.9 A			
HCM 95th %tile Q(veh)	0	- A	-	-	0.3			
TION FULL FORME (VEII)	U	-	-	-	0.5			

	•	→	←	•	\	1
	EDI	EDT	LUDT	WDD	0.01	000
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations					W	
Volume (vph)	2	270	183	0	6	28
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Link Speed (mph)		30	30		30	
Link Distance (ft)		684	436		304	
Travel Time (s)		15.5	9.9		6.9	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type: Unsignalize	ed					

Intersection								
Int Delay, s/veh	0.7							
J .								
Movement	EBL	EBT			WBT	WBR	SBL	SBR
Vol, veh/h	2	270			183	0	6	28
Conflicting Peds, #/hr	0	0			0	0	0	0
Sign Control	Free	Free			Free	Free	Stop	Stop
RT Channelized	-	None			-	None	-	None
Storage Length	_	-			_	-	0	-
Veh in Median Storage, #	ŧ _	0			0	_	0	_
Grade, %	_	0			0	_	0	_
Peak Hour Factor	95	95			95	95	95	95
Heavy Vehicles, %	2	2			2	2	2	2
Mymt Flow	2	284			193	0	6	29
		201			173			27
Major/Minor	Maiori			, A	loier2		Minor	
Major/Minor	Major1	^		IV	lajor2		Minor2	100
Conflicting Flow All	193	0			-	0	481	193
Stage 1	-	-			-	-	193	-
Stage 2	- 4.10	-			-	-	288	- (22
Critical Hdwy	4.12	-			-	-	6.42	6.22
Critical Hdwy Stg 1	-	-			-	-	5.42	-
Critical Hdwy Stg 2	- 0.040	-			-	-	5.42	- 0.040
Follow-up Hdwy	2.218	-			-	-	3.518	3.318
Pot Cap-1 Maneuver	1380	-			-	-	544	849
Stage 1	-	-			-	-	840	-
Stage 2	-	-			-	-	761	-
Platoon blocked, %	1000	-			-	-	F 4.0	0.45
Mov Cap-1 Maneuver	1380	-			-	-	543	849
Mov Cap-2 Maneuver	-	-			-	-	543	-
Stage 1	-	-			-	-	840	-
Stage 2	-	-			-	-	759	-
					14:5		25	
Approach	EB				WB		SB	
HCM Control Delay, s	0.1				0		9.9	
HCM LOS							А	
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR SBLn1				
Capacity (veh/h)	1380	-	-	- 772				
HCM Lane V/C Ratio	0.002	-	-	- 0.046				
HCM Control Delay (s)	7.6	0	-	- 9.9				
HCM Lane LOS	А	Α	-	- A				
LICM OF the O/tile O(veh)	0			0.1				

HCM 95th %tile Q(veh)

0.1

APPENDIX 5.4

EXISTING PLUS AMBIENT PLUS PROJECT PLUS CUMULATIVE (EAPC 2017) CONDITIONS INTERSECTION ANALYSIS CALCULATION WORKSHEETS

	ᄼ	→	•	•	←	•	•	†	<i>></i>	>	ļ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		ની	7		ની	7	ሻ	^	7	ሻ	^	7
Volume (vph)	0	0	0	184	0	235	1	749	109	147	1147	0
Ideal Flow (vphpl)	1800	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Storage Length (ft)	0		0	0		130	270		0	60		275
Storage Lanes	0		1	0		1	1		1	1		1
Taper Length (ft)	60			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			40			50			40	
Link Distance (ft)		506			600			1582			1080	
Travel Time (s)		13.8			10.2			21.6			18.4	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Turn Type			Perm	Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4		8	8		5	2		1	6	
Permitted Phases	4		4			8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	8.0	20.0	20.0	8.0	20.0	20.0
Total Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	8.0	26.0	26.0	14.0	32.0	32.0
Total Split (%)	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	10.0%	32.5%	32.5%	17.5%	40.0%	40.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max

Area Type: Other

Cycle Length: 80

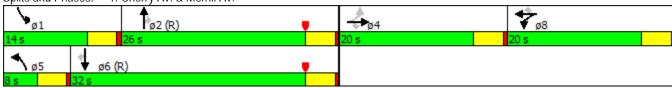
Actuated Cycle Length: 80

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 80

Control Type: Actuated-Coordinated

Splits and Phases: 1: Cherry Av. & Merrill Av.



	۶	→	•	•	←	•	•	†	~	/	+	✓
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4	7		ર્ન	7	ሻ	44	7	ሻ	^	7
Volume (veh/h)	0	0	0	184	0	235	1	749	109	147	1147	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1800	1765	1765	1700	1765	1765	1667	1765	1765	1667	1765	1765
Adj Flow Rate, veh/h	0	0	0	190	0	242	1	772	112	152	1182	0
Adj No. of Lanes	0	1	1	0	1	1	1	2	1	1	2	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	2	2	312	0	278	2	1940	824	182	2341	995
Arrive On Green	0.00	0.00	0.00	0.19	0.00	0.19	0.00	0.55	0.55	0.11	0.66	0.00
Sat Flow, veh/h	0	1765	1500	1681	0	1500	1587	3529	1500	1587	3529	1500
Grp Volume(v), veh/h	0	0	0	190	0	242	1	772	112	152	1182	0
Grp Sat Flow(s), veh/h/ln	0	1765	1500	1681	0	1500	1587	1765	1500	1587	1765	1500
Q Serve(q_s), s	0.0	0.0	0.0	8.3	0.0	12.5	0.1	10.1	2.9	7.5	13.6	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	8.3	0.0	12.5	0.1	10.1	2.9	7.5	13.6	0.0
Prop In Lane	0.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	0	2	2	312	0	278	2	1940	824	182	2341	995
V/C Ratio(X)	0.00	0.00	0.00	0.61	0.00	0.87	0.50	0.40	0.14	0.83	0.50	0.00
Avail Cap(c_a), veh/h	0	353	300	336	0	300	79	1940	824	198	2341	995
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	29.9	0.0	31.6	39.9	10.4	8.8	34.7	6.8	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	2.8	0.0	21.9	126.9	0.6	0.3	23.7	0.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	4.1	0.0	6.9	0.1	5.0	1.3	4.5	6.8	0.0
LnGrp Delay(d),s/veh	0.0	0.0	0.0	32.7	0.0	53.6	166.9	11.0	9.1	58.4	7.6	0.0
LnGrp LOS				С		D	F	В	А	Е	Α	
Approach Vol, veh/h		0			432			885			1334	
Approach Delay, s/veh		0.0			44.4			10.9			13.4	
Approach LOS					D			В			В	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.2	48.0		0.0	4.1	57.1		18.8				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	10.0	22.0		16.0	4.0	28.0		16.0				
Max Q Clear Time (g_c+l1), s	9.5	12.1		0.0	2.1	15.6		14.5				
Green Ext Time (p_c), s	0.0	7.7		0.0	0.0	9.3		0.3				
Intersection Summary												
HCM 2010 Ctrl Delay			17.6									
HCM 2010 LOS			В									

	۶	→	•	•	←	•	4	†	/	>	ļ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4	7		ર્ન	7	*	ተተተ		7	ተተተ	7
Volume (vph)	1	0	0	207	3	115	22	797	122	109	1138	8
Ideal Flow (vphpl)	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Storage Length (ft)	0		0	0		50	260		0	70		200
Storage Lanes	0		1	0		1	1		0	1		1
Taper Length (ft)	60			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		589			331			2702			1062	
Travel Time (s)		13.4			7.5			36.8			14.5	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						6
Detector Phase	4	4	4	8	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	8.0	20.0		8.0	20.0	20.0
Total Split (s)	28.0	28.0	28.0	28.0	28.0	28.0	11.0	33.0		19.0	41.0	41.0
Total Split (%)	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	13.8%	41.3%		23.8%	51.3%	51.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		4.0	4.0		4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	C-Max

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 8 (10%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 50

Control Type: Actuated-Coordinated

Splits and Phases: 2: Cherry Av. & Randall Av.



Lane Configurations Volume (veh/h) Number Initial Q (Qb), veh Ped-Bike Adj(A_pbT) 1. Parking Bus, Adj 1. Adj Sat Flow, veh/h/ln 17 Adj Flow Rate, veh/h Adj No. of Lanes Peak Hour Factor 0. Percent Heavy Veh, % Cap, veh/h 1 Arrive On Green 0. Sat Flow, veh/h 3 Grp Volume(v), veh/h Grp Sat Flow(s),veh/h/ln 3 Q Serve(g_s), s	1 7 0 0 0 0 1.C 0 176 1 0 0.97 0.9 2 42 116 0.C 0 19	0 0 0 4 14 0 0 1.00 0 1.00 5 1765 0 0 1 1 7 0.97 2 2 0 247	3 0 1.00 1.00 1700 213 0	WBT 3 8 0 1.00 1765 3 1 0.97	WBR 115 18 0 1.00 1.00 1765 119	NBL 22 5 0 1.00 1.00 1667 23	NBT ↑↑↑ 797 2 0 1.00 1765	122 12 0 1.00 1.00 1800	109 1 0 1.00 1.00 1.667	SBT ↑↑↑ 1138 6 0 1.00	SBR 8 16 0 1.00
Volume (veh/h) Number Initial Q (Qb), veh Ped-Bike Adj(A_pbT) Parking Bus, Adj Adj Sat Flow, veh/h/ln Adj Flow Rate, veh/h Adj No. of Lanes Peak Hour Factor Percent Heavy Veh, % Cap, veh/h Arrive On Green Sat Flow, veh/h Grp Volume(v), veh/h Grp Sat Flow(s),veh/h/ln Q Serve(g_s), s	1 7 0 0 0 0 1.C 0 176 1 0 0 97 0.9 2 42 116 0.C 119	0 0 4 14 0 0 1.00 0 1.00 5 1765 0 0 1 1 7 0.97 2 2 0 247	3 0 1.00 1.00 1700 213 0	3 8 0 1.00 1765 3 1	115 18 0 1.00 1.00 1765 119	22 5 0 1.00 1.00 1667	797 2 0 1.00 1765	12 0 1.00 1.00	109 1 0 1.00 1.00	1138 6 0	8 16 0
Number Initial Q (Qb), veh Ped-Bike Adj(A_pbT) 1. Parking Bus, Adj 1. Adj Sat Flow, veh/h/In 17 Adj Flow Rate, veh/h Adj No. of Lanes Peak Hour Factor 0. Percent Heavy Veh, % Cap, veh/h 1 Arrive On Green 0. Sat Flow, veh/h 3 Grp Volume(v), veh/h Grp Sat Flow(s),veh/h/In 3 Q Serve(g_s), s	7 0 00 00 1.0 100 176 1 0 97 0.9 2 42 16 0.0	4 14 0 0 1.00 0 1.00 5 1765 0 0 1 1 7 0.97 2 2 0 247	3 0 1.00 1.00 1700 213 0	1.00 1765 3	18 0 1.00 1.00 1765 119	5 0 1.00 1.00 1667	797 2 0 1.00 1765	12 0 1.00 1.00	1 0 1.00 1.00	6 0	16 0
Initial Q (Qb), veh Ped-Bike Adj(A_pbT) 1. Parking Bus, Adj 1. Adj Sat Flow, veh/h/ln 17 Adj Flow Rate, veh/h Adj No. of Lanes Peak Hour Factor 0. Percent Heavy Veh, % Cap, veh/h 1 Arrive On Green 0. Sat Flow, veh/h 3 Grp Volume(v), veh/h Grp Sat Flow(s),veh/h/ln 3 Q Serve(g_s), s	0 00 00 1.0 00 176 1 0 97 0.9 2 42 16 0.0	0 0 1.00 1.00 5 1765 0 0 1 1 7 0.97 2 2 0 247	0 1.00 1.00 1700 213 0 0.97	1.00 1765 3	0 1.00 1.00 1765 119	0 1.00 1.00 1667	1.00 1765	0 1.00 1.00	0 1.00 1.00	0	0
Ped-Bike Adj(A_pbT) 1. Parking Bus, Adj 1. Adj Sat Flow, veh/h/ln 17 Adj Flow Rate, veh/h Adj No. of Lanes Peak Hour Factor 0. Percent Heavy Veh, % Cap, veh/h 1 Arrive On Green 0. Sat Flow, veh/h 3 Grp Volume(v), veh/h Grp Sat Flow(s),veh/h/ln 3 Q Serve(g_s), s	00 00 1.0 10 1 0 97 2 42 16 0.0	1.00 0 1.00 5 1765 0 0 1 1 7 0.97 2 2 0 247	1.00 1.00 1700 213 0 0.97	1.00 1765 3 1	1.00 1.00 1765 119	1.00 1.00 1667	1.00 1765	1.00 1.00	1.00 1.00		
Parking Bus, Adj 1. Adj Sat Flow, veh/h/ln 17 Adj Flow Rate, veh/h Adj No. of Lanes Peak Hour Factor 0. Percent Heavy Veh, % Cap, veh/h 1 Arrive On Green 0. Sat Flow, veh/h 3 Grp Volume(v), veh/h Grp Sat Flow(s),veh/h/ln 3 Q Serve(g_s), s	00 1.0 100 176 1 0 97 0.9 2 42 16 0.0	0 1.00 5 1765 0 0 1 1 7 0.97 2 2 0 247	1.00 1700 213 0 0.97	1765 3 1	1.00 1765 119	1.00 1667	1765	1.00	1.00	1 00	1 00
Adj Sat Flow, veh/h/ln Adj Flow Rate, veh/h Adj No. of Lanes Peak Hour Factor Percent Heavy Veh, % Cap, veh/h Arrive On Green Sat Flow, veh/h Grp Volume(v), veh/h Grp Sat Flow(s),veh/h/ln Q Serve(g_s), s	100 176 1 0 97 0.9 2 42 16 0.0	5 1765 0 0 1 1 7 0.97 2 2 0 247	1700 213 0 0.97	1765 3 1	1765 119	1667	1765			1 00	
Adj Flow Rate, veh/h Adj No. of Lanes Peak Hour Factor O. Percent Heavy Veh, % Cap, veh/h Arrive On Green O. Sat Flow, veh/h Grp Volume(v), veh/h Grp Sat Flow(s),veh/h/ln O Serve(g_s), s	1 0 97 0.9 2 42 16 0.0	0 0 1 1 7 0.97 2 2 0 247	213 0 0.97	3	119			1800	1647	1.00	1.00
Adj No. of Lanes Peak Hour Factor Percent Heavy Veh, % Cap, veh/h Arrive On Green Sat Flow, veh/h Grp Volume(v), veh/h Grp Sat Flow(s),veh/h/ln Q Serve(g_s), s	0 97 0.9 2 42 .16 0.0	1 1 7 0.97 2 2 0 247	0 0.97	1		23	000			1765	1765
Peak Hour Factor 0. Percent Heavy Veh, % Cap, veh/h 1 Arrive On Green 0. Sat Flow, veh/h 3 Grp Volume(v), veh/h Grp Sat Flow(s),veh/h/ln 3 Q Serve(g_s), s	97 0.9 2 42 16 0.0	7 0.97 2 2 0 247	0.97			25	822	126	112	1173	8
Percent Heavy Veh, % Cap, veh/h 1 Arrive On Green 0. Sat Flow, veh/h 3 Grp Volume(v), veh/h Grp Sat Flow(s),veh/h/ln 3 Q Serve(g_s), s	2 42 .16 0.0	2 2 0 247		0.07	1	1	3	0	1	3	1
Cap, veh/h 1 Arrive On Green 0. Sat Flow, veh/h 3 Grp Volume(v), veh/h Grp Sat Flow(s),veh/h/ln 3 Q Serve(g_s), s 0	42 .16 0.0	0 247	2	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Arrive On Green 0. Sat Flow, veh/h 3 Grp Volume(v), veh/h Grp Sat Flow(s),veh/h/ln 3 Q Serve(g_s), s	.16 0.0 319			2	2	2	2	2	2	2	2
Sat Flow, veh/h Grp Volume(v), veh/h Grp Sat Flow(s), veh/h/ln Q Serve(g_s), s	19	n n n	352	4	247	32	2683	408	140	3523	998
Grp Volume(v), veh/h Grp Sat Flow(s),veh/h/ln 3 Q Serve(g_s), s				0.16	0.16	0.04	1.00	1.00	0.09	0.67	0.67
Grp Sat Flow(s),veh/h/ln 3 Q Serve(g_s), s	1	0 1500	1593	22	1500	1587	4490	684	1587	5294	1500
Q Serve(g_s), s		0 0	216	0	119	23	645	303	112	1173	8
	119	0 1500	1616	0	1500	1587	1765	1644	1587	1765	1500
	0.1	0.0	0.0	0.0	5.8	1.1	0.0	0.0	5.5	7.6	0.1
Oycic & Olcul (g_c), 3	9.9 0.	0.0	9.8	0.0	5.8	1.1	0.0	0.0	5.5	7.6	0.1
Prop In Lane 1.	.00	1.00	0.99		1.00	1.00		0.42	1.00		1.00
Lane Grp Cap(c), veh/h 1	42	0 247	355	0	247	32	2109	982	140	3523	998
V/C Ratio(X) 0.	.01 0.0	0.00	0.61	0.00	0.48	0.72	0.31	0.31	0.80	0.33	0.01
Avail Cap(c_a), veh/h 3	14	0 450	547	0	450	139	2109	982	298	3523	998
HCM Platoon Ratio 1.	.00 1.0	0 1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I) 1.	.00 0.0	0.00	1.00	0.00	1.00	0.88	0.88	0.88	1.00	1.00	1.00
Uniform Delay (d), s/veh 36	6.7 0.	0.0	32.0	0.0	30.3	38.2	0.0	0.0	35.8	5.8	4.5
Incr Delay (d2), s/veh (0.0	0.0	1.7	0.0	1.5	23.7	0.3	0.7	10.2	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	0.0
%ile BackOfQ(50%),veh/ln (0.0	0.0	4.7	0.0	2.5	0.7	0.1	0.2	2.8	3.8	0.1
LnGrp Delay(d),s/veh 36	6.8 0.	0.0	33.7	0.0	31.8	61.9	0.3	0.7	46.0	6.0	4.5
LnGrp LOS	D		С		С	Е	Α	Α	D	Α	Α
Approach Vol, veh/h		1		335			971			1293	
Approach Delay, s/veh	36	8		33.0			1.9			9.5	
Approach LOS		D		С			А			А	
Timer	1	2 3	4	5	6	7	8				
Assigned Phs	1	2	4	5	6		8				
	1.0 51	8	17.2	5.6	57.2		17.2				
	4.0 4.		4.0	4.0	4.0		4.0				
	5.0 29.	0	24.0	7.0	37.0		24.0				
3 · · · ·	7.5 2		11.9	3.1	9.6		11.8				
	0.1 15		1.3	0.0	16.1		1.3				
Intersection Summary											
HCM 2010 Ctrl Delay		9.7									
HCM 2010 LOS		А									

