

## **Appendix G      Traffic Analysis**

## Appendices

*This page intentionally left blank.*



---

# Chaffey Community College District's Rancho Cucamonga Campus Master Plan

## TRAFFIC ANALYSIS

### CITY OF RANCHO CUCAMONGA

PREPARED BY:

Aric Evatt, PTP  
aevatt@urbanxroads.com

Charlene So, PE  
cso@urbanxroads.com

Connor Paquin, PE  
cpaquin@urbanxroads.com

SEPTEMBER 10, 2021



---

13149-23 TA Report REV





## TABLE OF CONTENTS

<b>TABLE OF CONTENTS</b> .....	<b>III</b>
<b>APPENDICES</b> .....	<b>V</b>
<b>LIST OF EXHIBITS</b> .....	<b>VII</b>
<b>LIST OF TABLES</b> .....	<b>VII</b>
<b>LIST OF ABBREVIATED TERMS</b> .....	<b>IX</b>
<b>1 INTRODUCTION</b> .....	<b>1</b>
1.1 Summary of Findings.....	1
1.2 Project Overview.....	1
1.3 Analysis Scenarios .....	5
1.4 Study Area.....	6
1.5 Deficiencies .....	8
1.6 On-Site and Site Access Improvements .....	9
1.7 Queuing Analysis.....	9
1.8 Off-Site Improvements.....	11
<b>2 METHODOLOGIES</b> .....	<b>13</b>
2.1 Level of Service .....	13
2.2 Intersection Capacity Analysis .....	13
2.3 Traffic Signal Warrant Analysis Methodology.....	15
2.4 Minimum Acceptable Levels of Service (LOS).....	16
2.5 Intersection Deficiency Criteria.....	16
2.6 Vehicles Miles Traveled (VMT).....	17
<b>3 AREA CONDITIONS</b> .....	<b>19</b>
3.1 Existing Circulation Network.....	19
3.2 City of Rancho Cucamonga General Plan Circulation Element .....	19
3.3 Bicycle & Pedestrian Facilities.....	19
3.4 Transit Service .....	23
3.5 Existing Traffic Counts.....	23
3.6 Intersection Operations Analysis .....	31
3.7 Traffic Signal Warrants Analysis.....	31
<b>4 PROJECTED FUTURE TRAFFIC</b> .....	<b>33</b>
4.1 Trip Generation .....	33
4.2 Project Trip Distribution.....	34
4.3 Modal Split .....	34
4.4 Project Trip Assignment .....	34
4.5 Traffic Forecasts .....	34
4.6 Horizon Year (2051) Conditions .....	38
<b>5 EXISTING PLUS PROJECT TRAFFIC ANALYSIS</b> .....	<b>41</b>
5.1 E+P Volume Forecasts.....	41
5.2 Intersection Operations Analysis .....	41
5.3 Traffic Signal Warrants Analysis.....	43
5.4 Deficiencies and Improvements .....	43
<b>6 HORIZON YEAR (2051) TRAFFIC ANALYSIS</b> .....	<b>45</b>
6.1 Roadway Improvements .....	45

6.2 Horizon Year (2051) Without Project Volume Forecasts ..... 45

6.3 Horizon Year (2051) With Project Volume Forecasts ..... 45

6.4 Intersection Operations Analysis ..... 48

6.5 Traffic Signal Warrants Analysis..... 49

6.6 Deficiencies and Improvements ..... 49

**7 LOCAL AND REGIONAL FUNDING MECHANISMS ..... 51**

7.1 Measure “I” ..... 51

7.2 City of Rancho Cucamonga Development Impact Fee (DIF) ..... 51

**8 REFERENCES..... 53**

## **APPENDICES**

- APPENDIX 1.1: APPROVED SCOPING AGREEMENT**
- APPENDIX 1.2: SITE ADJACENT QUEUING WORKSHEETS**
- APPENDIX 3.1: EXISTING TRAFFIC COUNTS**
- APPENDIX 3.2: EXISTING (2021) CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS**
- APPENDIX 3.3: EXISTING (2021) CONDITIONS TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS**
- APPENDIX 4.1: POST PROCESSING WORKSHEETS**
- APPENDIX 5.1: E+P CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS**
- APPENDIX 5.2: E+P CONDITIONS TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS**
- APPENDIX 5.3: E+P INTERSECTION OPERATIONS ANALYSIS WORKSHEETS WITH IMPROVEMENTS**
- APPENDIX 6.1: HORIZON YEAR (2051) WITHOUT PROJECT CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS**
- APPENDIX 6.2: HORIZON YEAR (2051) WITH PROJECT CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS**
- APPENDIX 6.3: HORIZON YEAR (2051) WITHOUT PROJECT CONDITIONS TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS**
- APPENDIX 6.4: HORIZON YEAR (2051) WITH PROJECT CONDITIONS TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS**
- APPENDIX 6.5: HORIZON YEAR (2051) WITH PROJECT CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS WITH IMPROVEMENTS**

This Page Intentionally Left Blank

**LIST OF EXHIBITS**

**EXHIBIT 1-1: LOCATION MAP..... 2**  
**EXHIBIT 1-2: AREAS TO BE DEMOLISHED ..... 3**  
**EXHIBIT 1-3: PROPOSED NEW BUILDINGS..... 4**  
**EXHIBIT 1-4: LOCATION MAP..... 7**  
**EXHIBIT 1-5: SITE ADJACENT ROADWAY AND SITE-ACCESS RECOMMENDATIONS..... 10**  
**EXHIBIT 3-1: EXISTING NUMBER OF THROUGH LANES AND INTERSECTION CONTROLS ..... 20**  
**EXHIBIT 3-2: CITY OF RANCHO CUCAMONGA GENERAL PLAN CIRCULATION ELEMENT ..... 21**  
**EXHIBIT 3-3: CITY OF RANCHO CUCAMONGA GENERAL PLAN ROADWAY CROSS-SECTIONS..... 22**  
**EXHIBIT 3-4: CITY OF RANCHO CUCAMONGA BIKE ROUTES ..... 23**  
**EXHIBIT 3-5: CITY OF RANCHO CUCAMONGA EXISTING TRAILS..... 23**  
**EXHIBIT 3-6: EXISTING PEDESTRIAN FACILITIES..... 23**  
**EXHIBIT 3-7: EXISTING TRANSIT ROUTES ..... 24**  
**EXHIBIT 3-8: EXISTING (2021) TRAFFIC VOLUMES (IN ACTUAL VEHICLES)..... 30**  
**EXHIBIT 4-1: PROJECT TRIP DISTRIBUTION..... 35**  
**EXHIBIT 4-2: PROJECT ONLY TRAFFIC VOLUMES (IN ACTUAL VEHICLES) ..... 37**  
**EXHIBIT 5-1: E+P TRAFFIC VOLUMES (IN ACTUAL VEHICLES) ..... 42**  
**EXHIBIT 6-1: HORIZON YEAR (2051) WITHOUT PROJECT TRAFFIC VOLUMES (IN ACTUAL VEHICLES).... 46**  
**EXHIBIT 6-2: HORIZON YEAR (2051) WITH PROJECT TRAFFIC VOLUMES (IN ACTUAL VEHICLES)..... 47**

**LIST OF TABLES**

**TABLE 1-1: INTERSECTION ANALYSIS LOCATIONS ..... 6**  
**TABLE 1-2: SUMMARY OF DEFICIENT INTERSECTIONS BY ANALYSIS SCENARIO ..... 8**  
**TABLE 1-3: SUMMARY OF IMPROVEMENTS BY ANALYSIS SCENARIO ..... 11**  
**TABLE 2-1: SIGNALIZED INTERSECTION LOS THRESHOLDS..... 14**  
**TABLE 2-2: UNSIGNALIZED INTERSECTION LOS THRESHOLDS ..... 15**  
**TABLE 2-3: TRAFFIC SIGNAL WARRANT ANALYSIS LOCATIONS..... 15**  
**TABLE 3-1: EXISTING TRIP GENERATION ..... 29**  
**TABLE 3-2: INTERSECTION ANALYSIS FOR EXISTING (2021) CONDITIONS ..... 31**  
**TABLE 4-1: PROJECT TRIP GENERATION SUMMARY ..... 33**  
**TABLE 5-1: INTERSECTION ANALYSIS FOR E+P CONDITIONS..... 41**  
**TABLE 5-2: INTERSECTION ANALYSIS FOR E+P CONDITIONS WITH IMPROVEMENTS ..... 43**  
**TABLE 6-1: INTERSECTION ANALYSIS FOR HORIZON YEAR (2051) CONDITIONS..... 48**  
**TABLE 6-2: INTERSECTION ANALYSIS FOR HORIZON YEAR (2051) CONDITIONS WITH IMPROVEMENTS ..... 49**

This Page Intentionally Left Blank

## **LIST OF ABBREVIATED TERMS**

(1)	Reference
ADT	Average Daily Traffic
CA MUTCD	California Manual on Uniform Traffic Control Devices
Caltrans	California Department of Transportation
CEQA	California Environmental Quality Act
CMP	Congestion Management Program
DIF	Development Impact Fee
E+P	Existing Plus Project
HCM	Highway Capacity Manual
ITE	Institute of Transportation Engineers
LOS	Level of Service
PCE	Passenger Car Equivalent
PHF	Peak Hour Factor
Project	Chaffey Community College District's Rancho Cucamonga
Campus Master Plan	
RTP	Regional Transportation Plan
SBCTA	San Bernardino County Transportation Authority
SBTAM	San Bernardino Transportation Analysis Model
SCAG	Southern California Association of Governments
SCS	Sustainable Communities Strategy
SHS	State Highway System
TA	Traffic Analysis
vphgpl	Vehicles Per Hour Green Per Lane

This Page Intentionally Left Blank



# 1 INTRODUCTION

This report presents the results of the traffic analysis (TA) for the proposed Chaffey Community College District's Rancho Cucamonga Campus Master Plan development (referred to as "Project") located on the southeast corner of Haven Avenue and Wilson Avenue in the City of Rancho Cucamonga, as shown on Exhibit 1-1.

The purpose of this TA is to evaluate the potential circulation system deficiencies that may result from the development of the proposed Project, and to recommend improvements to achieve acceptable circulation system operational conditions. This traffic study has been prepared in accordance with the San Bernardino County Congestion Management Program (CMP) Guidelines for CMP Traffic Impact Analysis Reports (Appendix B, 2016 Update), and the City of Rancho Cucamonga Traffic Impact Analysis Guidelines (June 2020). (1) (2) (3) The City of Rancho Cucamonga was consulted during the TA scoping process, which is provided in Appendix 1.1 of this TA.

## 1.1 SUMMARY OF FINDINGS

The Project is to construct the following improvements as Project design features in conjunction with development of the site:

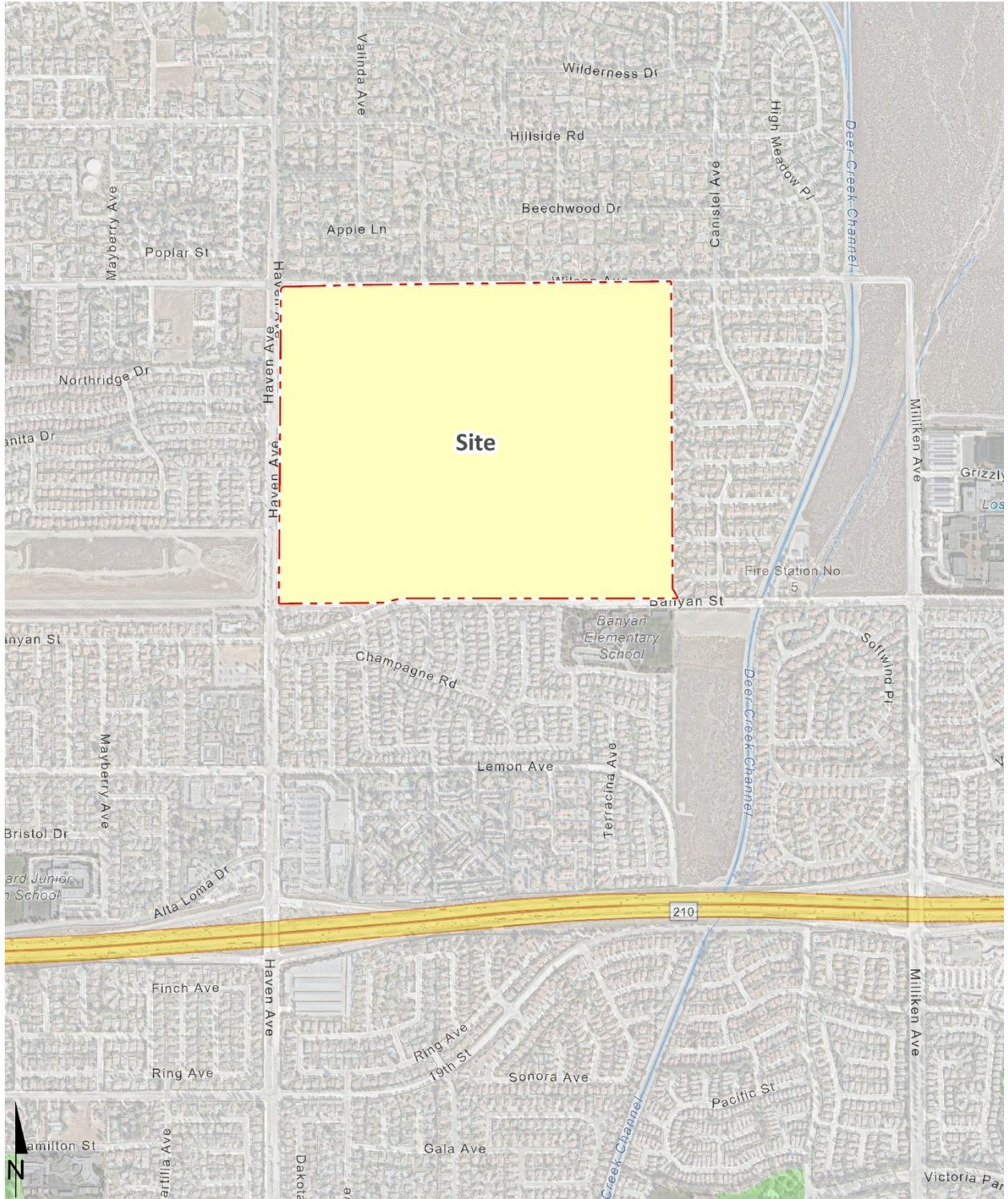
- Project access points are adequate to accommodate the anticipated increase of 930 students with no changes to the existing access points.

Additional details and intersection lane geometrics are provided in Section 1.6 *On-Site and Site Access Improvements* of this report. The Project Applicant's responsibility for the Project's contribution towards off-site intersection deficiencies under Horizon Year conditions is fulfilled through payment of fair share that would be assigned to construction of the identified improvements. The Project Applicant would be required to pay requisite fair share contributions consistent with the City's requirements (see Section 7 *Local and Regional Funding Mechanisms*).

## 1.2 PROJECT OVERVIEW

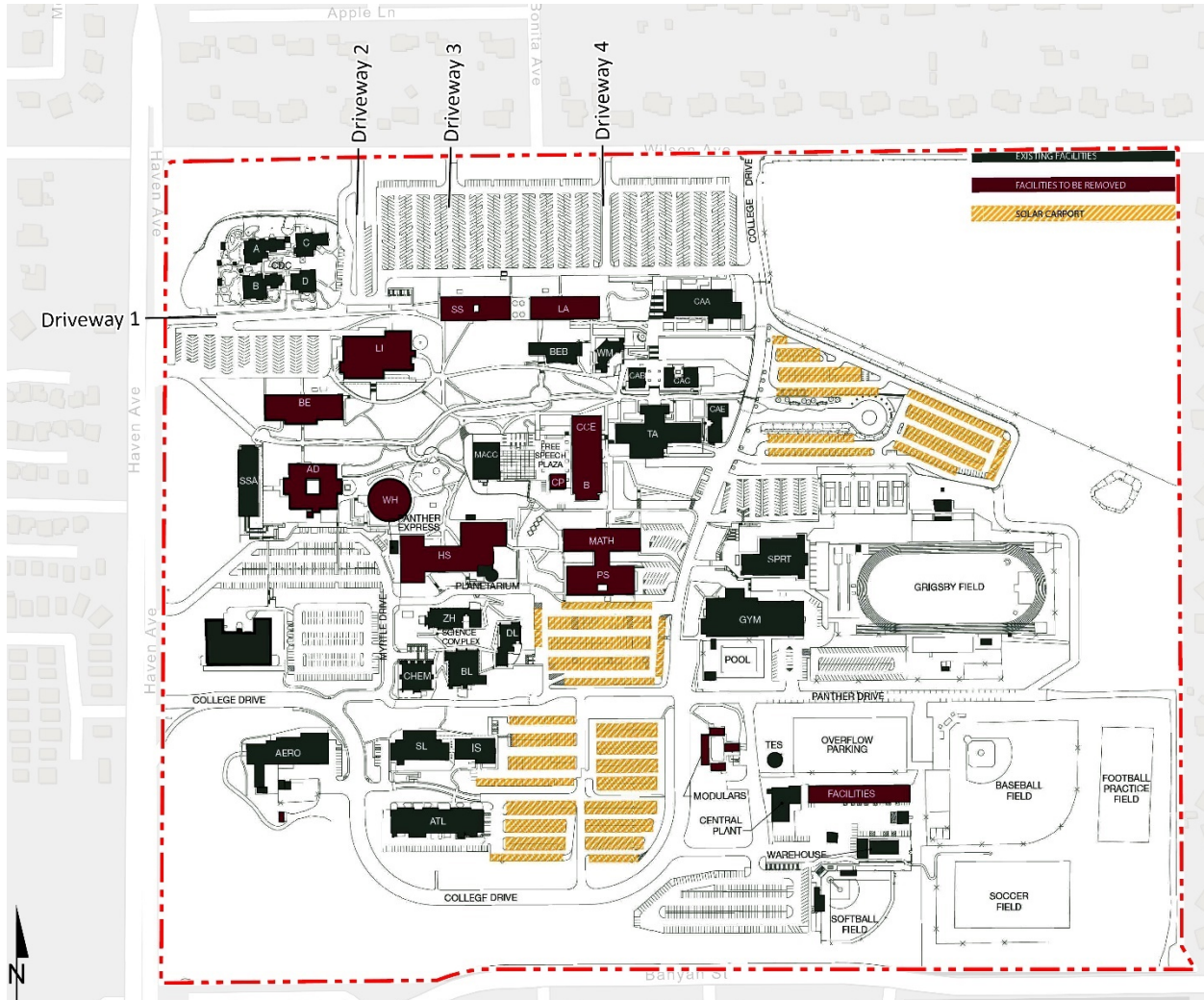
As shown on Exhibit 1-2, the proposed Project will include the demolition of approximately 127,000 square feet within 16 buildings (to be demolished and replaced with new modern buildings). As shown on Exhibit 1-3, 9 new buildings totaling 673,000 square feet of new construction is proposed in conjunction with renovation of 187,000 square feet. Vehicular access will be maintained via existing driveways on Haven Avenue and Wilson Avenue. The proposed Project will be developed in 5 phases over 30 years. The pre-pandemic student headcount at the Chaffey College Rancho Cucamonga Campus was 16,474 students actively enrolled in Fall 2019. By 2051, the student count is anticipated to increase by approximately 5.65% resulting in a headcount of 17,404 students (an increase of 930 students). Regional access to the Project site is available from the I-210 Freeway at the Haven Avenue interchange.

**EXHIBIT 1-1: LOCATION MAP**

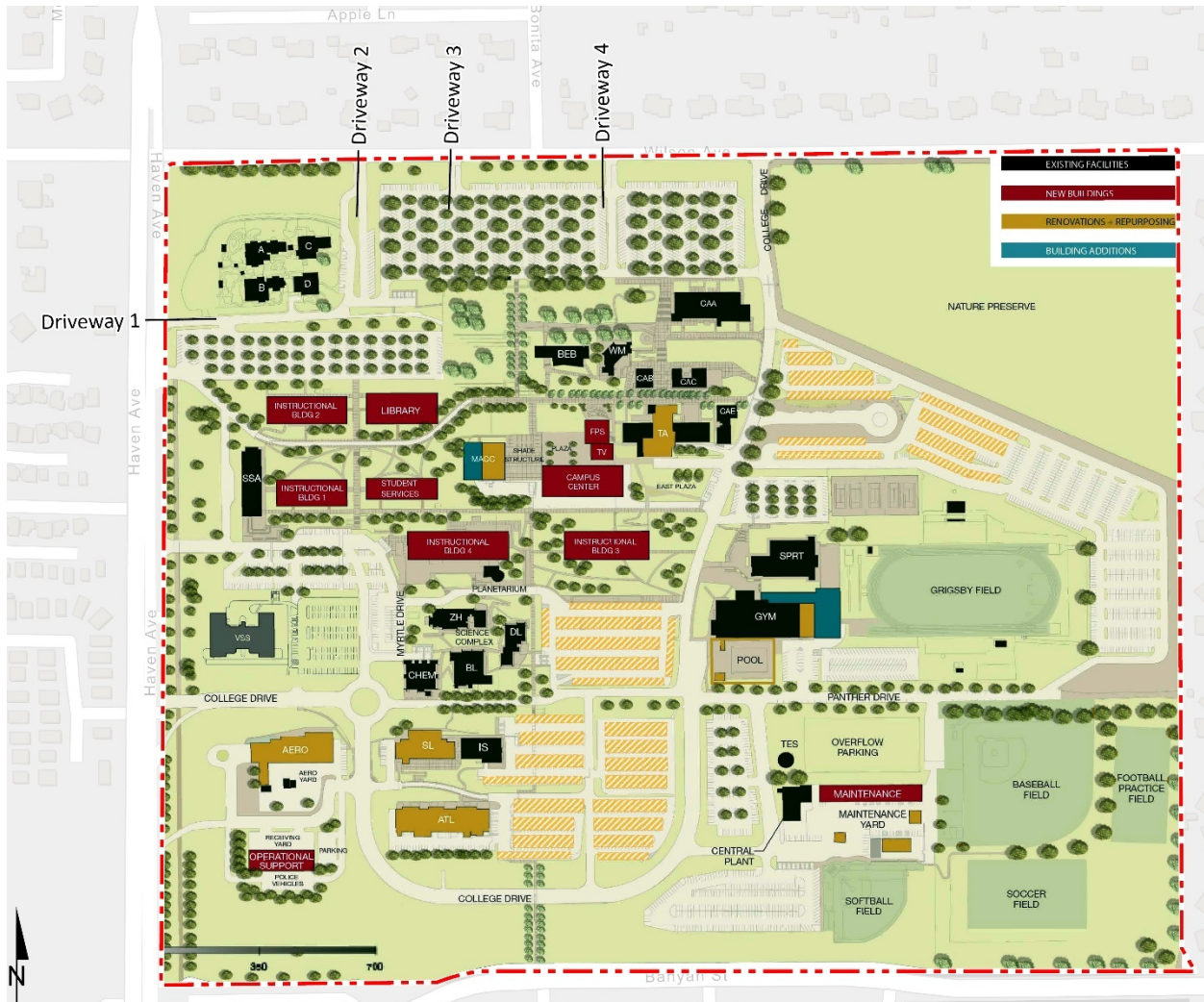




**EXHIBIT 1-2: AREAS TO BE DEMOLISHED**



**EXHIBIT 1-3: PROPOSED NEW BUILDINGS**



As part of the Project Olive Way will be relocated slightly to the north and reconfigured, however, this should not affect the analysis as it has been evaluated as a right-in/right-out driveway. There is also a new driveway proposed to serve the Operational Support Building south of College Drive. This driveway will be the main truck access for the receiving yard, and the Operational Support will be replacing the warehouse and maintenance building. The trips associated with this driveway are anticipated to be nominal and is not anticipated to have any operational issues as it would be restricted to right-in/right-out access only (nominal conflict). As such, the traffic associated with this driveway has been allocated to College Drive for the purposes of this traffic study in an effort to conduct a conservative analysis.

Trips generated by the Project's proposed land uses have been estimated based on trip generation rates published by the Institute of Transportation Engineers (ITE) as provided in their Trip Generation Manual, 10<sup>th</sup> Edition, 2017. (4) The Project is estimated to generate 1,070 two-way vehicle trips per day on a typical weekday, with 102 AM peak hour trips and 102 PM peak hour trips. The assumptions and methods used to estimate the Project's trip generation characteristics are discussed in greater detail in Section 4.1 *Project Trip Generation* of this report.

### 1.3 ANALYSIS SCENARIOS

For the purposes of this traffic study, potential deficiencies to traffic and circulation have been assessed for each of the following conditions:

- Existing (2021)
- Existing plus Project
- Horizon Year (2051) Without Project
- Horizon Year (2051) With Project

#### 1.3.1 EXISTING (2021) CONDITIONS

Existing (2021) conditions represent the baseline traffic conditions as they existed at the time this report was prepared. It should be noted that historic traffic count data in conjunction with current count data has been utilized to establish the baseline condition due to the currently ongoing COVID-19 pandemic. Additional details on adjustments to the Existing conditions baseline are discussed in Section 3.5 *Existing Traffic Counts* of this report.

#### 1.3.2 EXISTING PLUS PROJECT CONDITIONS

The Existing plus Project (E+P) conditions analysis determines the potential project-related circulation system deficiencies based on a comparison of Existing and E+P traffic conditions. Project-related circulation deficiencies are identified if the addition of Project traffic results in a new deficiency as compared to Existing conditions. E+P traffic conditions does not include any other background traffic growth or cumulative development projects.

**1.3.3 HORIZON YEAR (2051) CONDITIONS**

Traffic projections for Horizon Year (2051) with Project conditions were derived from the San Bernardino Transportation Analysis Model (SBTAM) plus additional growth to Year 2051. The Horizon Year (2051) conditions analysis will be utilized to determine if improvements funded through regional transportation mitigation fee programs, such as the City's Development Impact Fee (DIF) program or other approved funding mechanisms, can accommodate the long-range cumulative traffic at the target level of service (LOS) identified by the City of Rancho Cucamonga (lead agency). If the planned and funded improvements can provide the target LOS, then the Project's payment into established fee programs will be considered as cumulative improvements. Other improvements needed beyond the "funded" improvements (such as localized improvements to non-DIF facilities) are identified as such.

**1.4 STUDY AREA**

To ensure that this TA satisfies the City of Rancho Cucamonga's requirements, Urban Crossroads, Inc. prepared a project TA scoping package for review by City staff prior to the preparation of this report. The Agreement provides an outline of the Project study area, trip generation, trip distribution, and analysis methodology.

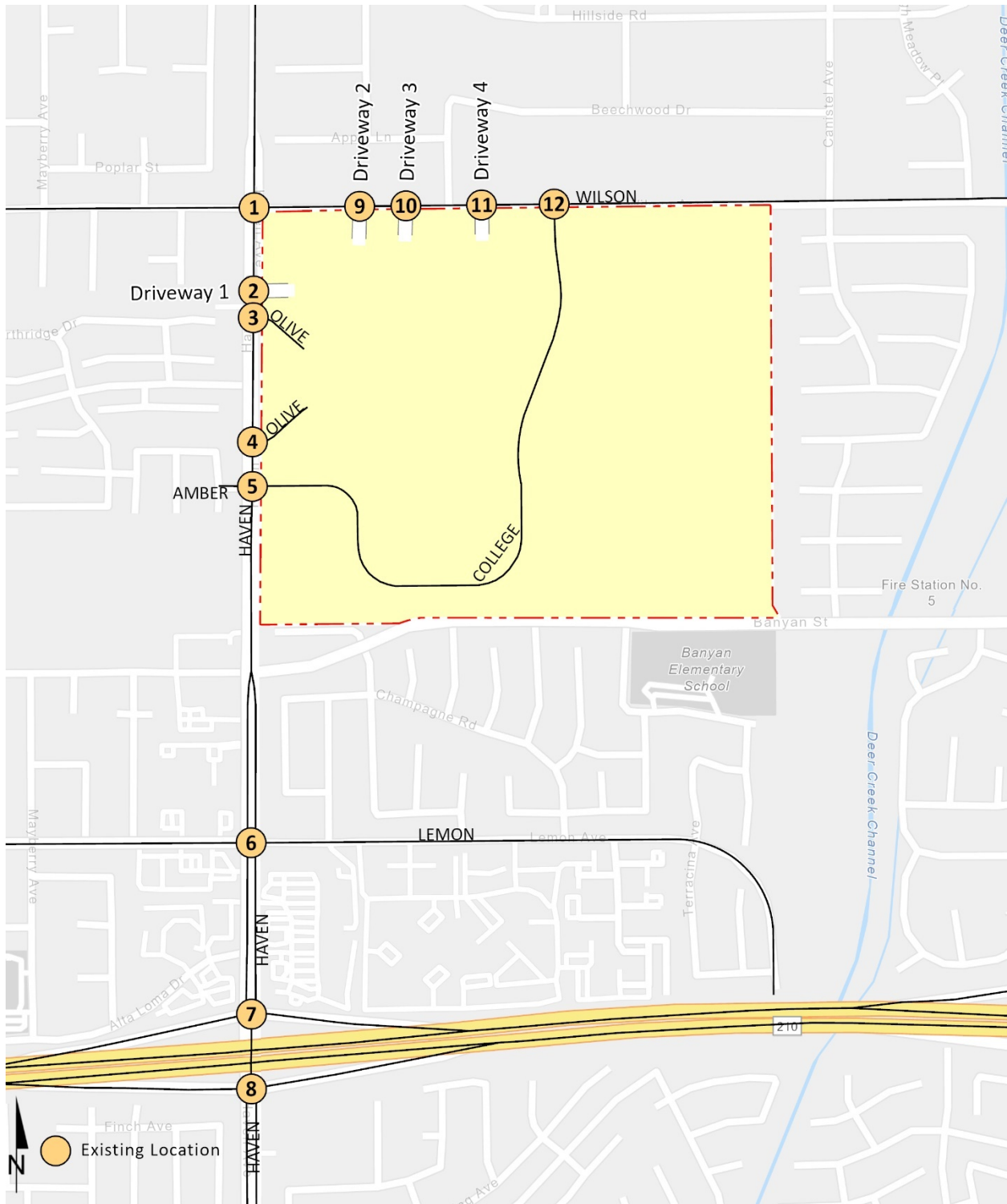
The following 12 study area intersections shown on Exhibit 1-4 and listed in Table 1-1 were selected for this TA based on consultation with City of Rancho Cucamonga staff.

**TABLE 1-1: INTERSECTION ANALYSIS LOCATIONS**

ID	Intersection Location	Jurisdiction	CMP?
1	Haven Av. & Wilson Av.	Rancho Cucamonga	No
2	Haven Av. & Driveway 1	Rancho Cucamonga	No
3	Haven Av. & Olive Wy.-North	Rancho Cucamonga	No
4	Haven Av. & Olive Wy.-South	Rancho Cucamonga	No
5	Haven Av. & Amber Ln./College Dr.	Rancho Cucamonga	No
6	Haven Av. & Lemon Av.	Rancho Cucamonga	No
7	Haven Av. & I-210 WB Ramps	Rancho Cucamonga	No
8	Haven Av. & I-210 EB Ramps	Rancho Cucamonga	No
9	Driveway 2 & Wilson Av.	Rancho Cucamonga	No
10	Driveway 3 & Wilson Av.	Rancho Cucamonga	No
11	Driveway 4 & Wilson Av.	Rancho Cucamonga	No
12	College Dr. & Wilson Av.	Rancho Cucamonga	No

The intent of a CMP is to more directly link land use, transportation, and air quality, thereby prompting reasonable growth management programs that will effectively utilize new transportation funds, alleviate traffic congestion and related deficiencies, and improve air quality. Counties within California have developed CMPs with varying methods and strategies to meet the intent of the CMP legislation. There are no study area intersections identified as a San Bernardino County Transportation Authority (SBCTA) CMP intersection.

EXHIBIT 1-4: LOCATION MAP





## 1.5 DEFICIENCIES

This section provides a summary of Project deficiencies. Section 2 *Methodologies* provides information on the methodologies used in the analysis and Section 5 *Existing plus Project Traffic Conditions* and Section 6 *Horizon Year (2051) Traffic Conditions* includes the detailed analysis. A summary of LOS results for all analysis scenarios is presented in Table 1-2.

**TABLE 1-2: SUMMARY OF DEFICIENT INTERSECTIONS BY ANALYSIS SCENARIO**

#	Intersection	Existing (2021)		E+P		2051 NP		2051 WP	
		AM	PM	AM	PM	AM	PM	AM	PM
1	Haven Av. & Wilson Av.	●	●	●	●	●	●	●	●
2	Haven Av. & Driveway 1	●	●	●	●	●	●	●	●
3	Haven Av. & Olive Wy.-North	●	●	●	●	●	●	●	●
4	Haven Av. & Olive Wy.-South	●	●	●	●	●	●	●	●
5	Haven Av. & Amber Ln./College Dr.	●	●	●	●	●	●	●	●
6	Haven Av. & Lemon Av.	●	●	●	●	●	●	●	●
7	Haven Av. & I-210 WB Ramps	●	●	●	●	●	●	●	●
8	Haven Av. & I-210 EB Ramps	●	●	●	●	●	●	●	●
9	Driveway 2 & Wilson Av.	●	●	●	●	●	●	●	●
10	Driveway 3 & Wilson Av.	●	●	●	●	●	●	●	●
11	Driveway 4 & Wilson Av.	●	●	●	●	●	●	●	●
12	College Dr. & Wilson Av.	●	●	●	●	●	●	●	●

● = A - D   ● = E   ● = F

### 1.5.1 EXISTING PLUS PROJECT CONDITIONS

The following intersection is anticipated to continue to operate at an unacceptable LOS during the peak hours with the addition of Project traffic:

- Haven Avenue & I-210 Eastbound Ramps (#8) – LOS E AM and PM peak hours

It should be noted that this is an existing deficiency to which the Project is anticipated to contribute traffic to.

### 1.5.2 HORIZON YEAR (2051) CONDITIONS

The following study area intersection is anticipated to operate at an unacceptable LOS during the peak hours under Horizon Year (2051) Without Project conditions:

- Haven Avenue & I-210 Eastbound Ramps (#8) – LOS E AM and PM peak hours

With the addition of Project traffic, there are no additional study area intersections that are anticipated to operate at an unacceptable LOS during the peak hours.



## 1.6 ON-SITE AND SITE ACCESS IMPROVEMENTS

The following Project design features are based on the improvements needed to accommodate site access. Exhibit 1-5 shows the site adjacent recommendations. As shown on Exhibit 1-5, there are no changes recommended to the site access intersections including no additional turn pocket storage needed to accommodate the proposed project.

On-site traffic signing and striping should be implemented in conjunction with detailed construction plans for the Project site.

Sight distance at each project access point should be reviewed with respect to standard City of Rancho Cucamonga sight distance standards at the time of preparation of final grading, landscape, and street improvement plans.