	ᄼ	→	\rightarrow	•	←	•	•	†	/	>	ļ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	7	^	7	7	∱ ∱		7	ተተኈ		7	ተተተ	7
Volume (vph)	184	70	95	146	344	90	85	775	89	75	851	379
Ideal Flow (vphpl)	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Storage Length (ft)	300		285	50		0	220		0	210		300
Storage Lanes	1		1	1		0	1		0	1		1
Taper Length (ft)	60			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		555			705			459			2702	
Travel Time (s)		12.6			16.0			6.3			36.8	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases			4									6
Detector Phase	7	4	4	3	8		5	2		1	6	7
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	8.0	20.0	20.0	8.0	20.0		8.0	20.0		8.0	20.0	8.0
Total Split (s)	20.0	23.0	23.0	17.0	20.0		14.0	27.0		13.0	26.0	20.0
Total Split (%)	25.0%	28.8%	28.8%	21.3%	25.0%		17.5%	33.8%		16.3%	32.5%	25.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5		0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lead/Lag	Lag	Lead	Lead	Lag	Lead		Lag	Lead		Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	None

Area Type: Other

Cycle Length: 80

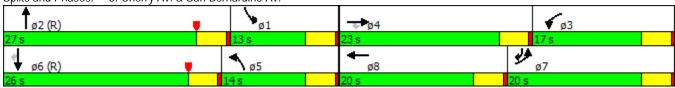
Actuated Cycle Length: 80

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 60

Control Type: Actuated-Coordinated

Splits and Phases: 3: Cherry Av. & San Bernardino Av.



	•	→	•	√	←	•	•	†	~	>		√
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	7	^	7	7	ተ ኈ		ሻ	ተተ _ጉ		ሻ	ተተተ	7
Volume (veh/h)	184	70	95	146	344	90	85	775	89	75	851	379
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	1667	1765	1765	1667	1765	1800	1667	1765	1800	1667	1765	1765
Adj Flow Rate, veh/h	190	72	0	151	355	93	88	799	92	77	877	391
Adj No. of Lanes	1	2	1	1	2	0	1	3	0	1	3	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	226	176	75	409	446	115	345	1341	154	326	1456	626
Arrive On Green	0.14	0.05	0.00	0.26	0.16	0.16	0.22	0.29	0.29	0.07	0.09	0.09
Sat Flow, veh/h	1587	3529	1500	1587	2706	700	1587	4666	534	1587	5294	1500
Grp Volume(v), veh/h	190	72	0	151	230	218	88	603	288	77	877	391
Grp Sat Flow(s), veh/h/ln	1587	1765	1500	1587	1765	1641	1587	1765	1670	1587	1765	1500
Q Serve(g_s), s	9.3	1.6	0.0	6.2	10.0	10.2	3.7	11.7	11.9	3.7	12.7	8.3
Cycle Q Clear(g_c), s	9.3	1.6	0.0	6.2	10.0	10.2	3.7	11.7	11.9	3.7	12.7	8.3
Prop In Lane	1.00		1.00	1.00		0.43	1.00		0.32	1.00		1.00
Lane Grp Cap(c), veh/h	226	176	75	409	291	270	345	1015	480	326	1456	626
V/C Ratio(X)	0.84	0.41	0.00	0.37	0.79	0.81	0.25	0.59	0.60	0.24	0.60	0.62
Avail Cap(c_a), veh/h	317	838	356	409	353	328	345	1015	480	326	1456	626
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Uniform Delay (d), s/veh	33.4	36.9	0.0	24.4	32.1	32.2	25.9	24.5	24.5	31.4	32.2	24.7
Incr Delay (d2), s/veh	13.0	1.5	0.0	0.6	9.6	11.6	0.4	2.6	5.4	0.4	1.8	4.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	0.8	0.0	2.8	5.6	5.5	1.7	6.1	6.2	1.7	6.5	4.2
LnGrp Delay(d),s/veh	46.4	38.4	0.0	24.9	41.7	43.8	26.3	27.1	30.0	31.7	33.9	29.2
LnGrp LOS	D	D		С	D	D	С	С	С	С	С	С
Approach Vol, veh/h		262			599			979			1345	
Approach Delay, s/veh		44.2			38.2			27.8			32.4	
Approach LOS		D			D			С			С	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.4	27.0	24.6	8.0	21.4	26.0	15.4	17.2				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	9.0	23.0	13.0	19.0	10.0	22.0	16.0	16.0				
Max Q Clear Time (g_c+l1), s	5.7	13.9	8.2	3.6	5.7	14.7	11.3	12.2				
Green Ext Time (p_c), s	0.1	3.5	0.5	0.3	0.1	3.8	0.3	0.9				
Intersection Summary												
HCM 2010 Ctrl Delay			33.1									
HCM 2010 LOS			С									

	•	-	•	•	←	•	4	†	<i>></i>	>	ļ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	14.14	^	7	ሻሻ	ħβ		ሻሻ	^	7	ሻ	^	7
Volume (vph)	64	133	188	424	284	65	424	890	350	69	985	91
Ideal Flow (vphpl)	1600	1800	1800	1600	1800	1800	1600	1800	1800	1700	1800	1800
Storage Length (ft)	250		160	250		0	420		220	170		0
Storage Lanes	2		1	2		0	2		0	1		1
Taper Length (ft)	120			120			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		845			1019			968			718	
Travel Time (s)		19.2			23.2			13.2			9.8	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Shared Lane Traffic (%)												
Turn Type	Prot	NA	pm+ov	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4	5	3	8		5	2		1	6	
Permitted Phases			4						2			6
Detector Phase	7	4	5	3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	20.0	8.0	8.0	20.0		8.0	20.0	20.0	8.0	20.0	20.0
Total Split (s)	8.0	20.0	16.0	16.0	28.0		16.0	34.0	34.0	10.0	28.0	28.0
Total Split (%)	10.0%	25.0%	20.0%	20.0%	35.0%		20.0%	42.5%	42.5%	12.5%	35.0%	35.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max

Area Type: Other

Cycle Length: 80

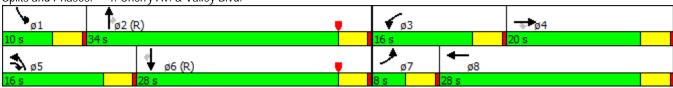
Actuated Cycle Length: 80

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow, Master Intersection

Natural Cycle: 80

Control Type: Actuated-Coordinated

Splits and Phases: 4: Cherry Av. & Valley Blvd.



	•	→	•	•	←	•	•	†	<i>></i>	/	+	✓
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	16.5%	^	7	44	∱ ∱		ሻሻ	^	7	7	^	7
Volume (veh/h)	64	133	188	424	284	65	424	890	350	69	985	91
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	1569	1765	1765	1569	1765	1800	1569	1765	1765	1667	1765	1765
Adj Flow Rate, veh/h	67	139	196	442	296	68	442	927	365	72	1026	95
Adj No. of Lanes	2	2	1	2	2	0	2	2	1	1	2	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	116	541	455	448	737	167	448	1557	662	89	1224	520
Arrive On Green	0.04	0.15	0.15	0.15	0.26	0.26	0.30	0.88	0.88	0.06	0.35	0.35
Sat Flow, veh/h	2988	3529	1500	2988	2788	630	2988	3529	1500	1587	3529	1500
Grp Volume(v), veh/h	67	139	196	442	186	178	442	927	365	72	1026	95
Grp Sat Flow(s),veh/h/ln	1494	1765	1500	1494	1765	1653	1494	1765	1500	1587	1765	1500
Q Serve(g_s), s	1.8	2.8	8.4	11.8	6.9	7.1	11.8	5.2	4.5	3.6	21.4	3.5
Cycle Q Clear(g_c), s	1.8	2.8	8.4	11.8	6.9	7.1	11.8	5.2	4.5	3.6	21.4	3.5
Prop In Lane	1.00		1.00	1.00		0.38	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	116	541	455	448	467	437	448	1557	662	89	1224	520
V/C Ratio(X)	0.58	0.26	0.43	0.99	0.40	0.41	0.99	0.60	0.55	0.81	0.84	0.18
Avail Cap(c_a), veh/h	149	706	525	448	529	496	448	1557	662	119	1224	520
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.79	0.79	0.79	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.8	29.9	22.3	33.9	24.2	24.3	27.9	2.9	2.9	37.4	24.1	18.2
Incr Delay (d2), s/veh	4.5	0.2	0.6	38.8	0.5	0.6	34.1	1.3	2.6	25.7	7.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	1.4	3.6	7.3	3.4	3.3	6.9	2.3	2.0	2.2	11.6	1.6
LnGrp Delay(d),s/veh	42.3	30.1	23.0	72.7	24.7	24.9	62.0	4.3	5.5	63.1	31.0	19.0
LnGrp LOS	D	С	С	E	С	С	E	A 724	А	Е	C	В
Approach Vol, veh/h		402			806			1734			1193	
Approach Delay, s/veh		28.7			51.1			19.3			32.0	
Approach LOS		С			D			В			С	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.5	39.3	16.0	16.3	16.0	31.7	7.1	25.2				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	6.0	30.0	12.0	16.0	12.0	24.0	4.0	24.0				
Max Q Clear Time (g_c+l1), s	5.6	7.2	13.8	10.4	13.8	23.4	3.8	9.1				
Green Ext Time (p_c), s	0.0	15.3	0.0	1.9	0.0	0.5	0.0	3.3				
Intersection Summary												
HCM 2010 Ctrl Delay			30.0									
HCM 2010 LOS			С									

	•	•	†	~	-	ļ
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	ሻሻ	7	ተተተ	7		1111
Volume (vph)	536	596	1108	523	0	1604
Ideal Flow (vphpl)	1600	1800	1800	1800	1800	1800
Storage Length (ft)	0	0		200	0	
Storage Lanes	2	1		1	0	
Taper Length (ft)	60				60	
Right Turn on Red		Yes		Yes		
Link Speed (mph)	30		45			45
Link Distance (ft)	252		337			968
Travel Time (s)	5.7		5.1			14.7
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Turn Type	Prot	Perm	NA	Free		NA
Protected Phases	8		2			6
Permitted Phases		8		Free		
Detector Phase	8	8	2			6
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0			4.0
Minimum Split (s)	20.0	20.0	20.0			20.0
Total Split (s)	48.0	48.0	32.0			32.0
Total Split (%)	60.0%	60.0%	40.0%			40.0%
Yellow Time (s)	3.5	3.5	3.5			3.5
All-Red Time (s)	0.5	0.5	0.5			0.5
Lost Time Adjust (s)	0.0	0.0	0.0			0.0
Total Lost Time (s)	4.0	4.0	4.0			4.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	C-Max			C-Max
Interception Comment						