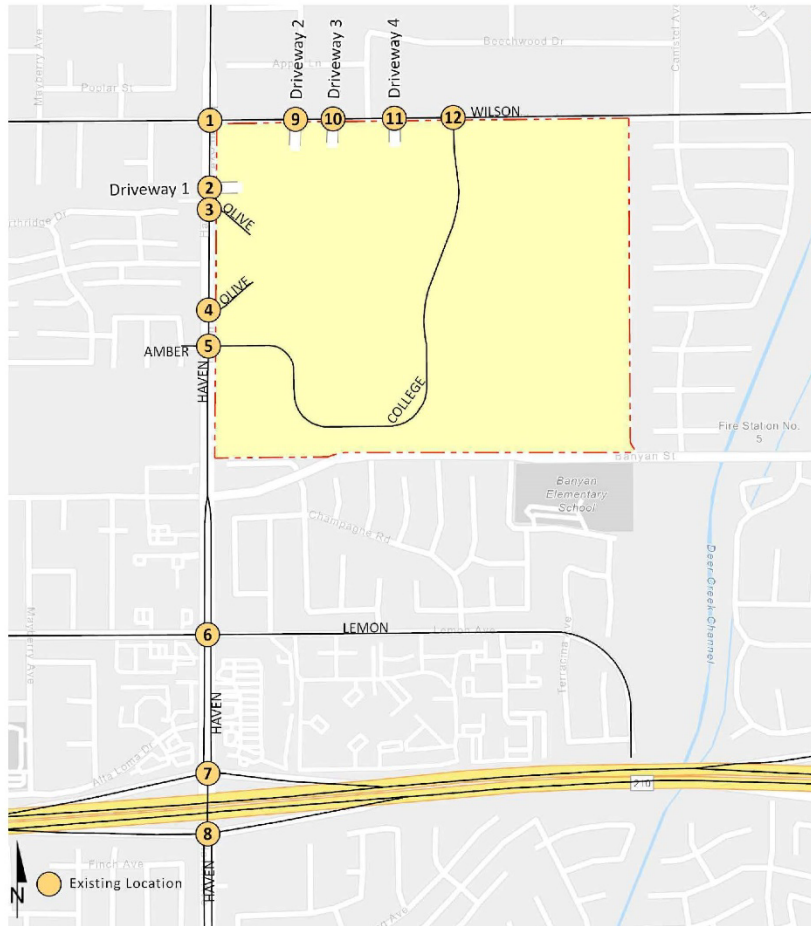
## 1.7 QUEUING ANALYSIS

A queuing analysis was conducted along the site adjacent roadways and driveways for Horizon Year (2051) With Project traffic conditions to determine the turn pocket lengths necessary to accommodate long-range 95<sup>th</sup> percentile queues and to determine if additional storage is needed for the existing left turn pockets. The analysis was conducted for the weekday AM and weekday PM peak hours and results have been provided in Appendix 1.2.

SimTraffic is designed to model networks of signalized and unsignalized intersections, with the primary purpose of checking and fine-tuning signal operations. SimTraffic uses the input parameters from Synchro to generate random simulations. The 50<sup>th</sup> percentile, or average, queue represents the typical queue length for peak hour traffic conditions, while the 95<sup>th</sup> percentile queue is derived from the average queue plus 1.65 standard deviations. The 95<sup>th</sup> percentile queue is not necessarily ever observed; it is simply based on statistical calculations (or Average Queue plus 1.65 standard deviations). Many agencies utilize the 95<sup>th</sup> percentile queues for design purposes.

The random simulations generated by SimTraffic have been utilized to determine the 95<sup>th</sup> percentile queue lengths observed for each applicable turn lane. A SimTraffic simulation has been recorded five times, during the weekday AM and weekday PM peak hours, and has been seeded for 15-minute periods with 60-minute recording intervals. Based on the anticipated 95<sup>th</sup> percentile queue, there are no anticipated queue issues along the Project frontages that would block the adjacent driveways or cause queues within turn lanes to spill back into the adjacent through lanes. Turn pocket storage lengths needed to accommodate site access are also based on the peak 95<sup>th</sup> percentile queues and are shown on Exhibit 1-5.

**EXHIBIT 1-5: SITE ADJACENT ROADWAY AND SITE-ACCESS RECOMMENDATIONS**



1	Haven Av. & Wilson Av.	2	Haven Av. & Dwy. 1	3	Haven Av. & Olive Wy. N.	4	Haven Av. & Olive Wy. S.	5	Haven Av. & Amber Ln. / College Dr.
9	Dwy. 2 & Wilson Av.	10	Dwy. 3 & Wilson Av.	11	Dwy. 4 & Wilson Av.	12	College Dr. & Wilson Av.		
							<p> = Stop Sign</p> <p> = Existing Lane</p> <p><b>TRAP</b> = Trap Lane</p> <p><b>100'</b> = Minimum Turn Pocket Length</p>		

## 1.8 OFF-SITE IMPROVEMENTS

The recommended improvements needed to address the cumulative deficiencies identified under E+P and Horizon Year (2051) traffic conditions are shown in Table 1-3. Based on the operations analysis, the Project is to implement/construct the improvement identified in Table 1-3. In addition, the Project Applicant would be required to pay development fees consistent with the City's requirements (see Section 7 *Local and Regional Funding Mechanisms*).

**TABLE 1-3: SUMMARY OF IMPROVEMENTS BY ANALYSIS SCENARIO**

#	Intersection Location	Jurisdiction	E+P	Horizon Year (2051)	Improvements in DIF? <sup>1</sup>	Project Responsibility <sup>2</sup>
8	Haven Av. & I-210 EB Ramps	Caltrans, Rancho Cucamonga	Restripe the NB approach with 2 through lanes and one right turn lane	Same	No	Construct

<sup>1</sup> Improvements included in City's DIF or regional fee programs.

<sup>2</sup> Identifies the Project's responsibility: construct an improvement or contribute fair share towards the implementation of the improvement.

This Page Intentionally Left Blank

## 2 METHODOLOGIES

This section of the report presents the methodologies used to perform the traffic analyses summarized in this report. The methodologies described are generally consistent with the City of Rancho Cucamonga, SBCTA CMP, and Caltrans traffic study guidelines. (1) (2) (3)

### 2.1 LEVEL OF SERVICE

Traffic operations of roadway facilities are described using the term "Level of Service" (LOS). LOS is a qualitative description of traffic flow based on several factors such as speed, travel time, delay, and freedom to maneuver. Six levels are typically defined ranging from LOS A, representing completely free-flow conditions, to LOS F, representing breakdown in flow resulting in stop-and-go conditions. LOS E represents operations at or near capacity, an unstable level where vehicles are operating with the minimum spacing for maintaining uniform flow.

### 2.2 INTERSECTION CAPACITY ANALYSIS

The definitions of LOS for interrupted traffic flow (flow restrained by the existence of traffic signals and other traffic control devices) differ slightly depending on the type of traffic control. The LOS is typically dependent on the quality of traffic flow at the intersections along a roadway. The Transportation Research Board's Highway Capacity Manual (HCM) 6<sup>th</sup> Edition methodology expresses the LOS at an intersection in terms of delay time for the various intersection approaches. (5) The HCM uses different procedures depending on the type of intersection control.

#### 2.2.1 SIGNALIZED INTERSECTIONS

The City of Rancho Cucamonga and Caltrans require signalized intersection operations analysis based on the methodology described in the HCM 6<sup>th</sup> Edition. Intersection LOS operations are based on an intersection's average control delay. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. For signalized intersections, LOS is directly related to the average control delay per vehicle and is correlated to a LOS designation as described in Table 2-1. Study area intersections have been evaluated using the Synchro (Version 11) analysis software package.

Synchro is a macroscopic traffic software program that is based on the signalized intersection capacity analysis as specified in the HCM. Macroscopic level models represent traffic in terms of aggregate measures for each movement at the study intersections. Equations are used to determine measures of effectiveness such as delay and queue length. The level of service and capacity analysis performed by Synchro takes into consideration optimization and coordination of signalized intersections within a network.

**TABLE 2-1: SIGNALIZED INTERSECTION LOS THRESHOLDS**

Description	Average Control Delay (Seconds), V/C ≤ 1.0	Level of Service, V/C ≤ 1.0	Level of Service, V/C > 1.0
Operations with very low delay occurring with favorable progression and/or short cycle length.	0 to 10.00	A	F
Operations with low delay occurring with good progression and/or short cycle lengths.	10.01 to 20.00	B	F
Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	20.01 to 35.00	C	F
Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop and individual cycle failures are noticeable.	35.01 to 55.00	D	F
Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences. This is considered to be the limit of acceptable delay.	55.01 to 80.00	E	F
Operation with delays unacceptable to most drivers occurring due to over saturation, poor progression, or very long cycle lengths.	80.01 and up	F	F

Source: HCM, 6<sup>th</sup> Edition

The peak hour traffic volumes have been adjusted using a peak hour factor (PHF) to reflect peak 15-minute volumes. Common practice for LOS analysis is to use a peak 15-minute rate of flow. However, flow rates are typically expressed in vehicles per hour. The PHF is the relationship between the peak 15-minute flow rate and the full hourly volume (e.g.,  $PHF = \frac{\text{Hourly Volume}}{4 \times \text{Peak 15-minute Flow Rate}}$ ). The use of a 15-minute PHF produces a more detailed analysis as compared to analyzing vehicles per hour. Existing PHFs have been used for all analysis scenarios. Per the HCM, PHF values over 0.95 often are indicative of high traffic volumes with capacity constraints on peak hour flows while lower PHF values are indicative of greater variability of flow during the peak hour. (5)

**2.2.2 UNSIGNALIZED INTERSECTIONS**

The City of Rancho Cucamonga requires the operations of unsignalized intersections be evaluated using the methodology described the HCM 6<sup>th</sup> Edition. (5) The LOS rating is based on the weighted average control delay expressed in seconds per vehicle (see Table 2-2).

At two-way or side-street stop-controlled intersections, LOS is calculated for each controlled movement and for the left turn movement from the major street, as well as for the intersection as a whole. For approaches composed of a single lane, the delay is computed as the average of all movements in that lane. For all-way stop controlled intersections, LOS is computed for the intersection as a whole.

**TABLE 2-2: UNSIGNALIZED INTERSECTION LOS THRESHOLDS**

Description	Average Control Delay Per Vehicle (Seconds)	Level of Service, V/C ≤ 1.0	Level of Service, V/C > 1.0
Little or no delays.	0 to 10.00	A	F
Short traffic delays.	10.01 to 15.00	B	F
Average traffic delays.	15.01 to 25.00	C	F
Long traffic delays.	25.01 to 35.00	D	F
Very long traffic delays.	35.01 to 50.00	E	F
Extreme traffic delays with intersection capacity exceeded.	> 50.00	F	F

Source: HCM, 6<sup>th</sup> Edition

**2.3 TRAFFIC SIGNAL WARRANT ANALYSIS METHODOLOGY**

The term "signal warrants" refers to the list of established criteria used by Caltrans and other public agencies to quantitatively justify or ascertain the potential need for installation of a traffic signal at an otherwise unsignalized intersection. This TA uses the signal warrant criteria presented in the latest edition of the Caltrans California Manual on Uniform Traffic Control Devices (CA MUTCD) for all unsignalized study area intersections. (6)

The signal warrant criteria for Existing study area intersections are based upon several factors, including volume of vehicular and pedestrian traffic, frequency of accidents, and location of school areas. The CA MUTCD indicate that the installation of a traffic signal should be considered if one or more of the signal warrants are met. (6) Specifically, this TA utilizes the Peak Hour Volume-based Warrant 3 as the appropriate representative traffic signal warrant analysis for existing traffic conditions. Warrant 3 is appropriate to use for this TA because it provides specialized warrant criteria for intersections with rural characteristics (e.g., located in communities with populations of less than 10,000 persons or with adjacent major streets operating above 40 miles per hour). For the purposes of this study, the speed limit was the basis for determining whether Urban or Rural warrants were used for a given intersection.

As shown in Table 2-3, traffic signal warrant analyses were performed for the following unsignalized study area intersections during the peak weekday conditions wherein the Project is anticipated to contribute the highest trips:

**TABLE 2-3: TRAFFIC SIGNAL WARRANT ANALYSIS LOCATIONS**

ID	Intersection Location	Jurisdiction	CMP?
9	Driveway 2 & Wilson Av.	Rancho Cucamonga	No
10	Driveway 3 & Wilson Av.	Rancho Cucamonga	No
11	Driveway 4 & Wilson Av.	Rancho Cucamonga	No
12	College Dr. & Wilson Av.	Rancho Cucamonga	No

The Existing conditions traffic signal warrant analysis is presented in the subsequent section, Section 3 *Area Conditions* of this report. The traffic signal warrant analyses for future conditions are presented in Section 5 *Existing plus Project Traffic Analysis* and Section 6 *Horizon Year (2051) Traffic Analysis* of this report.

It is important to note that a signal warrant defines the minimum condition under which the installation of a traffic signal might be warranted. Meeting this threshold condition does not require that a traffic control signal be installed at a particular location, but rather, that other traffic factors and conditions be evaluated in order to determine whether the signal is truly justified. It should also be noted that signal warrants do not necessarily correlate with LOS. An intersection may satisfy a signal warrant condition and operate at or above acceptable LOS or operate below acceptable LOS and not meet a signal warrant.

## **2.4 MINIMUM ACCEPTABLE LEVELS OF SERVICE (LOS)**

### **2.4.1 CITY OF RANCHO CUCAMONGA**

Per the City's traffic study Guidelines, the City of Rancho Cucamonga allows LOS D to be used as the maximum acceptable threshold for study area intersections and roadways.

### **2.4.2 SAN BERNARDINO COUNTY CMP**

The CMP definition of deficiency is based on maintaining a level of service standard of LOS E or better, where feasible, except where an existing LOS F condition is identified in the CMP document. However, for the purposes of this analysis, LOS D has been utilized for all study area intersections. (7)

## **2.5 INTERSECTION DEFICIENCY CRITERIA**

To determine whether the addition of project traffic at a study intersection, which would result in a direct project-related traffic deficiency, the following will be utilized:

- When the pre-Project condition is at or better than LOS D (i.e., acceptable LOS), and project-generated traffic causes deterioration below LOS E (i.e., unacceptable LOS), a deficiency is deemed to occur.
- However, when the pre-Project condition is already below LOS D (i.e., unacceptable LOS), the Project will be responsible for improving its contribution to a deficiency to a level of service equal to or better than it was without the Project.

Cumulative traffic deficiencies are created as a result of a combination of the proposed Project together with other future developments contributing to the overall traffic deficiencies requiring additional improvements to maintain acceptable level of service operations with or without the Project. A Project's contribution to a cumulative deficiency can be reduced if the Project is required to implement or fund its fair share of improvements designed to alleviate its contribution to the deficiency.

Improvements for project level deficiencies should focus on providing operations that offset the project deficiency (e.g., achieve a "no project" LOS). Improvements could consist of signal timing improvements, lane restriping, or new lanes to study facilities. Cumulative deficiencies should include a fair-share contribution toward achieving acceptable levels of service as noted below. Alternatively, if a cumulative location is included in an existing traffic impact fee program, payment of those fees would constitute an appropriate contribution.



## 2.6 VEHICLES MILES TRAVELED (VMT)

A key element of SB 743 is the elimination of automobile delay and level of service as the sole basis of determining CEQA impacts. The most recent CEQA guidelines, released in December 2018, recommend VMT as the most appropriate measure of discerning project transportation impacts for the purposes of CEQA. However, SB 743 does not prevent a City or County from continuing to analyze delay or LOS as part of other plans (i.e., the general plan), studies, or ongoing network monitoring. VMT thresholds, methodology, analysis, and findings will be presented under separate cover from this traffic study and will follow the City's traffic study guidelines.

This Page Intentionally Left Blank

### 3 AREA CONDITIONS

This section provides a summary of the existing circulation network, the City of Rancho Cucamonga General Plan Circulation Network, and a review of existing peak hour intersection operations and traffic signal warrant analyses.

#### 3.1 EXISTING CIRCULATION NETWORK

The study area includes a total of 12 existing and future intersections as shown previously on Exhibit 1-4. Exhibit 3-1 illustrates the study area intersections located near the proposed Project and identifies the number of through traffic lanes for existing roadways and intersection traffic controls.

#### 3.2 CITY OF RANCHO CUCAMONGA GENERAL PLAN CIRCULATION ELEMENT

As previously noted, the Project site is located within the City of Rancho Cucamonga. Exhibit 3-2 shows the City of Rancho Cucamonga General Plan Circulation Element, and Exhibit 3-3 illustrates the City of Rancho Cucamonga General Plan roadway cross-sections. The roadway classifications and planned (ultimate) roadway cross-sections of the major roadways within the City of Rancho Cucamonga in the vicinity of the proposed Project as identified on the City's General Plan Circulation Element are described subsequently.

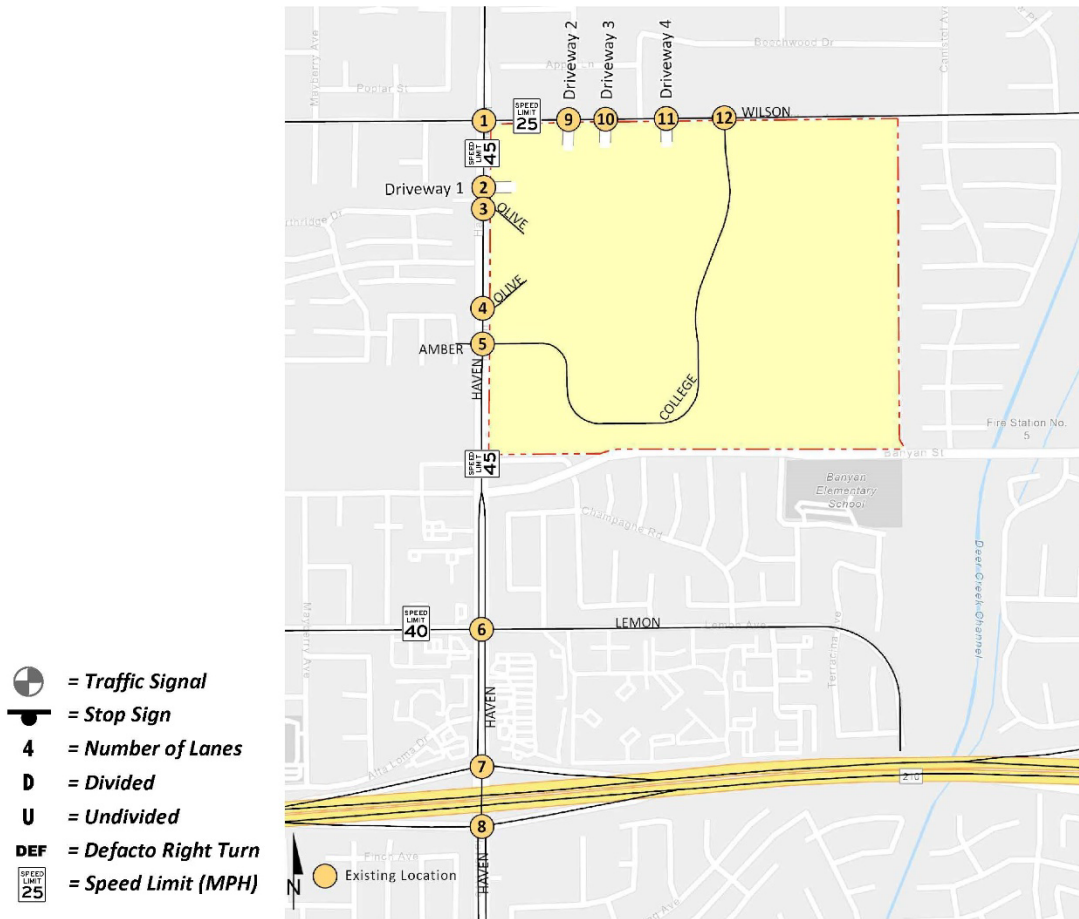
**Major Divided Arterials** can accommodate six travel lanes and have raised medians. These roadways experience the most traffic within the city. An example of a Major Divided Arterial within the study area includes:

- Haven Avenue, south of Wilson Avenue

**Secondary Arterials** can accommodate four travel lanes and provide connection between collectors and arterials. Secondary Arterials have two-way left-turn lanes. Examples of Secondary Arterials within the study area include:

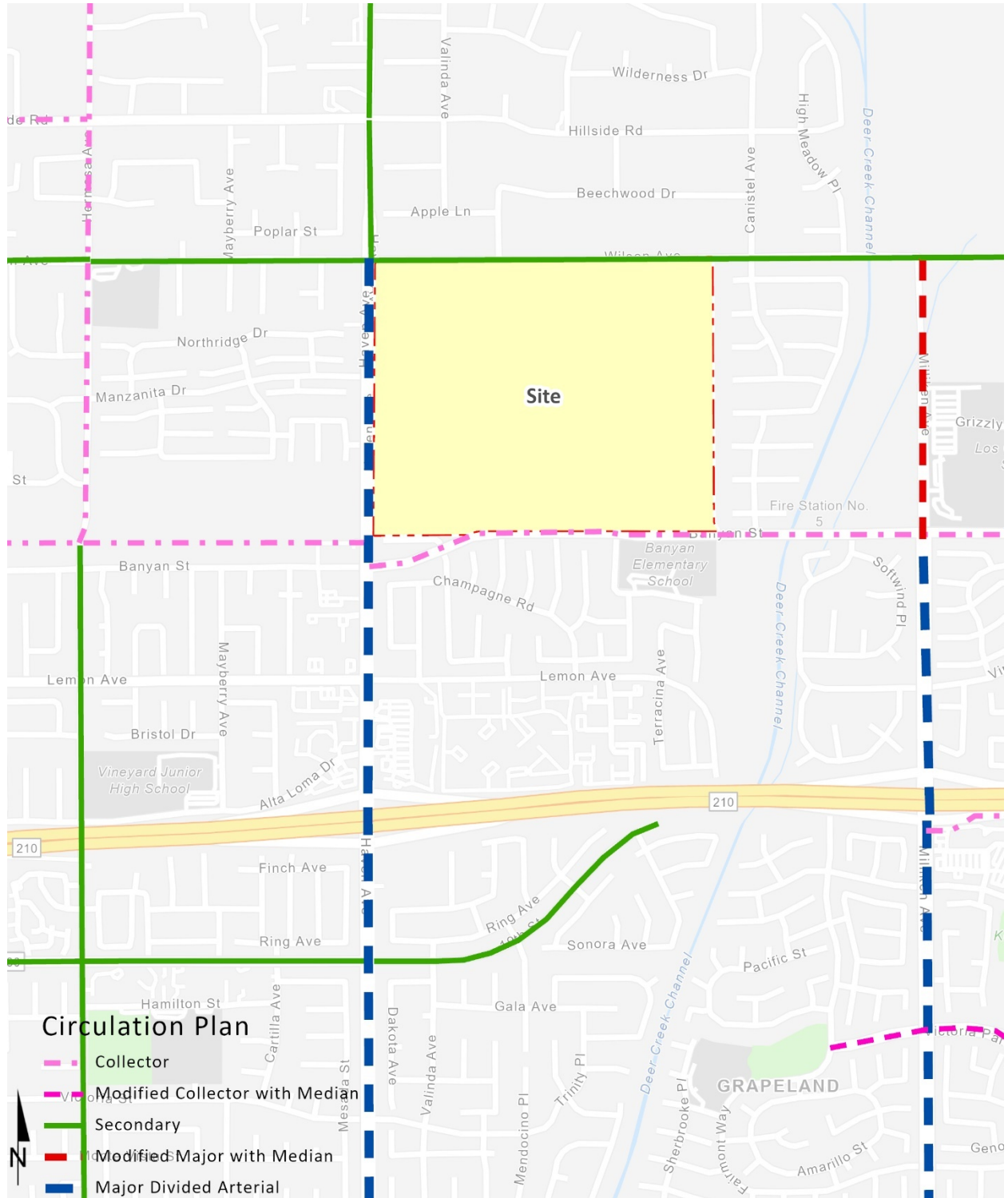
- Haven Avenue, north Wilson Avenue
- Wilson Avenue

**EXHIBIT 3-1: EXISTING NUMBER OF THROUGH LANES AND INTERSECTION CONTROLS**

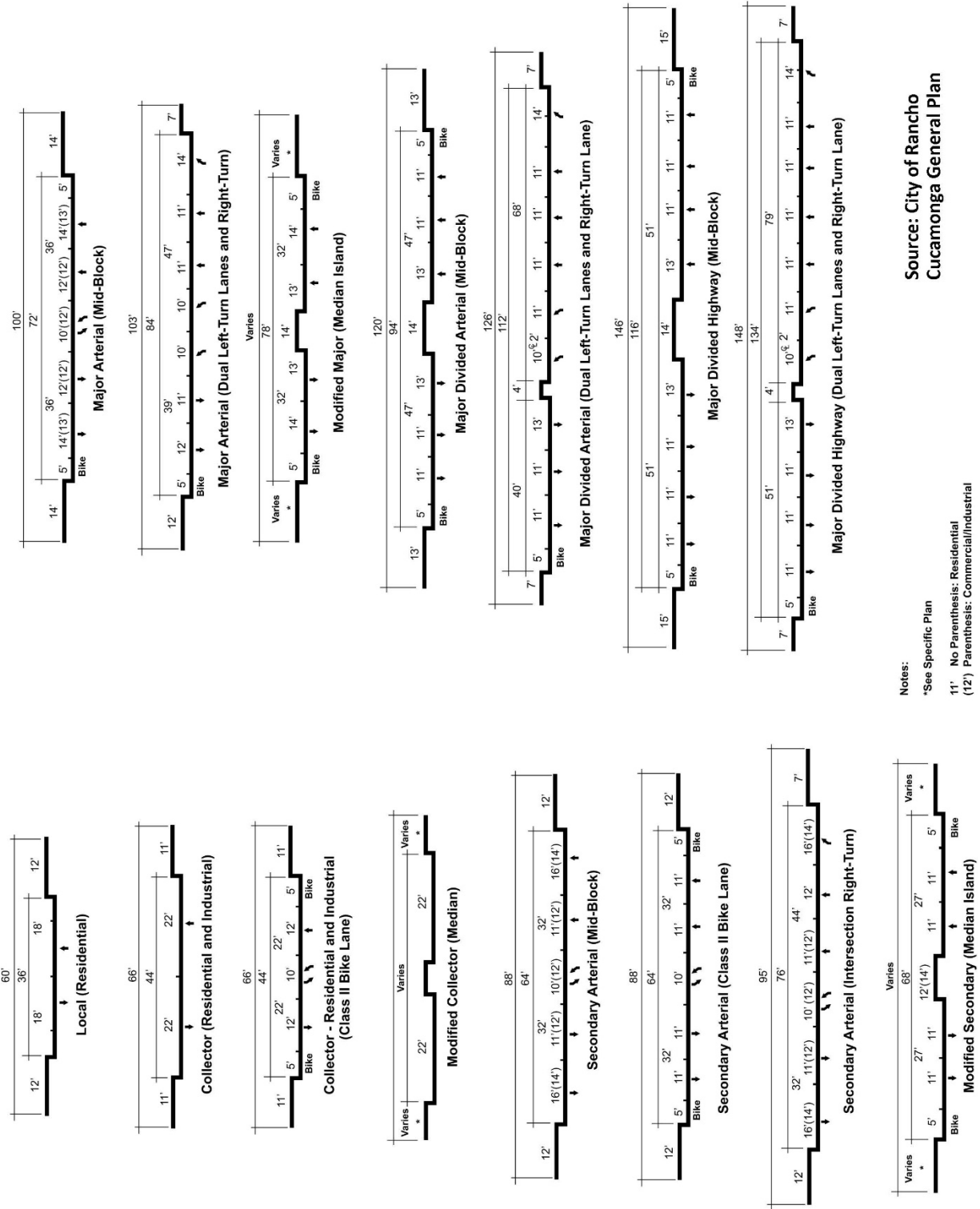


1	Haven Av. & Wilson Av.	2	Haven Av. & Dwy. 1	3	Haven Av. & Olive Wy. N.	4	Haven Av. & Olive Wy. S.	5	Haven Av. & Amber Ln. / College Dr.	6	Haven Av. & Lemon Av.

**EXHIBIT 3-2: CITY OF RANCHO CUCAMONGA GENERAL PLAN CIRCULATION ELEMENT**



**EXHIBIT 3-3: CITY OF RANCHO CUCAMONGA GENERAL PLAN ROADWAY CROSS-SECTIONS**



**Source: City of Rancho Cucamonga General Plan**

**Notes:**  
 \*See Specific Plan  
 11' No Parenthesis: Residential  
 (12) Parenthesis: Commercial/Industrial

### 3.3 BICYCLE & PEDESTRIAN FACILITIES

In an effort to promote alternative modes of transportation, the City of Rancho Cucamonga General Plan also includes a bike plan. The City of Rancho Cucamonga bike routes are shown on Exhibit 3-4. Within the study area, there are proposed Class II (striped, on-street) bike lane along Wilson Avenue and Haven Avenue. There are existing Class II bike lanes on Wilson Avenue west of Haven Avenue. Exhibit 3-5 shows the City of Rancho Cucamonga trails. As shown on Exhibit 3-5, there are community trails that currently exist along Wilson Avenue, Haven Avenue, and Banyan Street. Community trails connect local trails (private equestrian easements) to regional trails (generally adjacent to flood control channels). Community trails are off-road facilities that can be utilized by pedestrians, bicyclists and equestrians. Exhibit 3-6 illustrates the existing pedestrian facilities, including sidewalks and crosswalk locations. As shown on Exhibit 3-6, there are currently no sidewalks along the Project's frontages of Haven Avenue and Wilson Avenue. With the anticipated increase of 930 students over the next 30 years, it is anticipated these facilities (or lack thereof) will not likely be adversely affected by the Project.

### 3.4 TRANSIT SERVICE

The study area is currently served by Omnitrans, a public transit agency serving various jurisdictions within San Bernardino County, with bus service along Haven Avenue via Route 81 and along Banyan Street to Haven Avenue into the Project via Route 85. The existing Omnitrans Route 85 would likely continue to serve the Project. The existing transit routes within the area by Omnitrans is shown on Exhibit 3-7. Transit service is reviewed and updated by Omnitrans periodically to address ridership, budget, and community demand needs. Changes in land use can affect these periodic adjustments which may lead to either enhanced or reduced service where appropriate.

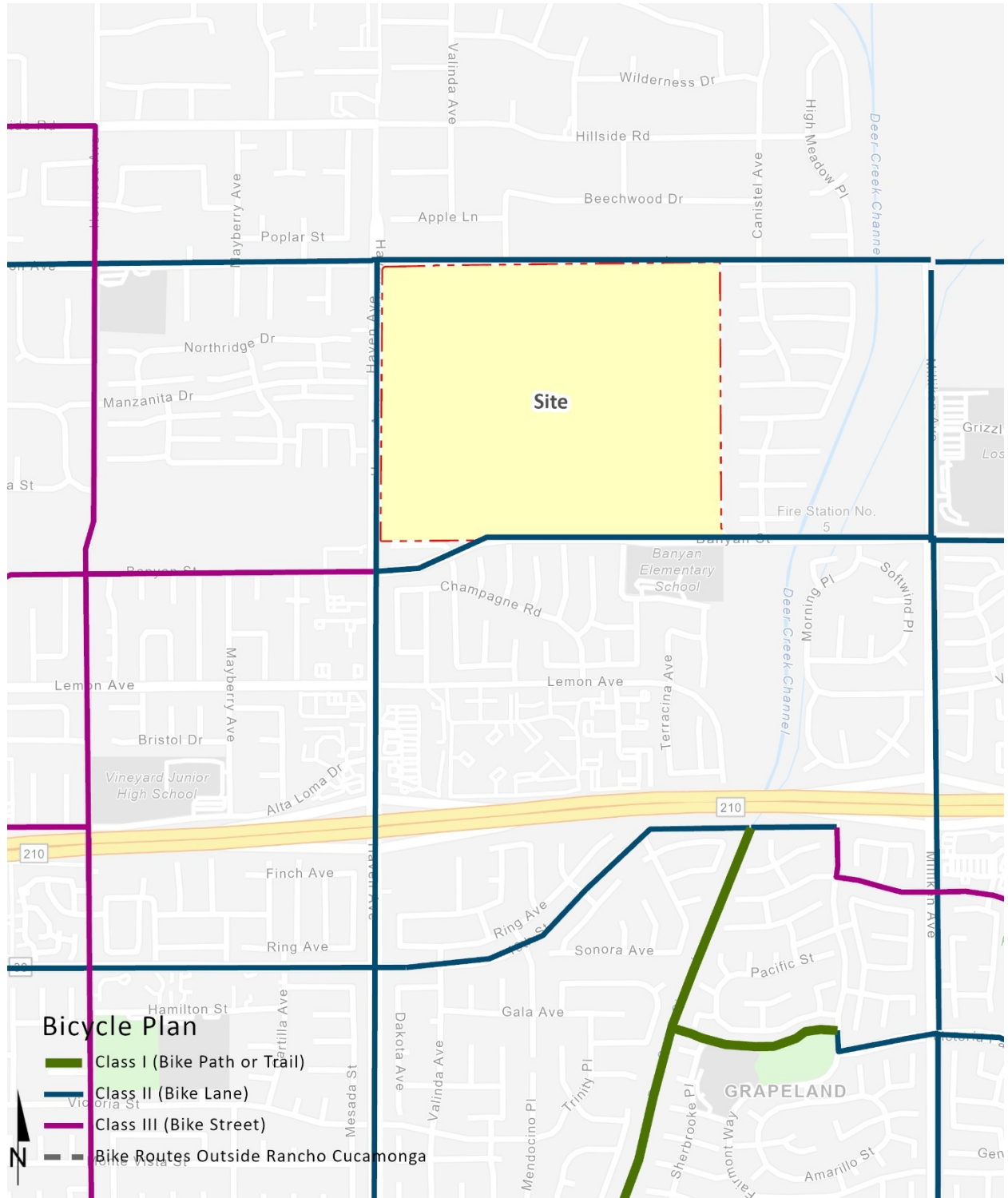
### 3.5 EXISTING TRAFFIC COUNTS

The intersection LOS analysis is based on the traffic volumes observed during the peak hour conditions using traffic count data collected in March 2019 and June 2021. Consistent with standard engineering practice, these traffic counts were conducted either on Tuesday, Wednesday, or Thursday due to potential fluctuations in traffic that typically occur on Mondays, Fridays, Holidays, or weekends. The following peak hours were selected for analysis:

- Weekday AM Peak Hour (peak hour between 7:00 AM and 9:00 AM)
- Weekday PM Peak Hour (peak hour between 4:00 PM and 6:00 PM)

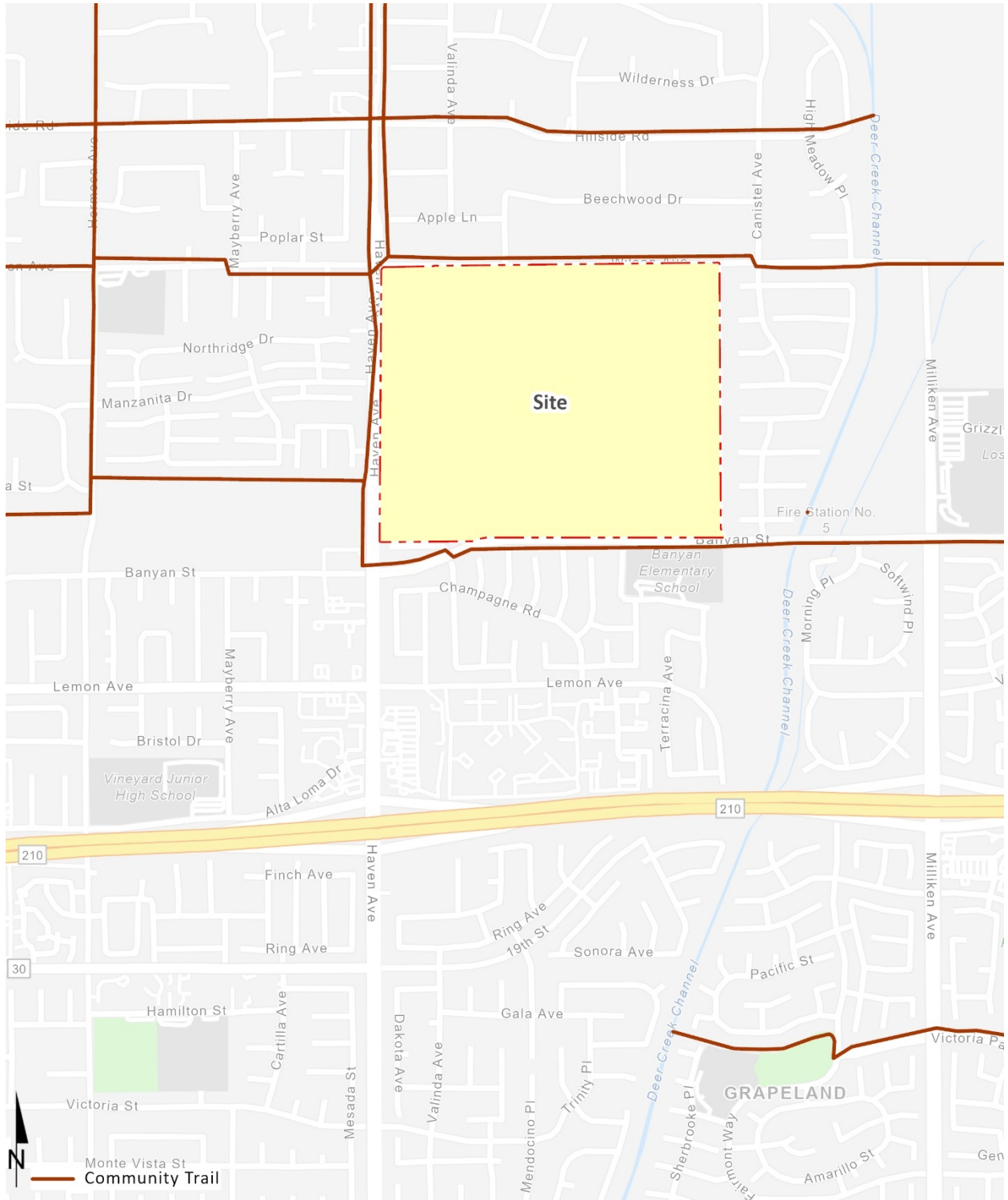
Due to the currently ongoing COVID-19 pandemic, schools and businesses within the study area were closed or operating at less than full capacity at the time this study was prepared. Traffic counts older than the current year (2021) would be brought to current conditions through the application of an adjustment factor. The adjustment factor is derived based on a comparison of historic March 2019 traffic counts adjusted to 2021 conditions by applying a 2% per year growth adjustment as compared to the current June 2021 traffic counts. As such, a different adjustment factor was developed for the AM and PM peak hours.

**EXHIBIT 3-4: PROPOSED CITY OF RANCHO CUCAMONGA BIKE ROUTES**

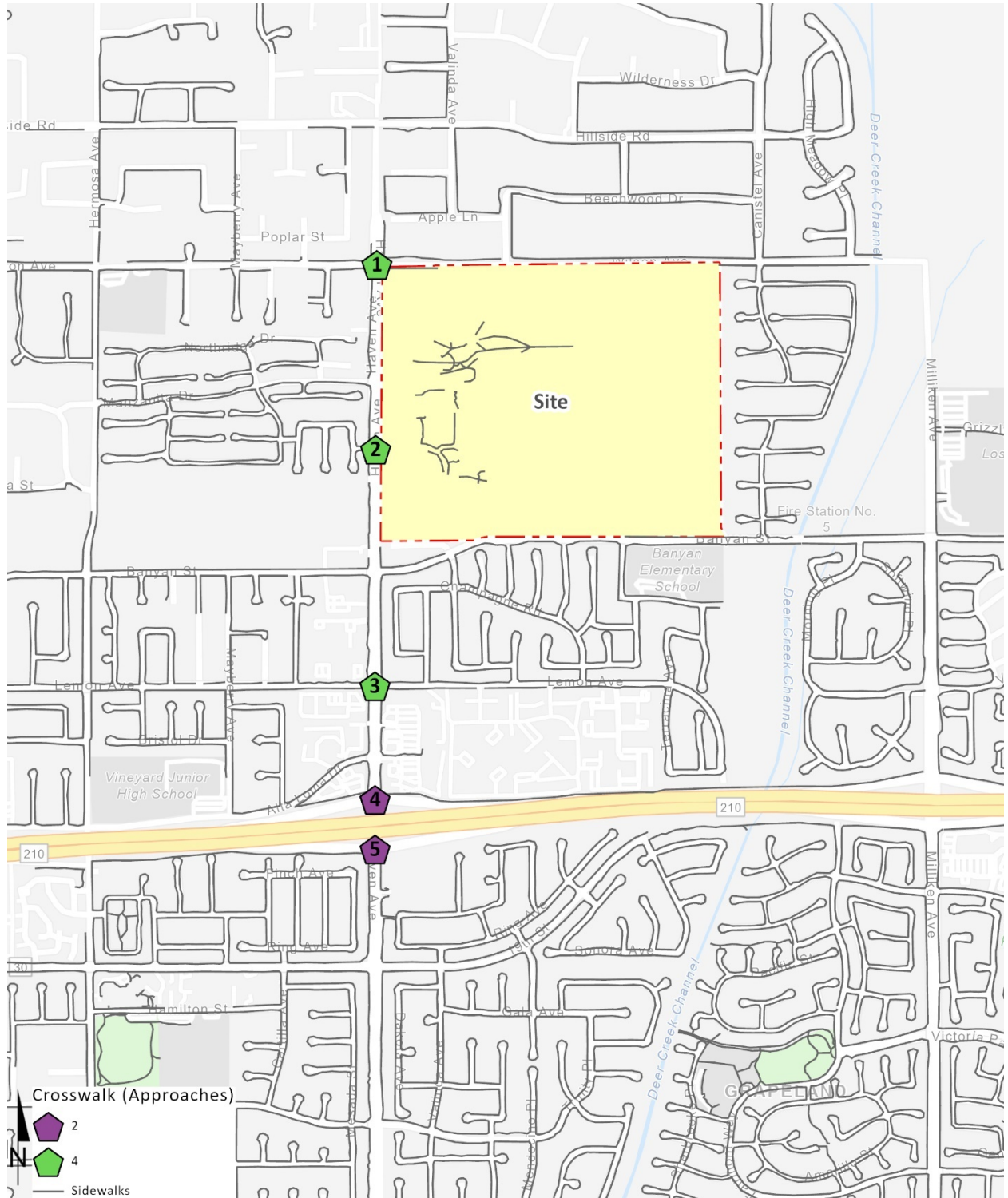




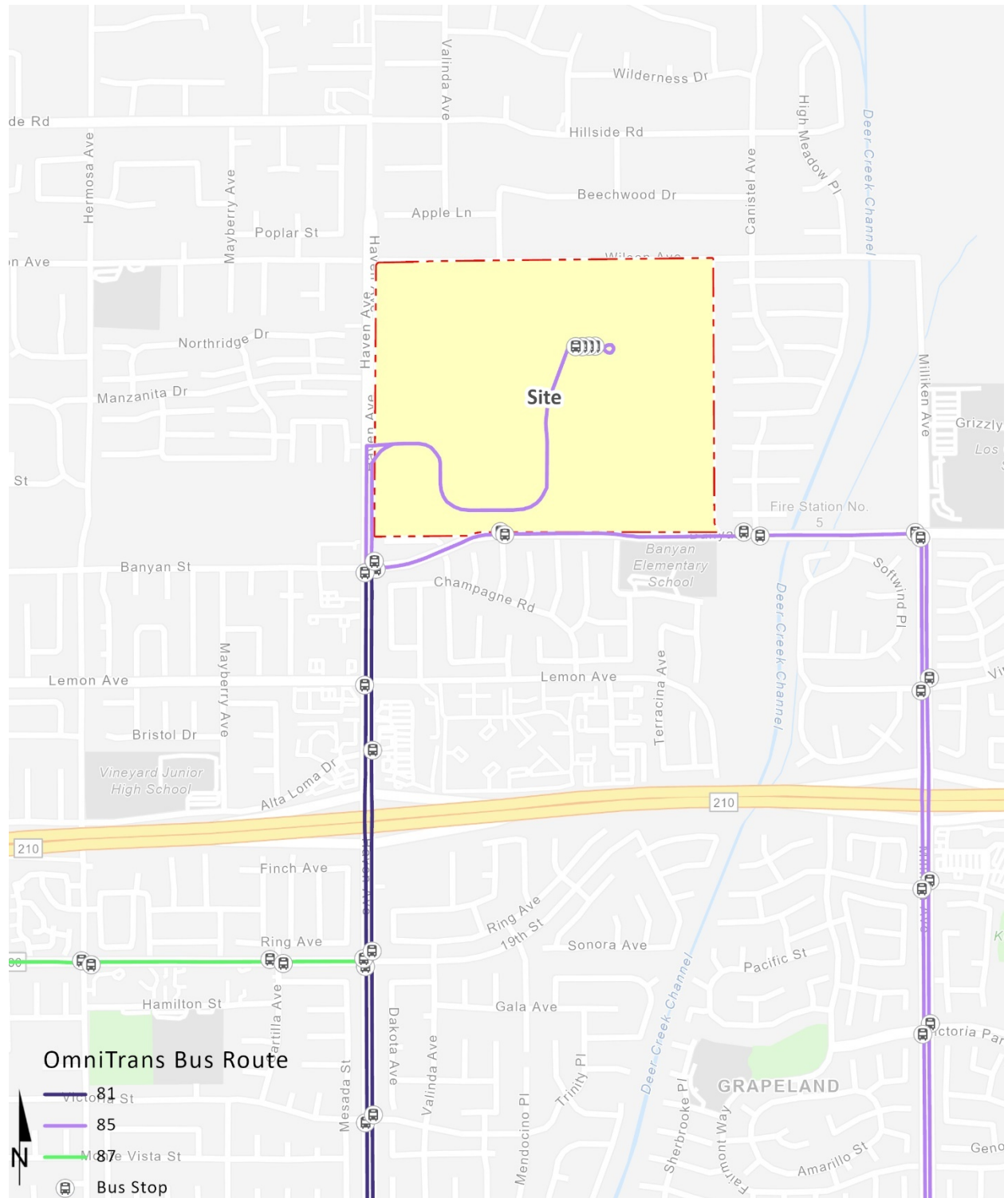
**EXHIBIT 3-5: CITY OF RANCHO CUCAMONGA EXISTING TRAILS**



**EXHIBIT 3-6: EXISTING PEDESTRIAN FACILITIES**



**EXHIBIT 3-7: EXISTING TRANSIT ROUTES**



Historic pre-COVID (March 2019) traffic counts were utilized in conjunction with a 2% per year growth rate (compounded annually) to reflect adjusted 2021 conditions for the following intersections:

- Haven Av. & Wilson Av. (#1)
- Haven Av. & Lemon Av. (#6)

The 2019 count data are representative of typical weekday peak hour traffic conditions in the study area. There were no observations made in the field that would indicate atypical traffic conditions on the count dates, such as construction activity or detour routes and near-by schools were in session and operating on normal schedules.

Historic traffic count data was not readily available for the remaining study area intersections (those not listed above). As such, 2021 traffic counts have been collected at these intersections in order to compare and develop an adjustment factor based on historic 2019 traffic count data to the recently collected 2021 traffic count data. This adjustment factor has been applied to the traffic count data at the intersections where historic traffic count data is not available to reflect non-COVID traffic conditions. Where applicable, traffic volumes have been flow conserved in order to not have any loss of vehicles. The raw manual peak hour turning movement traffic count data sheets are included in Appendix 3.1. These raw turning volumes have been flow conserved between intersections with limited access, no access, and where there are currently no uses generating traffic. The traffic counts collected in June 2021 include the vehicle classifications as shown below:

- Passenger Cars
- 2-Axle Trucks
- 3-Axle Trucks
- 4 or More Axle Trucks

To represent the effect of large trucks, buses, and recreational vehicles have on traffic flow, all trucks were accounted for in the operations analysis as a percentage of total traffic. By their size alone, these vehicles occupy the same space as two or more passenger cars. In addition, the time it takes for them to accelerate and slow-down is also much longer than for passenger cars and varies depending on the type of vehicle and number of axles.

As the traffic counts conducted in June 2021 reflect nominal traffic coming into and out of the Project site, the baseline was adjusted to account for full-time enrollment of 16,474 students. In addition to the existing students, we have also accounted for a 3,600 square foot warehouse and 17,100 square foot maintenance building. The existing student count was pathed consistent with the Project trip distribution discussed subsequently in Section 4. Table 3-1 identifies the existing student trip generation that has been added to the baseline. As shown in Table 3-1, the existing use currently generates 18,982 two-way trip-ends per day, 1,815 AM peak hour trips and 1,815 PM peak hour trips.

**TABLE 3-1: EXISTING TRIP GENERATION**

Land Use <sup>1</sup>	Units <sup>2</sup>	ITE LU Code	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
<b>Project Trip Generation Rates:</b>									
Warehousing <sup>3</sup>	TSF	150	0.131	0.039	0.170	0.051	0.139	0.190	1.740
Passenger Cars			0.114	0.034	0.148	0.044	0.118	0.162	1.270
2-Axle Trucks			0.003	0.001	0.004	0.001	0.003	0.005	0.078
3-Axle Trucks			0.004	0.001	0.005	0.002	0.004	0.006	0.097
4+-Axle Trucks			0.011	0.003	0.014	0.005	0.013	0.018	0.294
Junior/Community College	STU	540	0.09	0.02	0.11	0.06	0.05	0.11	1.15

<sup>1</sup> Trip Generation Source: Institute of Transportation Engineers (ITE), *Trip Generation Manual*, Tenth Edition (2017).

<sup>2</sup> STU = Students; TSF = Thousand Square Feet

<sup>3</sup> Vehicle Mix Source: ITE *Trip Generation Handbook Supplement* (2020), Appendix C.

Truck Mix: South Coast Air Quality Management District's (SCAQMD) recommended truck mix, by axle type.

Normalized % - Without Cold Storage: 16.7% 2-Axle trucks, 20.7% 3-Axle trucks, 62.6% 4-Axle trucks.

Project Land Use	Quantity Units <sup>1</sup>	AM Peak Hour			PM Peak Hour			Daily
		In	Out	Total	In	Out	Total	
<b>Project Trip Generation Summary:</b>								
Warehousing	20,700 TSF							
Passenger Cars:		2	1	3	1	2	3	26
2-axle Trucks:		0	0	0	0	0	0	2
3-axle Trucks:		0	0	0	0	0	0	2
4+-axle Trucks:		0	0	0	0	0	0	6
Total Truck Trips:		0	0	0	0	0	0	10
Total Warehouse Trips		2	1	3	1	2	3	36
Fall 2019 (Pre-Pandemic) Enrollment	16,474 STU	1,468	344	1,812	1,015	797	1,812	18,946
<b>Total Project Trips</b>		<b>1,470</b>	<b>345</b>	<b>1,815</b>	<b>1,016</b>	<b>799</b>	<b>1,815</b>	<b>18,982</b>

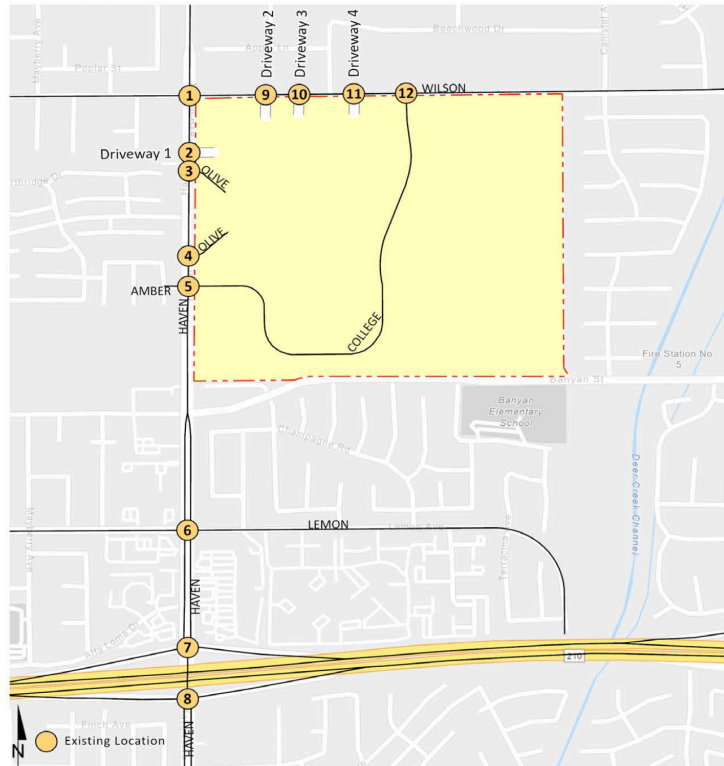
<sup>1</sup> STU = Students; TSF = Thousand Square Feet

Existing weekday ADT volumes on arterial highways throughout the study area are shown on Exhibit 3-8. Existing ADT volumes were based upon factored intersection peak hour counts collected by Urban Crossroads, Inc. using the following formula for each intersection leg:

$$\text{Weekday PM Peak Hour (Approach Volume + Exit Volume)} \times 12.0 = \text{Leg Volume}$$

A comparison of the PM peak hour and daily traffic volumes of various roadway segments within the study area indicated that the peak-to-daily relationship is approximately 8.33 percent. As such, the above equation utilizing a factor of 12.0 estimates the ADT volumes on the study area roadway segments assuming a peak-to-daily relationship of approximately 8.33 percent (i.e.,  $1/0.0833 = 12.0$ ) and was assumed to sufficiently estimate average daily traffic (ADT) volumes for planning-level analyses. Existing weekday AM and weekday PM peak hour intersection volumes (in actual vehicles) are also shown on Exhibit 3-8.

**EXHIBIT 3-8: EXISTING (2021) TRAFFIC VOLUMES (IN ACTUAL VEHICLES)**



1	Haven Av. & Wilson Av.	2	Haven Av. & Driveway 1	3	Haven Av. & N. Olive Wy.	4	Haven Av. & S. Olive Wy.	5	Haven Av. & College Dr.																														
5,900 24(17) 323(151) 16(33) 31(60) 130(115) 74(202) 9(54) 184(155) 56(67) 8,400	9,700 453(420) 3(8) 366(391) 73(51) 10,100	10,100 453(419) 4(8) 17(40) 436(435) 10,450	11,600 482(500) 5(23) 357(466) 302(210) 13,300	13,300 3(2) 396(457) 82(41) 320(728) 12(18) 650(667) 1039(652) 15,300 28,200	6	Haven Av. & Lemon Av.	7	Haven Av. & I-210 WB Ramps	8	Haven Av. & I-210 EB Ramps	9	Driveway 2 & Wilson Av.	10	Driveway 3 & Wilson Av.	35,600 64(82) 727(1414) 9(22) 26(27) 51(40) 292(183) 120(171) 24(103) 65(111) 7,200	51,450 529(729) 1066(1390) 865(797) 8(5) 476(553) 537(646) 1641(1348) 15,450	48,400 1001(1199) 540(746) 1344(611) 5(8) 335(313) 835(1583) 536(971) 20,650	8,400 231(370) 15(10) 3(8) 3(8) 400	8,400 244(372) 15(10) 3(8) 410(318) 15(10) 3(8) 8,400	11	Driveway 4 & Wilson Av.	12	College Dr. & Wilson Av.	##(###) AM(PM) Peak Hour Intersection Volumes ## Average Daily Trips						8,400 254(373) 15(10) 3(8) 3(8) 399(316) 15(10) 8,400	8,550 266(375) 33(22) 3(8) 9(28) 384(314) 18(10) 8,400	550	550						
6	Haven Av. & Lemon Av.	7	Haven Av. & I-210 WB Ramps	8	Haven Av. & I-210 EB Ramps	9	Driveway 2 & Wilson Av.	10	Driveway 3 & Wilson Av.																														
35,600 64(82) 727(1414) 9(22) 26(27) 51(40) 292(183) 120(171) 24(103) 65(111) 7,200	51,450 529(729) 1066(1390) 865(797) 8(5) 476(553) 537(646) 1641(1348) 15,450	48,400 1001(1199) 540(746) 1344(611) 5(8) 335(313) 835(1583) 536(971) 20,650	8,400 231(370) 15(10) 3(8) 3(8) 400	8,400 244(372) 15(10) 3(8) 410(318) 15(10) 3(8) 8,400	11	Driveway 4 & Wilson Av.	12	College Dr. & Wilson Av.	##(###) AM(PM) Peak Hour Intersection Volumes ## Average Daily Trips						8,400 254(373) 15(10) 3(8) 3(8) 399(316) 15(10) 8,400	8,550 266(375) 33(22) 3(8) 9(28) 384(314) 18(10) 8,400	550	550																					
11	Driveway 4 & Wilson Av.	12	College Dr. & Wilson Av.	##(###) AM(PM) Peak Hour Intersection Volumes ## Average Daily Trips																																			
8,400 254(373) 15(10) 3(8) 3(8) 399(316) 15(10) 8,400	8,550 266(375) 33(22) 3(8) 9(28) 384(314) 18(10) 8,400	550	550																																				



### 3.6 INTERSECTION OPERATIONS ANALYSIS

Existing peak hour traffic operations have been evaluated for the study area intersections based on the analysis methodologies presented in Section 2.2 *Intersection Capacity Analysis* of this report. The intersection operations analysis results are summarized in Table 3-2, which indicates that the study area intersections are currently operating at an acceptable LOS during the peak hours (i.e., LOS D or better). The intersection operations analysis worksheets are included in Appendix 3.2 of this TA.

**TABLE 3-2: INTERSECTION ANALYSIS FOR EXISTING (2021) CONDITIONS**

#	Intersection	Traffic Control <sup>2</sup>	Delay <sup>1</sup> (secs.)		Level of Service	
			AM	PM	AM	PM
1	Haven Av. & Wilson Av.	TS	18.2	16.8	B	B
2	Haven Av. & Driveway 1	CSS	10.5	10.5	B	B
3	Haven Av. & Olive Wy.-North	CSS	13.5	13.3	B	B
4	Haven Av. & Olive Wy.-South	CSS	11.7	11.9	B	B
5	Haven Av. & Amber Ln./College Dr.	TS	14.8	17.4	B	B
6	Haven Av. & Lemon Av.	TS	23.1	23.3	C	C
7	Haven Av. & I-210 WB Ramps	TS	34.8	45.2	C	D
8	Haven Av. & I-210 EB Ramps	TS	<b>56.8</b>	<b>60.9</b>	<b>E</b>	<b>E</b>
9	Driveway 2 & Wilson Av.	CSS	12.6	12.2	B	B
10	Driveway 3 & Wilson Av.	CSS	12.2	11.4	B	B
11	Driveway 4 & Wilson Av.	CSS	12.7	11.2	B	B
12	College Dr. & Wilson Av.	CSS	13.3	11.9	B	B

\* **BOLD** = Level of Service (LOS) does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

<sup>1</sup> Per the Highway Capacity Manual (6th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross-street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane)

<sup>2</sup> TS = Traffic Signal; CSS = Cross-Street Stop

### 3.7 TRAFFIC SIGNAL WARRANTS ANALYSIS

Traffic signal warrants for Existing (2021) traffic conditions are based on existing peak hour intersection turning volumes. There are no study area intersections that currently meet a traffic signal warrant under Existing (2021) traffic conditions. Existing (2021) traffic conditions traffic signal warrant analysis worksheets are provided in Appendix 3.3.

This Page Intentionally Left Blank



## 4 PROJECTED FUTURE TRAFFIC

This section presents the traffic volumes estimated to be generated by the Project, as well as the Project's trip assignment, onto the study area roadway network. The pre-pandemic student headcount at the Chaffey College Rancho Cucamonga Campus was 16,474 students actively enrolled in Fall 2019. By 2051, the student count is anticipated to increase by approximately 5.65% resulting in a headcount of 17,404 students (an increase of 930 students). The proposed Project will be developed in 5 phases over 30 years. Regional access to the Project site is available from the I-210 Freeway at the Haven Avenue interchange.

### 4.1 TRIP GENERATION

Trip generation represents the amount of traffic that is attracted and produced by a development and is based upon the specific land uses planned for a given project. In order to develop the traffic characteristics of the proposed project, the trip generation rates used for this analysis are based upon information collected by the ITE as provided in their Trip Generation Manual, 10<sup>th</sup> Edition, 2017 for the Junior/Community College land use (ITE Land Use Code 540). (4) Trip generation rates for the proposed Project are shown in Table 4-1. The trip generation summary illustrating daily, and peak hour trip generation estimates for the proposed Project are also shown in Table 4-1.

**TABLE 4-1: PROJECT TRIP GENERATION SUMMARY**

Land Use <sup>1</sup>	Units <sup>2</sup>	ITE LU Code	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
<b>Project Trip Generation Rates:</b>									
Junior/Community College	STU	540	0.09	0.02	0.11	0.06	0.05	0.11	1.15

<sup>1</sup> Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, Tenth Edition (2017).

<sup>2</sup> STU = Students

Project Land Use	Quantity Units <sup>1</sup>	AM Peak Hour			PM Peak Hour			Daily
		In	Out	Total	In	Out	Total	
<b>Project Trip Generation Summary:</b>								
Chaffey College - Rancho Cucamonga	930 STU	83	19	102	57	45	102	1,070

<sup>1</sup> STU = Students

As shown in Table 4-1, the proposed Project is anticipated to generate a total of 1,070 two-way trip-ends per day, with 102 AM peak hour trips and 102 PM peak hour trips.

## **4.2 PROJECT TRIP DISTRIBUTION**

Trip distribution is the process of identifying the probable destinations, directions, or traffic routes that will be utilized by Project traffic. The potential interaction between the planned land uses and surrounding regional access routes are considered to identify the route where the Project traffic would distribute. The Project trip distribution was developed based on anticipated travel patterns to and from the Project site. The Project trip distribution patterns are graphically depicted on Exhibit 4-1.

## **4.3 MODAL SPLIT**

The traffic reducing potential of public transit, walking, or bicycling have not been considered in this TA. Essentially, the traffic projections are "conservative" in that these alternative travel modes might be able to reduce the forecasted traffic volumes.

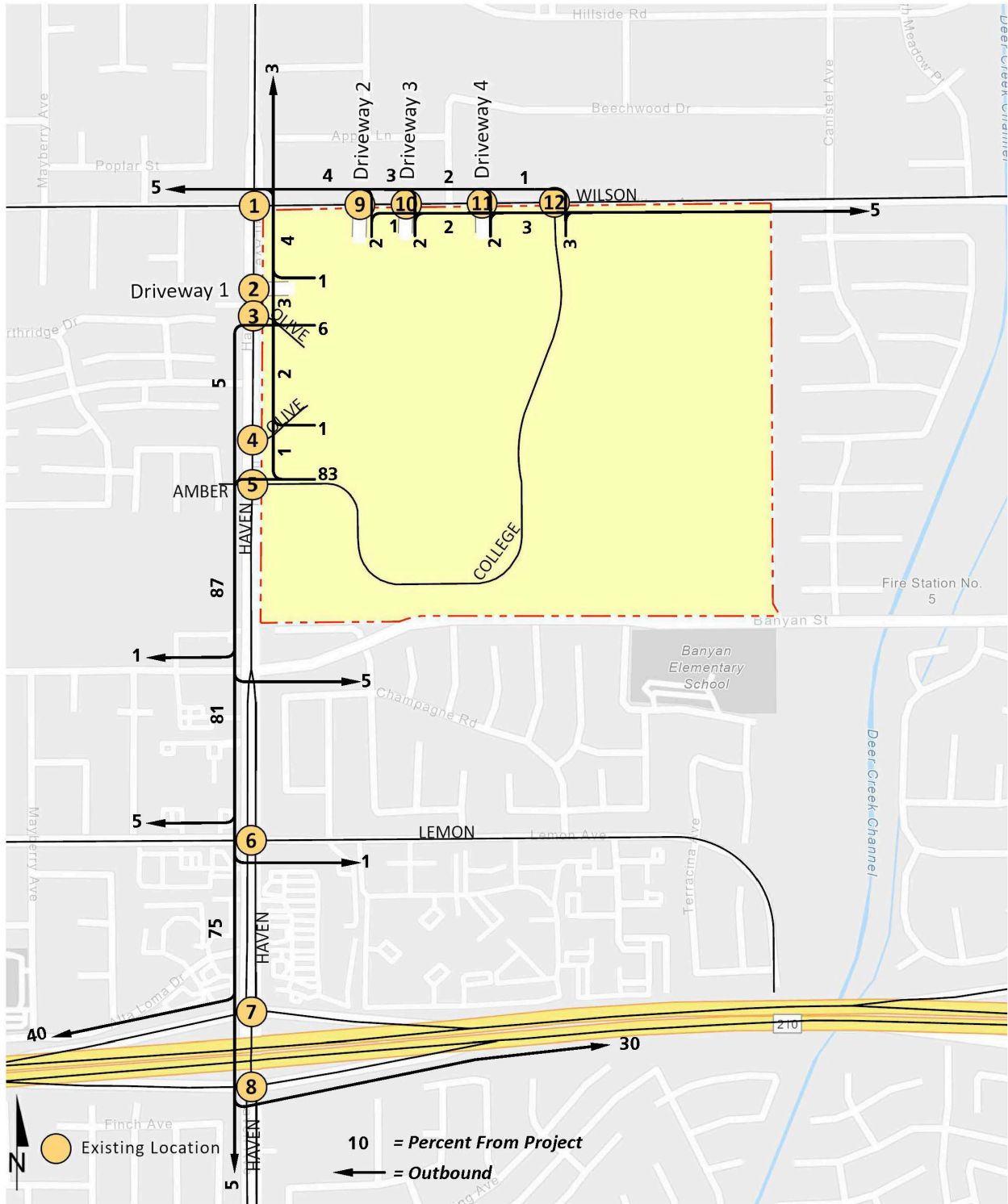
## **4.4 PROJECT TRIP ASSIGNMENT**

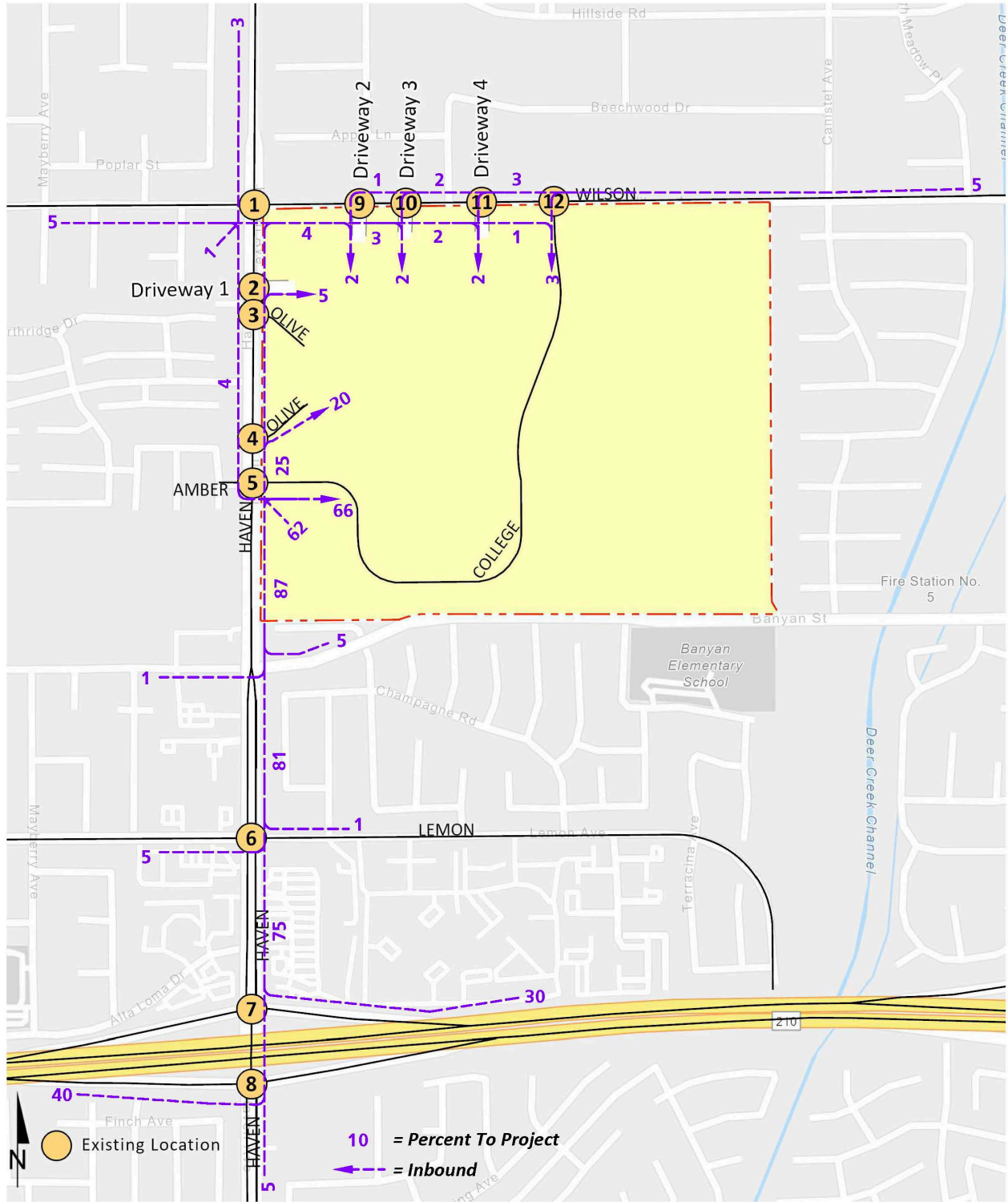
The assignment of traffic from the Project area to the adjoining roadway system is based upon the Project trip generation, trip distribution, and the arterial highway and local street system improvements that would be in place by the time of initial occupancy of the Project. Based on the identified Project traffic generation and trip distribution patterns, Project ADT and peak hour intersection turning movement volumes are shown on Exhibit 4-2.