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 40

Control Type: Actuated-Coordinated

Splits and Phases: 5: Cherry Av. & I-10 WB Ramps



•	•	†	/	\	ļ	
WBL	WBR	NBT	NBR	SBL	SBT	
16	7	^	7		1111	
536	596	1108	523	0	1604	
3	18	2	12	1	6	
0	0	0	0	0	0	
1.00	1.00		1.00	1.00		
1.00	1.00	1.00	1.00	1.00	1.00	
1569	1765	1765	1765	0	1765	
564	627	1166	0	0	1688	
2	1	3	1	0	4	
0.95	0.95	0.95	0.95	0.95	0.95	
2	2	2	2	0	2	
1375	691	2328	659	0	3104	
0.46	0.46	0.88	0.00	0.00	0.88	
2988	1500	5294	1500	0	7059	
564		1166	0	0	1688	
		1765	1500	0	1765	
10.0	31.0	3.8	0.0	0.0	4.4	
	31.0	3.8		0.0	4.4	
1.00	1.00		1.00	0.00		
1375	691	2328	659	0	3104	
0.41	0.91	0.50	0.00	0.00	0.54	
1643	825	2328	659	0	3104	
1.00	1.00	2.00	2.00	1.00	2.00	
1.00	1.00	1.00	0.00	0.00	0.50	
14.4	20.0	2.9	0.0	0.0	3.0	
0.2	12.4	8.0	0.0	0.0	0.3	
0.0	0.0	0.0	0.0	0.0	0.0	
4.2	15.1	1.7	0.0	0.0	1.9	
14.6	32.4	3.7	0.0	0.0	3.3	
В	С	Α			Α	
1191		1166			1688	
23.9		3.7			3.3	
С		А			А	
1	2	3	4	5	6	7 8
	2				6	8
	39.2				39.2	40.8
	4.0				4.0	4.0
	28.0				28.0	44.0
	5.8				6.4	33.0
	18.6				18.1	3.8
		9.5				
	536 3 0 1.00 1.00 1569 564 2 0.95 2 1375 0.46 2988 564 1494 10.0 1.00 1375 0.41 1643 1.00 1.00 14.4 0.2 0.0 4.2 14.6 B	WBL WBR 536 596 3 18 0 0 1.00 1.00 1.00 1.00 1569 1765 564 627 2 1 0.95 0.95 2 2 1375 691 0.46 0.46 2988 1500 564 627 1494 1500 10.0 31.0 10.0 31.0 10.0 1.00 1375 691 0.41 0.91 1643 825 1.00 1.00 1.00 1.00 1.00 1.00 14.4 20.0 0.2 12.4 0.0 0.0 4.2 15.1 14.6 32.4 B C 1191 23.9 C 2 39.2 4.0 28.0 5.8	WBL WBR NBT 536 596 1108 3 18 2 0 0 0 1.00 1.00 1.00 1569 1765 1765 564 627 1166 2 1 3 0.95 0.95 0.95 2 2 2 1375 691 2328 0.46 0.46 0.88 2988 1500 5294 564 627 1166 1494 1500 1765 10.0 31.0 3.8 10.0 31.0 3.8 1.00 31.0 3.8 1.00 1.00 1.50 1643 825 2328 1.00 1.00 2.00 1.00 1.00 1.00 14.4 20.0 2.9 0.2 12.4 0.8 0.0 0.0	WBL WBR NBT NBR 536 596 1108 523 3 18 2 12 0 0 0 0 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1569 1765 1765 1765 564 627 1166 0 2 1 3 1 0.95 0.95 0.95 0.95 2 2 2 2 2 1375 691 2328 659 0.46 0.46 0.88 0.00 2988 1500 5294 1500 564 627 1166 0 1494 1500 1765 1500 10.0 31.0 3.8 0.0 10.0 31.0	WBL WBR NBT NBR SBL 11 1 <t< td=""><td>WBL WBR NBT NBR SBL SBT 536 596 1108 523 0 1604 3 18 2 12 1 6 0 0 0 0 0 0 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.569 1765 1765 10 1765 0 1765 564 627 1166 0 0 1688 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.</td></t<>	WBL WBR NBT NBR SBL SBT 536 596 1108 523 0 1604 3 18 2 12 1 6 0 0 0 0 0 0 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.569 1765 1765 10 1765 0 1765 564 627 1166 0 0 1688 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.

	•	→	\rightarrow	•	•	•	•	†	/	>	ļ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	7	4	7					ተተተ	7	ሻሻ	ተተተ	
Volume (vph)	363	0	580	0	0	0	0	1269	423	396	1255	0
Ideal Flow (vphpl)	1700	1800	1800	1800	1800	1800	1800	1800	1800	1600	1800	1800
Storage Length (ft)	0		350	0		0	0		0	300		0
Storage Lanes	1		1	0		0	0		1	2		0
Taper Length (ft)	120			60			60			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		722			861			873			429	
Travel Time (s)		16.4			19.6			13.2			6.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)	10%		47%									
Turn Type	Perm	NA	Perm					NA	Perm	Prot	NA	
Protected Phases		4						2		1	6	
Permitted Phases	4		4						2			
Detector Phase	4	4	4					2	2	1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0					4.0	4.0	4.0	4.0	
Minimum Split (s)	20.0	20.0	20.0					20.0	20.0	8.0	20.0	
Total Split (s)	30.0	30.0	30.0					30.0	30.0	20.0	50.0	
Total Split (%)	37.5%	37.5%	37.5%					37.5%	37.5%	25.0%	62.5%	
Yellow Time (s)	3.5	3.5	3.5					3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5	0.5					0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0					0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0					4.0	4.0	4.0	4.0	
Lead/Lag								Lead	Lead	Lag		
Lead-Lag Optimize?								Yes	Yes	Yes		
Recall Mode	None	None	None					C-Max	C-Max	None	C-Max	

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 55

Control Type: Actuated-Coordinated

Splits and Phases: 6: Cherry Av. & I-10 EB Ramps



	۶	→	•	•	←	•	1	†	~	/	Ţ	-√
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	- ሽ	4	7					ተተተ	7	1,4	ተተተ	
Volume (veh/h)	363	0	580	0	0	0	0	1269	423	396	1255	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1765	1765				0	1765	1765	1569	1765	0
Adj Flow Rate, veh/h	255	0	747				0	1336	445	417	1321	0
Adj No. of Lanes	1	0	2				0	3	1	2	3	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	455	0	860				0	1721	488	712	3246	0
Arrive On Green	0.29	0.00	0.29				0.00	0.32	0.32	0.48	1.00	0.00
Sat Flow, veh/h	1587	0	3000				0	5294	1500	2988	5294	0
Grp Volume(v), veh/h	255	0	747				0	1336	445	417	1321	0
Grp Sat Flow(s), veh/h/ln	1587	0	1500				0	1765	1500	1494	1765	0
Q Serve(g_s), s	10.9	0.0	18.9				0.0	18.2	22.8	8.1	0.0	0.0
Cycle Q Clear(g_c), s	10.9	0.0	18.9				0.0	18.2	22.8	8.1	0.0	0.0
Prop In Lane	1.00	0	1.00				0.00	1701	1.00	1.00	20.47	0.00
Lane Grp Cap(c), veh/h	455	0	860				0	1721	488	712	3246	0
V/C Ratio(X)	0.56	0.00	0.87				0.00	0.78	0.91	0.59	0.41	0.00
Avail Cap(c_a), veh/h	516	1.00	975				1.00	1721	488	712	3246	1.00
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	24.2 1.1	0.0	27.1 7.7				0.0	24.4	25.9	18.1 1.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0				0.0	3.5 0.0	24.0 0.0	0.0	0.4	0.0
Initial Q Delay(d3),s/veh	4.9	0.0	8.7				0.0	9.3	12.6	3.4	0.0	0.0
%ile BackOfQ(50%),veh/ln LnGrp Delay(d),s/veh	25.3	0.0	34.8				0.0	27.9	49.9	19.3	0.1	0.0
LnGrp LOS	23.3 C	0.0	34.0 C				0.0	27.9 C	49.9 D	19.3 B	0.4 A	0.0
	C	1000	C					1781	D	Ь	1738	
Approach Vol, veh/h		1002						33.4				
Approach LOS		32.4 C						33.4 C			4.9	
Approach LOS								C			Α	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	23.1	30.0		26.9		53.1						
Change Period (Y+Rc), s	4.0	4.0		4.0		4.0						
Max Green Setting (Gmax), s	16.0	26.0		26.0		46.0						
Max Q Clear Time (g_c+l1), s	10.1	24.8		20.9		2.0						
Green Ext Time (p_c), s	4.3	1.0		2.0		14.5						
Intersection Summary												
HCM 2010 Ctrl Delay			22.2									
HCM 2010 LOS			С									
Notes												
User approved volume balance	ing amor	ng the lan	es for turr	ning move	ement.							

TEC Traffic Impact Analysis C:\TRAMES\0255-0001\Synchro\04 - EAPC AM.syn

Trames Solutions, Inc. Synchro 8 Report

	ၨ	→	•	•	\	1
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		W	
Volume (vph)	32	199	321	0	0	4
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Link Speed (mph)		30	30		30	
Link Distance (ft)		331	684		288	
Travel Time (s)		7.5	15.5		6.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type: Unsignalize	ed					

Intersection								
Int Delay, s/veh	0.5							
,								
Movement	EBL	EBT			WBT	WBR	SBL	SBR
Vol, veh/h	32	199			321	0	0	4
Conflicting Peds, #/hr	0	0			0	0	0	0
Sign Control	Free	Free			Free	Free	Stop	Stop
RT Channelized	-	None			-	None	310p	None
Storage Length		-				-	0	-
Veh in Median Storage, #	_	0			0	-	0	_
Grade, %	<u> </u>	0			0	-	0	-
Peak Hour Factor	95	95			95	95	95	95
Heavy Vehicles, %	2	2			2	2	2	2
Mymt Flow	34	209			338	0	0	4
IVIVIAL LIOW	34	209			330	U	0	4
Major/Minor	Major1				Major2		Minor2	
Conflicting Flow All	338	0			-	0	615	338
Stage 1	-	-			-	-	338	-
Stage 2	-	-			-	-	277	-
Critical Hdwy	4.12	-			-	-	6.42	6.22
Critical Hdwy Stg 1	-	-			-	-	5.42	-
Critical Hdwy Stg 2	-	-			-	-	5.42	-
Follow-up Hdwy	2.218	-			-	-	3.518	3.318
Pot Cap-1 Maneuver	1221	-			-	-	455	704
Stage 1	-	-			-	-	722	-
Stage 2	-	-			-	-	770	-
Platoon blocked, %		-			-	-		
Mov Cap-1 Maneuver	1221	-			-	-	440	704
Mov Cap-2 Maneuver	-	-			-	-	440	-
Stage 1	-	-			-	-	722	-
Stage 2	-	-			-	-	745	-
Approach	EB				WB		SB	
HCM Control Delay, s	1.1				0		10.1	
HCM LOS							В	
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR SBLn	1			
Capacity (veh/h)	1221	-	-	- 70 ⁴				
HCM Lane V/C Ratio	0.028	-	-	- 0.000				
HCM Control Delay (s)	0.028	0	-	- 10.				
HCM Lane LOS	A	A			1 B			
HOW Lake LUS	A	А	-	- l	ט			

0.1

HCM 95th %tile Q(veh)

0

	•	→	•	•	\	1
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		†	†		W	
Volume (vph)	11	188	320	2	0	1
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Link Speed (mph)		30	30		30	
Link Distance (ft)		684	436		304	
Travel Time (s)		15.5	9.9		6.9	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type: Unsignalize	ed					

Intersection								
Int Delay, s/veh	0.2							
Movement	EBL	EBT			WBT	WBR	SBL	SBR
Vol, veh/h	11	188			320	2	0	1
Conflicting Peds, #/hr	0	0			0	0	0	0
Sign Control	Free	Free			Free	Free	Stop	Stop
RT Channelized	-	None			-	None	-	None
Storage Length	-	-			_	-	0	-
Veh in Median Storage, #	_	0			0	_	0	-
Grade, %	-	0			0	_	0	-
Peak Hour Factor	95	95			95	95	95	95
Heavy Vehicles, %	2	2			2	2	2	2
Mvmt Flow	12	198			337	2	0	1
Major/Minor	Major1				Major2		Minor2	
Conflicting Flow All	339	0			- Iviajoiz	0	559	338
Stage 1	- 337	-			_	-	338	-
Stage 2	<u> </u>	-				-	221	-
Critical Hdwy	4.12				_		6.42	6.22
Critical Hdwy Stg 1	4.12	_			_	_	5.42	0.22
Critical Hdwy Stg 2	_	_			_	_	5.42	_
Follow-up Hdwy	2.218	_			_	_	3.518	3.318
Pot Cap-1 Maneuver	1220	_			_	_	490	704
Stage 1	1220	_			_	_	722	704
Stage 2	_	_			_	_	816	_
Platoon blocked, %		-			_	_	310	
Mov Cap-1 Maneuver	1220	_			_	_	485	704
Mov Cap-2 Maneuver	-	_			_	_	485	707
Stage 1	_	_			_		722	-
Stage 2	-	_			_	-	807	-
o to go L							307	
Approach	EB				WB		SB	
HCM Control Delay, s	0.4				0		10.1	
HCM LOS	0.4				0		В	
TOW LOO								
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR SBLn	1			
Capacity (veh/h)	1220	-	-	- 70				
HCM Lane V/C Ratio	0.009		_	- 0.00				
HCM Control Delay (s)	8	0	_	- 10.				
HCM Lane LOS	A	A	_		В			
HOW LAND LOS			_		-			

HCM 95th %tile Q(veh)

0

	۶	→	•	•	•	•	4	†	/	>	ţ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		ર્ન	7		ની	7	ሻ	^	7	7	^	7
Volume (vph)	0	0	0	101	0	176	0	1271	169	213	820	0
Ideal Flow (vphpl)	1800	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Storage Length (ft)	0		0	0		130	270		0	60		275
Storage Lanes	0		1	0		0	1		1	1		1
Taper Length (ft)	60			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			40			50			40	
Link Distance (ft)		506			600			1582			1080	
Travel Time (s)		13.8			10.2			21.6			18.4	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Turn Type			Perm	Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4		8	8		5	2		1	6	
Permitted Phases	4		4			8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	8.0	20.0	20.0	8.0	20.0	20.0
Total Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	8.0	28.0	28.0	12.0	32.0	32.0
Total Split (%)	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	10.0%	35.0%	35.0%	15.0%	40.0%	40.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max

Area Type: Other

Cycle Length: 80

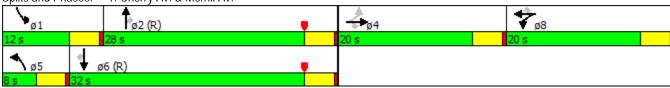
Actuated Cycle Length: 80

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 90

Control Type: Actuated-Coordinated

Splits and Phases: 1: Cherry Av. & Merrill Av.



	ၨ	→	•	•	—	•	•	†	<i>></i>	>	+	✓
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		र्स	7		र्स	7	ሻ	^	7	ሻ	^	7
Volume (veh/h)	0	0	0	101	0	176	0	1271	169	213	820	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1800	1765	1765	1700	1765	1765	1667	1765	1765	1667	1765	1765
Adj Flow Rate, veh/h	0	0	0	107	0	187	0	1352	180	227	872	0
Adj No. of Lanes	0	1	1	0	1	1	1	2	1	1	2	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	2	2	254	0	227	2	2113	898	159	2642	1123
Arrive On Green	0.00	0.00	0.00	0.15	0.00	0.15	0.00	0.60	0.60	0.10	0.75	0.00
Sat Flow, veh/h	0	1765	1500	1681	0	1500	1587	3529	1500	1587	3529	1500
Grp Volume(v), veh/h	0	0	0	107	0	187	0	1352	180	227	872	0
Grp Sat Flow(s), veh/h/ln	0	1765	1500	1681	0	1500	1587	1765	1500	1587	1765	1500
Q Serve(g_s), s	0.0	0.0	0.0	4.6	0.0	9.7	0.0	19.9	4.4	8.0	6.6	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	4.6	0.0	9.7	0.0	19.9	4.4	8.0	6.6	0.0
Prop In Lane	0.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	0	2	2	254	0	227	2	2113	898	159	2642	1123
V/C Ratio(X)	0.00	0.00	0.00	0.42	0.00	0.82	0.00	0.64	0.20	1.43	0.33	0.00
Avail Cap(c_a), veh/h	0	353	300	336	0	300	79	2113	898	159	2642	1123
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	30.8	0.0	32.9	0.0	10.4	7.3	36.0	3.4	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	1.1	0.0	13.0	0.0	1.5	0.5	225.9	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	2.2	0.0	4.8	0.0	10.0	1.9	13.4	3.3	0.0
LnGrp Delay(d),s/veh	0.0	0.0	0.0	31.9	0.0	45.9	0.0	11.9	7.8	261.9	3.7	0.0
LnGrp LOS				С		D		В	Α	F	Α	
Approach Vol, veh/h		0			294			1532			1099	
Approach Delay, s/veh		0.0			40.8			11.5			57.0	
Approach LOS					D			В			E	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.0	51.9		0.0	0.0	63.9		16.1				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	8.0	24.0		16.0	4.0	28.0		16.0				
Max Q Clear Time (g_c+l1), s	10.0	21.9		0.0	0.0	8.6		11.7				
Green Ext Time (p_c), s	0.0	1.9		0.0	0.0	14.6		0.5				
Intersection Summary												
HCM 2010 Ctrl Delay			31.5									
HCM 2010 LOS			С									

	۶	→	•	•	←	•	4	†	/	>	ļ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4	7		ર્ન	7	*	ተተተ		7	ተተተ	7
Volume (vph)	11	4	23	176	0	113	9	1354	159	113	848	4
Ideal Flow (vphpl)	1700	1800	1800	1800	1800	1800	1700	1800	1800	1700	1800	1800
Storage Length (ft)	0		0	0		50	260		0	70		200
Storage Lanes	0		1	0		1	1		0	1		1
Taper Length (ft)	60			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		589			331			2702			1062	
Travel Time (s)		13.4			7.5			36.8			14.5	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						6
Detector Phase	4	4	4	8	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	8.0	20.0		8.0	20.0	20.0
Total Split (s)	22.0	22.0	22.0	22.0	22.0	22.0	8.0	41.0		17.0	50.0	50.0
Total Split (%)	27.5%	27.5%	27.5%	27.5%	27.5%	27.5%	10.0%	51.3%		21.3%	62.5%	62.5%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		4.0	4.0		4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	C-Max

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 23 (29%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 55

Control Type: Actuated-Coordinated

Splits and Phases: 2: Cherry Av. & Randall Av.



	۶	→	•	•	←	•	1	†	<i>></i>	/	↓	4
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		र्स	7		र्स	7	ሻ	ተተተ		ሻ	^	7
Volume (veh/h)	11	4	23	176	0	113	9	1354	159	113	848	4
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	1700	1765	1765	1800	1765	1765	1667	1765	1800	1667	1765	1765
Adj Flow Rate, veh/h	12	4	25	193	0	124	10	1488	175	124	932	4
Adj No. of Lanes	0	1	1	0	1	1	1	3	0	1	3	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	79	15	338	90	0	338	16	2459	289	153	3256	923
Arrive On Green	0.22	0.22	0.22	0.22	0.00	0.22	0.02	1.00	1.00	0.10	0.62	0.62
Sat Flow, veh/h	0	65	1500	0	0	1500	1587	4651	547	1587	5294	1500
Grp Volume(v), veh/h	16	0	25	193	0	124	10	1129	534	124	932	4
Grp Sat Flow(s),veh/h/ln	65	0	1500	0	0	1500	1587	1765	1668	1587	1765	1500
Q Serve(g_s), s	0.0	0.0	1.1	0.0	0.0	5.6	0.5	0.0	0.0	6.1	6.6	0.1
Cycle Q Clear(g_c), s	18.0	0.0	1.1	18.0	0.0	5.6	0.5	0.0	0.0	6.1	6.6	0.1
Prop In Lane	0.75		1.00	1.00		1.00	1.00		0.33	1.00		1.00
Lane Grp Cap(c), veh/h	93	0	338	90	0	338	16	1866	882	153	3256	923
V/C Ratio(X)	0.17	0.00	0.07	2.14	0.00	0.37	0.63	0.61	0.61	0.81	0.29	0.00
Avail Cap(c_a), veh/h	93	0	338	90	0	338	79	1866	882	258	3256	923
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.66	0.66	0.66	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.1	0.0	24.4	40.0	0.0	26.2	39.1	0.0	0.0	35.4	7.2	5.9
Incr Delay (d2), s/veh	0.9	0.0	0.1	550.1	0.0	0.7	24.5	1.0	2.1	9.8	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.4	15.7	0.0	2.4	0.3	0.3	0.5	3.1	3.3	0.0
LnGrp Delay(d),s/veh	27.0	0.0	24.5	590.1	0.0	26.9	63.5	1.0	2.1	45.2	7.4	6.0
LnGrp LOS	С		С	F		С	<u>E</u>	A	A	D	A	A
Approach Vol, veh/h		41			317			1673			1060	
Approach Delay, s/veh		25.5			369.8			1.7			11.8	
Approach LOS		С			F			Α			В	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.7	46.3		22.0	4.8	53.2		22.0				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	13.0	37.0		18.0	4.0	46.0		18.0				
Max Q Clear Time (g_c+I1), s	8.1	2.0		20.0	2.5	8.6		20.0				
Green Ext Time (p_c), s	0.1	23.5		0.0	0.0	24.6		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			43.2									
HCM 2010 LOS			D									

	۶	→	•	•	←	•	•	†	/	-	ļ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻ	^	7	ሻ	↑ Ъ		ሻ	ተተኈ		ሻ	ተተተ	7
Volume (vph)	297	613	155	73	150	85	59	984	128	101	864	269
Ideal Flow (vphpl)	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Storage Length (ft)	300		285	50		0	220		0	210		300
Storage Lanes	1		1	1		0	1		0	1		1
Taper Length (ft)	60			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		555			705			459			2702	
Travel Time (s)		12.6			16.0			6.3			36.8	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)	.		_	.			<u> </u>					
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases	7		4	0	0		-	0		-	,	6 7
Detector Phase	7	4	4	3	8		5	2		1	6	1
Switch Phase	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	8.0 23.0	20.0	20.0	8.0	20.0 20.0		8.0 10.0	20.0 25.0		8.0 12.0	20.0 27.0	8.0 23.0
Total Split (s)	28.8%	37.5%	37.5%	16.3%	25.0%		12.5%	31.3%		15.0%	33.8%	28.8%
Total Split (%)	3.5	37.5%	37.5%	3.5	3.5		3.5	31.3%		3.5	33.8%	3.5
Yellow Time (s) All-Red Time (s)	0.5	0.5	0.5	0.5	0.5		0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lead/Lag	Lead			Lead			Lead	Lag		Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Lag Yes	Lag Yes	Yes	Lag Yes		Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	None
Necali Mouc	NONE	None	None	NONE	NOUG		NONE	O-IVIAX		NOUG	O-IVIAX	NOUG

Area Type: Other

Cycle Length: 80

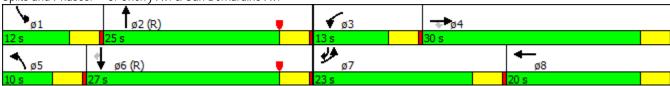
Actuated Cycle Length: 80

Offset: 46 (58%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 70

Control Type: Actuated-Coordinated





	۶	→	•	•	←	•	•	†	<i>></i>	>		✓
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	7	^	7	7	ተ ኈ		ሻ	ተተኈ		ሻ	ተተተ	7
Volume (veh/h)	297	613	155	73	150	85	59	984	128	101	864	269
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	1667	1765	1765	1667	1765	1800	1667	1765	1800	1667	1765	1765
Adj Flow Rate, veh/h	326	674	0	80	165	93	65	1081	141	111	949	296
Adj No. of Lanes	1	2	1	1	2	0	1	3	0	1	3	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	359	1094	465	99	317	169	80	1570	205	136	1998	906
Arrive On Green	0.23	0.31	0.00	0.06	0.15	0.15	0.05	0.34	0.34	0.11	0.50	0.50
Sat Flow, veh/h	1587	3529	1500	1587	2166	1159	1587	4591	598	1587	5294	1500
Grp Volume(v), veh/h	326	674	0	80	133	125	65	831	391	111	949	296
Grp Sat Flow(s),veh/h/ln	1587	1765	1500	1587	1765	1560	1587	1765	1659	1587	1765	1500
Q Serve(g_s), s	16.0	13.0	0.0	4.0	5.6	6.0	3.2	16.2	16.2	5.5	9.4	6.8
Cycle Q Clear(g_c), s	16.0	13.0	0.0	4.0	5.6	6.0	3.2	16.2	16.2	5.5	9.4	6.8
Prop In Lane	1.00		1.00	1.00		0.74	1.00		0.36	1.00		1.00
Lane Grp Cap(c), veh/h	359	1094	465	99	258	228	80	1207	567	136	1998	906
V/C Ratio(X)	0.91	0.62	0.00	0.81	0.51	0.55	0.82	0.69	0.69	0.82	0.47	0.33
Avail Cap(c_a), veh/h	377	1147	488	179	353	312	119	1207	567	159	1998	906
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.98	0.98
Uniform Delay (d), s/veh	30.1	23.5	0.0	37.0	31.5	31.7	37.6	22.6	22.7	34.8	14.7	6.1
Incr Delay (d2), s/veh	24.4	0.9	0.0	14.0	1.6	2.1	22.7	3.2	6.7	23.8	8.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.4	6.5	0.0	2.1	2.8	2.7	1.9	8.4	8.4	3.3	4.6	3.0
LnGrp Delay(d),s/veh	54.6	24.5	0.0	51.1	33.1	33.8	60.4	25.9	29.4	58.7	15.5	7.0
LnGrp LOS	D	С		D	С	С	Е	С	С	Е	В	Α
Approach Vol, veh/h		1000			338			1287			1356	
Approach Delay, s/veh		34.3			37.6			28.7			17.2	
Approach LOS		С			D			С			В	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.8	31.4	9.0	28.8	8.0	34.2	22.1	15.7				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	8.0	21.0	9.0	26.0	6.0	23.0	19.0	16.0				
Max Q Clear Time (g_c+l1), s	7.5	18.2	6.0	15.0	5.2	11.4	18.0	8.0				
Green Ext Time (p_c), s	0.0	2.5	0.0	4.6	0.0	9.3	0.1	3.7				
Intersection Summary												
HCM 2010 Ctrl Delay			26.9									
HCM 2010 LOS			С									

	•	→	•	•	←	•	4	†	<i>></i>	>	ţ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	44	^	7	44	∱ }		1,1	† †	7	¥	† †	7
Volume (vph)	204	725	330	362	270	99	307	939	498	144	1006	70
Ideal Flow (vphpl)	1600	1800	1800	1600	1800	1800	1600	1800	1800	1700	1800	1800
Storage Length (ft)	250		160	250		0	420		220	170		0
Storage Lanes	2		1	2		0	2		0	1		1
Taper Length (ft)	120			120			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		845			1019			968			718	
Travel Time (s)		19.2			23.2			13.2			9.8	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Shared Lane Traffic (%)												
Turn Type	Prot	NA	pm+ov	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4	5	3	8		5	2		1	6	
Permitted Phases			4						2			6
Detector Phase	7	4	5	3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	20.0	8.0	8.0	20.0		8.0	20.0	20.0	8.0	20.0	20.0
Total Split (s)	14.0	22.0	13.0	14.0	22.0		13.0	31.0	31.0	13.0	31.0	31.0
Total Split (%)	17.5%	27.5%	16.3%	17.5%	27.5%		16.3%	38.8%	38.8%	16.3%	38.8%	38.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow, Master Intersection

Natural Cycle: 80

Control Type: Actuated-Coordinated

Splits and Phases: 4: Cherry Av. & Valley Blvd.



	۶	→	•	•	←	•	•	†	~	/		✓
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1,1	^	7	44	ħβ		ሻሻ	^	7	7	^↑	7
Volume (veh/h)	204	725	330	362	270	99	307	939	498	144	1006	70
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1569	1765	1765	1569	1765	1800	1569	1765	1765	1667	1765	1765
Adj Flow Rate, veh/h	212	755	344	377	281	103	320	978	519	150	1048	73
Adj No. of Lanes	2	2	1	2	2	0	2	2	1	1	2	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	285	794	506	373	633	226	336	1191	506	179	1191	506
Arrive On Green	0.10	0.22	0.22	0.13	0.25	0.25	0.04	0.11	0.11	0.11	0.34	0.34
Sat Flow, veh/h	2988	3529	1500	2988	2483	889	2988	3529	1500	1587	3529	1500
Grp Volume(v), veh/h	212	755	344	377	198	186	320	978	519	150	1048	73
Grp Sat Flow(s), veh/h/ln	1494	1765	1500	1494	1765	1608	1494	1765	1500	1587	1765	1500
Q Serve(g_s), s	5.5	16.9	15.8	10.0	7.5	7.8	8.6	21.7	27.0	7.4	22.4	2.7
Cycle Q Clear(g_c), s	5.5	16.9	15.8	10.0	7.5	7.8	8.6	21.7	27.0	7.4	22.4	2.7
Prop In Lane	1.00		1.00	1.00		0.55	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	285	794	506	373	449	410	336	1191	506	179	1191	506
V/C Ratio(X)	0.74	0.95	0.68	1.01	0.44	0.45	0.95	0.82	1.03	0.84	0.88	0.14
Avail Cap(c_a), veh/h	373	794	506	373	449	410	336	1191	506	179	1191	506
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.81	0.81	0.81	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.2	30.6	22.8	35.0	25.0	25.1	38.3	33.2	35.5	34.8	25.0	18.5
Incr Delay (d2), s/veh	5.7	20.8	3.7	49.0	0.7	8.0	32.0	5.3	42.5	28.4	9.4	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	10.5	7.0	6.6	3.8	3.6	5.0	11.5	17.2	4.7	12.3	1.2
LnGrp Delay(d),s/veh	40.9	51.4	26.4	84.0	25.7	25.9	70.3	38.4	78.0	63.2	34.4	19.1
LnGrp LOS	D	D	С	F	С	С	Е	D	F	Е	С	В
Approach Vol, veh/h		1311			761			1817			1271	
Approach Delay, s/veh		43.1			54.6			55.3			36.9	
Approach LOS		D			D			Ε			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.0	31.0	14.0	22.0	13.0	31.0	11.6	24.4				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	9.0	27.0	10.0	18.0	9.0	27.0	10.0	18.0				
Max Q Clear Time (q_c+I1), s	9.4	29.0	12.0	18.9	10.6	24.4	7.5	9.8				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	2.4	0.2	5.1				
Intersection Summary												
HCM 2010 Ctrl Delay			47.6									
HCM 2010 LOS			D									