## **4.5 TRAFFIC FORECASTS**

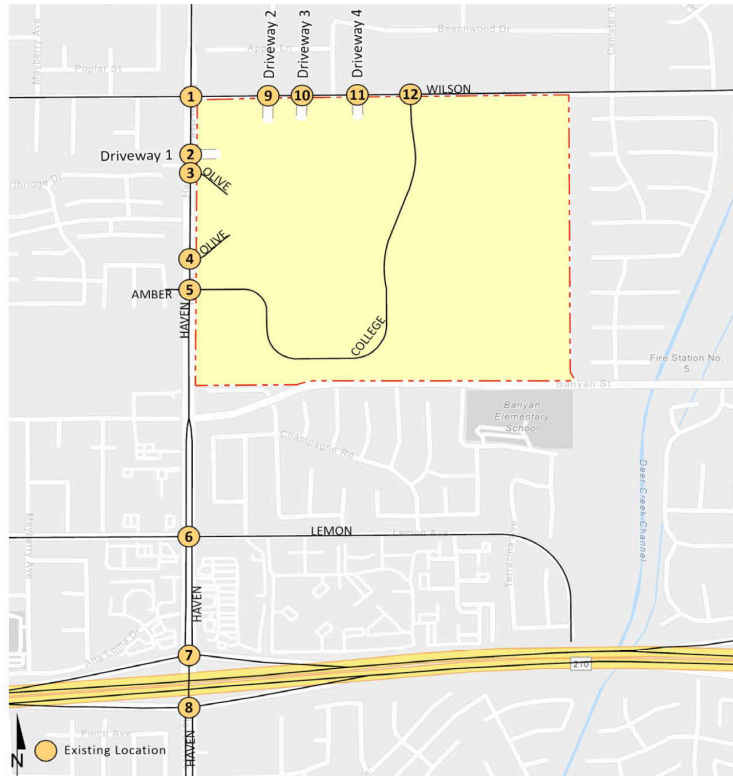
To provide a comprehensive assessment of the deficiencies, two types of analyses, "buildup" and "buildout", were performed in support of this work effort. The "buildup" method was used to approximate E+P traffic conditions and is intended to identify the near-term deficiencies on both the existing and planned near-term circulation system. The E+P traffic conditions includes traffic generated by the proposed Project only. The "buildout" method was utilized for Horizon Year traffic conditions and is based on the regional traffic model for 2051 traffic conditions.

**EXHIBIT 4-1: PROJECT TRIP DISTRIBUTION**





**EXHIBIT 4-2: PROJECT ONLY TRAFFIC VOLUMES (IN ACTUAL VEHICLES)**



1 Haven Av. & Wilson Av.		2 Haven Av. & Driveway 1		3 Haven Av. & N. Olive Wy.		4 Haven Av. & S. Olive Wy.		5 Haven Av. & College Dr.	
Nominal	Nominal	Nominal	Nominal	Nominal	Nominal	100	100	200	800
← 2(2)	← 1(2)	← 3(2)		← 3(2)	↘ 1(2)	← 4(5)		← 1(2)	↘ 16(37)
3(2) →	1(1) →		1(1) →	5(4) →	4(3) →		17(11) →	21(14) →	51(35) →
1(1) ↘			4(3) ↘						
Nominal	Nominal	Nominal	Nominal	Nominal	100	200	200	950	
6 Haven Av. & Lemon Av.		7 Haven Av. & I-210 WB Ramps		8 Haven Av. & I-210 EB Ramps		9 Driveway 2 & Wilson Av.		10 Driveway 3 & Wilson Av.	
850		800	150	450	150		Nominal		Nominal
↘ 1(2)	↘ 1(1)	↘ 8(18)	↘ 25(17)	↘ 1(2)		← 1(1)		← 1(1)	
↘ 14(34)		↘ 7(16)		↘ 6(14)		↘ 1(1)		↘ 1(1)	
4(3) →	62(43) →		37(26) →	33(23) →	4(3) →	2(2) →		2(2) →	
						1(1) ↘		1(1) ↘	
Nominal	800	200	450	200	Nominal	Nominal	Nominal	Nominal	
11 Driveway 4 & Wilson Av.		12 College Dr. & Wilson Av.							
	Nominal		Nominal	##(##) AM(PM) Peak Hour Intersection Volumes					
	← 2(2)		← 2(2)	## Average Daily Trips					
	↘ 1(1)		↘ 2(1)						
1(1) →		1(1) →	0(1) ↘						
1(1) ↘		1(1) ↘							
Nominal	Nominal	Nominal	Nominal						

## 4.6 HORIZON YEAR (2051) CONDITIONS

Traffic projections for Horizon Year (2040) Without Project conditions were derived from the San Bernardino Transportation Analysis Model (SBTAM) using accepted procedures for model forecast refinement and smoothing for study area intersections located within the County of San Bernardino. The current version of the SBTAM reflects the local input in the adopted 2016 SCAG RTP within the County of San Bernardino.

The traffic forecasts reflect the area-wide growth anticipated between Existing (2021) conditions and Horizon Year (2040) traffic conditions. In most instances the traffic model zone structure is not designed to provide accurate turning movements along arterial roadways unless refinement and reasonableness checking is performed. Therefore, the Horizon Year (2040) peak hour forecasts were refined using the model derived long range forecasts, base (validation) year model forecasts, along with existing peak hour traffic count data collected at each analysis location in March 2019 and June 2021. The SBTAM has a base (validation) year of 2012 and a horizon (future forecast) year of 2040. The difference in model volumes (2040-2012) defines the growth in traffic over the 28-year period.

The refined future peak hour approach and departure volumes obtained from the model output data are then entered into a spreadsheet program consistent with the National Cooperative Highway Research Program (NCHRP Report 255), along with initial estimates of turning movement proportions. A linear programming algorithm is used to calculate individual turning movements which match the known directional roadway segment forecast volumes computed in the previous step. This program computes a likely set of intersection turning movements from intersection approach counts and the initial turning proportions from each approach leg.

The SBTAM uses an AM peak period-to-peak hour factor of 0.35 and a PM peak period-to-peak hour factor of 0.27. These factors represent the relationship of the highest single AM peak hour to the modeled 3-hour AM peak period (an even distribution would result in a factor of 0.33) and the highest single PM peak hour to the modeled 4-hour PM peak period (an even distribution would result in a factor of 0.25).

The fully adopted Southern California Association of Governments (SCAG) 2020 Regional Transportation Plan (RTP)/Southern California Strategies (SCS) (Connect SoCal) (September 2020) growth forecasts for City of Rancho Cucamonga identifies projected growth in population of 176,500 in 2016 to 204,300 in 2045, or a 14.1% increase over the 29-year period. (11) The change in population equates to roughly a 0.45% growth rate compounded annually. Similarly, growth over the same 29-year period in households is projected to increase by 16.9%, or 0.54% annual growth rate. Finally, growth in employment over the same 29-year period is projected to increase by 19.0%, or a 0.60% annual growth rate. The average household, population, and employment growth is 0.53% per year. (11)

The traffic model zone structure is not designed to provide accurate turning movements along arterial roadways unless refinement and reasonableness checking is performed. Horizon Year (2051) turning volumes were developed by taking the post-processed Horizon Year (2040) volumes and increasing them by 0.53% per year, compounded annually over 11 years (2040 to

2051). The initial estimate of the future Horizon Year (2051) peak hour turning movements were then reviewed by Urban Crossroads for reasonableness at intersections where model results showed unreasonable turning movements. The initial raw model estimates were adjusted to achieve flow conservation (where applicable), reasonable growth, and reasonable diversion between parallel routes. Post-processing worksheets for Horizon Year with Project traffic conditions are provided in Appendix 4.1.

The Horizon Year (2051) conditions analysis will be utilized to determine if improvements funded through regional transportation mitigation fee programs, such as the City's DIF program or other approved funding mechanisms, can accommodate the long-range cumulative traffic at the target LOS identified by the City of Rancho Cucamonga (lead agency). If the planned and funded improvements can provide the target LOS, then the Project's payment into established fee programs will be considered as cumulative improvements. Other improvements needed beyond the "funded" improvements (such as localized improvements to non-DIF facilities) are identified as such.

This Page Intentionally Left Blank



## 5 EXISTING PLUS PROJECT TRAFFIC ANALYSIS

This section discusses the traffic forecasts for E+P conditions and the resulting peak hour intersection operations and traffic signal warrant analyses.

### 5.1 E+P VOLUME FORECASTS

Project traffic has been added to Existing (2021) traffic volumes (no cumulative development project or ambient growth has been added for this analysis scenario). The weekday ADT and weekday AM and PM peak hour volumes which can be expected for E+P traffic conditions are shown on Exhibit 5-1.

### 5.2 INTERSECTION OPERATIONS ANALYSIS

E+P peak hour traffic operations have been evaluated for the study area intersections based on the analysis methodologies presented in Section 2 *Methodologies* of this TA. The intersection analysis results are summarized in Table 5-1, which indicates that the following intersection is anticipated to operate at an unacceptable LOS during the peak hours:

- Haven Av. & I-210 Eastbound Ramps (#8) – LOS E AM and PM peak hours

The intersection operations analysis worksheets for E+P traffic conditions are included in Appendix 5.1 of this TA.

TABLE 5-1: INTERSECTION ANALYSIS FOR E+P CONDITIONS

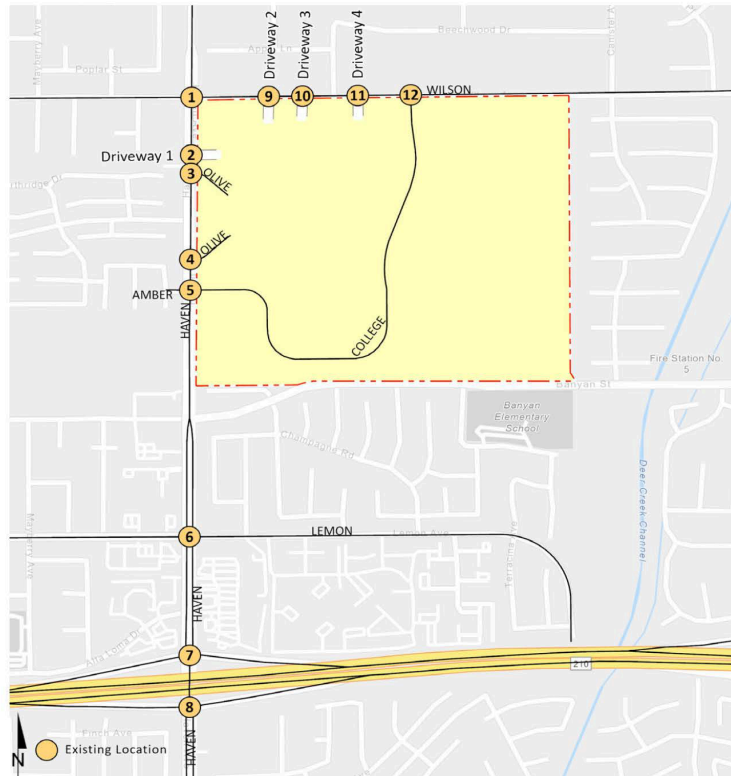
#	Intersection	Traffic Control <sup>2</sup>	Existing (2021)				E+P			
			Delay <sup>1</sup> (secs.)		Level of Service		Delay <sup>1</sup> (secs.)		Level of Service	
			AM	PM	AM	PM	AM	PM	AM	PM
1	Haven Av. & Wilson Av.	TS	18.2	16.8	B	B	18.3	16.8	B	B
2	Haven Av. & Driveway 1	CSS	10.5	10.5	B	B	10.5	10.5	B	B
3	Haven Av. & Olive Wy.-North	CSS	13.5	13.3	B	B	13.6	13.4	B	B
4	Haven Av. & Olive Wy.-South	CSS	11.7	11.9	B	B	11.8	12.0	B	B
5	Haven Av. & Amber Ln./College Dr.	TS	14.8	17.4	B	B	15.0	17.8	B	B
6	Haven Av. & Lemon Av.	TS	23.1	23.3	C	C	23.8	23.6	C	C
7	Haven Av. & I-210 WB Ramps	TS	34.8	45.2	C	D	35.8	47.6	D	D
8	Haven Av. & I-210 EB Ramps	TS	<b>56.8</b>	<b>60.9</b>	<b>E</b>	<b>E</b>	<b>59.4</b>	<b>64.4</b>	<b>E</b>	<b>E</b>
9	Driveway 2 & Wilson Av.	CSS	12.6	12.2	B	B	12.6	12.2	B	B
10	Driveway 3 & Wilson Av.	CSS	12.2	11.4	B	B	12.3	11.5	B	B
11	Driveway 4 & Wilson Av.	CSS	12.7	11.2	B	B	12.7	11.3	B	B
12	College Dr. & Wilson Av.	CSS	13.3	11.9	B	B	13.4	11.9	B	B

\* **BOLD** = Level of Service (LOS) does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

<sup>1</sup> Per the Highway Capacity Manual (6th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross-street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

<sup>2</sup> TS = Traffic Signal; CSS = Cross-street Stop

**EXHIBIT 5-1: E+P TRAFFIC VOLUMES (IN ACTUAL VEHICLES)**



1	Haven Av. & Wilson Av.	2	Haven Av. & Driveway 1	3	Haven Av. & N. Olive Wy.	4	Haven Av. & S. Olive Wy.	5	Haven Av. & College Dr.
5,950	8,450	9,750	600	10,150	600	11,700	2,350	13,500	16,100
24(17) ↓ 325(153) ↓ 16(33) ↑	31(60) ↑ 131(117) ↑ 74(202) ↑	456(422) ↓	3(8) ↑	456(421) ↓	4(8) ↑	486(505) ↓	5(23) ↑	3(2) ↓	9(10) ↑
9(54) →	39(71) ↑		367(892) ↑		18(42) ↑		361(469) ↑	397(459) ←	336(765) ↑
187(157) →	95(186) ↑		77(54) ↑		441(439) ↑		319(221) ↑	85(43) ↓	671(681) ↑
57(68) →	236(143) ↑						20(33) ↓	12(18) ↑	1090(687) ↑
5,650	9,750		10,150		10,550		13,500	650	29,150
6	Haven Av. & Lemon Av.	7	Haven Av. & I-210 WB Ramps	8	Haven Av. & I-210 EB Ramps	9	Driveway 2 & Wilson Av.	10	Driveway 3 & Wilson Av.
36,450	7,200	52,300	15,600	48,850	20,850		8,450		8,450
65(84) ↓	27(28) ↑	537(747) ↓	890(814) ↑	1002(1201) ↓	546(760) ↓		232(371) ←		245(373) ←
741(1448) ↓	51(40) ↑	1073(1406) ↓	8(5) ↑	1377(634) ↓			16(11) ↑		16(11) ↑
9(22) ↑	292(183) ↑		476(553) ↑	5(8) ↑			3(8) ↑		3(8) ↑
124(174) →	83(173) ↑		537(646) ↑	839(1586) ↑			423(322) →		412(320) →
24(103) →	2094(1484) ↑		1678(1574) ↑	335(313) ↓			16(11) ↓		16(11) ↓
65(111) →	94(228) ↑								3(8) ↑
8,050	41,300	16,750	48,850	10,350	48,700	8,450	400	8,450	400
11	Driveway 4 & Wilson Av.	12	College Dr. & Wilson Av.						
	8,450	8,600	8,600	#(###) AM(PM) Peak Hour Intersection Volumes					
				## Average Daily Trips					
	256(375) ←	268(377) ←							
	16(11) ↑	35(23) ↑							
	3(8) ↑	3(8) ↑							
400(317) →	3(8) ↑	385(315) →	3(8) ↑						
16(11) →	3(8) ↑	19(11) →	9(29) ↑						
8,450	400	8,400	550						

### 5.3 TRAFFIC SIGNAL WARRANTS ANALYSIS

Traffic signal warrants for E+P traffic conditions are based on E+P peak hour intersection turning volumes. There are no study area intersections that are anticipated to meet a traffic signal warrant under E+P traffic conditions. E+P traffic conditions traffic signal warrant analysis worksheets are provided in Appendix 5.2.

### 5.4 DEFICIENCIES AND IMPROVEMENTS

This section provides a summary of Project deficiencies and identified improvements. Based on the deficiency criteria discussed in Section 2.6 *Deficiency Criteria*, the following intersection was found to be deficient:

- Haven Av. & I-210 Eastbound Ramps (#8)

The effectiveness of the identified improvement strategies to address E+P traffic deficiencies are presented in Table 5-2 and described below. Improvements to address E+P traffic deficiencies should be identified to reduce the incremental Project delay in order to bring the LOS back to pre-project conditions. As such, the following improvements will be implemented/constructed by the Project.

**Haven Avenue & I-210 Eastbound Ramps (#8)** – The following improvement is necessary to address deficiencies during the peak hours:

- Restripe the northbound approach from three through lanes to accommodate two through lanes and a dedicated right turn lane.

Worksheets for E+P traffic conditions, with improvements, HCM calculation worksheets are provided in Appendix 5.3.

**TABLE 5-2: INTERSECTION ANALYSIS FOR E+P CONDITIONS WITH IMPROVEMENTS**

#	Intersection	Traffic Control <sup>3</sup>	Intersection Approach Lanes <sup>1</sup>												Delay <sup>2</sup> (secs.)		Level of Service		
			Northbound			Southbound			Eastbound			Westbound			AM	PM	AM	PM	
			L	T	R	L	T	R	L	T	R	L	T	R					
8	Haven Av. & I-210 EB Ramps																		
	Without Improvements:	TS	0	3	0	2	3	0	1	1	1	0	0	0	59.4	64.4	E	E	
	With Improvements:	TS	0	<u>2</u>	<u>1</u>	2	3	0	1	1	1	0	0	0	45.9	49.5	D	D	

<sup>1</sup> 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 (20-feet).

L = Left; T = Through; R = Right; 1 = Improvement; d = Defacto Right Turn Lane; > = Right Turn Overlap Phasing

<sup>2</sup> Per the Highway Capacity Manual (6th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross-street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

<sup>3</sup> TS = Traffic Signal

This Page Intentionally Left Blank

## 6 HORIZON YEAR (2051) TRAFFIC ANALYSIS

This section discusses the methods used to develop Horizon Year (2051) Without and With Project traffic forecasts and the resulting peak hour intersection operations and traffic signal warrant analyses.

### 6.1 ROADWAY IMPROVEMENTS

The lane configurations and traffic controls assumed to be in place for Horizon Year (2051) conditions are consistent with those shown previously on Exhibit 3-1, with the exception of the following:

- Other parallel facilities, that although not evaluated for the purposes of this analysis, are anticipated to be in place for Horizon Year traffic conditions and would affect the travel patterns within the study area.

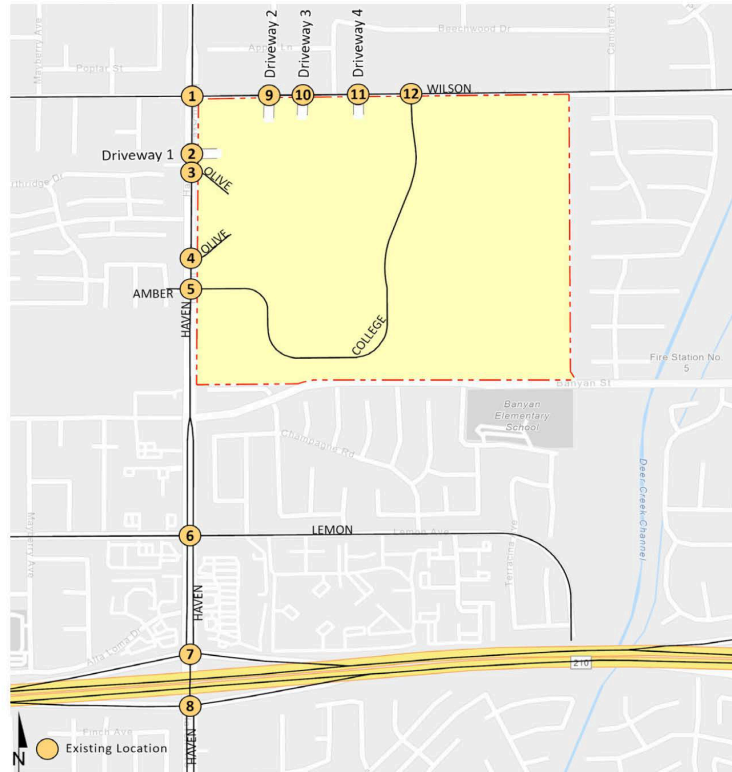
### 6.2 HORIZON YEAR (2051) WITHOUT PROJECT VOLUME FORECASTS

The Horizon Year (2051) Without Project analysis scenario includes the refined post-process volumes obtained from the SBTAM (see Section 4.6 *Horizon Year (2051) Conditions* of this TA for a detailed discussion on the post-processing methodology) plus 6.01% growth (or 0.53% per year compounded annually over 11 years to adjust 2040 SBTAM forecasts to Year 2051). The weekday ADT and weekday AM and PM peak hour volumes which can be expected for Horizon Year (2051) Without Project traffic conditions are shown on Exhibit 6-1.

### 6.3 HORIZON YEAR (2051) WITH PROJECT VOLUME FORECASTS

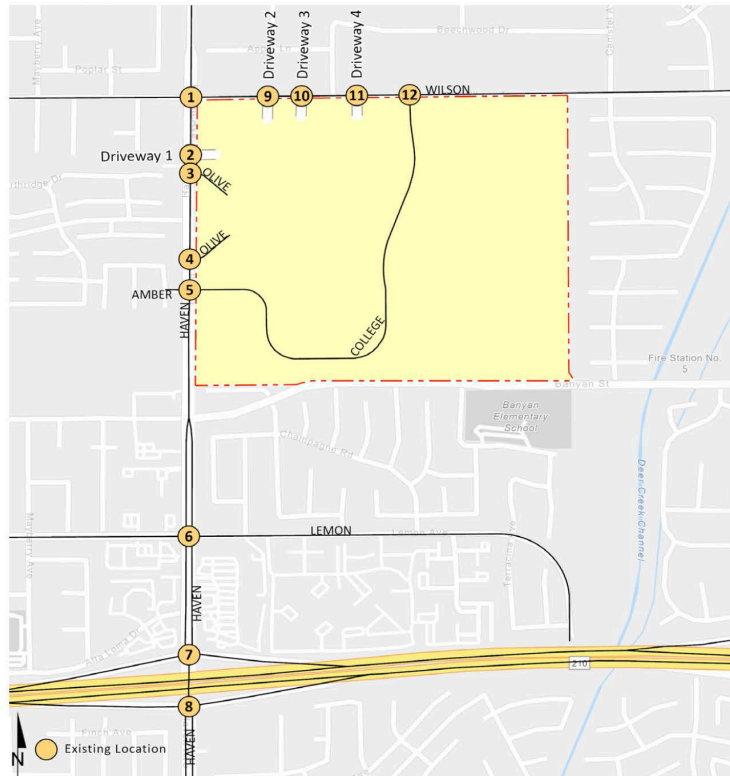
The Horizon Year (2051) Without Project analysis scenario as described in Section 6.2 plus the traffic generated by the buildout of the proposed Project. The weekday ADT and weekday AM and PM peak hour volumes which can be expected for Horizon Year (2051) With Project traffic conditions are shown on Exhibit 6-2.

**EXHIBIT 6-1: HORIZON YEAR (2051) WITHOUT PROJECT TRAFFIC VOLUMES (IN ACTUAL VEHICLES)**



1	Haven Av. & Wilson Av.	2	Haven Av. & Driveway 1	3	Haven Av. & N. Olive Wy.	4	Haven Av. & S. Olive Wy.	5	Haven Av. & College Dr.
6,450 28(19) 365(195) 14(52) 8(67) 230(313) 72(76) 7,050	12,750 37(72) 225(149) 125(221) 57(78) 111(190) 265(215) 11,350	11,400 562(492) 3(8) 430(475) 73(51) 11,850	650 562(492) 4(8) 17(40) 500(518) 12,300	13,600 565(587) 5(23) 419(547) 302(210) 15,600	16,250 5(2) 477(544) 82(41) 16(19) 711(747) 1039(652) 11,000 33,450	22,400 77(86) 878(1503) 11(22) 128(233) 24(129) 71(146) 8,600	7,100 27(30) 53(41) 302(194) 91(186) 2156(1625) 93(236) 28,550	54,500 556(763) 1162(1484) 548(638) 1731(1652) 16,550	15,000 930(843) 8(5) 513(552) 904(1731) 559(1114) 50,450
6	Haven Av. & Lemon Av.	7	Haven Av. & I-210 WB Ramps	8	Haven Av. & I-210 EB Ramps	9	Driveway 2 & Wilson Av.	10	Driveway 3 & Wilson Av.
8,600	28,550	16,550	50,450	8,950	51,950	9,850	450	9,850	450
11	Driveway 4 & Wilson Av.	12	College Dr. & Wilson Av.						
9,850	9,850 409(438) 15(10) 468(567) 15(10) 450	19,600 421(440) 33(22) 453(565) 18(10) 350	###(###) AM(PM) Peak Hour Intersection Volumes ## Average Daily Trips						

**EXHIBIT 6-2: HORIZON YEAR (2051) WITH PROJECT TRAFFIC VOLUMES (IN ACTUAL VEHICLES)**



1 Haven Av. & Wilson Av.	2 Haven Av. & Driveway 1	3 Haven Av. & N. Olive Wy.	4 Haven Av. & S. Olive Wy.	5 Haven Av. & College Dr.																																																																				
<table border="1"> <tr><td>6,450</td><td>12,800</td></tr> <tr><td>28(19)</td><td>37(72)</td></tr> <tr><td>367(197)</td><td>226(151)</td></tr> <tr><td>14(52)</td><td>125(221)</td></tr> <tr><td>8(67)</td><td>57(78)</td></tr> <tr><td>233(315)</td><td>112(191)</td></tr> <tr><td>73(77)</td><td>265(215)</td></tr> <tr><td>7,100</td><td>11,400</td></tr> </table>	6,450	12,800	28(19)	37(72)	367(197)	226(151)	14(52)	125(221)	8(67)	57(78)	233(315)	112(191)	73(77)	265(215)	7,100	11,400	<table border="1"> <tr><td>11,450</td><td>700</td></tr> <tr><td>565(494)</td><td>3(8)</td></tr> <tr><td>431(476)</td><td>77(54)</td></tr> <tr><td>11,900</td><td>11,900</td></tr> </table>	11,450	700	565(494)	3(8)	431(476)	77(54)	11,900	11,900	<table border="1"> <tr><td>11,900</td><td>700</td></tr> <tr><td>565(494)</td><td>4(8)</td></tr> <tr><td>18(42)</td><td>505(522)</td></tr> <tr><td>12,350</td><td>12,350</td></tr> </table>	11,900	700	565(494)	4(8)	18(42)	505(522)	12,350	12,350	<table border="1"> <tr><td>13,700</td><td>2,750</td></tr> <tr><td>569(592)</td><td>5(23)</td></tr> <tr><td>423(550)</td><td>319(221)</td></tr> <tr><td>15,800</td><td>15,800</td></tr> </table>	13,700	2,750	569(592)	5(23)	423(550)	319(221)	15,800	15,800	<table border="1"> <tr><td>16,450</td><td>11,800</td></tr> <tr><td>5(2)</td><td>9(10)</td></tr> <tr><td>478(546)</td><td>336(765)</td></tr> <tr><td>85(43)</td><td>16(19)</td></tr> <tr><td>21(32)</td><td>732(761)</td></tr> <tr><td></td><td>1090(687)</td></tr> <tr><td></td><td>16,400</td></tr> </table>	16,450	11,800	5(2)	9(10)	478(546)	336(765)	85(43)	16(19)	21(32)	732(761)		1090(687)		16,400														
6,450	12,800																																																																							
28(19)	37(72)																																																																							
367(197)	226(151)																																																																							
14(52)	125(221)																																																																							
8(67)	57(78)																																																																							
233(315)	112(191)																																																																							
73(77)	265(215)																																																																							
7,100	11,400																																																																							
11,450	700																																																																							
565(494)	3(8)																																																																							
431(476)	77(54)																																																																							
11,900	11,900																																																																							
11,900	700																																																																							
565(494)	4(8)																																																																							
18(42)	505(522)																																																																							
12,350	12,350																																																																							
13,700	2,750																																																																							
569(592)	5(23)																																																																							
423(550)	319(221)																																																																							
15,800	15,800																																																																							
16,450	11,800																																																																							
5(2)	9(10)																																																																							
478(546)	336(765)																																																																							
85(43)	16(19)																																																																							
21(32)	732(761)																																																																							
	1090(687)																																																																							
	16,400																																																																							
6 Haven Av. & Lemon Av.	7 Haven Av. & I-210 WB Ramps	8 Haven Av. & I-210 EB Ramps	9 Driveway 2 & Wilson Av.	10 Driveway 3 & Wilson Av.																																																																				
<table border="1"> <tr><td>23,300</td><td>7,100</td></tr> <tr><td>78(88)</td><td>28(31)</td></tr> <tr><td>892(1537)</td><td>53(41)</td></tr> <tr><td>11(22)</td><td>302(194)</td></tr> <tr><td>132(236)</td><td>91(186)</td></tr> <tr><td>24(129)</td><td>2218(1668)</td></tr> <tr><td>71(146)</td><td>93(236)</td></tr> <tr><td>8,650</td><td>29,350</td></tr> </table>	23,300	7,100	78(88)	28(31)	892(1537)	53(41)	11(22)	302(194)	132(236)	91(186)	24(129)	2218(1668)	71(146)	93(236)	8,650	29,350	<table border="1"> <tr><td>55,300</td><td>15,150</td></tr> <tr><td>564(781)</td><td>955(860)</td></tr> <tr><td>1169(1500)</td><td>8(5)</td></tr> <tr><td>513(552)</td><td>548(638)</td></tr> <tr><td>1768(1678)</td><td>1768(1678)</td></tr> <tr><td>50,900</td><td>50,900</td></tr> </table>	55,300	15,150	564(781)	955(860)	1169(1500)	8(5)	513(552)	548(638)	1768(1678)	1768(1678)	50,900	50,900	<table border="1"> <tr><td>50,900</td><td>22,300</td></tr> <tr><td>1094(1273)</td><td>908(1734)</td></tr> <tr><td>588(779)</td><td>559(1114)</td></tr> <tr><td>1408(582)</td><td>338(314)</td></tr> <tr><td>5(7)</td><td>908(1734)</td></tr> <tr><td>908(1734)</td><td>559(1114)</td></tr> <tr><td>52,000</td><td>52,000</td></tr> </table>	50,900	22,300	1094(1273)	908(1734)	588(779)	559(1114)	1408(582)	338(314)	5(7)	908(1734)	908(1734)	559(1114)	52,000	52,000	<table border="1"> <tr><td>9,900</td><td>9,900</td></tr> <tr><td>385(435)</td><td>16(11)</td></tr> <tr><td>16(11)</td><td>3(8)</td></tr> <tr><td>3(8)</td><td>3(8)</td></tr> <tr><td>495(573)</td><td>16(11)</td></tr> <tr><td>16(11)</td><td>450</td></tr> <tr><td>9,900</td><td>450</td></tr> </table>	9,900	9,900	385(435)	16(11)	16(11)	3(8)	3(8)	3(8)	495(573)	16(11)	16(11)	450	9,900	450	<table border="1"> <tr><td>9,900</td><td>9,900</td></tr> <tr><td>398(437)</td><td>16(11)</td></tr> <tr><td>16(11)</td><td>3(8)</td></tr> <tr><td>483(571)</td><td>16(11)</td></tr> <tr><td>16(11)</td><td>450</td></tr> <tr><td>9,900</td><td>450</td></tr> </table>	9,900	9,900	398(437)	16(11)	16(11)	3(8)	483(571)	16(11)	16(11)	450	9,900	450
23,300	7,100																																																																							
78(88)	28(31)																																																																							
892(1537)	53(41)																																																																							
11(22)	302(194)																																																																							
132(236)	91(186)																																																																							
24(129)	2218(1668)																																																																							
71(146)	93(236)																																																																							
8,650	29,350																																																																							
55,300	15,150																																																																							
564(781)	955(860)																																																																							
1169(1500)	8(5)																																																																							
513(552)	548(638)																																																																							
1768(1678)	1768(1678)																																																																							
50,900	50,900																																																																							
50,900	22,300																																																																							
1094(1273)	908(1734)																																																																							
588(779)	559(1114)																																																																							
1408(582)	338(314)																																																																							
5(7)	908(1734)																																																																							
908(1734)	559(1114)																																																																							
52,000	52,000																																																																							
9,900	9,900																																																																							
385(435)	16(11)																																																																							
16(11)	3(8)																																																																							
3(8)	3(8)																																																																							
495(573)	16(11)																																																																							
16(11)	450																																																																							
9,900	450																																																																							
9,900	9,900																																																																							
398(437)	16(11)																																																																							
16(11)	3(8)																																																																							
483(571)	16(11)																																																																							
16(11)	450																																																																							
9,900	450																																																																							
11 Driveway 4 & Wilson Av.	12 College Dr. & Wilson Av.	##(##) AM(PM) Peak Hour Intersection Volumes ## Average Daily Trips																																																																						
<table border="1"> <tr><td>9,900</td><td>9,900</td></tr> <tr><td>411(440)</td><td>423(442)</td></tr> <tr><td>16(11)</td><td>35(23)</td></tr> <tr><td>469(568)</td><td>454(566)</td></tr> <tr><td>16(11)</td><td>19(11)</td></tr> <tr><td>3(8)</td><td>3(8)</td></tr> <tr><td>3(8)</td><td>9(29)</td></tr> <tr><td>9,900</td><td>12,800</td></tr> </table>	9,900	9,900	411(440)	423(442)	16(11)	35(23)	469(568)	454(566)	16(11)	19(11)	3(8)	3(8)	3(8)	9(29)	9,900	12,800	<table border="1"> <tr><td>19,650</td><td>350</td></tr> <tr><td>423(442)</td><td>35(23)</td></tr> <tr><td>35(23)</td><td>3(8)</td></tr> <tr><td>454(566)</td><td>9(29)</td></tr> <tr><td>19(11)</td><td>3(8)</td></tr> <tr><td>3(8)</td><td>9(29)</td></tr> <tr><td>12,800</td><td>350</td></tr> </table>	19,650	350	423(442)	35(23)	35(23)	3(8)	454(566)	9(29)	19(11)	3(8)	3(8)	9(29)	12,800	350																																									
9,900	9,900																																																																							
411(440)	423(442)																																																																							
16(11)	35(23)																																																																							
469(568)	454(566)																																																																							
16(11)	19(11)																																																																							
3(8)	3(8)																																																																							
3(8)	9(29)																																																																							
9,900	12,800																																																																							
19,650	350																																																																							
423(442)	35(23)																																																																							
35(23)	3(8)																																																																							
454(566)	9(29)																																																																							
19(11)	3(8)																																																																							
3(8)	9(29)																																																																							
12,800	350																																																																							

## 6.4 INTERSECTION OPERATIONS ANALYSIS

Horizon Year (2051) Without and With Project peak hour traffic operations have been evaluated for the study area intersections based on the analysis methodologies presented in Section 2 *Methodologies* of this TA. The intersection analysis results are summarized in Table 6-1 for both Horizon Year (2051) Without and With Project traffic conditions.

### 6.4.1 HORIZON YEAR (2051) WITHOUT PROJECT CONDITIONS

As shown in Table 6-1, the following study area intersection is anticipated to operate at an unacceptable LOS during the peak hours under Horizon Year (2051) Without Project conditions:

- Haven Av. & I-210 Eastbound Ramps (#8) – LOS E AM and PM peak hours

The intersection operations analysis worksheets for Horizon Year (2051) Without Project traffic conditions are included in Appendix 6.1 of this TA.

### 6.4.2 HORIZON YEAR (2051) WITH PROJECT CONDITIONS

There are no additional study area intersections that are anticipated to operate at an unacceptable LOS during the peak hours with the addition of Project traffic. The intersection operations analysis worksheets for Horizon Year (2051) With Project traffic conditions are included in Appendix 6.2 of this TA.

**TABLE 6-1: INTERSECTION ANALYSIS FOR HORIZON YEAR (2051) CONDITIONS**

#	Intersection	Traffic Control <sup>2</sup>	2051 Without Project				2051 With Project			
			Delay <sup>1</sup> (secs.)		Level of Service		Delay <sup>1</sup> (secs.)		Level of Service	
			AM	PM	AM	PM	AM	PM	AM	PM
1	Haven Av. & Wilson Av.	TS	20.4	20.1	C	C	20.5	20.1	C	C
2	Haven Av. & Driveway 1	CSS	10.8	10.8	B	B	10.8	10.8	B	B
3	Haven Av. & Olive Wy.-North	CSS	14.4	14.4	B	B	14.5	14.5	B	B
4	Haven Av. & Olive Wy.-South	CSS	12.0	12.3	B	B	12.1	12.4	B	B
5	Haven Av. & Amber Ln./College Dr.	TS	15.0	17.6	B	B	15.1	18.1	B	B
6	Haven Av. & Lemon Av.	TS	25.5	27.7	C	C	26.7	28.3	C	C
7	Haven Av. & I-210 WB Ramps	TS	42.0	53.4	D	D	44.4	54.1	D	D
8	Haven Av. & I-210 EB Ramps	TS	<b>69.4</b>	<b>78.8</b>	<b>E</b>	<b>E</b>	<b>72.0</b>	<b>81.7</b>	<b>E</b>	<b>F</b>
9	Driveway 2 & Wilson Av.	CSS	14.2	14.4	B	B	14.2	14.5	B	B
10	Driveway 3 & Wilson Av.	CSS	13.5	14.0	B	B	13.5	14.0	B	B
11	Driveway 4 & Wilson Av.	CSS	14.1	13.6	B	B	14.2	13.6	B	B
12	College Dr. & Wilson Av.	CSS	15.4	13.7	C	B	15.4	13.7	C	B

\* **BOLD** = Level of Service (LOS) does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

<sup>1</sup> Per the Highway Capacity Manual (6th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross-street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

<sup>2</sup> TS = Traffic Signal; CSS = Cross-street Stop



## 6.5 TRAFFIC SIGNAL WARRANTS ANALYSIS

Traffic signal warrants for Horizon Year (2051) Without and With Project traffic conditions are based on peak hour intersection turning volumes. There are no study area intersections that are anticipated to meet a traffic signal warrant under either Horizon Year (2051) Without or With Project traffic conditions. Horizon Year (2051) Without Project traffic conditions traffic signal warrant analysis worksheets are provided in Appendix 6.3 and in Appendix 6.4 for Horizon Year (2051) With Project traffic conditions.

## 6.6 DEFICIENCIES AND IMPROVEMENTS

This section provides a summary of Project deficiencies and recommended improvements. Based on the deficiency criteria discussed in Section 2.6 *Deficiency Criteria*, the following intersection was found to be deficient:

- Haven Av. & I-210 Eastbound Ramps (#8)

The effectiveness of the identified improvement strategies to address Horizon Year (2051) traffic deficiencies are presented in Table 6-2 and discussed below. As noted previously in Section 5.4 *Deficiencies and Improvements*, the Project is to construct/implement the following improvement.

**Haven Avenue & I-210 Eastbound Ramps (#8)** – The following improvement is necessary to address deficiencies during the peak hours:

- Restripe the northbound approach from three through lanes to accommodate two through lanes and a dedicated right turn lane.

Worksheets for Horizon Year (2051) With Project conditions, with improvements, HCM calculation worksheets are provided in Appendix 6.5.

**TABLE 6-2: INTERSECTION ANALYSIS FOR HORIZON YEAR (2051) CONDITIONS WITH IMPROVEMENTS**

#	Intersection	Traffic Control <sup>3</sup>	Intersection Approach Lanes <sup>1</sup>												Delay <sup>2</sup> (secs.)		Level of Service		
			Northbound			Southbound			Eastbound			Westbound			AM	PM	AM	PM	
			L	T	R	L	T	R	L	T	R	L	T	R					
8	Haven Av. & I-210 EB Ramps																		
	Without Improvements:	TS	0	3	0	2	3	0	1	1	1	0	0	0	72.0	81.7	E	F	
	With Improvements:	TS	0	<u>2</u>	<u>1</u>	2	3	0	1	1	1	0	0	0	54.9	54.2	D	D	

<sup>1</sup> 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 (20-feet).

L = Left; T = Through; R = Right; 1 = Improvement; d = Defacto Right Turn Lane; > = Right Turn Overlap Phasing

<sup>2</sup> Per the Highway Capacity Manual (6th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross-street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

<sup>3</sup> TS = Traffic Signal

This Page Intentionally Left Blank

## 7 LOCAL AND REGIONAL FUNDING MECHANISMS

Transportation improvements within the City of Rancho Cucamonga are funded through a combination of direct project mitigation, fair share contributions or development impact fee programs, such as the County's Measure "I" Fund and the City of Rancho Cucamonga DIF program. Identification and timing of needed improvements is generally determined through local jurisdictions based upon a variety of factors. The proposed Project would be required to pay DIF fees.

### 7.1 MEASURE "I"

In 2004, the voters of San Bernardino County approved the 30-year connection of Measure "I," a one-half of one percent sales tax on retail transactions, through the year 2040, for transportation projects including, but not limited to, infrastructure improvements, commuter rail, public transit, and other identified improvements. The Measure "I" connection requires that a regional traffic impact fee be created to ensure development is paying its fair share. A regional Nexus study was prepared by SBCTA and concluded that each jurisdiction should include a regional fee component in their local programs in order to meet the Measure "I" requirement. The regional component assigns specific facilities and cost sharing formulas to each jurisdiction and was most recently updated in November 2011. Revenues collected through these programs are used in tandem with Measure "I" funds to deliver projects identified in the Nexus Study. While Measure "I" is a self-executing sales tax administered by SBCTA, it bears discussion here because the funds raised through Measure "I" have funded in the past and will continue to fund new transportation facilities in San Bernardino County.

### 7.2 CITY OF RANCHO CUCAMONGA DEVELOPMENT IMPACT FEE (DIF)

The City of Rancho Cucamonga adopted the latest update to their DIF program in July 2019. Fees from new residential, commercial, and industrial development are collected to fund Measure "I" compliant regional facilities as well as local facilities. Under the City's DIF program, the City may grant to developers a credit against specific components of fees when those developers construct certain facilities and landscaped medians identified in the list of improvements funded by the DIF program.

After the City's DIF fees are collected, they are placed in a separate restricted use account pursuant to the requirements of Government Code sections 66000 et seq. The timing to use the DIF fees is established through periodic capital improvement programs which are overseen by the City's Engineering Department. Periodic traffic counts, review of traffic accidents, and a review of traffic trends throughout the City are also periodically performed by City staff and consultants. The City uses this data to determine the timing of the improvements listed in its facilities list. The City also uses this data to ensure that the improvements listed on the facilities list are constructed before the LOS falls below the LOS performance standards adopted by the City. In this way, the improvements are constructed before the LOS falls below the City's LOS performance thresholds. The City's DIF program establishes a timeline to fund, design, and build the improvements.

This Page Intentionally Left Blank

## 8 REFERENCES

1. **San Bernardino Associated Governments.** *Congestion Management Program for County of San Bernardino.* County of San Bernardino : s.n., Updated June 2016.
2. **California Department of Transportation.** *Guide for the Preparation of Traffic Impact Studies.* December 2002.
3. **City of Rancho Cucamonga.** *City of Rancho Cucamonga Traffic Impact Analysis Guidelines.* Rancho Cucamonga : s.n., June 2020.
4. **Institute of Transportation Engineers.** *Trip Generation Manual.* 10th Edition. 2017.
5. **Transportation Research Board.** *Highway Capacity Manual (HCM).* 6th Edition. s.l. : National Academy of Sciences, 2016.
6. **California Department of Transportation.** California Manual on Uniform Traffic Control Devices (MUTCD). [book auth.] California Department of Transportation. *California Manual on Uniform Traffic Control Devices (CAMUTCD).* 2014.
7. **San Bernardino Associated Governments.** *Congestion Management Program for County of San Bernardino.* County of San Bernardino : s.n., Updated June 2016.
8. **Southern California Association of Governments.** *2020 Regional Transportation Plan/Sustainable Communities Strategy.* May 2020 (to be adopted September 2020).

This Page Intentionally Left Blank

**APPENDIX 1.1:**  
**APPROVED SCOPING AGREEMENT**

This Page Intentionally Left Blank





May 4, 2021 (Revised)

Mr. Jason Welday  
City of Rancho Cucamonga  
10500 Civic Center Drive  
Rancho Cucamonga, CA 91730

**SUBJECT: CHAFFEY COMMUNITY COLLEGE DISTRICT'S RANCHO CUCAMONGA CAMPUS MASTER PLAN  
TRAFFIC ANALYSIS SCOPING AGREEMENT (REVISED)**

Dear Mr. Jason Welday:

This letter has been prepared to document the recommended scoping assumptions for the proposed Chaffey Community College District's Rancho Cucamonga Campus Master Plan (**Project**), which is located on the southeast corner of Haven Avenue and Wilson Avenue in the City of Rancho Cucamonga. This letter describes the proposed analysis methodology, project trip generation, trip distribution, and project traffic assignment/project trips on the surrounding roadway network, which establish the draft proposed project study area. This scoping agreement has been prepared in accordance with the City of Rancho Cucamonga's Traffic Impact Analysis Guidelines (dated June 2020) (**TIA Guidelines**).

## **PROPOSED PROJECT**

Exhibit 1 identifies the general location of the proposed Project (Master Plan) in relation to the surrounding area. As shown on Exhibit 2, the proposed Project will include the demolition of approximately 127,000 square feet within 16 buildings (to be demolished and replaced with new modern buildings). As shown on Exhibit 3, 9 new buildings totaling 673,000 square feet of new construction is proposed in conjunction with renovation of 187,000 square feet and a new parking structure with approximately 650 parking spaces. Vehicular access will be maintained via existing driveways on Haven Avenue and Wilson Avenue. The proposed Project will be developed in 5 phases over 30 years. The pre-pandemic student headcount at the Chaffey College Rancho Cucamonga Campus was 16,474 students actively enrolled in Fall 2019. By 2051, the student count is anticipated to increase by approximately 5.65% resulting in a headcount of 17,404 students. The proposed study area analysis locations are shown on Exhibit 4.

## **TRIP GENERATION ASSUMPTIONS**

Trip generation represents the amount of traffic that is attracted and produced by a development and is based upon the specific land uses planned for a given project. In order to develop the traffic characteristics of the proposed project, the trip generation rates used for this analysis are based upon

information collected by the Institute of Transportation Engineers (ITE) as provided in their Trip Generation Manual, 10<sup>th</sup> Edition (2017) for the Junior/Community College land use (ITE Land Use Code 540). Trip generation rates for the proposed Project are shown in Table 1. The trip generation summary illustrating daily, and peak hour trip generation estimates for the proposed Project is also shown in Table 1.

**TABLE 1: PROJECT TRIP GENERATION SUMMARY**

Land Use <sup>1</sup>	Units <sup>2</sup>	ITE LU Code	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
<b>Project Trip Generation Rates:</b>									
Junior/Community College	STU	540	0.09	0.02	0.11	0.06	0.05	0.11	1.15

<sup>1</sup> Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, Tenth Edition (2017).

<sup>2</sup> STU - Students

Project Land Use	Quantity Units <sup>1</sup>	AM Peak Hour			PM Peak Hour			Daily
		In	Out	Total	In	Out	Total	
<b>Project Trip Generation Summary:</b>								
Chaffey College - Rancho Cucamonga	930 STU	83	19	102	57	45	102	1,070

<sup>1</sup> STU = Students

As shown in Table 1, the proposed Project is anticipated to generate a total of 1,070 two-way trips per day, with 102 AM peak hour trips and 102 PM peak hour trips.

## TRIP DISTRIBUTION ASSUMPTIONS

The Project trip distribution and assignment process represents the directional orientation of traffic to and from the Project site. Exhibit 5 illustrates the Project trip distribution patterns.

## PROPOSED STUDY AREA INTERSECTIONS

Consistent with the City’s TIA guidelines, the study area intersections were selected based on where Project is expected to add at least 50 peak hour trips (however, site adjacent and Project driveways have been included even with less than 50 peak hour trips). Exhibit 2 shows the proposed study area intersections.

## ANALYSIS SCENARIOS

Intersection analysis will be performed for the following analysis scenarios:

- Existing (2021) Conditions
- Existing Plus Project (E+P)
- Horizon Year (2051) Without Project
- Horizon Year (2051) With Project

In light of the current economic conditions and social-distancing practices in effect related to the COVID-19 pandemic, Urban Crossroads will work with City staff and local count companies in order to obtain historic counts for the study area intersections. We are proposing the application of a 2% per year growth factor be applied to any historic data provided by City staff for the purposes of establishing the baseline condition.

## INTERSECTION ANALYSIS METHODOLOGY

For the purposes of this analysis, signalized intersection operations analysis will be based on the methodology described in the Highway Capacity Manual (6<sup>th</sup> Edition). Intersection LOS operations are based on an intersection's average control delay. Unsignalized intersections will be evaluated using the methodology described in the HCM 6<sup>th</sup> Edition. At two-way or side-street stop-controlled intersections, LOS is calculated for each controlled movement and for the left turn movement from the major street, as well as for the intersection as a whole. For approaches composed of a single lane, the delay is computed as the average of all movements in that lane.

## LEVEL OF SERVICE CRITERIA

**City of Rancho Cucamonga:** Per the City's General Plan Mobility Element and TIA guidelines, the City of Rancho Cucamonga allows LOS D to be used as the maximum acceptable threshold for study area intersections and roadways.

**San Bernardino County CMP:** The CMP definition of deficiency is based on maintaining a level of service standard of LOS E or better, where feasible, except where an existing LOS F condition is identified in the CMP document.

## PROJECT DEFICIENCIES

Per the City’s TIA guidelines:

*The identification of project deficiencies is designed to identify potential LOS problems and to address them before they occur. This will also provide a framework for establishing transportation related project conditions by the City. Deficiencies beyond the boundaries of the City must be identified in the same fashion as impacts within the City. Jurisdictions with identified deficiencies will be provided an opportunity for review of the LOS analysis. It is the responsibility of the applicant to obtain written concurrence on proposed improvements from the affected jurisdictions.*

*For conformity with the CMP, the improvements on CMP roadways must bring the roadway into conformance with the LOS standards established for the CMP. However, the City may require conformance to higher standards, and will be determined in consultation with the City.*

*The LOS with improvements must be computed and shown on a map or table along with the traffic LOS without improvements. Delay values, volume/capacity ratios (if appropriate), or other measures of LOS must be included in the results (could be in an appendix) along with the letter designation.*

A key element of SB 743 is the elimination of automobile delay and level of service as the sole basis of determining CEQA impacts. The most recent CEQA guidelines, released in December 2018, recommend vehicle miles traveled (VMT) as the most appropriate measure of discerning project transportation impacts for the purposes of CEQA. However, SB 743 does not prevent a City or County from continuing to analyze delay or LOS as part of other plans (i.e., the general plan), studies, or ongoing network monitoring. VMT thresholds, methodology, analysis, and findings will be presented under separate cover from the focused traffic memo.

## FAIR SHARE CALCULATION METHODOLOGY

The following equation will be used to calculate the Project’s fair share:

$$\text{Fair Share \%} = \frac{\text{Project Total trips}}{2051 \text{ Net New Traffic}}$$

\* where Net New Traffic is 2051 With Project forecasts less existing baseline traffic

## **SPECIAL ISSUES**

The following special issues will be addressed in the focused traffic memo:

- Queuing analysis at the site adjacent intersections/Project driveways to determine adequate storage lengths.
- Traffic signal warrant analysis for all applicable unsignalized study area intersections.
- As noted previously, VMT analysis will be prepared under separate cover and will be prepared in accordance with the City's TIA guidelines (June 2020).

## **CUMULATIVE DEVELOPMENTS**

It is requested that the City provide a list of applicable cumulative development projects for inclusion in the traffic analysis.

If you have any questions or comments, I can be reached at (949) 861-0177.

URBAN CROSSROADS, INC.