	€	•	†	/	\	ļ
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	ሻሻ	7	ተተተ	7		1111
Volume (vph)	401	492	1311	407	0	1712
Ideal Flow (vphpl)	1600	1800	1800	1800	1800	1800
Storage Length (ft)	0	0		200	0	
Storage Lanes	2	1		1	0	
Taper Length (ft)	60				60	
Right Turn on Red		Yes		Yes		
Link Speed (mph)	30		45			45
Link Distance (ft)	252		337			968
Travel Time (s)	5.7		5.1			14.7
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Turn Type	Prot	Perm	NA	Free		NA
Protected Phases	8		2			6
Permitted Phases		8		Free		
Detector Phase	8	8	2			6
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0			4.0
Minimum Split (s)	20.0	20.0	20.0			20.0
Total Split (s)	43.0	43.0	37.0			37.0
Total Split (%)	53.8%	53.8%	46.3%			46.3%
Yellow Time (s)	3.5	3.5	3.5			3.5
All-Red Time (s)	0.5	0.5	0.5			0.5
Lost Time Adjust (s)	0.0	0.0	0.0			0.0
Total Lost Time (s)	4.0	4.0	4.0			4.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	C-Max			C-Max
Intersection Summary						

Area Type: Other

Cycle Length: 80

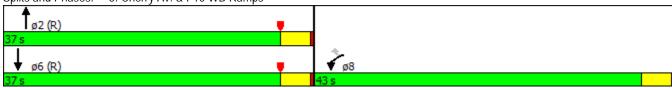
Actuated Cycle Length: 80

Offset: 39 (49%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 40

Control Type: Actuated-Coordinated

Splits and Phases: 5: Cherry Av. & I-10 WB Ramps



	•	•	†	<i>></i>	\	↓	
Movement	WBL	WBR	NBT	NBR	SBL	SBT	
Lane Configurations	ሻሻ	7	ተተተ	7		1111	
Volume (veh/h)	401	492	1311	407	0	1712	
Number	3	18	2	12	1	6	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	
Adj Sat Flow, veh/h/ln	1569	1765	1765	1765	0	1765	
Adj Flow Rate, veh/h	422	518	1380	0	0	1802	
Adj No. of Lanes	2	1	3	1	0	4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	
Percent Heavy Veh, %	2	2	2	2	0	2	
Cap, veh/h	1152	579	2723	771	0	3631	
Arrive On Green	0.39	0.39	1.00	0.00	0.00	0.17	
Sat Flow, veh/h	2988	1500	5294	1500	0	7059	
Grp Volume(v), veh/h	422	518	1380	0	0	1802	
Grp Sat Flow(s), veh/h/ln	1494	1500	1765	1500	0	1765	
Q Serve(q_s), s	8.1	25.9	0.0	0.0	0.0	18.5	
Cycle Q Clear(g_c), s	8.1	25.9	0.0	0.0	0.0	18.5	
Prop In Lane	1.00	1.00		1.00	0.00		
Lane Grp Cap(c), veh/h	1152	579	2723	771	0	3631	
V/C Ratio(X)	0.37	0.90	0.51	0.00	0.00	0.50	
Avail Cap(c_a), veh/h	1457	731	2723	771	0	3631	
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	0.33	
Upstream Filter(I)	1.00	1.00	1.00	0.00	0.00	0.50	
Uniform Delay (d), s/veh	17.6	23.1	0.0	0.0	0.0	23.8	
Incr Delay (d2), s/veh	0.2	11.6	0.7	0.0	0.0	0.2	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	3.4	12.5	0.2	0.0	0.0	9.1	
LnGrp Delay(d),s/veh	17.8	34.7	0.7	0.0	0.0	24.1	
LnGrp LOS	В	С	Α			С	
Approach Vol, veh/h	940		1380			1802	
Approach Delay, s/veh	27.1		0.7			24.1	
Approach LOS	С		А			С	
Timer	1	2	3	4	5	6	7 8
Assigned Phs		2				6	8
Phs Duration (G+Y+Rc), s		45.1				45.1	34.9
Change Period (Y+Rc), s		4.0				4.0	4.0
Max Green Setting (Gmax), s		33.0				33.0	39.0
Max Q Clear Time (g_c+I1), s		2.0				20.5	27.9
Green Ext Time (p_c), s		26.5				11.6	2.9
Intersection Summary							
HCM 2010 Ctrl Delay			16.9				
HCM 2010 LOS			В				

	•	→	\rightarrow	•	•	•	•	†	/	>	ļ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	7	4	7					ተተተ	7	ሻሻ	ተተተ	
Volume (vph)	433	0	552	0	0	0	0	1283	508	542	1096	0
Ideal Flow (vphpl)	1700	1800	1800	1800	1800	1800	1800	1800	1800	1600	1800	1800
Storage Length (ft)	0		350	0		0	0		0	300		0
Storage Lanes	1		1	0		0	0		1	2		0
Taper Length (ft)	120			60			60			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		722			861			873			429	
Travel Time (s)		16.4			19.6			13.2			6.5	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Shared Lane Traffic (%)	21%		43%									
Turn Type	Perm	NA	Perm					NA	Perm	Prot	NA	
Protected Phases		4						2		1	6	
Permitted Phases	4		4						2			
Detector Phase	4	4	4					2	2	1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0					4.0	4.0	4.0	4.0	
Minimum Split (s)	20.0	20.0	20.0					20.0	20.0	8.0	20.0	
Total Split (s)	28.0	28.0	28.0					29.0	29.0	23.0	52.0	
Total Split (%)	35.0%	35.0%	35.0%					36.3%	36.3%	28.8%	65.0%	
Yellow Time (s)	3.5	3.5	3.5					3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5	0.5					0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0					0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0					4.0	4.0	4.0	4.0	
Lead/Lag								Lead	Lead	Lag		
Lead-Lag Optimize?								Yes	Yes	Yes		
Recall Mode	None	None	None					C-Max	C-Max	None	C-Max	

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 28 (35%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 60

Control Type: Actuated-Coordinated





	۶	→	•	•	←	•	1	†	_	/	+	-√
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	7	4	7					ተተተ	7	ሻሻ	ተተተ	
Volume (veh/h)	433	0	552	0	0	0	0	1283	508	542	1096	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1765	1765				0	1765	1765	1569	1765	0
Adj Flow Rate, veh/h	649	0	363				0	1336	529	565	1142	0
Adj No. of Lanes	2	0	1				0	3	1	2	3	0
Peak Hour Factor	0.96	0.96	0.96				0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	872	0	412				0	1654	469	785	3310	0
Arrive On Green	0.27	0.00	0.27				0.00	0.31	0.31	0.53	1.00	0.00
Sat Flow, veh/h	3175	0	1500				0	5294	1500	2988	5294	0
Grp Volume(v), veh/h	649	0	363				0	1336	529	565	1142	0
Grp Sat Flow(s), veh/h/ln	1587	0	1500				0	1765	1500	1494	1765	0
Q Serve(g_s), s	14.9	0.0	18.5				0.0	18.6	25.0	11.5	0.0	0.0
Cycle Q Clear(g_c), s	14.9	0.0	18.5				0.0	18.6	25.0	11.5	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	872	0	412				0	1654	469	785	3310	0
V/C Ratio(X)	0.74	0.00	0.88				0.00	0.81	1.13	0.72	0.35	0.00
Avail Cap(c_a), veh/h	952	0	450				0	1654	469	785	3310	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	26.4	0.0	27.8				0.0	25.3	27.5	16.7	0.0	0.0
Incr Delay (d2), s/veh	2.9	0.0	17.0				0.0	4.3	81.7	3.2	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
%ile BackOfQ(50%),veh/ln	6.8	0.0	9.6				0.0	9.7	20.9	4.9	0.1	0.0
LnGrp Delay(d),s/veh	29.4	0.0	44.8				0.0	29.6	109.2	20.0	0.3	0.0
LnGrp LOS	С		D					С	F	В	Α	
Approach Vol, veh/h		1012						1865			1707	
Approach Delay, s/veh		34.9						52.2			6.8	
Approach LOS		С						D			А	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	25.0	29.0		26.0		54.0						
Change Period (Y+Rc), s	4.0	4.0		4.0		4.0						
Max Green Setting (Gmax), s	19.0	25.0		24.0		48.0						
Max Q Clear Time (g_c+l1), s	13.5	27.0		20.5		2.0						
Green Ext Time (p_c), s	3.9	0.0		1.5		13.2						
Intersection Summary												
HCM 2010 Ctrl Delay			31.5									
HCM 2010 LOS			C									
Notes												
110163												

TEC Traffic Impact Analysis C:\TRAMES\0255-0001\Synchro\04 - EAPC PM.syn

User approved volume balancing among the lanes for turning movement.

Trames Solutions, Inc. Synchro 8 Report

	۶	→	←	•	>	4
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	†		N/	
Volume (vph)	5	272	211	0	0	78
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Link Speed (mph)		30	30		30	
Link Distance (ft)		331	684		288	
Travel Time (s)		7.5	15.5		6.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type: Unsignalize	d					

Intersection									
Int Delay, s/veh	1.4								
J.									
Movement	EBL	EBT			WB ⁻	Τ \Λ	'BR	SBL	SBR
Vol, veh/h	5	272			21		0	0	78
Conflicting Peds, #/hr	0	0				0	0	0	0
Sign Control	Free	Free			Fre		ree	Stop	Stop
RT Channelized	-	None					one	310p	None
Storage Length		NONE -				- 140	JIIC -	0	None -
Veh in Median Storage, #		0				0	-	0	-
Grade, %	<u> </u>	0				0	-	0	-
Peak Hour Factor	95	95			9.		95	95	95
Heavy Vehicles, %	2	2				3 2	2	2	2
Mvmt Flow	5	286			22		0	0	82
IVIVITIL FIOW	5	200			22.	۷	U	U	02
Major/Minor	Major1				Major:	2		Minor2	
Conflicting Flow All	222	0				-	0	519	222
Stage 1	-	-				-	-	222	-
Stage 2	-	-				-	-	297	-
Critical Hdwy	4.12	-				-	-	6.42	6.22
Critical Hdwy Stg 1	-	-				-	-	5.42	-
Critical Hdwy Stg 2	-	-				-	-	5.42	-
Follow-up Hdwy	2.218	-				-	-	3.518	3.318
Pot Cap-1 Maneuver	1347	-				-	-	517	818
Stage 1	-	-				-	-	815	-
Stage 2	-	-				-	-	754	-
Platoon blocked, %		-				-	-		
Mov Cap-1 Maneuver	1347	-				-	-	515	818
Mov Cap-2 Maneuver	-	-				-	-	515	_
Stage 1	-	-				-	-	815	-
Stage 2	-	-				-	-	751	-
Approach	EB				WI	3		SB	
HCM Control Delay, s	0.1					0		9.9	
HCM LOS	0.1					J		Α	
HOW LOO									
Minor Lang/Major Mumt	EBL	EBT	WBT	WBR SBI	l n1				
Minor Lane/Major Mvmt		EDI	WDI						
Capacity (veh/h)	1347	-	-		818				
HCM Control Doloy (a)	0.004	-	-		0.1				
HCM Long LOS	7.7	0	-		9.9				
HCM Lane LOS	A	Α	-	-	A				

HCM 95th %tile Q(veh)

0.3

	•	_	←	•	\	1
						-
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		N/	
Volume (vph)	2	270	183	0	6	28
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Link Speed (mph)		30	30		30	
Link Distance (ft)		684	436		304	
Travel Time (s)		15.5	9.9		6.9	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type: Unsignalize	ed					

Intersection								
Int Delay, s/veh	0.7							
Movement	EBL	EBT			WBT	WBR	SBL	SBR
Vol, veh/h	2	270			183	0	6	28
Conflicting Peds, #/hr	0	0			0	0	0	0
Sign Control	Free	Free			Free		Stop	Stop
RT Channelized	-	None			-		- -	None
Storage Length	_	-			_	-	0	-
Veh in Median Storage, #		0			0	_	0	_
Grade, %	_	0			0	_	0	-
Peak Hour Factor	95	95			95	95	95	95
Heavy Vehicles, %	2	2			2		2	2
Mvmt Flow	2	284			193	0	6	29
Major/Minor	Major1				Major2		Minor2	
Conflicting Flow All	193	0			- Iviajoiz		481	193
Stage 1	-	-			_	-	193	- 175
Stage 2	_	_			_	_	288	_
Critical Hdwy	4.12	_			_	_	6.42	6.22
Critical Hdwy Stg 1	7.12	_			_	-	5.42	-
Critical Hdwy Stg 2	-	_			-	_	5.42	-
Follow-up Hdwy	2.218	-			_	-	3.518	3.318
Pot Cap-1 Maneuver	1380	_			-	_	544	849
Stage 1	-	_			_	-	840	-
Stage 2	_				-		761	-
Platoon blocked, %		-			-	-	, 31	
Mov Cap-1 Maneuver	1380				-		543	849
Mov Cap-2 Maneuver	-	-			_	-	543	-
Stage 1	-	_			-	_	840	-
Stage 2	-	-			-	-	759	-
Approach	EB				WB		SB	
HCM Control Delay, s	0.1				0		9.9	
HCM LOS	0.1				Ū		A	
TIOM LOO							71	
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR SB	Ln1			
Capacity (veh/h)	1380	-	-		772			
HCM Lane V/C Ratio	0.002			- 0.				
HCM Control Delay (s)	7.6	0	_	- 0.	9.9			
HCM Lane LOS	7.0 A	A	_	_	Α			
HOW Edito EOO					7.			