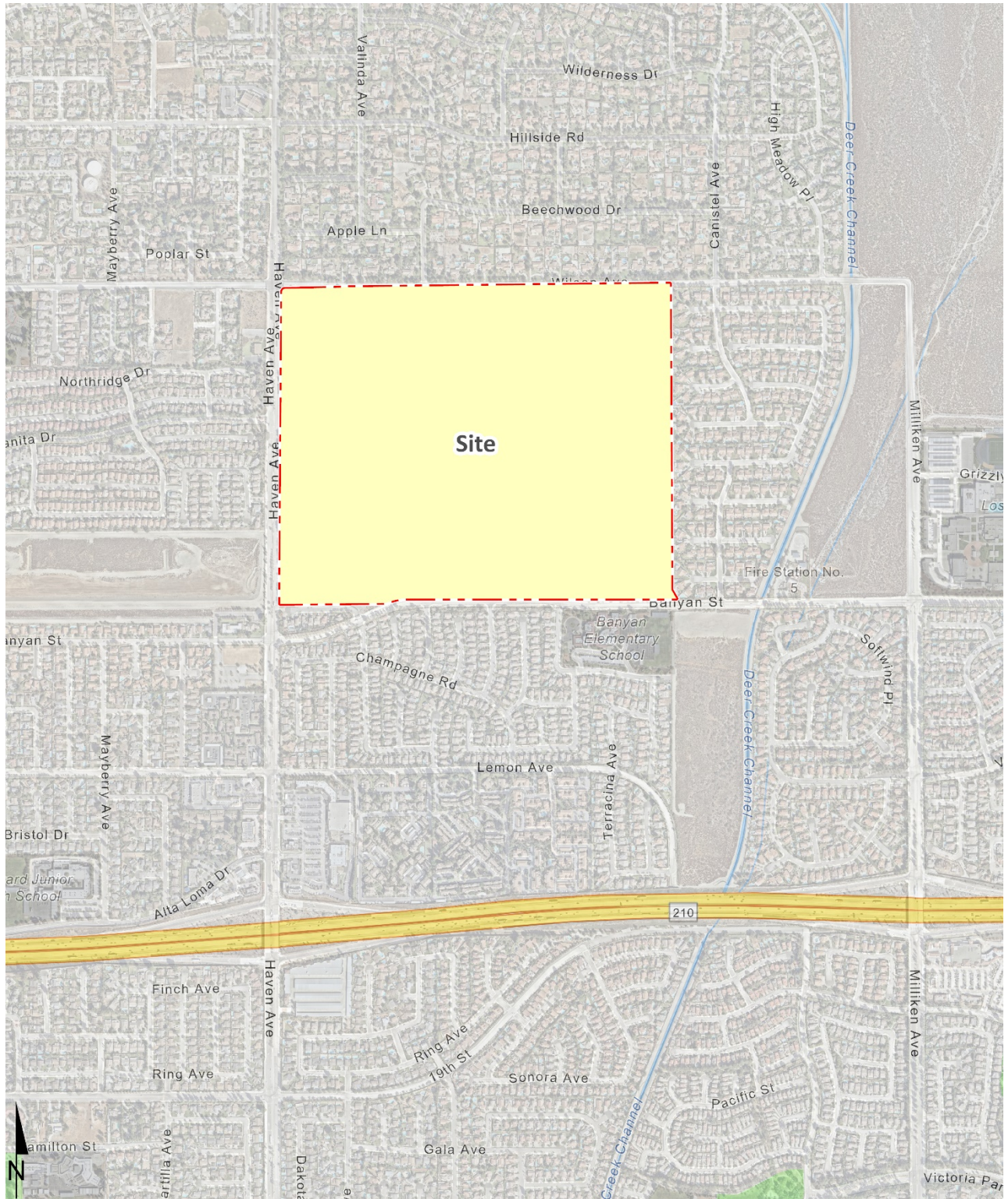


Charlene So, PE  
Associate Principal

Attachments

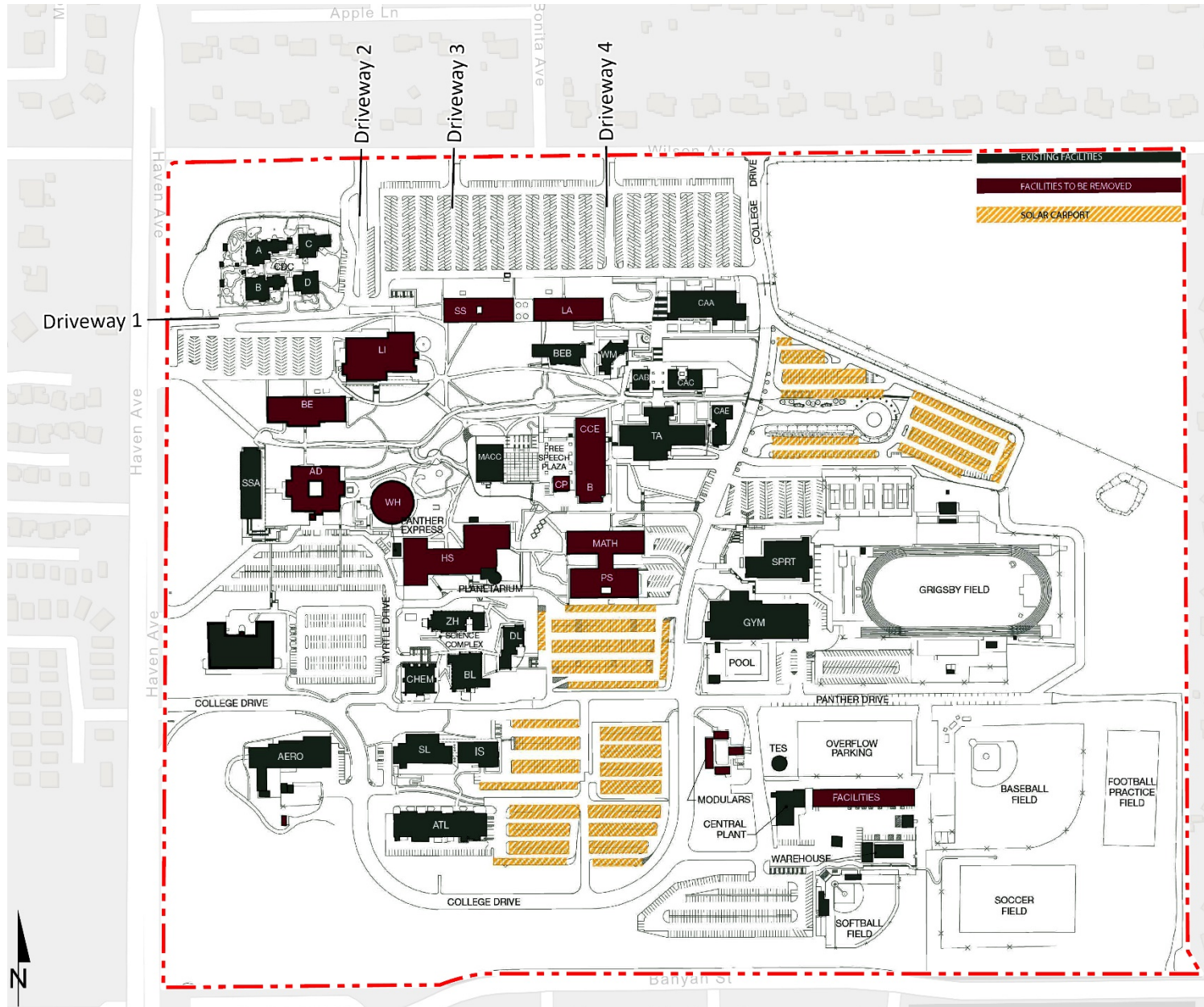


# EXHIBIT 1: LOCATION MAP

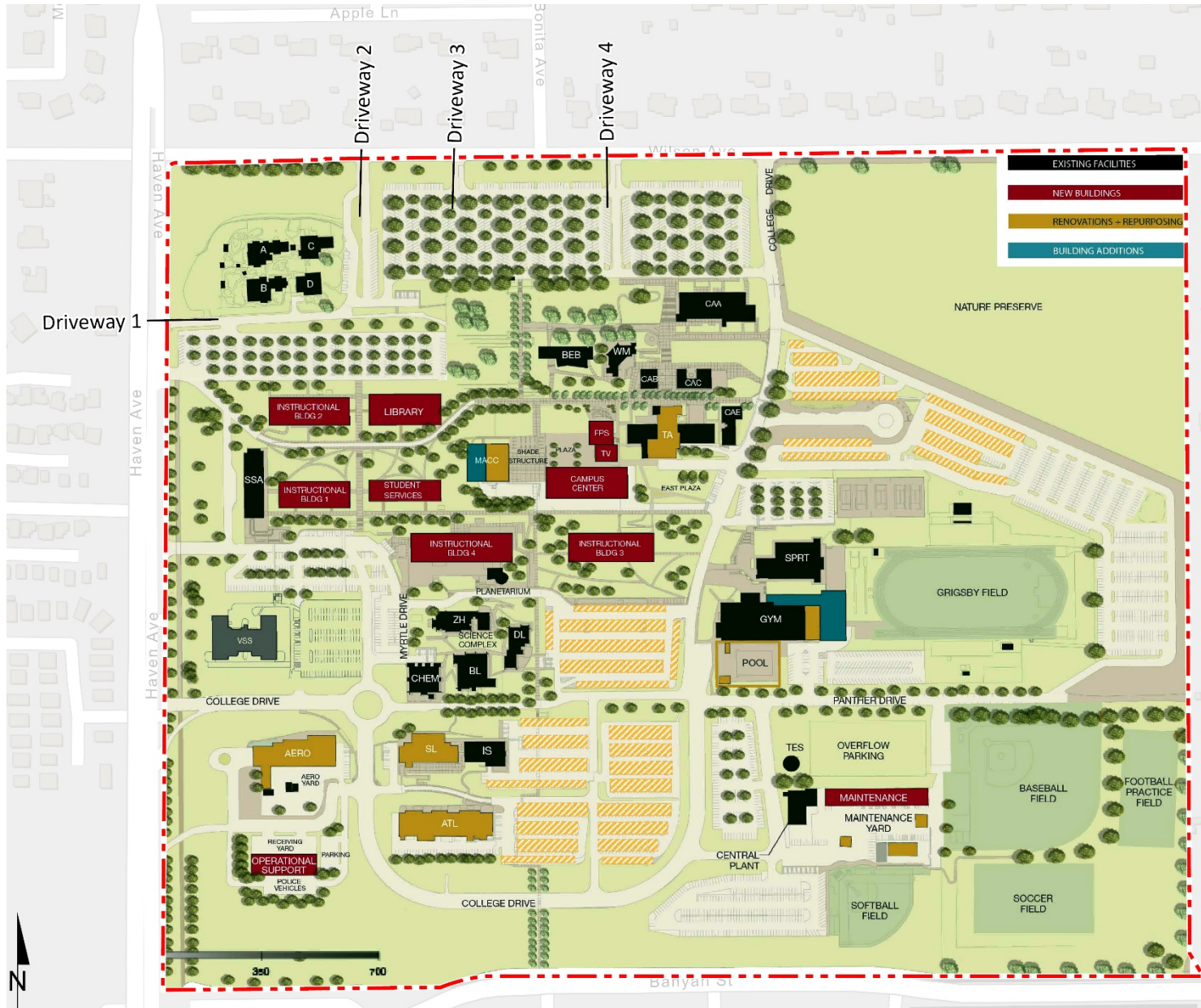




## EXHIBIT 2: AREAS TO BE DEMOLISHED

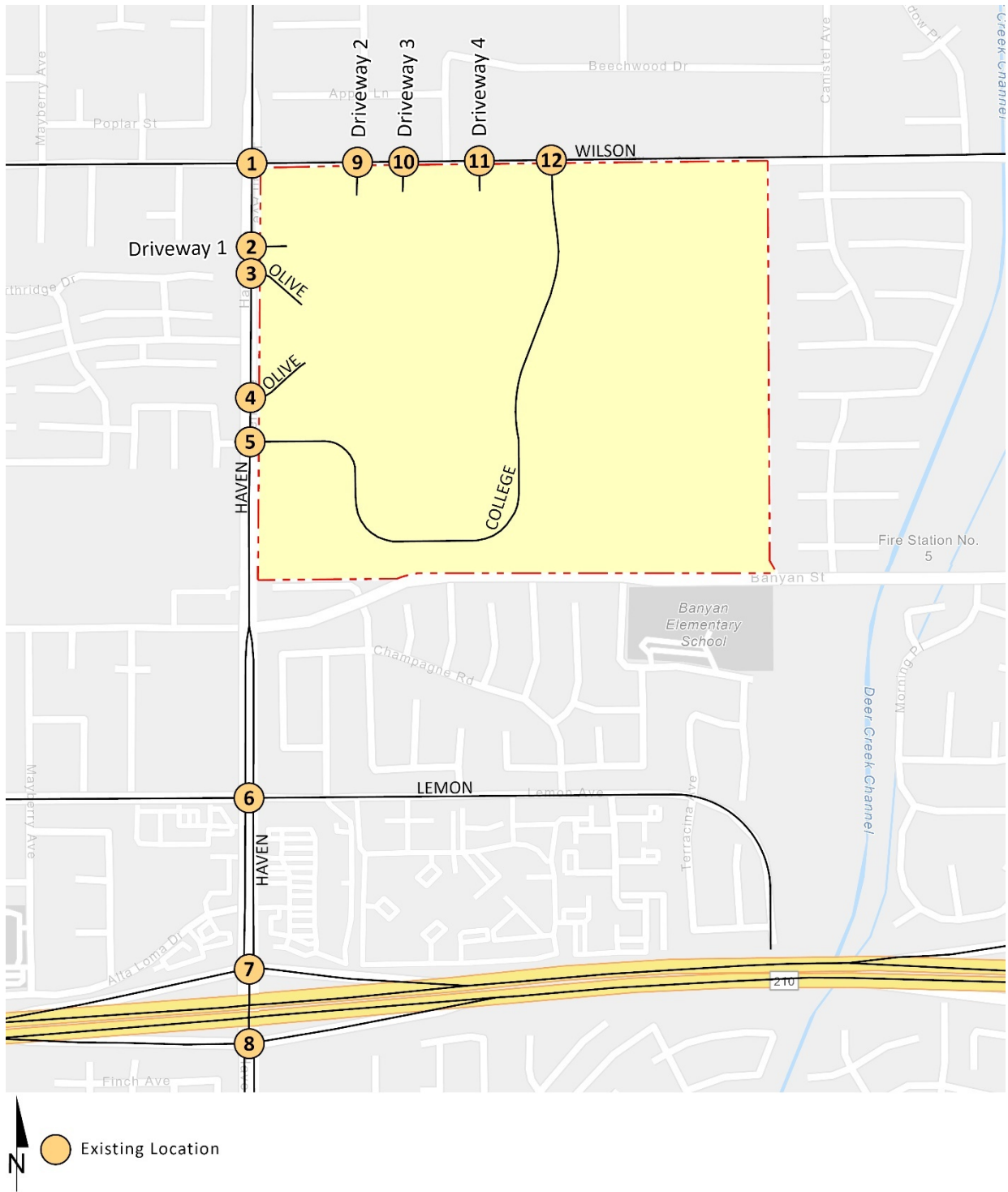


### EXHIBIT 3: PROPOSED NEW BUILDINGS

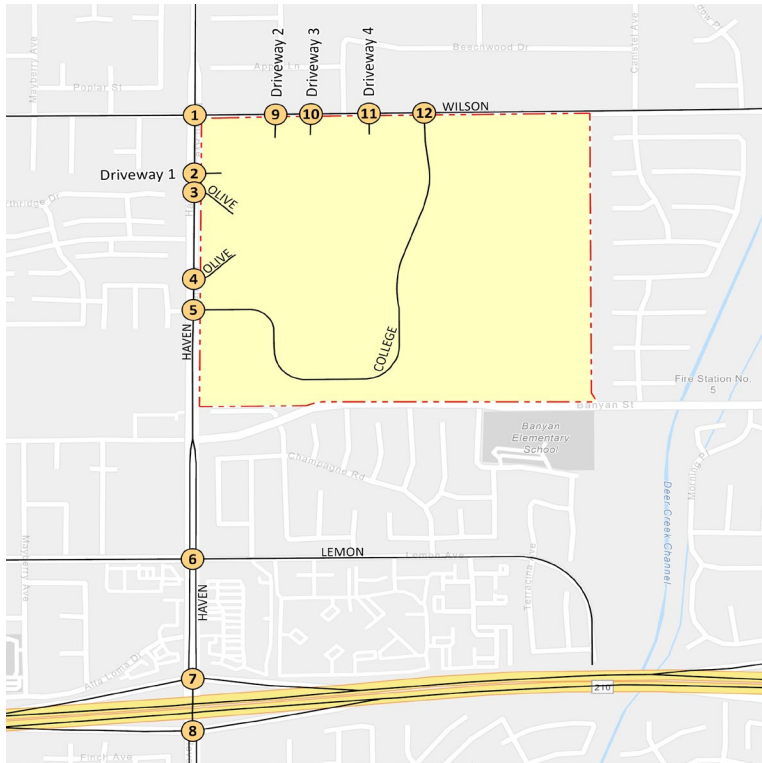




### EXHIBIT 4: STUDY AREA



### EXHIBIT 5: PROJECT TRIP DISTRIBUTION



1	Haven Av. & Wilson Av.	2	Haven Av. & Driveway 1	3	Haven Av. & N. Olive Wy.	4	Haven Av. & S. Olive Wy.	5	Haven Av. & College Dr.																																								
	<table border="1"> <tr> <td>← 3(0)</td> <td>↖ ↗ 0(4)</td> </tr> <tr> <td>4(0) →</td> <td>0(1) ↗</td> </tr> <tr> <td>1(0)</td> <td>0(2)</td> </tr> </table>	← 3(0)	↖ ↗ 0(4)	4(0) →	0(1) ↗	1(0)	0(2)		<table border="1"> <tr> <td>← 4(0)</td> <td>0(1) ↗</td> </tr> <tr> <td></td> <td>0(3) ↗</td> </tr> <tr> <td></td> <td>5(0)</td> </tr> </table>	← 4(0)	0(1) ↗		0(3) ↗		5(0)		<table border="1"> <tr> <td>← 4(0)</td> <td>0(1) ↗</td> </tr> <tr> <td></td> <td>0(5) ↗</td> </tr> <tr> <td></td> <td>5(2) ↗</td> </tr> </table>	← 4(0)	0(1) ↗		0(5) ↗		5(2) ↗		<table border="1"> <tr> <td>← 4(5)</td> <td>0(1) ↗</td> </tr> <tr> <td></td> <td>5(1) ↗</td> </tr> <tr> <td></td> <td>20(0)</td> </tr> </table>	← 4(5)	0(1) ↗		5(1) ↗		20(0)		<table border="1"> <tr> <td>← 0(5)</td> <td>0(1) ↗</td> </tr> <tr> <td></td> <td>4(6) ↗</td> </tr> <tr> <td></td> <td>0(82) ↗</td> </tr> <tr> <td></td> <td>25(0) ↗</td> </tr> <tr> <td></td> <td>62(0)</td> </tr> </table>	← 0(5)	0(1) ↗		4(6) ↗		0(82) ↗		25(0) ↗		62(0)						
← 3(0)	↖ ↗ 0(4)																																																
4(0) →	0(1) ↗																																																
1(0)	0(2)																																																
← 4(0)	0(1) ↗																																																
	0(3) ↗																																																
	5(0)																																																
← 4(0)	0(1) ↗																																																
	0(5) ↗																																																
	5(2) ↗																																																
← 4(5)	0(1) ↗																																																
	5(1) ↗																																																
	20(0)																																																
← 0(5)	0(1) ↗																																																
	4(6) ↗																																																
	0(82) ↗																																																
	25(0) ↗																																																
	62(0)																																																
6	Haven Av. & Lemon Av.	7	Haven Av. & I-210 WB Ramps	8	Haven Av. & I-210 EB Ramps	9	Driveway 2 & Wilson Av.	10	Driveway 3 & Wilson Av.																																								
	<table border="1"> <tr> <td>↖ 0(5)</td> <td>1(0)</td> </tr> <tr> <td>← 0(75)</td> <td></td> </tr> <tr> <td>0(6)</td> <td>↗ 75(0)</td> </tr> <tr> <td>5(0)</td> <td>→</td> </tr> </table>	↖ 0(5)	1(0)	← 0(75)		0(6)	↗ 75(0)	5(0)	→		<table border="1"> <tr> <td>↖ 0(40)</td> <td>30(0)</td> </tr> <tr> <td>← 0(35)</td> <td></td> </tr> <tr> <td></td> <td>↗ 45(0)</td> </tr> <tr> <td></td> <td>→</td> </tr> </table>	↖ 0(40)	30(0)	← 0(35)			↗ 45(0)		→		<table border="1"> <tr> <td>← 0(5)</td> <td>0(60)</td> </tr> <tr> <td></td> <td></td> </tr> <tr> <td>40(0)</td> <td>↗ 5(0)</td> </tr> <tr> <td></td> <td>→</td> </tr> </table>	← 0(5)	0(60)			40(0)	↗ 5(0)		→		<table border="1"> <tr> <td>↖ 0(3)</td> <td>↗ 1(0)</td> </tr> <tr> <td>↖ 1(0)</td> <td>↗ 0(1)</td> </tr> <tr> <td>3(0) →</td> <td>0(1)</td> </tr> <tr> <td>1(0)</td> <td>0(1)</td> </tr> </table>	↖ 0(3)	↗ 1(0)	↖ 1(0)	↗ 0(1)	3(0) →	0(1)	1(0)	0(1)		<table border="1"> <tr> <td>← 1(2)</td> <td>↗ 1(0)</td> </tr> <tr> <td></td> <td></td> </tr> <tr> <td>2(1) →</td> <td>0(1)</td> </tr> <tr> <td>1(0)</td> <td></td> </tr> </table>	← 1(2)	↗ 1(0)			2(1) →	0(1)	1(0)	
↖ 0(5)	1(0)																																																
← 0(75)																																																	
0(6)	↗ 75(0)																																																
5(0)	→																																																
↖ 0(40)	30(0)																																																
← 0(35)																																																	
	↗ 45(0)																																																
	→																																																
← 0(5)	0(60)																																																
40(0)	↗ 5(0)																																																
	→																																																
↖ 0(3)	↗ 1(0)																																																
↖ 1(0)	↗ 0(1)																																																
3(0) →	0(1)																																																
1(0)	0(1)																																																
← 1(2)	↗ 1(0)																																																
2(1) →	0(1)																																																
1(0)																																																	
11	Driveway 4 & Wilson Av.	12	College Dr. & Wilson Av.																																														
	<table border="1"> <tr> <td></td> <td>↖ 2(1)</td> </tr> <tr> <td></td> <td>↖ 1(0)</td> </tr> <tr> <td>1(2) →</td> <td>0(1)</td> </tr> <tr> <td>1(0)</td> <td>0(1)</td> </tr> </table>		↖ 2(1)		↖ 1(0)	1(2) →	0(1)	1(0)	0(1)		<table border="1"> <tr> <td>↖ 3(0)</td> <td>↗ 2(0)</td> </tr> <tr> <td>↖ 2(0)</td> <td>↗ 0(2)</td> </tr> <tr> <td>0(3) →</td> <td>0(1)</td> </tr> <tr> <td>1(0)</td> <td>0(1)</td> </tr> </table>	↖ 3(0)	↗ 2(0)	↖ 2(0)	↗ 0(2)	0(3) →	0(1)	1(0)	0(1)																														
	↖ 2(1)																																																
	↖ 1(0)																																																
1(2) →	0(1)																																																
1(0)	0(1)																																																
↖ 3(0)	↗ 2(0)																																																
↖ 2(0)	↗ 0(2)																																																
0(3) →	0(1)																																																
1(0)	0(1)																																																

##(##) Percent Inbound(Outbound) Peak Hour Distribution

**APPENDIX 1.2:**  
**SITE ADJACENT QUEUING WORKSHEETS**

This Page Intentionally Left Blank1

Queuing and Blocking Report  
 Horizon Year (2051) With Project - AM Peak Hour

07/30/2021

Intersection: 1: Haven Av. & Wilson Av.

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	SB
Directions Served	L	T	R	L	T	T	R	L	T	T	R	L
Maximum Queue (ft)	30	175	72	177	70	64	38	66	103	118	164	26
Average Queue (ft)	3	90	26	50	30	20	10	26	21	26	41	6
95th Queue (ft)	16	153	52	104	62	49	27	53	63	74	95	23
Link Distance (ft)		1277	1277		557	557			464	464	464	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	100			215			250	100				100
Storage Blk Time (%)		5							0			
Queuing Penalty (veh)		0							0			

Intersection: 1: Haven Av. & Wilson Av.

Movement	SB	SB	SB
Directions Served	T	T	R
Maximum Queue (ft)	128	146	17
Average Queue (ft)	36	78	4
95th Queue (ft)	83	128	16
Link Distance (ft)	1269	1269	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			150
Storage Blk Time (%)	0	1	
Queuing Penalty (veh)	0	0	

Intersection: 2: Haven Av. & Driveway 1

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 3: Haven Av. & Olive Wy. - North

Movement	WB	WB
Directions Served	L	R
Maximum Queue (ft)	49	30
Average Queue (ft)	14	9
95th Queue (ft)	37	31
Link Distance (ft)	393	393
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 4: Haven Av. & Olive Wy. - South

Movement	WB	NB	NB
Directions Served	R	T	TR
Maximum Queue (ft)	27	141	150
Average Queue (ft)	5	6	5
95th Queue (ft)	23	50	50
Link Distance (ft)	297	220	220
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 5: Haven Av. & Amber Ln./College Dr.

Movement	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LTR	L	LTR	L	T	T	TR	L	T	T	TR
Maximum Queue (ft)	31	161	132	49	1152	1899	2139	96	97	96	125
Average Queue (ft)	18	80	54	13	238	1398	1597	48	38	43	39
95th Queue (ft)	42	133	102	38	845	1839	2059	86	82	84	85
Link Distance (ft)	156	527	527	2163	2163	2163	2163	220	220	220	220
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)											
Storage Blk Time (%)											
Queuing Penalty (veh)											

Intersection: 9: Driveway 2 & Wilson Av.

Movement	WB	NB
Directions Served	L	R
Maximum Queue (ft)	31	31
Average Queue (ft)	3	4
95th Queue (ft)	17	21
Link Distance (ft)		195
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	100	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 10: Driveway 3 & Wilson Av.

Movement	WB	NB
Directions Served	L	LR
Maximum Queue (ft)	29	30
Average Queue (ft)	6	6
95th Queue (ft)	25	25
Link Distance (ft)		96
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	60	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 11: Driveway 4 & Wilson Av.

Movement	WB	NB
Directions Served	L	LR
Maximum Queue (ft)	28	30
Average Queue (ft)	7	2
95th Queue (ft)	27	14
Link Distance (ft)		97
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	100	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 12: College Dr. & Wilson Av.

Movement	WB	NB	NB
Directions Served	L	L	R
Maximum Queue (ft)	31	29	28
Average Queue (ft)	8	2	4
95th Queue (ft)	30	14	21
Link Distance (ft)	344		
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	170	50	
Storage Blk Time (%)			
Queuing Penalty (veh)			

Zone Summary

Zone wide Queuing Penalty: 1



Queuing and Blocking Report  
 Horizon Year (2051) With Project - PM Peak Hour

07/30/2021

Intersection: 1: Haven Av. & Wilson Av.

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	SB
Directions Served	L	T	R	L	T	T	R	L	T	T	R	L
Maximum Queue (ft)	149	212	60	167	63	70	42	104	83	110	120	78
Average Queue (ft)	38	115	27	83	26	26	15	44	23	37	45	33
95th Queue (ft)	96	182	52	138	53	59	32	89	59	81	91	67
Link Distance (ft)		1277	1277		557	557			464	464	464	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	100			215			250	100				100
Storage Blk Time (%)		11		0				1	0			0
Queuing Penalty (veh)		8		0				1	0			0

Intersection: 1: Haven Av. & Wilson Av.

Movement	SB	SB	SB
Directions Served	T	T	R
Maximum Queue (ft)	57	124	18
Average Queue (ft)	16	51	5
95th Queue (ft)	43	100	17
Link Distance (ft)	1269	1269	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			150
Storage Blk Time (%)		0	
Queuing Penalty (veh)		0	

Intersection: 2: Haven Av. & Driveway 1

Movement	WB
Directions Served	R
Maximum Queue (ft)	31
Average Queue (ft)	7
95th Queue (ft)	28
Link Distance (ft)	386
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 3: Haven Av. & Olive Wy. - North

Movement	WB	WB
Directions Served	L	R
Maximum Queue (ft)	54	36
Average Queue (ft)	23	7
95th Queue (ft)	44	28
Link Distance (ft)	393	393
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 4: Haven Av. & Olive Wy. - South

Movement	WB	NB	NB
Directions Served	R	T	TR
Maximum Queue (ft)	38	13	13
Average Queue (ft)	16	0	0
95th Queue (ft)	38	8	8
Link Distance (ft)	297	220	220
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 5: Haven Av. & Amber Ln./College Dr.

Movement	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LTR	L	LTR	L	T	T	TR	L	T	T	TR
Maximum Queue (ft)	54	244	289	48	362	788	909	74	120	121	120
Average Queue (ft)	21	143	129	13	83	203	345	32	60	63	54
95th Queue (ft)	46	230	228	37	261	668	849	65	106	104	100
Link Distance (ft)	156	527	527	2163	2163	2163	2163	220	220	220	220
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)											
Storage Blk Time (%)											
Queuing Penalty (veh)											

Intersection: 9: Driveway 2 & Wilson Av.

Movement	WB	NB	NB
Directions Served	L	L	R
Maximum Queue (ft)	30	35	31
Average Queue (ft)	5	5	6
95th Queue (ft)	23	23	25
Link Distance (ft)		195	195
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	100		
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 10: Driveway 3 & Wilson Av.

Movement	WB	NB
Directions Served	L	LR
Maximum Queue (ft)	34	36
Average Queue (ft)	5	13
95th Queue (ft)	23	38
Link Distance (ft)		96
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	60	
Storage Blk Time (%)	0	
Queuing Penalty (veh)	0	

Intersection: 11: Driveway 4 & Wilson Av.

Movement	WB	NB
Directions Served	L	LR
Maximum Queue (ft)	28	38
Average Queue (ft)	3	12
95th Queue (ft)	17	36
Link Distance (ft)		97
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	100	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 12: College Dr. & Wilson Av.

Movement	WB	NB	NB
Directions Served	L	L	R
Maximum Queue (ft)	35	39	48
Average Queue (ft)	9	7	18
95th Queue (ft)	30	29	43
Link Distance (ft)	344		
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	170	50	
Storage Blk Time (%)	0		
Queuing Penalty (veh)	0		

Zone Summary

Zone wide Queuing Penalty: 9

**APPENDIX 3.1:**  
**EXISTING TRAFFIC COUNTS**

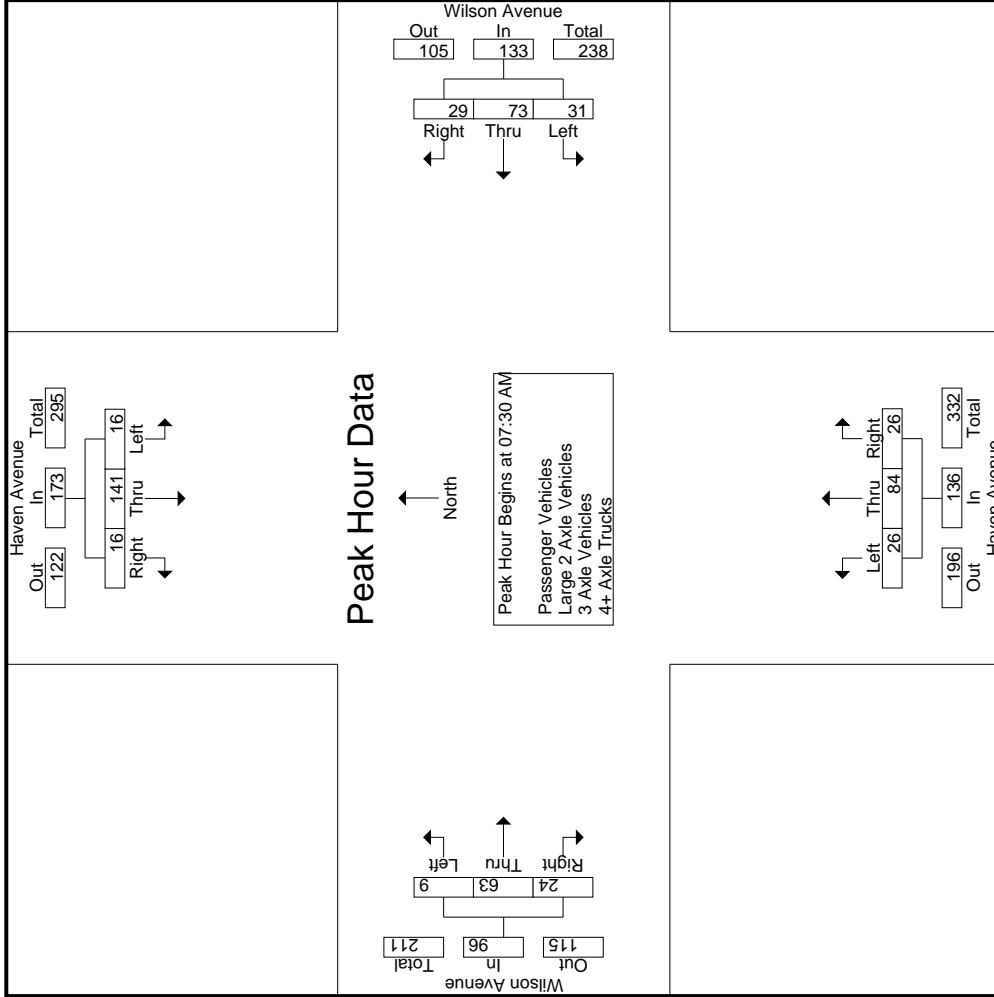
This Page Intentionally Left Blank

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

Start Time	Haven Avenue Southbound						Haven Avenue Northbound						Wilson Avenue Eastbound														
	Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total				
	Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total						
07:00 AM	4	28	4	3	36		5	13	4	2	22		6	20	1	1	27		2	5	10	4	17		10	102	112
07:15 AM	1	24	2	2	27		4	6	11	4	21		2	10	2	0	14		1	4	4	1	9		7	71	78
07:30 AM	4	32	6	2	42		6	15	7	5	28		5	10	8	2	23		1	16	4	3	21		12	114	126
07:45 AM	5	34	5	4	44		8	27	4	1	39		4	19	7	2	30		3	29	10	6	42		13	155	168
Total	14	118	17	11	149		23	61	26	12	110		17	59	18	5	94		7	54	28	14	89		42	442	484
08:00 AM	3	38	3	0	44		9	17	8	6	34		11	31	7	2	49		3	12	5	4	20		12	147	159
08:15 AM	4	37	2	2	43		8	14	10	7	32		6	24	4	2	34		2	6	5	2	13		13	122	135
08:30 AM	3	35	3	0	41		7	13	6	2	26		2	21	6	2	29		1	7	10	5	18		9	114	123
08:45 AM	4	42	1	0	47		11	11	4	3	26		3	22	4	1	29		0	9	6	6	15		10	117	127
Total	14	152	9	2	175		35	55	28	18	118		22	98	21	7	141		6	34	26	17	66		44	500	544
Grand Total	28	270	26	13	324		58	116	54	30	228		39	157	39	12	235		13	88	54	31	155		86	942	1028
% Approach	8.6	83.3	8				25.4	50.9	23.7		16.6		66.8	16.6			24.9		8.4	56.8	34.8						
% Total	3	28.7	2.8		34.4		6.2	12.3	5.7		24.2		4.1	16.7	4.1		24.9		1.4	9.3	5.7				8.4	91.6	
Passenger Vehicles	27	266	26		332		58	115	52		255		38	147	38		235		13	87	54				0	0	1007
% Large 2 Axle Vehicles	96.4	98.5	100	100	98.5		100	99.1	96.3	100	98.8		97.4	93.6	97.4	100	95.1		100	98.9	100	100	99.5		0	0	98
% 3 Axle Vehicles	0	2	0	0	2		0	0	1	0	1		1	7	1	0	9		0	0	0	0	0		0	0	12
% 4+ Axle Trucks	0	0.7	0	0	0.6		0	0	1.9	0	0.4		2.6	4.5	2.6	0	3.6		0	0	0	0	0		0	0	1.2
3 Axle Vehicles	1	1	0	0	2		0	1	1	1	2		0	1	0	0	1		0	1	0	0	1		0	0	6
% 4+ Axle Trucks	3.6	0.4	0	0	0.6		0	0.9	1.9	0	0.8		0	0.6	0	0	0.4		0	1.1	0	0	0.5		0	0	0.6
4+ Axle Trucks	0	1	0	0	1		0	0	0	0	0		0	2	0	0	2		0	0	0	0	0		0	0	3
% 4+ Axle Trucks	0	0.4	0	0	0.3		0	0	0	0	0		0	1.3	0	0	0.8		0	0	0	0	0		0	0	0.3

Start Time	Haven Avenue Southbound						Wilson Avenue Westbound						Haven Avenue Northbound						Wilson Avenue Eastbound											
	Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total	
	Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total			
07:30 AM	4	32	6		42		6	15	7	28		5	10	8		23		1	16	4		21		4	21	114				
07:45 AM	5	34	5		44		8	27	4	39		4	19	7		30		3	29	10		42		10	42	155				
08:00 AM	3	38	3		44		9	17	8	34		11	31	7		49		3	12	5		20		5	20	147				
08:15 AM	4	37	2		43		8	14	10	7	32		6	24	4		34		2	6	5		6		5	13	122			
Total	16	141	16		173		31	73	29	133		26	84	26		136		9	63	24		96		24	96	538				
% App. Total	9.2	81.5	9.2		9.2		23.3	54.9	21.8		19.1		61.8	19.1		69.4		9.4	65.6	25		57.1		25	25	868				
PHF	.800	.928	.667		.983		.861	.676	.725		.853		.677	.813		.694		.750	.543	.600		.571		.600	.600	.868				

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:30 AM





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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Wilson Avenue  
 Weather: Clear

File Name : 01\_RNC\_Haven\_Wilson AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 3

Start Time	Haven Avenue Southbound			Wilson Avenue Westbound			Haven Avenue Northbound			Wilson Avenue Eastbound						
	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 Each Approach Begins at:																
	08:00 AM			07:30 AM			07:45 AM			07:30 AM						
+0 mins.	3	38	3	44	6	15	7	28	4	19	7	30	1	16	4	21
+15 mins.	4	37	2	43	8	27	4	39	11	31	7	49	3	29	10	42
+30 mins.	3	35	3	41	9	17	8	34	6	24	4	34	3	12	5	20
+45 mins.	4	42	1	47	8	14	10	32	2	21	6	29	2	6	5	13
Total Volume	14	152	9	175	31	73	29	133	23	95	24	142	9	63	24	96
% App. Total	8	86.9	5.1		23.3	54.9	21.8		16.2	66.9	16.9		9.4	65.6	25	
PHF	.875	.905	.750	.931	.861	.676	.725	.853	.523	.766	.857	.724	.750	.543	.600	.571

Groups Printed- Large 2 Axle Vehicles

Start Time	Haven Avenue Southbound				Wilson Avenue Westbound				Haven Avenue Northbound				Wilson Avenue Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Grand Total	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12
%Approch %	0	100	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0
% Total %	0	16.7	0	0	16.7	0	0	8.3	0	8.3	11.1	77.8	58.3	8.3	0	0	0	100

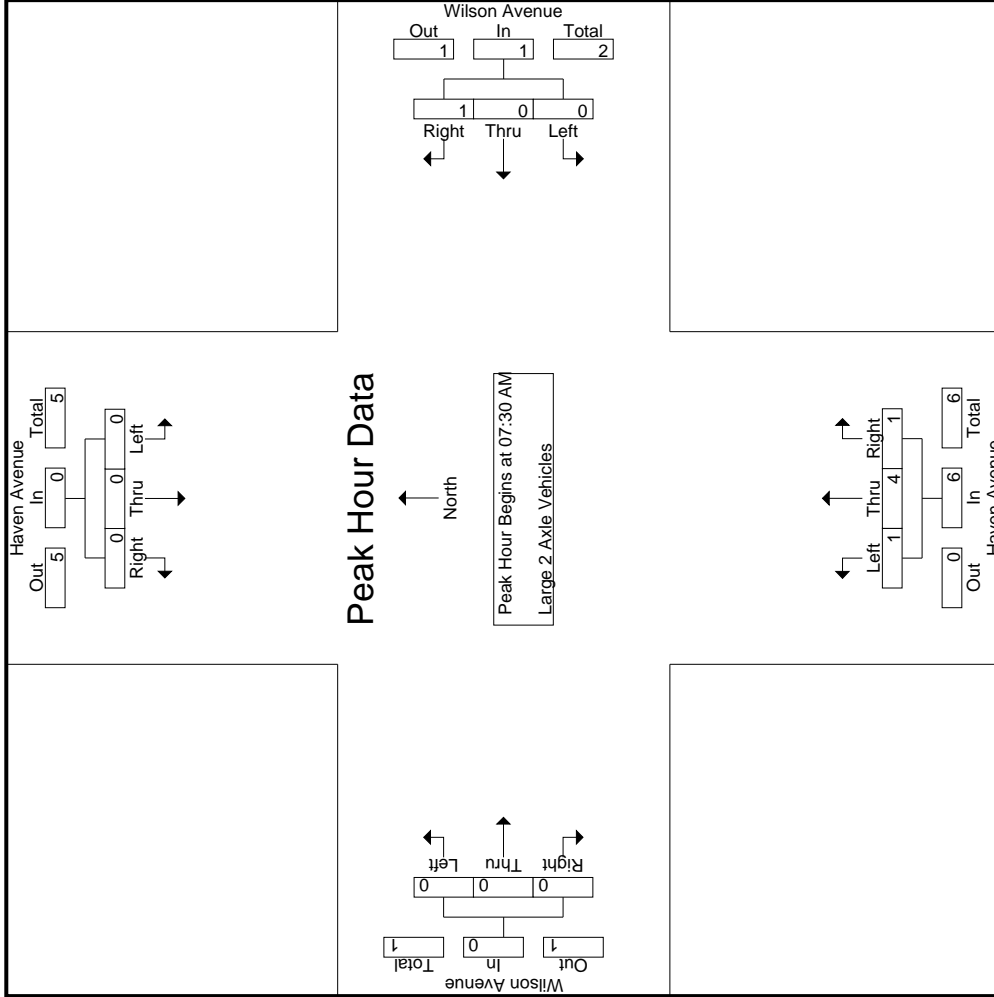
Start Time	Haven Avenue Southbound				Wilson Avenue Westbound				Haven Avenue Northbound				Wilson Avenue Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	App. Total	Int. Total
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0	0	0	0	100	0	0	16.7	66.7	16.7	0	0	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.250	.250	.250	.250	.250	.500	.250	.250	.750	.000	.000	.000	.000	.875

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:30 AM

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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Wilson Avenue  
 Weather: Clear

File Name : 01\_RNC\_Haven\_Wilson AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 2



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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Wilson Avenue  
 Weather: Clear

File Name : 01\_RNC\_Haven\_Wilson AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 3

Start Time	Haven Avenue Southbound			Wilson Avenue Westbound			Haven Avenue Northbound			Wilson Avenue Eastbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1												
Peak Hour for Each Approach Begins at:												
+0 mins.	0	0	0	0	0	1	0	1	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	1	1	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	1	0	0	0
Total Volume	0	0	0	0	0	1	1	4	1	0	0	0
% App. Total	0	0	0	0	0	100	16.7	66.7	16.7	0	0	0
PHF	.000	.000	.000	.000	.000	.250	.250	.500	.250	.000	.000	.000

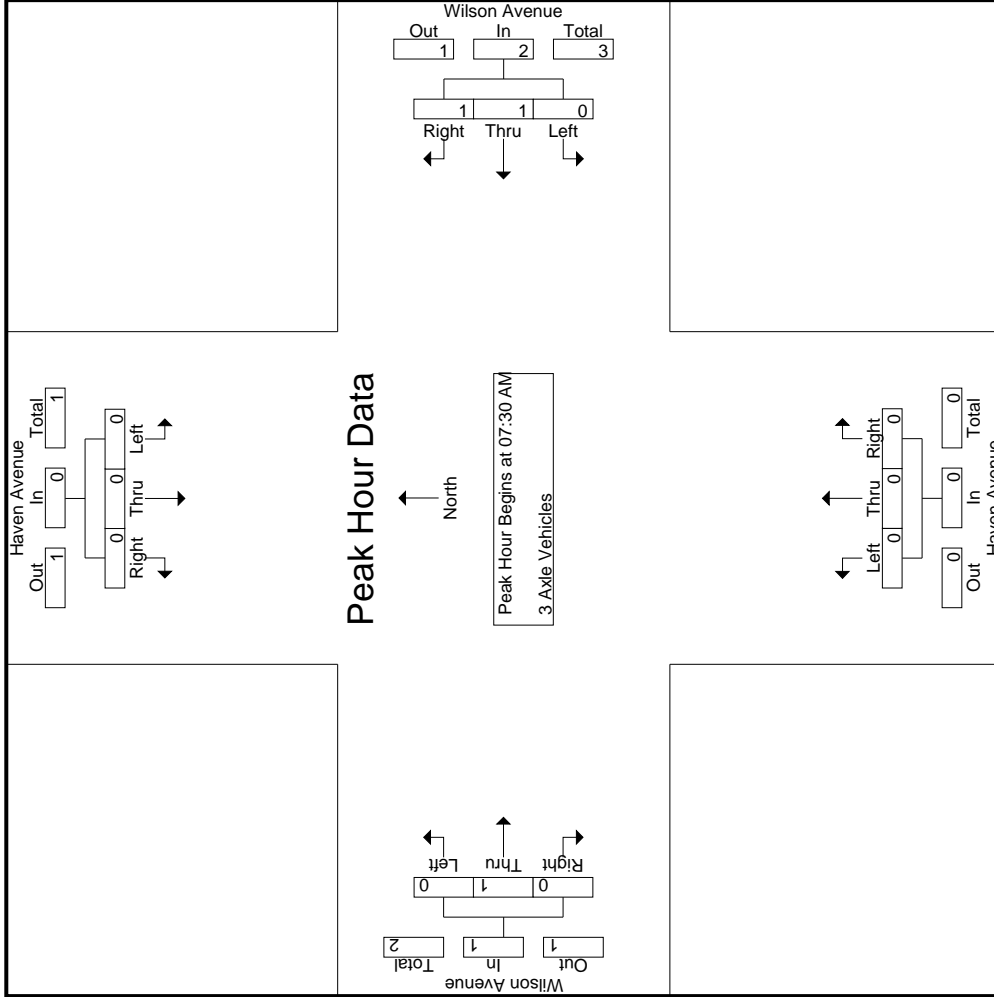
Groups Printed- 3 Axle Vehicles

Start Time	Haven Avenue Southbound					Wilson Avenue Westbound					Haven Avenue Northbound					Wilson Avenue Eastbound								
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
08:00 AM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	2
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1
08:30 AM	0	1	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	2
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	1	0	1	1	0	2	0	1	0	0	1	0	1	0	0	0	0	0	5	5
Grand Total	1	1	0	0	2	0	1	1	0	2	0	1	0	0	1	0	1	0	0	0	0	0	6	6
%Approch %	50	50	0	0	33.3	0	50	50	0	33.3	0	100	0	0	16.7	0	100	0	0	0	0	0	100	100
% Total %	16.7	16.7	0	0	33.3	0	16.7	16.7	0	33.3	0	16.7	0	0	16.7	0	16.7	0	0	0	0	0	100	100
Start Time	Haven Avenue Southbound					Wilson Avenue Westbound					Haven Avenue Northbound					Wilson Avenue Eastbound								
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total	
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																								
Peak Hour for Entire Intersection Begins at 07:30 AM																								
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Total Volume	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	3
% App. Total	0	0	0	0	0	0	0	50	0	50	0	0	0	0	0	0	100	0	0	0	0	0	100	100
PHF	.000	.000	.000	.000	.000	.000	.250	.250	.000	.250	.250	.000	.000	.000	.000	.000	.250	.250	.000	.000	.250	.250	.375	.375

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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Wilson Avenue  
 Weather: Clear

File Name : 01\_RNC\_Haven\_Wilson AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 2



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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Wilson Avenue  
 Weather: Clear

File Name : 01\_RNC\_Haven\_Wilson AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 3

Start Time	Haven Avenue Southbound			Wilson Avenue Westbound			Haven Avenue Northbound			Wilson Avenue Eastbound					
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total		
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1															
Peak Hour for Each Approach Begins at:															
	07:30 AM				07:30 AM				07:30 AM				07:30 AM		
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
+30 mins.	0	0	0	0	1	1	2	0	0	0	0	0	0	0	
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	1	1	
Total Volume	0	0	0	0	1	1	2	0	0	0	0	0	1	1	
% App. Total	0	0	0	0	50	50	100	0	0	0	0	0	100	0	
PHF	.000	.000	.000	.000	.250	.250	.250	.000	.000	.000	.000	.000	.250	.250	

Groups Printed- 4+ Axle Trucks

Start Time	Haven Avenue Southbound				Wilson Avenue Westbound				Haven Avenue Northbound				Wilson Avenue Eastbound											
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1	1
Total	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	1	0	0	1	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	2	2
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	1	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	2	2
Grand Total	0	1	0	0	1	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	3	3
Approach %	0	100	0	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0	100	100
Total %	0	33.3	0	0	33.3	0	0	0	0	0	66.7	0	0	0	66.7	0	0	0	0	0	0	0	100	100

Start Time	Haven Avenue Southbound				Wilson Avenue Westbound				Haven Avenue Northbound				Wilson Avenue Eastbound											
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total	
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1	1
% App. Total	0	0	0	0	0	0	0	0	0	0	100	0	0	0	100	0	0	0	0	0	0	0	100	100
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.250	.250

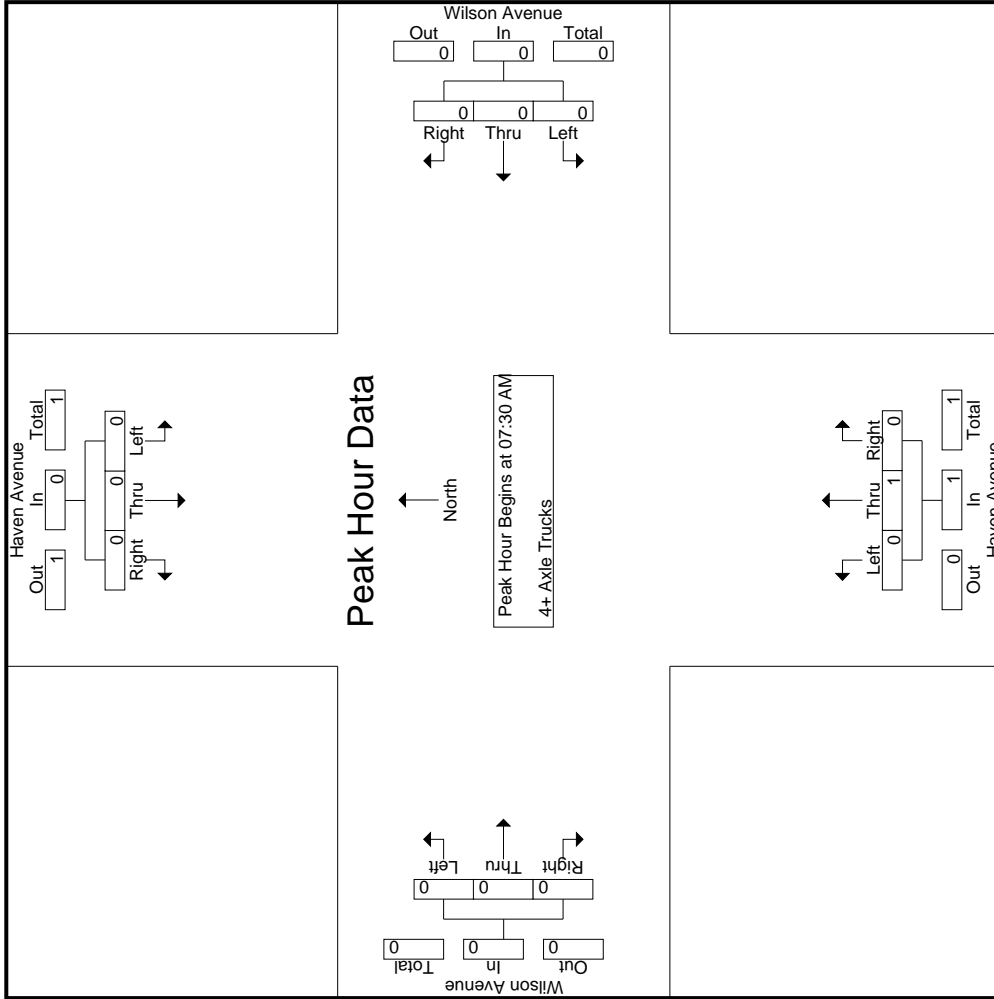
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:30 AM



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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Wilson Avenue  
 Weather: Clear

File Name : 01\_RNC\_Haven\_Wilson AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 2



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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Wilson Avenue  
 Weather: Clear

File Name : 01\_RNC\_Haven\_Wilson AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 3

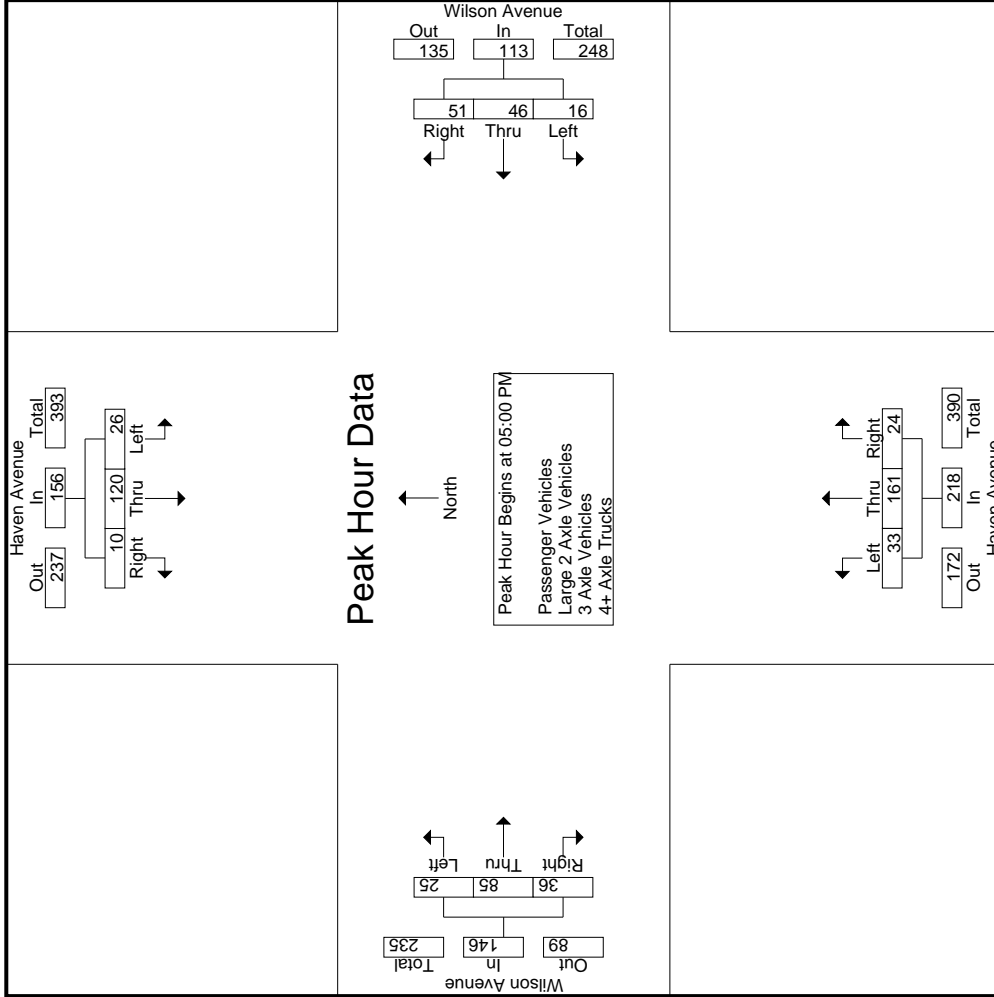
Start Time	Haven Avenue Southbound			Wilson Avenue Westbound			Haven Avenue Northbound			Wilson Avenue Eastbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1												
Peak Hour for Each Approach Begins at:												
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	1	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	1	0	0	0	0
% App. Total	0	0	0	0	0	0	0	100	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.250	.000	.000	.000	.000

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

Start Time	Haven Avenue Southbound					Haven Avenue Northbound					Wilson Avenue Eastbound												
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total					
04:00 PM	4	36	3	0	43	4	14	6	5	24	8	33	4	1	45	7	18	8	5	33	11	145	156
04:15 PM	4	28	4	2	36	11	8	10	6	29	10	27	6	2	43	6	19	13	8	38	18	146	164
04:30 PM	3	39	0	0	42	7	12	9	5	28	8	33	7	1	48	7	22	6	1	35	7	153	160
04:45 PM	7	37	7	1	51	2	10	10	5	22	7	23	7	1	37	5	26	7	5	38	12	148	160
Total	18	140	14	3	172	24	44	35	21	103	33	116	24	5	173	25	85	34	19	144	48	592	640
05:00 PM	10	34	1	0	45	3	8	13	7	24	6	46	4	1	56	10	16	10	7	36	15	161	176
05:15 PM	4	30	2	1	36	10	14	17	7	41	7	35	7	5	49	5	25	6	5	36	18	162	180
05:30 PM	7	24	6	1	37	3	11	9	7	23	9	44	5	2	58	6	14	12	7	32	17	150	167
05:45 PM	5	32	1	1	38	0	13	12	6	25	11	36	8	2	55	4	30	8	4	42	13	160	173
Total	26	120	10	3	156	16	46	51	27	113	33	161	24	10	218	25	85	36	23	146	63	633	696
Grand Total	44	260	24	6	328	40	90	86	48	216	66	277	48	15	391	50	170	70	42	290	111	1225	1336
% Approach	13.4	79.3	7.3			18.5	41.7	39.8			16.9	70.8	12.3			17.2	58.6	24.1					
% Total	3.6	21.2	2			3.3	7.3	7			5.4	22.6	3.9			4.1	13.9	5.7			8.3	91.7	
Passenger Vehicles	44	257	24		331	39	88	86		261	66	273	48		402	50	166	70		328	0	0	1322
Large 2 Axle Vehicles	100	98.8	100	100	99.1	97.5	97.8	100	100	98.9	100	98.6	100	100	99	100	97.6	100	100	98.8	0	0	99
% Large 2 Axle Vehicles	0	3	0	0	0.9	2.5	2.2	0	0	1.1	0	0.7	0	0	0.5	0	2.4	0	0	1.2	0	0	12
% 3 Axle Vehicles	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0.9
% 3 Axle Vehicles	0	0	0	0	0	0	0	0	0	0	0	0.4	0	0	0.2	0	0	0	0	0	0	0	0
4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1
% 4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0	0	0.4	0	0	0.2	0	0	0	0	0	0	0	0.1

Start Time	Haven Avenue Southbound					Wilson Avenue Westbound					Haven Avenue Northbound					Wilson Avenue Eastbound																		
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total	
05:00 PM	10	34	1		45	3	8	13		24	6	46	4		56	10	16	10		36	15	161	176											
05:15 PM	4	30	2		36	10	14	17		41	7	35	7		49	5	25	6		36	18	146	164											
05:30 PM	7	24	6		37	3	11	9		23	9	44	5		58	6	14	12		32	17	150	160											
05:45 PM	5	32	1		38	0	13	12		25	11	36	8		55	4	30	8		42	13	160	173											
Total Volume	26	120	10		156	16	46	51		113	33	161	24		218	25	85	36		146	63	633	696											
% App. Total	16.7	76.9	6.4			14.2	40.7	45.1			15.1	73.9	11			17.1	58.2	24.7																
PHF	.650	.882	.417		.867	.400	.821	.750		.689	.750	.875	.750		.940	.625	.708	.750		.869														

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



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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Wilson Avenue  
 Weather: Clear

File Name : 01\_RNC\_Haven\_Wilson PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 3

Start Time	Haven Avenue Southbound			Wilson Avenue Westbound			Haven Avenue Northbound			Wilson Avenue Eastbound				
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total	
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			04:30 PM			05:00 PM			04:15 PM				
+0 mins.	4	28	4	36	7	12	9	28	6	46	4	56	19	38
+15 mins.	3	39	0	42	2	10	10	22	7	35	7	49	22	35
+30 mins.	7	37	7	51	3	8	13	24	9	44	5	58	5	38
+45 mins.	10	34	1	45	10	14	17	41	11	36	8	55	10	36
Total Volume	24	138	12	174	22	44	49	115	33	161	24	218	28	147
% App. Total	13.8	79.3	6.9		19.1	38.3	42.6		15.1	73.9	11		19	56.5
PHF	.600	.885	.429	.853	.550	.786	.721	.701	.750	.875	.750	.940	.700	.967

Groups Printed- Large 2 Axle Vehicles

Start Time	Haven Avenue Southbound				Wilson Avenue Westbound				Haven Avenue Northbound				Wilson Avenue Eastbound											
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1
04:15 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	2	2
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	3	3
04:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Total	0	1	0	0	1	0	2	0	0	2	0	1	0	0	1	0	3	0	0	0	0	0	7	7
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1	1
05:15 PM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	2	0	0	2	1	0	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0	5	5
Grand Total	0	3	0	0	3	1	2	0	0	3	0	2	0	0	2	0	4	0	0	0	0	0	12	12
Approach %	0	100	0	0	33.3	66.7	0	0	0	0	100	0	0	0	16.7	0	100	0	0	0	0	0	100	100
Total %	0	25	0	0	25	8.3	16.7	0	0	25	16.7	0	0	0	16.7	0	33.3	0	0	0	0	0	100	100

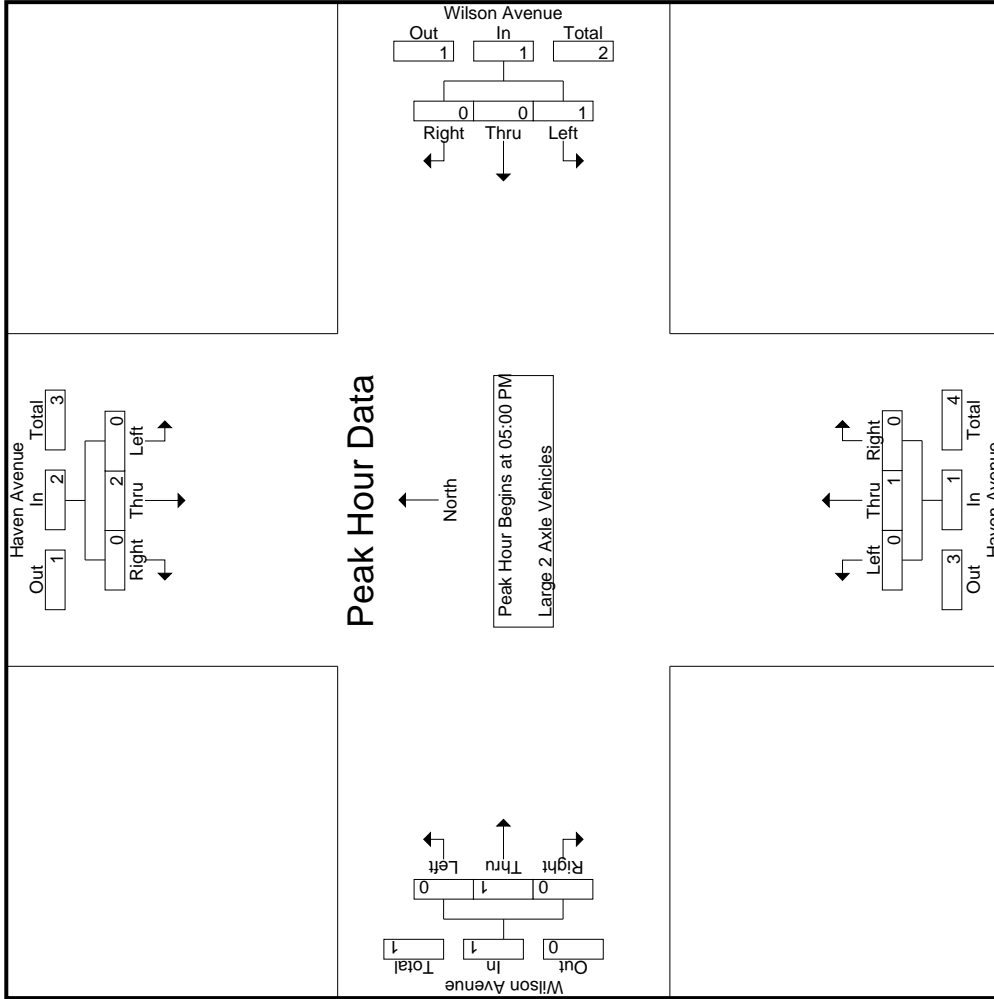
Start Time	Haven Avenue Southbound				Wilson Avenue Westbound				Haven Avenue Northbound				Wilson Avenue Eastbound											
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total	
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	2	0	0	2	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	2	0	0	2	1	0	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0	1	5
% App. Total	0	100	0	0	100	0	0	0	0	100	0	100	0	0	100	0	100	0	0	0	0	0	100	100
PHF	.000	.250	.000	.000	.250	.000	.000	.000	.000	.250	.000	.250	.000	.000	.250	.000	.250	.000	.000	.250	.000	.250	.417	.417

Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 05:00 PM

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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Wilson Avenue  
 Weather: Clear

File Name : 01\_RNC\_Haven\_Wilson PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 2



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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Wilson Avenue  
 Weather: Clear

File Name : 01\_RNC\_Haven\_Wilson PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 3

Start Time	Haven Avenue Southbound			Wilson Avenue Westbound			Haven Avenue Northbound			Wilson Avenue Eastbound					
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total		
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1															
Peak Hour for Each Approach Begins at:															
	05:00 PM				05:00 PM				05:00 PM				05:00 PM		
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
+15 mins.	0	2	0	2	1	0	0	1	0	0	0	0	0	0	
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total Volume	0	2	0	2	1	0	0	1	0	0	0	0	1	1	
% App. Total	0	100	0	100	0	0	0	0	0	0	0	0	100	0	
PHF	.000	.250	.000	.250	.250	.000	.000	.250	.000	.000	.000	.250	.000	.250	

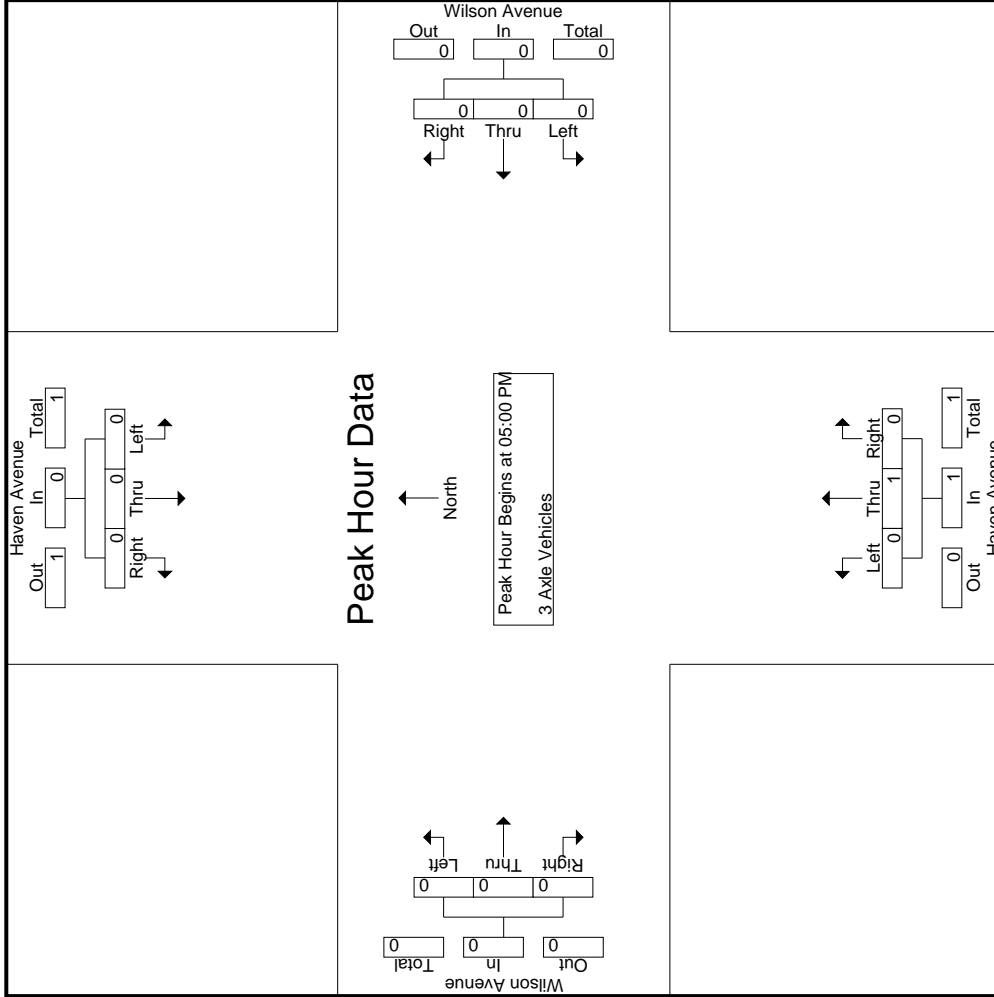


Groups Printed- 3 Axle Vehicles

Start Time	Haven Avenue Southbound				Wilson Avenue Westbound				Haven Avenue Northbound				Wilson Avenue Eastbound											
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1	1
Total	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1	1
Grand Total	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1	1
Approach %	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0
Total %	0	0	0	0	0	0	0	0	0	0	0	100	0	0	100	0	0	0	0	0	0	0	0	100

Start Time	Haven Avenue Southbound				Wilson Avenue Westbound				Haven Avenue Northbound				Wilson Avenue Eastbound											
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total	
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.250

Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 05:00 PM



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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Wilson Avenue  
 Weather: Clear

File Name : 01\_RNC\_Haven\_Wilson PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 3

Start Time	Haven Avenue Southbound			Wilson Avenue Westbound			Haven Avenue Northbound			Wilson Avenue Eastbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1												
Peak Hour for Each Approach Begins at:												
	05:00 PM			05:00 PM			05:00 PM			05:00 PM		
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	1	0	0	0	0	0
Total Volume	0	0	0	0	0	0	1	0	0	0	0	0
% App. Total	0	0	0	0	0	0	100	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.250	.000	.000	.000	.000	.000
	05:00 PM			05:00 PM			05:00 PM			05:00 PM		
	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	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	1	0	0	0	0	0
	0	0	0	0	0	0	100	0	0	0	0	0
	.000	.000	.000	.000	.000	.000	.250	.000	.000	.000	.000	.000
	05:00 PM			05:00 PM			05:00 PM			05:00 PM		
	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	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	1	0	0	0	0	0
	0	0	0	0	0	0	100	0	0	0	0	0
	.000	.000	.000	.000	.000	.000	.250	.000	.000	.000	.000	.000

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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Wilson Avenue  
 Weather: Clear

File Name : 01\_RNC\_Haven\_Wilson PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 1

Groups Printed- 4+ Axle Trucks

Start Time	Haven Avenue Southbound				Wilson Avenue Westbound				Haven Avenue Northbound				Wilson Avenue Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Approach %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100

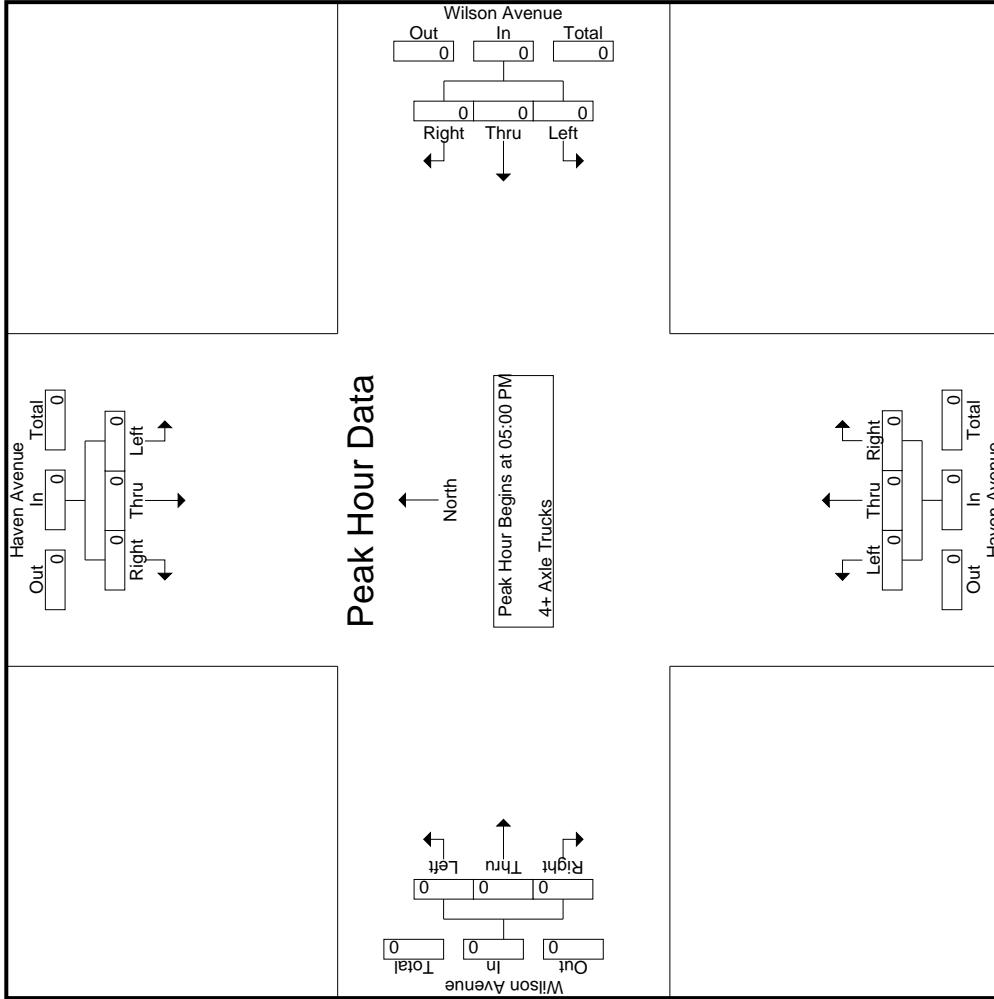
Start Time	Haven Avenue Southbound				Wilson Avenue Westbound				Haven Avenue Northbound				Wilson Avenue Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	App. Total	Int. Total
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 05:00 PM

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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Wilson Avenue  
 Weather: Clear

File Name : 01\_RNC\_Haven\_Wilson PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 2



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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Wilson Avenue  
 Weather: Clear

File Name : 01\_RNC\_Haven\_Wilson PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 3

Start Time	Haven Avenue Southbound			Wilson Avenue Westbound			Haven Avenue Northbound			Wilson Avenue Eastbound			Int. Total		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		App. Total	App. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1															
Peak Hour for Each Approach Begins at:															
	05:00 PM			05:00 PM			05:00 PM			05:00 PM			05:00 PM		
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Location: Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Wilson Avenue



Date: 6/2/2021  
 Day: Wednesday

PEDESTRIANS

	North Leg Haven Avenue	East Leg Wilson Avenue	South Leg Haven Avenue	West Leg Wilson Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
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	2	0	0	0	2
8:00 AM	2	0	1	2	5
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	1	1
TOTAL VOLUMES:	4	0	1	3	8

	North Leg Haven Avenue	East Leg Wilson Avenue	South Leg Haven Avenue	West Leg Wilson Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	3	0	0	3
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	1	1	0	2
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	4	1	0	5

Location: Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Wilson Avenue



Date: 6/2/2021  
 Day: Wednesday

BICYCLES

	Southbound Haven Avenue			Westbound Wilson Avenue			Northbound Haven Avenue			Eastbound Wilson Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
7:15 AM	0	0	0	0	1	0	0	0	0	0	1	0	2
7:30 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
7:45 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
8:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
TOTAL VOLUMES:	0	0	0	0	4	0	0	0	0	0	3	0	7

	Southbound Haven Avenue			Westbound Wilson Avenue			Northbound Haven Avenue			Eastbound Wilson Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	2	0	0	0	2
4:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
4:45 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	1	0	0	0	2	0	1	0	4



City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Driveway 2  
 Weather: Clear

File Name : 02\_RNC\_Haven\_DW1 AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 1

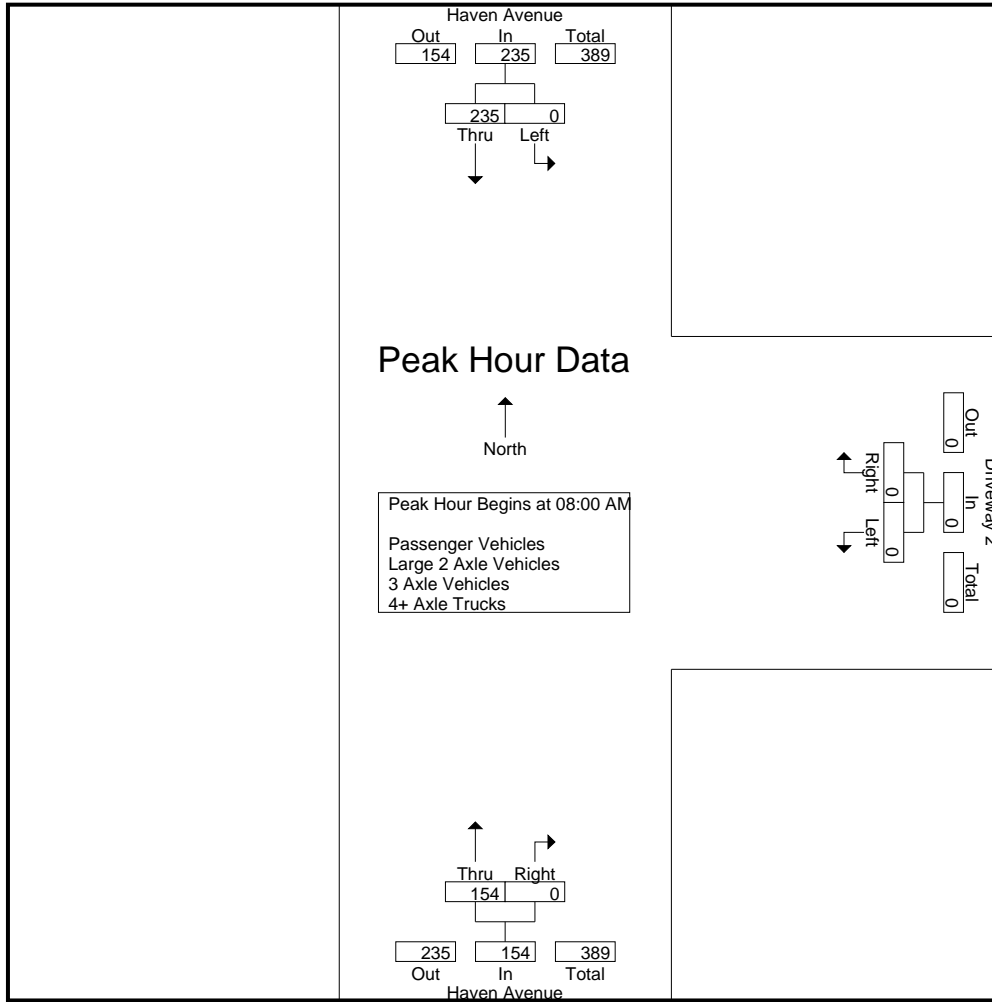
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Haven Avenue Southbound			Driveway 2 Westbound			Haven Avenue Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	0	44	44	0	0	0	26	0	26	70
07:15 AM	0	33	33	0	0	0	15	0	15	48
07:30 AM	0	40	40	0	0	0	23	0	23	63
07:45 AM	0	50	50	0	0	0	30	0	30	80
Total	0	167	167	0	0	0	94	0	94	261
08:00 AM	0	54	54	0	0	0	50	0	50	104
08:15 AM	0	55	55	0	0	0	37	0	37	92
08:30 AM	0	60	60	0	0	0	31	0	31	91
08:45 AM	0	66	66	0	0	0	36	0	36	102
Total	0	235	235	0	0	0	154	0	154	389
Grand Total	0	402	402	0	0	0	248	0	248	650
Apprch %	0	100		0	0		100	0		
Total %	0	61.8	61.8	0	0	0	38.2	0	38.2	
Passenger Vehicles	0	394	394	0	0	0	227	0	227	621
% Passenger Vehicles	0	98	98	0	0	0	91.5	0	91.5	95.5
Large 2 Axle Vehicles	0	7	7	0	0	0	18	0	18	25
% Large 2 Axle Vehicles	0	1.7	1.7	0	0	0	7.3	0	7.3	3.8
3 Axle Vehicles	0	0	0	0	0	0	2	0	2	2
% 3 Axle Vehicles	0	0	0	0	0	0	0.8	0	0.8	0.3
4+ Axle Trucks	0	1	1	0	0	0	1	0	1	2
% 4+ Axle Trucks	0	0.2	0.2	0	0	0	0.4	0	0.4	0.3

Start Time	Haven Avenue Southbound			Driveway 2 Westbound			Haven Avenue Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 08:00 AM										
08:00 AM	0	54	54	0	0	0	<b>50</b>	0	<b>50</b>	<b>104</b>
08:15 AM	0	55	55	0	0	0	37	0	37	92
08:30 AM	0	60	60	0	0	0	31	0	31	91
08:45 AM	0	<b>66</b>	<b>66</b>	0	0	0	36	0	36	102
Total Volume	0	235	235	0	0	0	154	0	154	389
% App. Total	0	100		0	0		100	0		
PHF	.000	.890	.890	.000	.000	.000	.770	.000	.770	.935

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Driveway 2  
 Weather: Clear

File Name : 02\_RNC\_Haven\_DW1 AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 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:

	08:00 AM			07:00 AM			08:00 AM		
+0 mins.	0	54	54	0	0	0	<b>50</b>	0	<b>50</b>
+15 mins.	0	55	55	0	0	0	37	0	37
+30 mins.	0	60	60	0	0	0	31	0	31
+45 mins.	0	<b>66</b>	<b>66</b>	0	0	0	36	0	36
Total Volume	0	235	235	0	0	0	154	0	154
% App. Total	0	100		0	0		100	0	
PHF	.000	.890	.890	.000	.000	.000	.770	.000	.770

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Driveway 2  
 Weather: Clear

File Name : 02\_RNC\_Haven\_DW1 AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 1

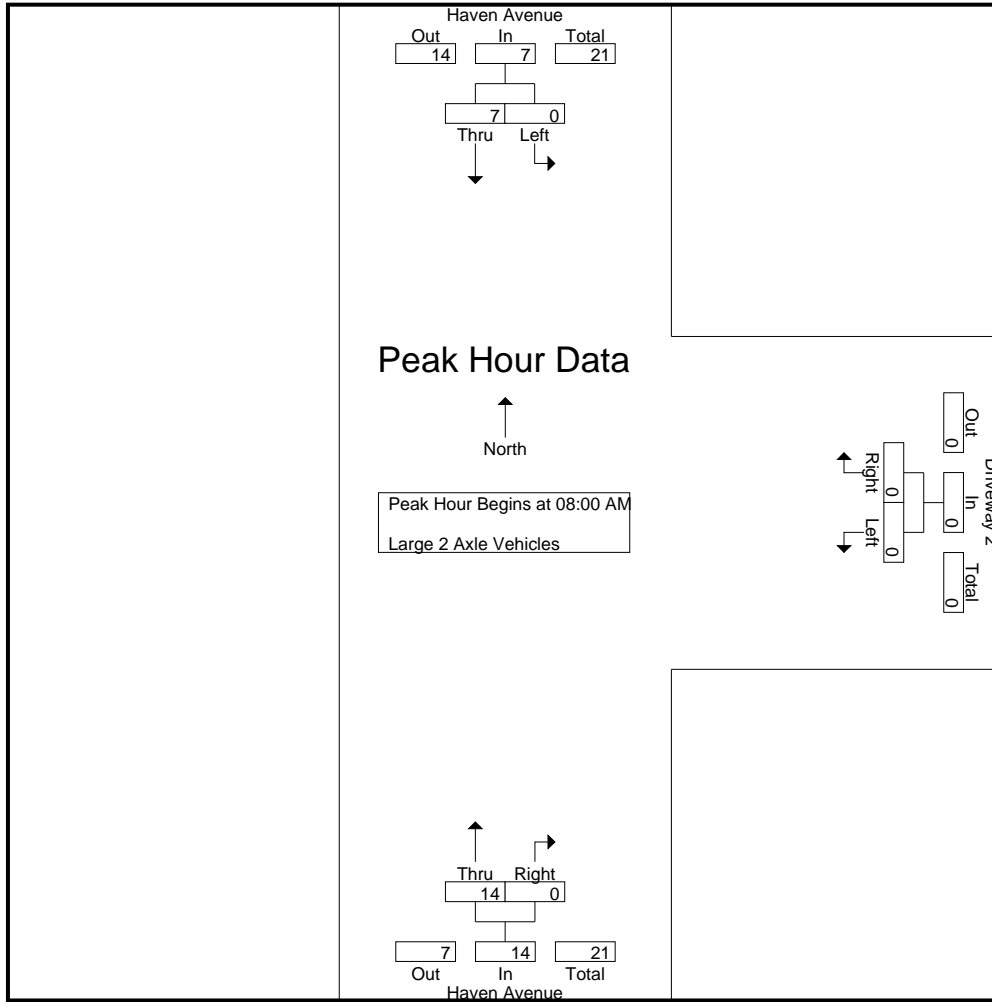
Groups Printed- Large 2 Axle Vehicles

Start Time	Haven Avenue Southbound			Driveway 2 Westbound			Haven Avenue Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	0	0	0	0	0	0	1	0	1	1
07:15 AM	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	1	0	1	1
07:45 AM	0	0	0	0	0	0	2	0	2	2
Total	0	0	0	0	0	0	4	0	4	4
08:00 AM	0	1	1	0	0	0	6	0	6	7
08:15 AM	0	0	0	0	0	0	3	0	3	3
08:30 AM	0	3	3	0	0	0	2	0	2	5
08:45 AM	0	3	3	0	0	0	3	0	3	6
Total	0	7	7	0	0	0	14	0	14	21
Grand Total	0	7	7	0	0	0	18	0	18	25
Apprch %	0	100		0	0		100	0		
Total %	0	28	28	0	0	0	72	0	72	