0

HCM 95th %tile Q(veh)

0.1

APPENDIX 5.5

EXISTING PLUS AMBIENT PLUS PROJECT PLUS CUMULATIVE (EAPC 2017) CONDITIONS
FREEWAY RAMP ANALYSIS WORKSHEETS

		RAMP	S AND RAI	MP JUNCT	ONS WO	RKS	HEET			
General Inf	ormation			Site Infor						
Analyst Agency or Compa	-	nes Solutions, I	nc.	Freeway/Dir of Tr Junction	ravel	-	Ave. Off-Ra	amp		
Date Performed Analysis Time Pe	2/3/1 rind AM I	eak Hour		Jurisdiction Analysis Year		Caltran EAPC				
	n TEC Traffic Im			Allalysis Teal		LAFC	(2017)			
Inputs	n TEO Traine in	ipadt / trialy 515								
Upstream Ac	dj Ramp	1 1	nber of Lanes, N	4					Downstrea	am Adj
□Yes	On	1 '	er of Lanes, N Lane Length, L_{Δ}	2					Ramp ☑ Yes	☑ On
✓ No	Off	Deceleration	Lane Length L _D	150					No	Off
L _{up} =	ft	Freeway Volume		5307 1132					L _{down} =	2500 ft
•		1	e-Flow Speed, S _F						\	500 L /I
$V_u =$	veh/h		low Speed, S _{FR}	35.0					V _D =	523 veh/h
Conversion	to pc/h Un	der Base	Conditions							
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv		f _{HV}	f _p	v = V/PHF	x f _{HV} x f _p
Freeway	5307	0.92	Level	10	0	0.	952	1.00	60	57
Ramp							990	1.00	12	43
UpStream	500	0.00					000	1.00		
DownStream	523	0.92 Merge Areas	Level	2	0	0.	990 <u> </u>	1.00 iverge Areas	57	/4
Estimation		Merge Areas			Estimat	tion o		iverge Areas		
		/D \						\/ . (\/ \/	\D	
_	$V_{12} = V_F$		10.7\					$V_R + (V_F - V_F)$		`
-EQ =		ation 13-6 or Equation(•		L _{EQ} =		-	Equation 13-1		•
P _{FM} = / ₁₂ =	pc/h	Equation (EXHIDIC 13-0)		P _{FD} = V ₁₂ =			160 using Equ 195 pc/h	Jation (EXIII	DIL 13-7)
/ ₁₂ – / ₃ or V _{av34}	•	Equation 12	3-14 or 13-17)		V ₁₂ – V ₃ or V _{av34}			•	otion 12 1/	1 or 12 17
	pc/ii (7,700 pc/h?		14 OI 13-11)			< 2.7		81 pc/h (Equa]Yes ☑No	auon 13-14	+ 01 13-17
	i.5 * V ₁₂ /2							Yes ☑No		
$f Yes, V_{12a} =$		(Equation 13	3-16, 13-18, or		If Yes,V _{12a} =	-		c/h (Equation	13-16, 13-	-18, or 13-
Capacity C		/			Capacit	ty Ch		,		
	Actual	(Capacity	LOS F?	1		Actual	Ca	pacity	LOS F
					V _F		6057	Exhibit 13-8	9400	No
V_{FO}		Exhibit 13-8			$V_{FO} = V_{F}$	- V _R	4814	Exhibit 13-8	9400	No
					V _R		1243	Exhibit 13-1	0 4000	No
Flow Enter	ing Merge Ir	fluence A	Area				a Diver	ge Influen	ce Area	
	Actual	_	Desirable	Violation?	1011 = 1	_	Actual	Max Desirab		Violation
V _{R12}		Exhibit 13-8			V ₁₂	2	2495	Exhibit 13-8	4400:All	No
	rvice Deteri	mination (if not F)		Level o	f Serv	/ice Det	terminatio	n (if not	. F)
	· 0.00734 v _R +					D _R = 4	.252 + 0.	0086 V ₁₂ - 0.	009 L _D	
O _R = (pc/m	i/ln)				D _R = 14	4.0 (pc	/mi/ln)			
.OS = (Exhi k	oit 13-2)				LOS = B	(Exhib	oit 13-2)			
Speed Dete	ermination				Speed L			n		
$M_{\rm S} = $ (Exibi	t 13-11)				$D_s = 0.$.540 (E	xhibit 13-	12)		
	Exhibit 13-11)				1."	-	(Exhibit	•		
	Exhibit 13-11)				1 *	-	(Exhibit	•		
	Exhibit 13-13)						(Exhibit 1	13-13)		
yright © 2014 Uni	versity of Florida, A	ll Rights Reserve	ed		HCS2010 [™]	M Vers	ion 6.60		Generated: 2	/7/2016 3:2

			MPS AND	RAMP JUN	ICTIONS W		EET				
Genera	I Inform	nation			Site Infor	mation					
Analyst Agency or (Date Perfor	med	2/3/1		nc.	Freeway/Dir of Tr Junction Jurisdiction	avel	Caltra	y Ave. Loop ns) On-Ramp		
Analysis Tir			Peak Hour	ŀ	Analysis Year		EAPC	(2017)			
	scription	TEC Traffic Im	pact Analysis								
nputs			l							1	
Jpstream A	Adj Ramp		1	ber of Lanes, N	4					Downstre	eam Adj
Yes	On		Ramp Number		1					Ramp	
				ane Length, L _A	300					✓ Yes	✓ On
☑ No	☐ Off		Freeway Volui	ane Length L _D	4175					□No	Off
- _{up} =	ft		Ramp Volume		523					L _{down} =	2000 ft
				, *R -Flow Speed, S _{ee}							
/ _u =	veh/h			ow Speed, S _{FR}	35.0					$V_D =$	491 veh/h
Conver	sion to	nc/h Hn		Conditions							
		γ ρο/11 Ο11				0/15	Т		,		IF f f
(pc/	/h)	(Veh/hr)	PHF	Terrain	%Truck	%Rv		f _{HV}	f _p	V = V/PH	IF x f _{HV} x f _p
Freeway		4175	0.92	Level	10	0	$\overline{}$).952	1.00		4765
Ramp		523	0.92	Level	2	0).990	1.00		574
UpStream DownStrea	am	491	0.92	Level	2	0).990	1.00		539
JOWNSHEE	1111		Merge Areas	revei		0			Diverge Areas		337
stima	tion of	V ₁₂				Estimat	tion (
		V ₁₂ = V _F	(P.,,)						., ., .,		
. _{EQ} =			ation 13-6 or	13-7)		l.			$V_R + (V_F - V_R)$		
) FM =				ion (Exhibit 13-	6)	L _{EQ} =			(Equation 13-		-
/ ₁₂ =		696 p		IOTT (EXHIBIT TO	0)	P _{FD} =			using Equatio	on (Exhibit	13-/)
				on 13-14 or 13	3-	V ₁₂ =			pc/h		
or V _{av34}		17)				V ₃ or V _{av34}			pc/h (Equation 1		-17)
		pc/h? 🗌 Ye							☐Yes ☐No		
Is V_3 or V_{a}	_{v34} > 1.5 *	V ₁₂ /2 ☑ Ye							☐ Yes ☐ No pc/h (Equatio		12 10 or
Yes,V _{12a}	=		pc/h (Equation 13-19)	on 13-16, 13-		If Yes,V _{12a} :	=		pc/ii (⊑qualio 3-19)	11 13-10,	13-10, 01
Canaci	tv Ched		13-19)			Capacit	tv Ch	ecks			
зараст	ty One	Actual	С	apacity	LOS F?		.y 0,,	Actual	Ca	pacity	LOS F?
						V _F			Exhibit 13-		
V		E220	Evhibit 12.0		No	$V_{FO} = V_{F}$. - V _D		Exhibit 13-	_	
V _F	О	5339	Exhibit 13-8		No		· R		Exhibit 13		
						V _R			10		
-low E	ntering	Merge In	<u>ifluence A</u>	rea	_	Flow Er	nterii	ng Dive	rge Influer		
		Actual	 	Desirable	Violation?	.,	_	Actual	Max Des	irable	Violation?
V _{R1}		2480	Exhibit 13-8	4600:All	No	V ₁₂		· -	Exhibit 13-8		1.51
			mination (i			+			eterminatio	•	t F)
			0.0078 V ₁₂ - 0.0	JU62/ L _A					0.0086 V ₁₂ - 0	.009 L _D	
11	22.7 (pc/mi/	•					pc/mi/ 				
	C (Exhibit 1					<u> </u>		t 13-2)			
Speed	Determ	ination				Speed I			on		
Λ _S = 0).347 (Exib	it 13-11)					Exhibit	•			
S _R = 5	7.0 mph (E	Exhibit 13-11)				I ''	-	hibit 13-12)			
	1.7 mph (E	Exhibit 13-11)				$S_0 = m$	nph (Ex	hibit 13-12)			
	69.4 mph (E	Exhibit 13-13)				S = m	nph (Ex	hibit 13-13)	<u> </u>		
yright © 20	14 Universit	y of Florida, All	Rights Reserved			HCS2010	 	rsion 6 60		Generate	d: 2/7/2016 3:

			MPS AND	RAMP JUI	NCTIONS W		EET				
Genera	al Inform	nation			Site Infor	mation					
Analyst Agency or o Date Perfoo Analysis Ti		2/3/	nes Solutions, Ir 16 Peak Hour	nc.	Freeway/Dir of Tr Junction Jurisdiction Analysis Year		I-10 WB Cherry Av Caltrans EAPC (20	/e. Slip On-	Ramp		
			npact Analysis				27.11 5 (2.1	,,			
Inputs			, ,								
Jpstream A	Adi Damn		Freeway Num	per of Lanes, N	4					Downstre	am Adi
psu cam r	ruj Kamp		Ramp Number	of Lanes, N	1					Ramp	zam Auj
✓ Yes	✓ On		Acceleration L	ane Length, L _₄	1000					Yes	On
□ NI=	□ 0#		Deceleration L	- 7							
□ No	☐ Off		Freeway Volur		4698					✓ No	Off
up =	2000 ft	t	Ramp Volume		491					L _{down} =	ft
			1	Flow Speed, S _E						.,	
/ _u =	523 ve l	h/h	Ramp Free-Flo		35.0					V _D =	veh/h
CONVO	rsion to	nc/h Hn		Conditions							
		<i>γ ρυ/ </i>				T	Т,				- , ,
(pc	:/n)	(Veh/hr)	PHF	Terrain	%Truck	%Rv	f _H	v	f _p	v = V/PH	F x f _{HV} x f _p
Freeway		4698	0.92	Level	10	0	0.95	2	1.00		5362
Ramp		491	0.92	Level	2	0	0.99	0	1.00		539
UpStream		523	0.92	Level	2	0	0.99	0	1.00		574
DownStrea	am		M A					Div			
Ectima	tion of		Merge Areas			Estimat	ion of		erge Areas		
_Suma	tion or		<i>'-</i>			LStillat	1011 01	1 2			
		$V_{12} = V_{F}$						$V_{12} = V_{R}$	+ (V _F - V _R))P _{FD}	
EQ =			ation 13-6 or	•		L _{EQ} =		(Ed	quation 13-	12 or 13-	13)
_{FM} =		0.150	using Equat	on (Exhibit 13-	6)	P _{FD} =		usi	ng Equatio	n (Exhibit 1	13-7)
12 =		807 p				V ₁₂ =		pc/	'h		
7 ₃ or V _{av34}	ļ.		pc/h (Equation	on 13-14 or 13	3-	V ₃ or V _{av34}			h (Equation 1	3-14 or 13-	17)
		17) pc/h?	se 🗸 No				, ₃₄ > 2,700	-	∕es □No		
		V ₁₂ /2 ☑ Ye							∕es □No		
Yes,V _{12a}		2144	pc/h (Equatio ∶13-19)	on 13-16, 13-		If Yes,V _{12a} =			h (Equatior	n 13-16, ′	13-18, or
Capaci	ity Ched		/			Capacit	y Ched	cks			
		Actual	С	apacity	LOS F?			Actual	Cap	acity	LOS F?
						V _F			Exhibit 13-8	3	
V _F		5901	Exhibit 13-8		No	$V_{FO} = V_{F}$	- V _R		Exhibit 13-8	3	
- 1	-0	3701	EXHIBIT 13 0		140	V _R			Exhibit 13-		
									10		
-low E	ntering		nfluence A		1	Flow En			e Influen		
		Actual	+	Desirable	Violation?		Ac	tual	Max Desi	rable	Violation?
V _R		2683	Exhibit 13-8	4600:All	No	V ₁₂			xhibit 13-8	(15	<u> </u>
			mination (i			†			rminatio	•	t F)
			0.0078 V ₁₂ - 0.0	00627 L _A				252 + 0.00	086 V ₁₂ - 0.	009 L _D	
	19.9 (pc/mi/	ln)					oc/mi/ln)				
.OS = E	B (Exhibit 1	3-2)				LOS = (E	Exhibit 1	3-2)			
Speed	Determ	ination				Speed L	Determ	ination			
N _S = (0.308 (Exibi	it 13-11)				$D_s = (E_s)^T$	Exhibit 13-	12)			
-	•	xhibit 13-11)				S _R = m	ph (Exhib	t 13-12)			
	-	xhibit 13-11)				$S_0 = m$	ph (Exhib	t 13-12)			
· ·		Exhibit 13-13)					iph (Exhibi	t 13-13)			

		RAMP	S AND RAIN	IP JUNCTI		JKKS	пссі			
General Inf	ormation			Site Infor						
Analyst				reeway/Dir of Tr	avel	I-10 EB				
Agency or Compa	-	nes Solutions, Ir		unction		-	Ave. Off-R	amp		
Date Performed	2/3/			urisdiction		Caltran				
analysis Time Pe		Peak Hour	A	nalysis Year		EAPC (2017)			
	n TEC Traffic In	npact Analysis								
nputs		<u> </u>								
Upstream Ad	dj Ramp	1	ber of Lanes, N	4					Downstre	am Adj
		Ramp Number	r of Lanes, N	2					Ramp	
☐Yes	On	Acceleration L	ane Length, L _A						✓ Yes	☑ On
✓ No	Off	Deceleration L	ane Length L _D	1000						
INO		Freeway Volui	me. V	5464					☐ No	Off
L _{up} =	ft	Ramp Volume		943					L _{down} =	2600 ft
ир		1	, *R -Flow Speed, S _{FF}							
V =	veh/h	1	• • • • • • • • • • • • • • • • • • • •						V _D =	819 veh
			ow Speed, S _{FR}	35.0						
Conversion	n to pc/h Un	der Base (Conditions		,					
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	-	f_{HV}	f _p	v = V/PHF	x f _{HV} x f _p
reeway	5464	0.92	Level	10	0		952	1.00		236
Ramp	943	2	0		990	1.00		035		
JpStream	743	2	0	0.1	770	1.00		033		
DownStream	819	0.92	Level	2	0	0.0	990	1.00		399
		Merge Areas	20101		<u> </u>	0.		iverge Areas		,,,
stimation		g			Estima	tion o	f V ₄₀	g		
		/D)			 				\D	
	$V_{12} = V_F$				<u> </u>			$V_R + (V_F - V_F)$		2)
EQ =		ation 13-6 or	*		L _{EQ} =			Equation 13-1		•
P _{FM} =	using	Equation (E	Exhibit 13-6)		P _{FD} =			260 using Equ	uation (Ext	nibit 13-7)
′ ₁₂ =	pc/h				V ₁₂ =		23	887 pc/h		
₃ or V _{av34}	pc/h	(Equation 13-	-14 or 13-17)		V_3 or V_{av34}		19	24 pc/h (Equ	ation 13-1	4 or 13-17
Is V_3 or $V_{av34} > 2$	2,700 pc/h? <u></u> Y∈	es 🗌 No			Is V ₃ or V _{av}	_{/34} > 2,70	00 pc/h? []Yes ☑No		
Is V ₃ or V _{av34} > 1	.5 * V ₁₂ /2	es 🗌 No			Is V ₃ or V _{av}	_{/34} > 1.5	* V ₁₂ /2	✓ Yes □ No		
Yes,V _{12a} =			-16, 13-18, or		If Yes,V _{12a}			94 pc/h (Equ	ation 13-1	6, 13-18,
	13-19)			<u> </u>		01	13-19)		
Capacity C	hecks				Capaci	ty Che	ecks			
	Actual	C	apacity	LOS F?			Actual	Ca	pacity	LOS F
					V_{F}		6236	Exhibit 13-8	9400	No
V_{FO}		Exhibit 13-8			$V_{FO} = V_{I}$	- V _R	5201	Exhibit 13-8	9400	No
. 0					V _R		1035	Exhibit 13-1	0 4000	No
Iow Entor	ing Merge li	nfluonoo A	<u> </u>		-			rge Influen		
-iow Einer	Actual		Desirable	Violation?	FIOW EI	_	<i>g Dive</i> l Actual	Max Desirab		Violation
\/	Actual	Exhibit 13-8	Desirable	VIOIALIOIT	V ₁₂			Exhibit 13-8	4400:All	
V _{R12}	maios Dotom		'f ===4 []				2387			No No
	rvice Deteri	·			Level o			terminatio	•	<i>F)</i>
• •	0.00734 v _R +	0.0078 V ₁₂ -	0.00627 L _A					.0086 V ₁₂ - 0.	009 L _D	
$P_R = (pc/m)$	i/ln)				$D_R = 5$.9 (pc/ n	ni/ln)			
OS = (Exhib	oit 13-2)				LOS = A	(Exhib	oit 13-2)			
Speed Dete	ermination				Speed	Deteri	minatio	on		
•	t 13-11)				 		xhibit 13-			
	Exhibit 13-11)				1	•	(Exhibit	•		
mnh/F	- ALIIDIL 19-11)				I K J	bii	,_,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	/		
	=				S ₀ = 4	7 0 mnh	(Eyhihit	13-12\		
$S_0 = \text{mph (E}$	Exhibit 13-11) Exhibit 13-13)				1 *	-	(Exhibit (Exhibit	•		

General Infor			RAMP JUNG	Site Infor					
Analyst				eeway/Dir of Tr		I-10 NB			
Analysi Agency or Company	Tron	nes Solutions, In		nction		Cherry Ave. On-	.Ramn		
agency of Company Date Performed	11ai 2/3/			risdiction		Caltrans	ramp		
Date Performed Analysis Time Period		16 Peak Hour		nalysis Year		Caltrans EAPC (2017)			
			AI	iaiysis reai		EAPC (2017)			
Project Description	TEC Trailic in	npact Analysis							
Inputs		Ero outou Numb	or of Lanca N					1	
Jpstream Adj Ramp		Freeway Numb		4				Downstre	am Adj
		Ramp Number	of Lanes, N	1				Ramp	
✓ Yes ☐ Or	ו	Acceleration La	ane Length, L _A	600				□Yes	On
	r	Deceleration La	ane Length L						_
□ No ☑ Of	l	Freeway Volun		4521				✓ No	Off
- _{up} = 2600	ft	1	•					L _{down} =	ft
_{-up} = 2600	IL.	Ramp Volume,	13	819				down	
V _u = 943 v	ah/h	Freeway Free-	Flow Speed, S _{FF}	65.0				V _D =	veh/h
vu 743 v	G11/11	Ramp Free-Flo	w Speed, S _{FR}	35.0				"	
Conversion t	o pc/h Un	der Base C	Conditions						
(pc/h)	V	PHF	Terrain	%Truck	%Rv	f _{HV}	f _p	v = V/PHI	F x f _{HV} x f _p
	(Veh/hr)					+	· ·		<u>'</u>
Freeway	4521	0.92	Level	10	0	0.952	1.00	 	5160
Ramp	819	0.92	Level	2	0	0.990	1.00		899
UpStream	943	0.92	Level	2	0	0.990	1.00		1035
DownStream									
		Merge Areas					Diverge Areas		
Estimation o	f v ₁₂				Estimat	ion of v ₁₂			
	V ₁₂ = V _F	- (P _{EM})						\D	
=		ıation 13-6 or	12 7)			V ₁₂ =	= V _R + (V _F - V _F	–	
-EQ =			*		L _{EQ} =		(Equation 13	-12 or 13-1	13)
P _{FM} =			on (Exhibit 13-6)		P _{FD} =		using Equation	n (Exhibit 1	3-7)
V ₁₂ =	544 p				V ₁₂ =		pc/h		
V_3 or V_{av34}		pc/h (Equation	n 13-14 or 13-		V ₃ or V _{av34}		pc/h (Equation	13-14 or 13-	17)
	17)	_				> 2.700 pc/b2	Yes No	13-14-01-13-	17)
Is V_3 or $V_{av34} > 2,70$									
Is V_3 or $V_{av34} > 1.5$	* V ₁₂ /2 ☑ Ye	es 🗌 No			Is v ₃ or v _{av3}	₃₄ > 1.5 " V ₁₂ /2	☐ Yes ☐ No	10.10.1	0.40
f Yes,V _{12a} =	2064	pc/h (Equation	n 13-16, 13-		If Yes,V _{12a} =		pc/h (Equatio 13-19)	n 13-16, 1	3-18, or
		13-19)					13-19)		
Capacity Che	ecks				Capacit	y Checks			W.
	Actual	Ca	apacity	LOS F?		Actua	I Ca	pacity	LOS F
		1 1			V_{F}		Exhibit 13-	8	
V	4050	Evhibit 12.0		Ma	$V_{FO} = V_{F}$	- V _D	Exhibit 13-	8	
V_{FO}	6059	Exhibit 13-8		No		K	Exhibit 13		+
					V_R		10	-	
Flow Entering	a Merae li	nfluence A	rea		Flow Fn	terina Div	erge Influer	ice Area)
	Actual	_)esirable	Violation?		Actual	Max Des		Violation
V _{R12}	2963	Exhibit 13-8	4600:All	No	V ₁₂	1	Exhibit 13-8	<u> </u>	1
Level of Serv				1.10	-	Sorvice D	eterminatio	n (if no	. _ 1
)
- '`		0.0078 V ₁₂ - 0.0	OUZ/LA		L	• •	0.0086 V ₁₂ - 0	.009 LD	
$O_{R} = 24.4 \text{ (pc/m)}$	ni/ln)				$D_R = (p$	c/mi/ln)			
_OS = C (Exhibit	13-2)				LOS = (E	xhibit 13-2)			
Speed Deterr	mination				Speed D	Determinat	ion		
•					 ' 	xhibit 13-12)			
	•					•)\		
-	// while!# 10 11\				$S_R = m_I$	ph (Exhibit 13-12	' .)		
9	(EXHIBIT 13-11)								
$S_R = 56.8 \text{ mph}$	(Exhibit 13-11) (Exhibit 13-11)				$S_0 = m_1$	ph (Exhibit 13-12	2)		
$S_{R} = 56.8 \text{ mph}$ $S_{0} = 61.2 \text{ mph}$					ľ	ph (Exhibit 13-12 ph (Exhibit 13-13			

		RAMP	S AND RAI	MP JUNCT	ONS WO	RKS	HEET			
General Info	ormation			Site Infor						
Analyst				Freeway/Dir of Ti		I-10 WI	3			
Agency or Compar	-	nes Solutions, I		Junction		-	Ave. Off-Ra	amp		
Date Performed	2/3/1			Jurisdiction		Caltran				
Analysis Time Peri		Peak Hour		Analysis Year		EAPC	(2017)			
Project Description Inputs	I TEC ITAILICIII	ipaci Analysis								
•	_	Freeway Num	nber of Lanes, N	4						
Upstream Adj	Ramp	Ramp Numbe		2					Downstrea Ramp	ım Adj
☐Yes	On	l '	Lane Length, L	Z						_
			- //	150					✓ Yes	✓ On
✓ No	Off		Lane Length L _D	150					☐ No	Off
1 -	ft	Freeway Volu		4343					L _{down} =	2500 ft
L _{up} =	It	Ramp Volume	11	893					-down	2000 11
V,, =	veh/h		e-Flow Speed, S _F	•					V _D =	407 veh/h
			low Speed, S _{FR}	35.0						
Conversion		<u>der Base</u>	Conditions	<u> </u>	,	-				
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv		f_{HV}	f _p	v = V/PHF	$x f_{HV} x f_{p}$
Freeway	4343	0.92	Level	10	0	0.	952	1.00	49	57
Ramp	amp 893 0.92 Level 2						990	1.00	98	
UpStream										
DownStream	407	0.92	Level	2	0	0.	990	1.00	44	17
		Merge Areas						iverge Areas		
Estimation of	of v ₁₂				Estima	tion o	of v ₁₂			
	V ₁₂ = V _F	(P _{EM})					V ₁₂ =	V _R + (V _F - V _F	P _{FD}	
- _{EQ} =	(Equa	ation 13-6 or	13-7)		L _{EQ} =		 (E	Equation 13-1	2 or 13-13)
P _{FM} =		Equation (I	•		P _{FD} =		-	260 using Equ		
/ ₁₂ =	pc/h		•		V ₁₂ =			14 pc/h	•	,
/ ₃ or V _{av34}	•	Equation 13	3-14 or 13-17)		V ₃ or V _{av34}			71 pc/h (Equ	ation 13-14	l or 13-17
Is V_3 or $V_{av34} > 2$,	-		, , , , , , , , , , , , , , , , , , , ,			> 2.7		Yes ☑No		
Is V_3 or $V_{av34} > 1.1$								Yes ☑ No		
			s-16, 13-18, or					c/h (Equation	13-16, 13-	18, or 13
f Yes,V _{12a} =	13-19		, ,		If Yes,V _{12a}		19			
Capacity Ch	ecks				Capaci	ty Ch	ecks			
	Actual	C	Capacity	LOS F?			Actual		pacity	LOS F
					V _F		4957	Exhibit 13-8	9400	No
V_{FO}		Exhibit 13-8			$V_{FO} = V_{FO}$	_F - V _R	3977	Exhibit 13-8	9400	No
					V_R		980	Exhibit 13-1	0 4000	No
Flow Enterio	ng Merge Ir	ifluence A	Area		Flow E	nterin	g Diver	ge Influen	ce Area	-
	Actual		Desirable	Violation?		_	Actual	Max Desirab		Violation'
V _{R12}		Exhibit 13-8			V ₁₂	2	2014	Exhibit 13-8	4400:All	No
Level of Ser	vice Deteri	mination (if not F)	•	Level o	f Serv	vice De	terminatio	n (if not	F)
D _R = 5.475 +	0.00734 v _R +	0.0078 V ₁₂ -	- 0.00627 L _A			D _R = 4	.252 + 0.	0086 V ₁₂ - 0.	009 L _D	
O _R = (pc/mi/	ln)				D _R = 9	.9 (pc/r	ni/ln)			
.OS = (Exhibi	t 13-2)					 (Exhik	oit 13-2)			
Speed Deter	· · · · · · · · · · · · · · · · · · ·				Speed			n		
-					+		xhibit 13-			
$M_{\rm S} = $ (Exibit	•						(Exhibit	•		
	xhibit 13-11)				1."		-	· ·		
0	xhibit 13-11)				1	-	(Exhibit	•		
	xhibit 13-13)				•		(Exhibit		_	
yright © 2014 Univ	ersity of Florida, Al	II Rights Reserve	ed		HCS2010	^{FM} Vers	ion 6.60		Generated: 2	/7/2016 3::

Generated: 2/7/2016 3:22 PM

			MPS AND	RAMP JUN			EET				
Genera	l Inform	nation			Site Infor	mation					
Analyst Agency or (Date Perfor		Tram 2/3/1	nes Solutions, Ir	nc. J	reeway/Dir of Tr unction urisdiction	ravel	I-10 W Cherry Caltrar	Ave. Loop	On-Ramp		
analysis Tir			Peak Hour		Analysis Year		EAPC				
			pact Analysis		a.yo.o . oa.		2711 0	(2017)			
nputs	'		, ,								
Jpstream A	Adj Ramp		1	per of Lanes, N	4					Downstre	eam Adj
Yes	On		Ramp Number		1					Ramp	
			1	ane Length, L _A ane Length L _D	300					✓ Yes	✓ On
☑ No	Off		Freeway Volui		3450					□No	Off
-up =	ft		Ramp Volume		407					L _{down} =	2000 ft
· / _			1	Flow Speed, S _{FF}	65.0					V _D =	475 veh/h
/ _u =	veh/h		Ramp Free-Fl	ow Speed, S _{FR}	35.0					V _D –	4/5 Ve II/II
Conver	sion to	pc/h Un	der Base (Conditions							
(pc/	'h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv		f_{HV}	f _p	v = V/PH	F x f _{HV} x f _p
Freeway		3450	0.92	Level	10	0	0.	952	1.00		3937
Ramp		407	0.92	Level	2	0	0.	990	1.00		447
UpStream		475	0.00					000	1.00		F04
DownStrea	im	475	0.92 Merge Areas	Level	2	0	0.	990	1.00 Diverge Areas		521
stima	tion of	v ₁₂	inorgo ruodo			Estimat	tion c		or or go 7 ii ous		
		V ₁₂ = V _F	(P _{FM})					V =	V _R + (V _F - V _R	/P	
-EQ =		(Equ	ation 13-6 or	13-7)		=			VR · (VF · VR (Equation 13-		13)
_{FM} =		0.162	using Equat	on (Exhibit 13-6	5)	L _{EQ} = P =			using Equation		-
′ ₁₂ =		637 p	c/h			P _{FD} = V ₁₂ =			pc/h	M (EXHIBIT	13-7)
or V _{av34}			pc/h (Equatio	on 13-14 or 13	-	V ₁₂ – V ₃ or V _{av34}			pc/h (Equation 1	13-14 or 13-	17)
	> 2.700	17) pc/h?	- A N-				> 2.7		Yes No	10 11 01 10	.,,
		V ₁₂ /2 ☑ Ye							⊒Yes □No		
Yes,V _{12a}		1574		on 13-16, 13-		If Yes,V _{12a} =			pc/h (Equatio 3-19)	n 13-16,	13-18, or
Canaci	tv Ched		13-19)			Capacit	tv Ch	ecks			
лараси	1, 0,,,,,	Actual	С	apacity	LOS F?		. , 	Actual	Ca	pacity	LOS F?
				-1		V _F			Exhibit 13-		
V_{F}		4384	Exhibit 13-8		No	$V_{FO} = V_{F}$	- V _R		Exhibit 13-	8	
- F		1001	EXHIBIT TO 0		110	V _R			Exhibit 13	-	
		Mayara In	fluores A				-4	na Diva	10		
-IOW EI	ntering	Actual	fluence A	rea Desirable	Violation?	FIOW EI	$\overline{}$	Actual	rge Influer Max Des		Violation?
V _{R1}	12	2021	Exhibit 13-8	4600:All	No	V ₁₂	+-	Actual	Exhibit 13-8	ITable	Violation:
		ce Deterr	nination (i	f not F)			f Ser	vice De	terminatio	n (if no	t F)
			0.0078 V ₁₂ - 0.0			+			.0086 V ₁₂ - 0	•	
	9.2 (pc/mi/		_				oc/mi/l		· -	_	
	3 (Exhibit 1	3-2)				1	Exhibit	13-2)			
Speed	Determ	ination				Speed I	Deter	minatio	on		
Λ _S = 0	.329 (Exibi	t 13-11)				$D_s = (E_s)^T$	Exhibit 1	3-12)			
_	-	Exhibit 13-11)				S _R = m	nph (Ext	nibit 13-12)			
		Exhibit 13-11)				$S_0 = m$	nph (Ext	nibit 13-12)			
	0.1 mph (E	Exhibit 13-13)				S = m	nph (Exh	nibit 13-13)			
yright © 20	14 Universit	y of Florida, All	Rights Reserved			HCS2010	TM Ver	sion 6.60		Generate	d: 2/7/2016 3:

Generated: 2/7/2016 3:22 PM

			MPS AND	RAMP JUN			EET				
Genera	I Inforn	nation			Site Infor	mation					
Analyst Agency or C Date Perfor Analysis Tin	med	2/3/	mes Solutions, Ir 16 Peak Hour	ıc. J	reeway/Dir of Tr lunction lurisdiction Analysis Year	avel	I-10 WI Cherry Caltran EAPC	Ave. Slip (s	On-Ramp		
			npact Analysis	<i>F</i>	anaiysis reai		EAPC	(2017)			
nputs	cription i	TEO Traine ii	iipact / iiiaiy3i3								
	di Domon		Freeway Num	per of Lanes, N	4					Daywaataa	A di
Jpstream A	ш капр		Ramp Number		1					Downstre Ramp	eam Auj
✓ Yes	✓ On		1 '	ane Length, L _₄	1000					Yes	On
□ N	□ o#		Deceleration L	- 7							
□ No	☐ Off		Freeway Volur		3857					✓ No	Off
up =	2000 ft		Ramp Volume		475					L _{down} =	ft
			1	Flow Speed, S _{FF}						, _	
_u =	893 vel	n/h	Ramp Free-Flo		35.0					V _D =	veh/h
Conver	sion to	nc/h Hn		Conditions							
		γ ρυ/ 			0/7	015			£		F., f., ., f
(pc/l	h)	(Veh/hr)	PHF	Terrain	%Truck	%Rv		f _{HV}	f _p	V = V/PH	F x f _{HV} x f _p
Freeway		3857	0.92	Level	10	0	0.	952	1.00		4402
Ramp		475	0.92	Level	2	0	$\overline{}$	990	1.00		521
JpStream		893	0.92	Level	2	0	0.	990	1.00		980
DownStrea	m		Merge Areas						Diverge Areas		
Stimat	tion of	V	Weige Aleas			Estimat	tion o		Diverge Areas		
			(D)			20077740		1 12			
		V ₁₂ = V ₁		40.7)				$V_{12} = {}^{1}$	$V_R + (V_F - V_R)$	P _{FD}	
EQ =			uation 13-6 or	· ·		L _{EQ} =		((Equation 13-	12 or 13-	13)
) _{FM} =				on (Exhibit 13-6	b)	P _{FD} =			using Equatio	n (Exhibit 1	13-7)
12 =		672		40 44 40		V ₁₂ =		1	pc/h		
$^{\prime}_{3}$ or V_{av34}		1865	pc/n (Equation	on 13-14 or 13	j-	V_3 or V_{av34}			pc/h (Equation 1	3-14 or 13-	17)
s V ₃ or V _{av}	,34 > 2,700	pc/h? TY	es 🗹 No			Is V ₃ or V _{av}	_{/34} > 2,7	00 pc/h? [□Yes □No		
		V ₁₂ /2 ▼ Y€				Is V ₃ or V _{av}	_{/34} > 1.5		☐Yes ☐No		
Yes,V _{12a} :		1760	pc/h (Equatio 13-19)	on 13-16, 13-		If Yes,V _{12a} :	=		pc/h (Equatio 3-19)	n 13-16, ′	13-18, or
Capacit	ty Chec					Capacit	ty Ch	ecks			
		Actual	С	apacity	LOS F?			Actual	Ca	pacity	LOS F?
						V _F			Exhibit 13-	8	
V _F		4923	Exhibit 13-8		No	$V_{FO} = V_{F}$	- V _R		Exhibit 13-	8	
F,						V _R			Exhibit 13	-	
			<u></u>						10		
low Er	<u>ntering</u>		nfluence A		\"\\"\\"\\\"\\\"\\\"\\\\\\\\\\\\\\\\\\	Flow Er			rge Influer		
1/	- 	Actual 2281	Exhibit 13-8	Desirable 4600:All	Violation?	V ₁₂	+-'	Actual	Max Des Exhibit 13-8	i abie	Violation?
V _{R1}					INU		f Com	ioo D-		n (if ===	<u> </u> 4
			mination (i			+			terminatio	•	(r)
			0.0078 V ₁₂ - 0.0	10021 L _A					.0086 V ₁₂ - 0	.009 L _D	
	6.8 (pc/mi/	•				I	pc/mi/lı	-			
	Exhibit 1					`	Exhibit				
speed I	Determ	ination				Speed I			on		
$M_{\rm S} = 0$.289 (Exibi	t 13-11)				L	Exhibit 1				
$S_R = 5$	8.3 mph (E	Exhibit 13-11)				1 ''	•	ibit 13-12)			
0		Exhibit 13-11)				$S_0 = m$	nph (Exh	ibit 13-12)			
S = 6	0.3 mph (E	xhibit 13-13)				S = m	nph (Exh	ibit 13-13)			
vright @ 201	14 Universit	v of Florida A	II Rights Reserved			HCS2010	TM Vor			Generate	d: 2/7/2016 3:

		RAMP	S AND RAM	IP JUNCTI	ONS WO	ORKS	HEET			
General Info	rmation			Site Infor			- -			
Analyst Agency or Compan	y Tram	es Solutions, I	nc. Ji	reeway/Dir of Tr unction	avel	-	Ave. Off-R	amp		
Date Performed Analysis Time Peric	2/3/1 DM D	6 Peak Hour		urisdiction .nalysis Year		Caltrar EAPC				
Project Description			A	ilialysis i cai		EAPC	(2017)			
Inputs	TEO TIUMO IIII	pact / trialy 313								
_	Domn	Freeway Num	ber of Lanes, N	4					Downstre	om Adi
Upstream Adj I	Kallip	Ramp Numbe	er of Lanes, N	2					Ramp	ani Auj
☐Yes [On	1 '	_ane Length, L _Δ						✓ Yes	☑ On
☑ No [Off	Deceleration I	Lane Length L _D	1000						
	0	Freeway Volu	me, V _F	3685					∏ No	Off
L _{up} =	ft	Ramp Volume	e, V _R	985					L _{down} =	2600 ft
V,, = \	veh/h	1	-Flow Speed, S _{FF}	65.0					V _D =	1050 veh/
vu '	VOII/II	Ramp Free-Fl	low Speed, S _{FR}	35.0						
Conversion	to pc/h Und	der Base	Conditions							
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv		f_{HV}	f_p	v = V/PH	F x f _{HV} x f _p
Freeway	3685	0.92	Level	10	0	0.	952	1.00	4	206
Ramp	985	0.92	Level	2	0	0.	990	1.00	1	081
UpStream	4050	0.00					000	4.00	1	150
DownStream	1050	0.92 Merge Areas	Level	2	0	0.	990	1.00 Diverge Areas	Ī	153
Estimation o		weige Aleas			Estima	tion c	of V	nverge Areas		
	V ₁₂ = V _F	(D)						· V _R + (V _F - V	/ \D	
l –	12 1	tion 13-6 or	12 7)		-			· v _R · (v _F - v Equation 13-	–	3)
L _{EQ} = P _		Equation (I	•		L _{EQ} = P _{FD} =		-	260 using Ed		-
P _{FM} = V ₁₂ =	pc/h	Equation (i	LATIIDIC 13-0)		V ₁₂ =			200 using E0 893 pc/h	quation (Lx	11011 13-7)
V ₃ or V _{av34}	•	Fauation 13	-14 or 13-17)		V ₃ or V _{av34}			56 pc/h (Eq	uation 13 ₋ 4	I4 or 13 ₋ 17)
Is V_3 or $V_{av34} > 2.7$			110110111					∃Yes ☑No		14 01 10 17)
Is V ₃ or V _{av34} > 1.5]Yes ☑No		
If Yes,V _{12a} =	pc/h (Equation 13	-16, 13-18, or		If Yes,V _{12a}		p	c/h (Equatio		3-18, or 13-
Capacity Ch	13-19)				Capacia		ocks	9)		
	Actual	1 0	Capacity	LOS F?	l	ty On	Actual	C	apacity	LOS F?
			- [· · · · · ·]		V _F		4206	Exhibit 13		No
V_{FO}		Exhibit 13-8			V _{FO} = V		3125	Exhibit 13	-8 9400	No
					V _R		1081	Exhibit 13-	10 4000	No
Flow Enterin	a Merae In	fluence A	\rea		Flow E	nterir	a Dive	rge Influei	nce Area)
	Actual	r	Desirable	Violation?			Actual	Max Desira		Violation?
V _{R12}		Exhibit 13-8			V ₁₂		1893	Exhibit 13-8	4400:All	No
Level of Serv	vice Detern	nination (if not F)		Level o	f Ser	vice De	terminatio	on (if not	: F)
$D_R = 5.475 + 0$	0.00734 v _R +	0.0078 V ₁₂ -	- 0.00627 L _A			$D_R = 4$	1.252 + 0	.0086 V ₁₂ - 0	0.009 L _D	
D _R = (pc/mi/lı	n)				$D_R = 0$).7 (pc/ i	mi/ln)			
LOS = (Exhibit	13-2)				LOS = A	(Exhil	oit 13-2)			
Speed Deter	mination				Speed	Deter	minatio	on		
M _S = (Exibit 1	13-11)				$D_S = 0$.525 (E	xhibit 13-	·12)		
	hibit 13-11)				$S_R = 5$	2.9 mph	(Exhibit	13-12)		
	hibit 13-11)				$S_0 = 7$	0.7 mph	(Exhibit	13-12)		
	hibit 13-13)						(Exhibit	13-13)		
pyright © 2014 Unive	rsity of Florida, All	Rights Reserve	ed		HCS2010	TM Vers	ion 6.60		Generated:	2/7/2016 3:23

			MPS AND	RAMP JUI	NCTIONS W		EET			
Genera	l Inforn	nation			Site Infor	mation				
Analyst Agency or O Date Perfor	med	2/3/		C.	Freeway/Dir of Tr Junction Jurisdiction	avel	I-10 NB Cherry Ave. (Caltrans	·		
Analysis Tir			Peak Hour npact Analysis	-	Analysis Year		EAPC (2017)			
nputs	сприон і	EC Hallic III	ipaci Alialysis							
			Freeway Num	per of Lanes, N	4				L .	
Jpstream A	ај катр		Ramp Number		1				Ramp	ream Adj
✓ Yes	\square On		1 '	ane Length, L	600				<u> </u>	
	- or		Deceleration L	- 7	000				Yes	∐On
□No	✓ Off		Freeway Volum		2700				✓ No	Off
up =	2600 ft		Ramp Volume		1050				L _{down} =	ft
ир			1	Flow Speed, S _E						
/ _u =	985 ve ł	n/h	Ramp Free-Flo		F 05.0				$V_D =$	veh/h
Convor	sion to	nc/h Hn		Conditions						
		<i>γ</i>				l	Τ,			·
(pc/	h)	(Veh/hr)	PHF	Terrain	%Truck	%Rv	f _{HV}	f _p	v = V/PI	HF x f _{HV} x f _p
Freeway		2700	0.92	Level	10	0	0.952	1.00		3082
Ramp		1050	0.92	Level	2	0	0.990	1.00		1153
UpStream		985	0.92	Level	2	0	0.990	1.00		1081
DownStrea	im		Merge Areas					Diverge Areas		
Stima	tion of		weige Aleas			Estimat	ion of v ₁		•	
			(D)				1011 01 1 1	2		
		V ₁₂ = V _F		40.7\			V ₁	$_{2} = V_{R} + (V_{F} - V_{F})$	$/_{R})P_{FD}$	
EQ =			ation 13-6 or	•	()	L _{EQ} =		(Equation 1	3-12 or 13	-13)
) _{FM} =				on (Exhibit 13-	6)	P _{FD} =		using Equa	tion (Exhibit	13-7)
12 =		227 p		on 13-14 or 13	2	V ₁₂ =		pc/h		
$^{\prime}_{3}$ or V_{av34}		17)	pc/ii (Equalic	JII 13-14 OF 13)-	V_3 or V_{av34}		pc/h (Equation		3-17)
s V ₃ or V _{av}	_{v34} > 2,700	pc/h? ☐ Ye	es 🗹 No					h? ☐ Yes ☐ N		
s V ₃ or V _{av}	_{v34} > 1.5 * \	/ ₁₂ /2 ☑ Ye	es 🗌 No			Is V ₃ or V _{av}	$_{34} > 1.5 * V_{12}$	2 Yes N		
Yes,V _{12a}		1232	pc/h (Equation	on 13-16, 13-		If Yes,V _{12a} =	=	pc/h (Equat 13-19)	ion 13-16,	13-18, or
			13-19)			0	01 - 1			
Japacn	ty Chec		1 0	an a altr	100.53	Capacit	y Checks		Conneitu	LOS F?
		Actual	l i	apacity	LOS F?	V _F	AC	tual (Exhibit 1	Capacity	LUSF?
							\/		_	_
V _F	0	4235	Exhibit 13-8		No	$V_{FO} = V_{F}$	- v _R	Exhibit 1		
						V _R		10	13-	
low Er	ntering	Merge II	nfluence A	rea		Flow Er	tering D	iverge Influe	ence Are	<u></u>
		Actual	Max I	Desirable	Violation?		Actual		esirable	Violation?
V_{R1}	12	2385	Exhibit 13-8	4600:All	No	V ₁₂		Exhibit 13-8	3	
.evel o	f Servic	e Deteri	mination (i	f not F)		Level or	f Service	Determinat	ion (if no	ot F)
D _R =	= 5.475 + 0	.00734 v _R +	0.0078 V ₁₂ - 0.0	0627 L _A			$D_{R} = 4.252$	+ 0.0086 V ₁₂ -	0.009 L _D	
) _R = 1	9.8 (pc/mi/l	n)				$D_R = (p)$	oc/mi/ln)			
.OS = B	3 (Exhibit 13	3-2)				LOS = (E	Exhibit 13-2)		
Speed I	Determ	ination				Speed L	Determina	ation		
$M_{\rm S} = 0$.321 (Exibi	t 13-11)				D _s = (E	Exhibit 13-12)			
5	-	xhibit 13-11)					ph (Exhibit 13	-12)		
		xhibit 13-11)				1 ''	ph (Exhibit 13			
0		xhibit 13-13)				ľ	ph (Exhibit 13			
		,						•		

Generated: 2/7/2016 3:23 PM