Start Time	Haven Avenue Southbound			Driveway 2 Westbound			Haven Avenue Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 08:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 08:00 AM										
08:00 AM	0	1	1	0	0	0	6	0	6	7
08:15 AM	0	0	0	0	0	0	3	0	3	3
08:30 AM	0	3	3	0	0	0	2	0	2	5
08:45 AM	0	3	3	0	0	0	3	0	3	6
Total Volume	0	7	7	0	0	0	14	0	14	21
% App. Total	0	100		0	0		100	0		
PHF	.000	.583	.583	.000	.000	.000	.583	.000	.583	.750

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Driveway 2  
 Weather: Clear

File Name : 02\_RNC\_Haven\_DW1 AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 2



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

	08:00 AM			08:00 AM			08:00 AM		
+0 mins.	0	1	1	0	0	0	6	0	6
+15 mins.	0	0	0	0	0	0	3	0	3
+30 mins.	0	3	3	0	0	0	2	0	2
+45 mins.	0	3	3	0	0	0	3	0	3
Total Volume	0	7	7	0	0	0	14	0	14
% App. Total	0	100		0	0		100	0	
PHF	.000	.583	.583	.000	.000	.000	.583	.000	.583

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Driveway 2  
 Weather: Clear

File Name : 02\_RNC\_Haven\_DW1 AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 1

Groups Printed- 3 Axle Vehicles

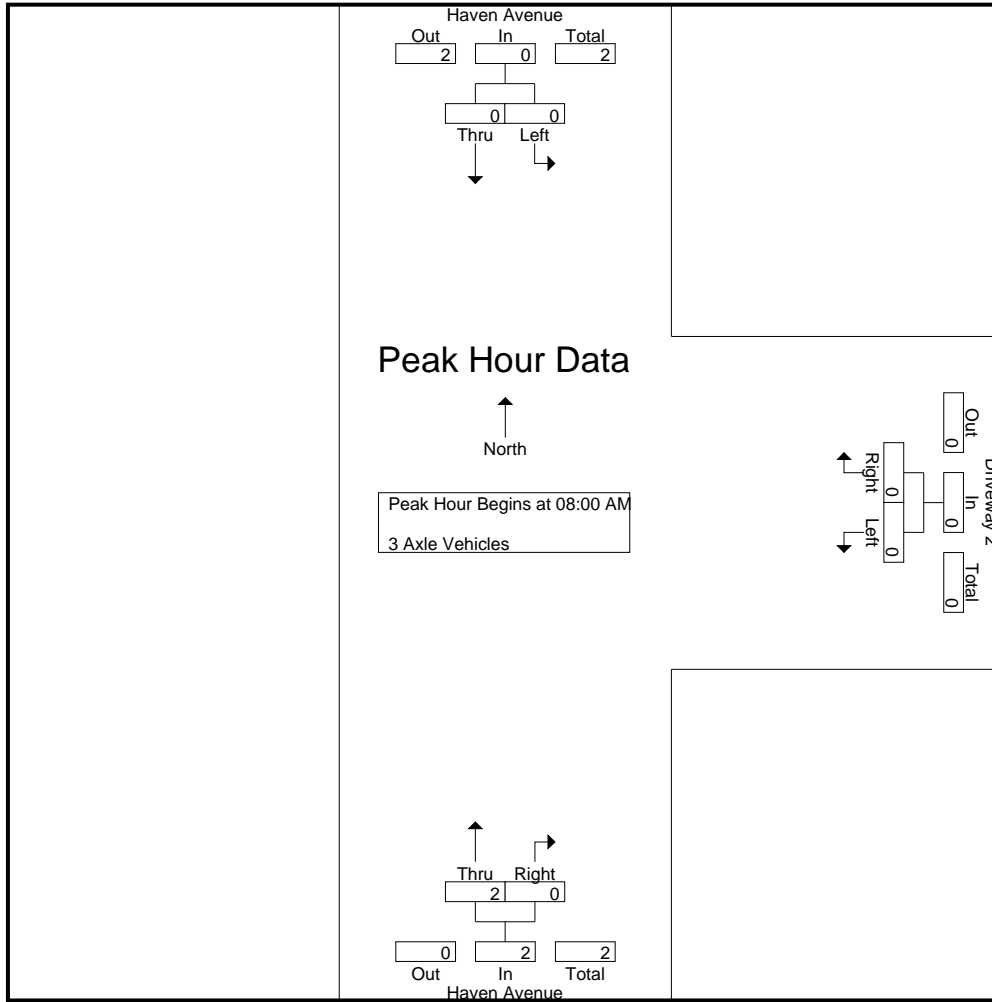
Start Time	Haven Avenue Southbound			Driveway 2 Westbound			Haven Avenue Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	2	0	2	2
08:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	2	0	2	2
Grand Total	0	0	0	0	0	0	2	0	2	2
Apprch %	0	0	0	0	0	0	100	0	100	100
Total %	0	0	0	0	0	0	100	0	100	100

Start Time	Haven Avenue Southbound			Driveway 2 Westbound			Haven Avenue Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
08:00 AM	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	2	0	2	2
08:45 AM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	2	0	2	2
% App. Total	0	0	0	0	0	0	100	0	100	100
PHF	.000	.000	.000	.000	.000	.000	.250	.000	.250	.250

Peak Hour Analysis From 08:00 AM to 08:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 08:00 AM

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Driveway 2  
 Weather: Clear

File Name : 02\_RNC\_Haven\_DW1 AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 2



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

	08:00 AM			08:00 AM			08:00 AM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	2	0	2
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	2	0	2
% App. Total	0	0	0	0	0	0	100	0	0
PHF	.000	.000	.000	.000	.000	.000	.250	.000	.250

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Driveway 2  
 Weather: Clear

File Name : 02\_RNC\_Haven\_DW1 AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 1

Groups Printed- 4+ Axle Trucks

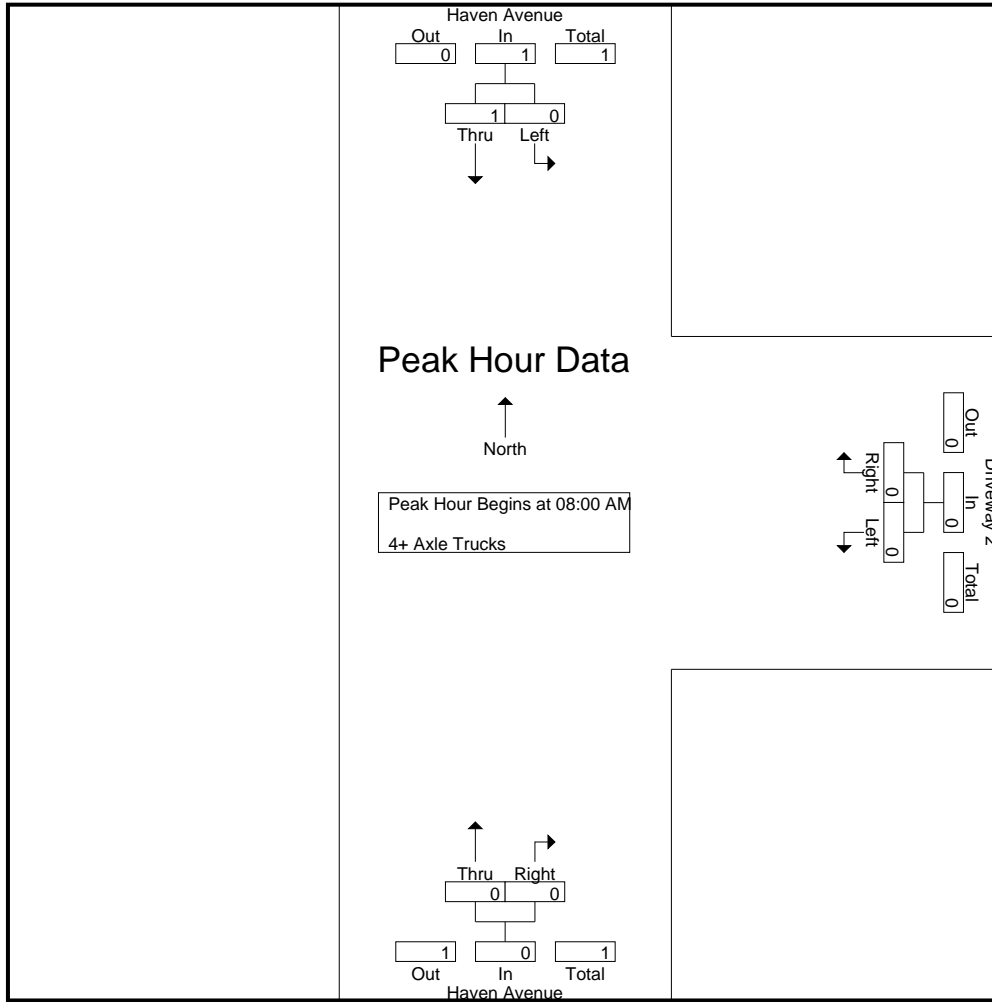
Start Time	Haven Avenue Southbound			Driveway 2 Westbound			Haven Avenue Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	1	0	1	1
Total	0	0	0	0	0	0	1	0	1	1
08:00 AM	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	1	1	0	0	0	0	0	0	1
08:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	1	1	0	0	0	0	0	0	1
Grand Total	0	1	1	0	0	0	1	0	1	2
Apprch %	0	100		0	0		100	0		
Total %	0	50	50	0	0	0	50	0	50	

Start Time	Haven Avenue Southbound			Driveway 2 Westbound			Haven Avenue Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
08:00 AM	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	1	1	0	0	0	0	0	0	1
08:45 AM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	1	0	0	0	0	0	0	1
% App. Total	0	100		0	0		0	0		
PHF	.000	.250	.250	.000	.000	.000	.000	.000	.000	.250

Peak Hour Analysis From 08:00 AM to 08:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 08:00 AM

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Driveway 2  
 Weather: Clear

File Name : 02\_RNC\_Haven\_DW1 AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 2



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

	08:00 AM			08:00 AM			08:00 AM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	1	1	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	0	1	1	0	0	0	0	0	0
% App. Total	0	100		0	0		0	0	
PHF	.000	.250	.250	.000	.000	.000	.000	.000	.000



City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Driveway 2  
 Weather: Clear

File Name : 02\_RNC\_Haven\_DW1 PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 1

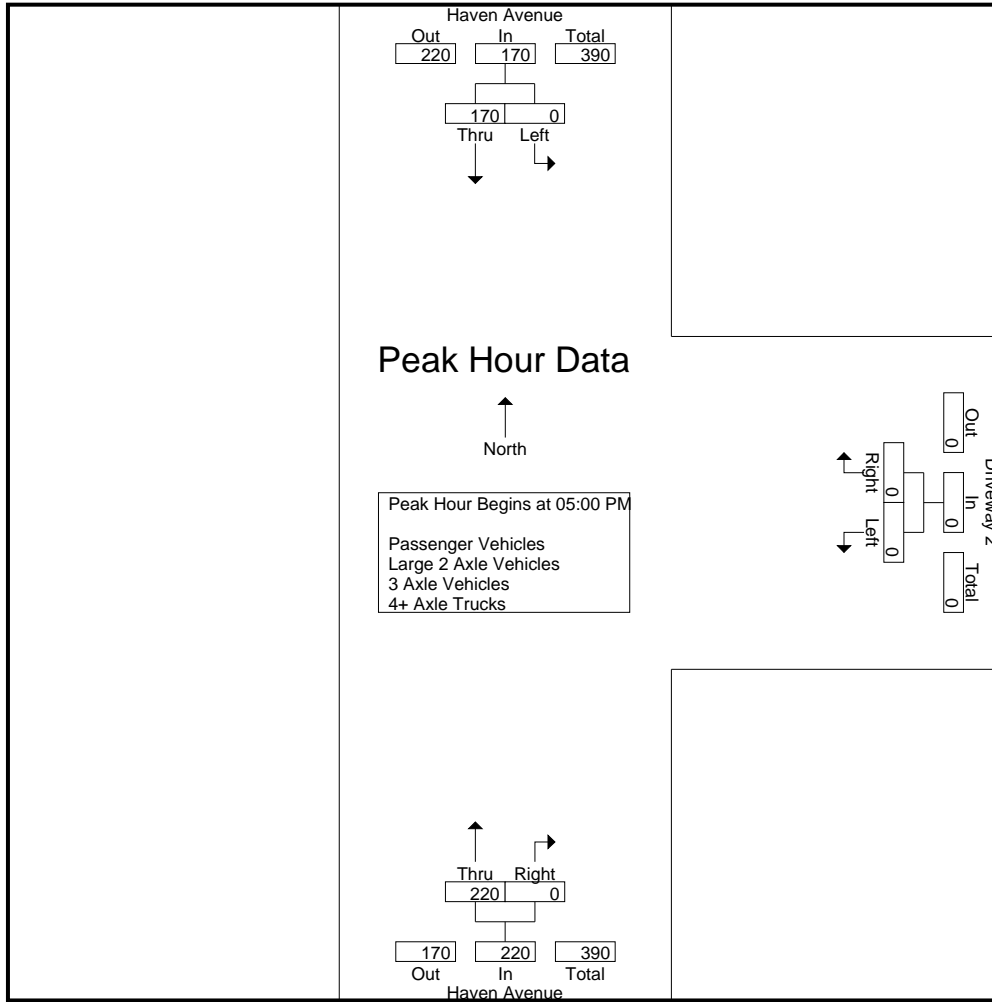
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Haven Avenue Southbound			Driveway 2 Westbound			Haven Avenue Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	0	45	45	0	0	0	48	0	48	93
04:15 PM	0	51	51	0	0	0	44	0	44	95
04:30 PM	0	50	50	0	0	0	50	0	50	100
04:45 PM	0	47	47	0	0	0	36	0	36	83
Total	0	193	193	0	0	0	178	0	178	371
05:00 PM	0	45	45	0	0	0	55	0	55	100
05:15 PM	0	46	46	0	0	0	49	0	49	95
05:30 PM	0	40	40	0	0	0	59	0	59	99
05:45 PM	0	39	39	0	0	0	57	0	57	96
Total	0	170	170	0	0	0	220	0	220	390
Grand Total	0	363	363	0	0	0	398	0	398	761
Apprch %	0	100		0	0		100	0		
Total %	0	47.7	47.7	0	0	0	52.3	0	52.3	
Passenger Vehicles	0	354	354	0	0	0	393	0	393	747
% Passenger Vehicles	0	97.5	97.5	0	0	0	98.7	0	98.7	98.2
Large 2 Axle Vehicles	0	9	9	0	0	0	3	0	3	12
% Large 2 Axle Vehicles	0	2.5	2.5	0	0	0	0.8	0	0.8	1.6
3 Axle Vehicles	0	0	0	0	0	0	1	0	1	1
% 3 Axle Vehicles	0	0	0	0	0	0	0.3	0	0.3	0.1
4+ Axle Trucks	0	0	0	0	0	0	1	0	1	1
% 4+ Axle Trucks	0	0	0	0	0	0	0.3	0	0.3	0.1

Start Time	Haven Avenue Southbound			Driveway 2 Westbound			Haven Avenue Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 05:00 PM										
05:00 PM	0	45	45	0	0	0	55	0	55	<b>100</b>
05:15 PM	0	<b>46</b>	<b>46</b>	0	0	0	49	0	49	95
05:30 PM	0	40	40	0	0	0	<b>59</b>	0	<b>59</b>	99
05:45 PM	0	39	39	0	0	0	57	0	57	96
Total Volume	0	170	170	0	0	0	220	0	220	390
% App. Total	0	100		0	0		100	0		
PHF	.000	.924	.924	.000	.000	.000	.932	.000	.932	.975

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Driveway 2  
 Weather: Clear

File Name : 02\_RNC\_Haven\_DW1 PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 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:

	04:00 PM			04:00 PM			05:00 PM		
+0 mins.	0	45	45	0	0	0	55	0	55
+15 mins.	0	<b>51</b>	<b>51</b>	0	0	0	49	0	49
+30 mins.	0	50	50	0	0	0	<b>59</b>	0	<b>59</b>
+45 mins.	0	47	47	0	0	0	57	0	57
Total Volume	0	193	193	0	0	0	220	0	220
% App. Total	0	100		0	0		100	0	
PHF	.000	.946	.946	.000	.000	.000	.932	.000	.932

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Driveway 2  
 Weather: Clear

File Name : 02\_RNC\_Haven\_DW1 PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

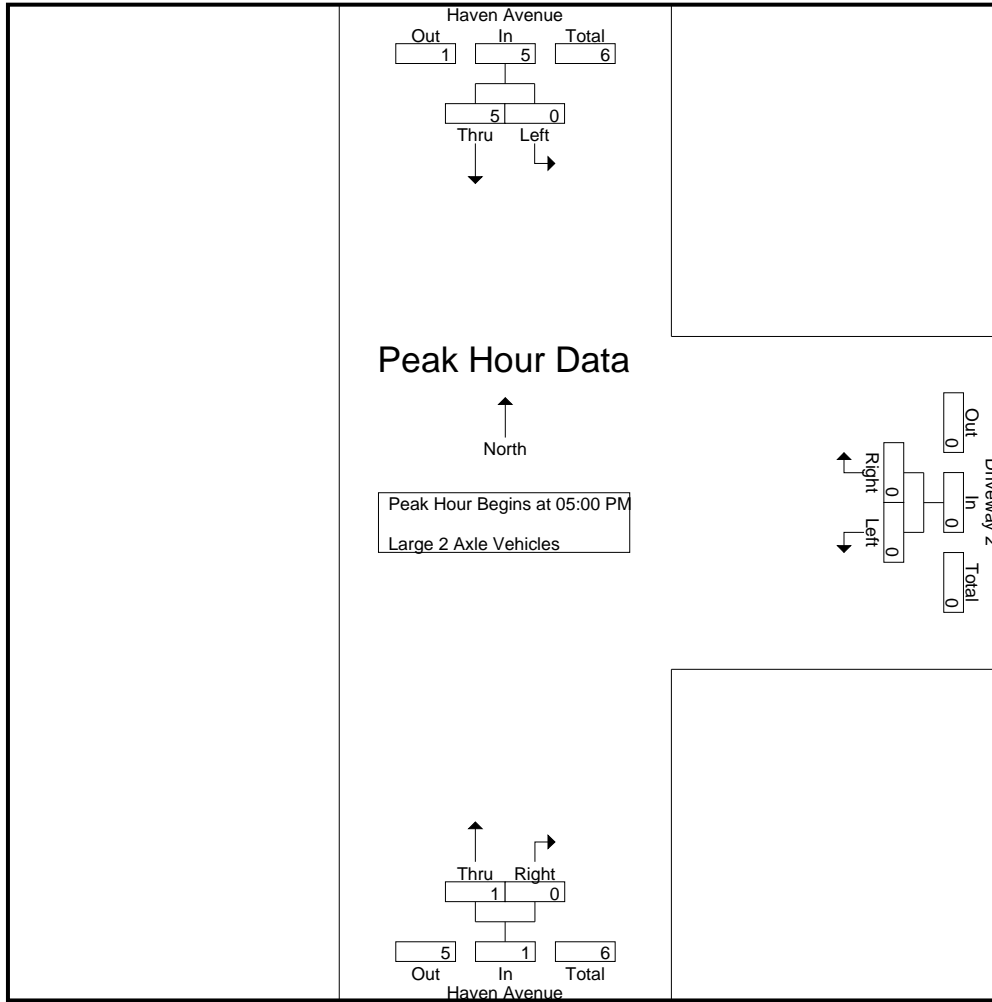
Start Time	Haven Avenue Southbound			Driveway 2 Westbound			Haven Avenue Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	0	1	1	0	0	0	0	0	0	1
04:15 PM	0	0	0	0	0	0	1	0	1	1
04:30 PM	0	2	2	0	0	0	1	0	1	3
04:45 PM	0	1	1	0	0	0	0	0	0	1
Total	0	4	4	0	0	0	2	0	2	6
05:00 PM	0	0	0	0	0	0	1	0	1	1
05:15 PM	0	4	4	0	0	0	0	0	0	4
05:30 PM	0	1	1	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	5	5	0	0	0	1	0	1	6
Grand Total	0	9	9	0	0	0	3	0	3	12
Apprch %	0	100		0	0		100	0		
Total %	0	75	75	0	0	0	25	0	25	

Start Time	Haven Avenue Southbound			Driveway 2 Westbound			Haven Avenue Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
05:00 PM	0	0	0	0	0	0	1	0	1	1
05:15 PM	0	4	4	0	0	0	0	0	0	4
05:30 PM	0	1	1	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	5	5	0	0	0	1	0	1	6
% App. Total	0	100		0	0		100	0		
PHF	.000	.313	.313	.000	.000	.000	.250	.000	.250	.375

Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 05:00 PM

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Driveway 2  
 Weather: Clear

File Name : 02\_RNC\_Haven\_DW1 PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 2



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

	05:00 PM			05:00 PM			05:00 PM		
+0 mins.	0	0	0	0	0	0	1	0	1
+15 mins.	0	4	4	0	0	0	0	0	0
+30 mins.	0	1	1	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	0	5	5	0	0	0	1	0	1
% App. Total	0	100		0	0		100	0	
PHF	.000	.313	.313	.000	.000	.000	.250	.000	.250

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Driveway 2  
 Weather: Clear

File Name : 02\_RNC\_Haven\_DW1 PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 1

Groups Printed- 3 Axle Vehicles

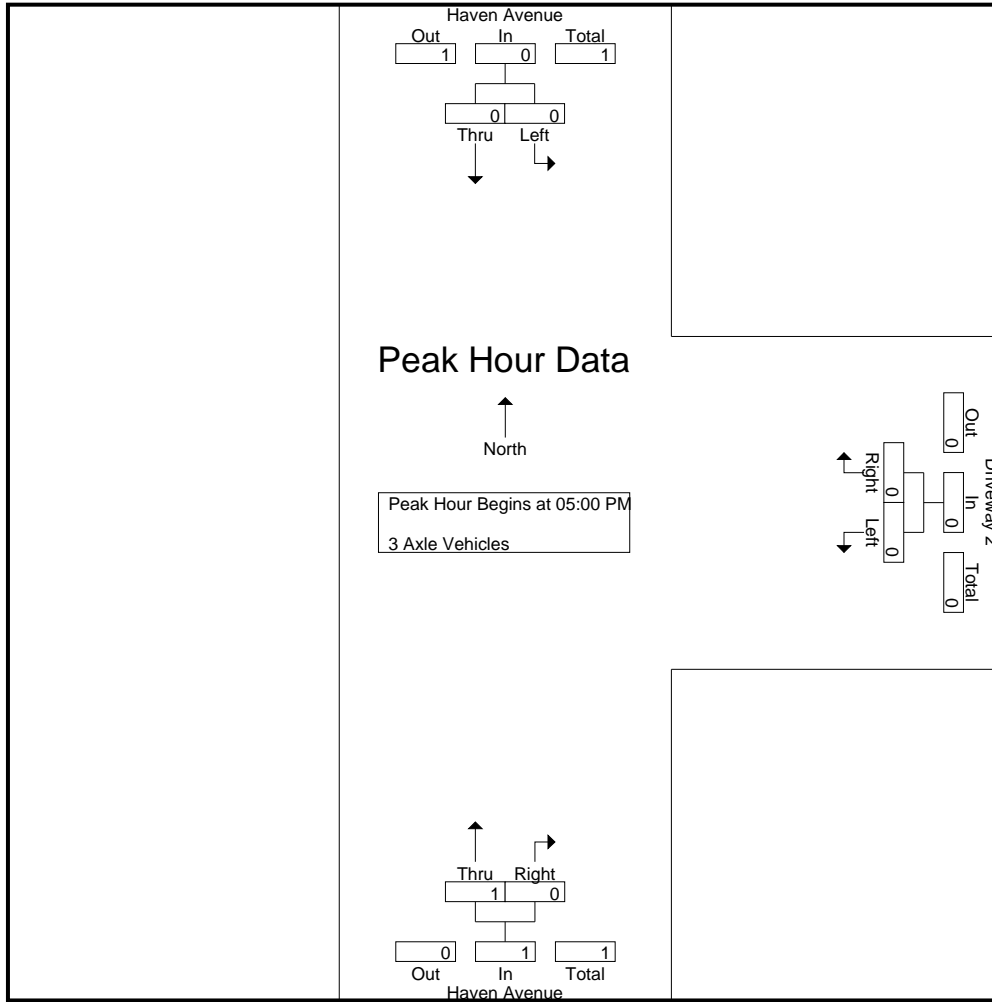
Start Time	Haven Avenue Southbound			Driveway 2 Westbound			Haven Avenue Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	1	0	1	1
Total	0	0	0	0	0	0	1	0	1	1
Grand Total	0	0	0	0	0	0	1	0	1	1
Apprch %	0	0	0	0	0	0	100	0	100	100
Total %	0	0	0	0	0	0	100	0	100	100

Start Time	Haven Avenue Southbound			Driveway 2 Westbound			Haven Avenue Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	1	0	1	1
Total Volume	0	0	0	0	0	0	1	0	1	1
% App. Total	0	0	0	0	0	0	100	0	100	100
PHF	.000	.000	.000	.000	.000	.000	.250	.000	.250	.250

Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 05:00 PM

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Driveway 2  
 Weather: Clear

File Name : 02\_RNC\_Haven\_DW1 PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 2



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

	05:00 PM			05:00 PM			05:00 PM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	1	0	1
Total Volume	0	0	0	0	0	0	1	0	1
% App. Total	0	0	0	0	0	0	100	0	100
PHF	.000	.000	.000	.000	.000	.000	.250	.000	.250

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Driveway 2  
 Weather: Clear

File Name : 02\_RNC\_Haven\_DW1 PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 1

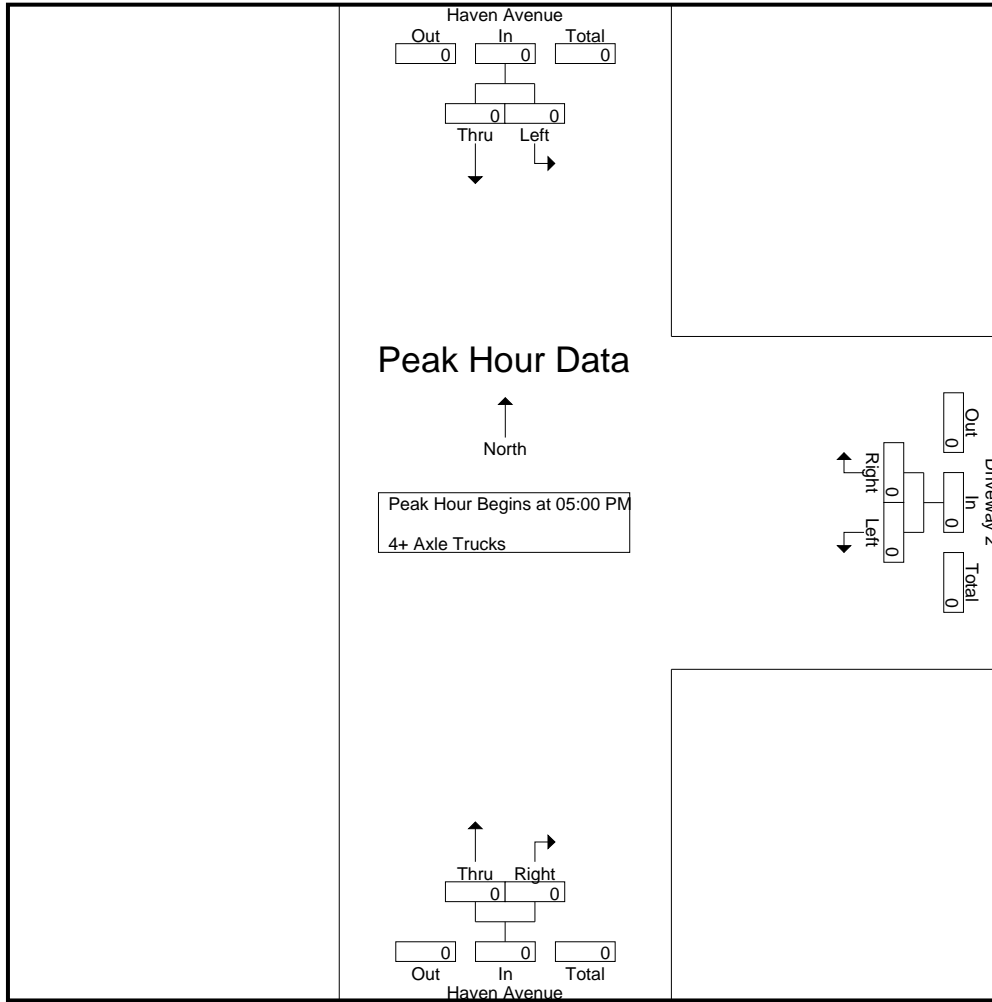
Groups Printed- 4+ Axle Trucks

Start Time	Haven Avenue Southbound			Driveway 2 Westbound			Haven Avenue Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	0	0	0	0	0	0	1	0	1	1
04:15 PM	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	1	0	1	1
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	1	0	1	1
Apprch %	0	0		0	0		100	0		
Total %	0	0		0	0		100	0	100	

Start Time	Haven Avenue Southbound			Driveway 2 Westbound			Haven Avenue Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 05:00 PM										
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0		0	0		0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Driveway 2  
 Weather: Clear

File Name : 02\_RNC\_Haven\_DW1 PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 2



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

	05:00 PM			05:00 PM			05:00 PM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000



Location: Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Driveway 2



Date: 6/2/2021  
 Day: Wednesday

PEDESTRIANS

	North Leg Haven Avenue	East Leg Driveway 2	South Leg Haven Avenue	West Leg Dead End	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	1	0	0	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	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	1	0	0	1

	North Leg Haven Avenue	East Leg Driveway 2	South Leg Haven Avenue	West Leg Dead End	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	3	0	0	3
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	3	0	0	3

Location: Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Driveway 2



Date: 6/2/2021  
 Day: Wednesday

BICYCLES

	Southbound Haven Avenue			Westbound Driveway 2			Northbound Haven Avenue			Eastbound Dead End			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

	Southbound Haven Avenue			Westbound Driveway 2			Northbound Haven Avenue			Eastbound Dead End			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	2	0	0	0	0	2
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	2	0	0	0	0	2

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Olive Way (North)  
 Weather: Clear

File Name : 03\_RNC\_Haven\_Olive N AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 1

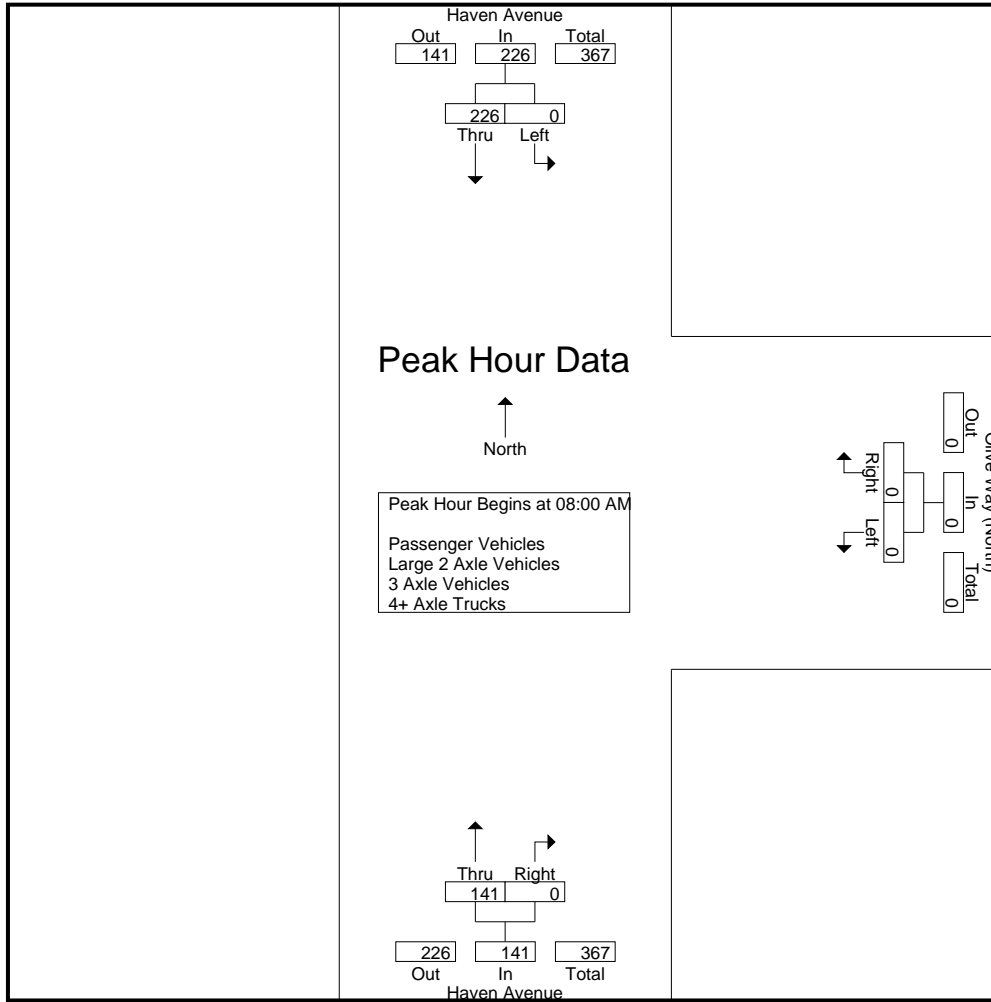
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Haven Avenue Southbound			Olive Way (North) Westbound			Haven Avenue Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	0	40	40	0	0	0	26	0	26	66
07:15 AM	0	33	33	0	0	0	14	0	14	47
07:30 AM	0	41	41	0	0	0	24	0	24	65
07:45 AM	0	50	50	0	0	0	30	0	30	80
Total	0	164	164	0	0	0	94	0	94	258
08:00 AM	0	53	53	0	0	0	50	0	50	103
08:15 AM	0	52	52	0	0	0	35	0	35	87
08:30 AM	0	62	62	0	0	0	29	0	29	91
08:45 AM	0	59	59	0	0	0	27	0	27	86
Total	0	226	226	0	0	0	141	0	141	367
Grand Total	0	390	390	0	0	0	235	0	235	625
Apprch %	0	100		0	0		100	0		
Total %	0	62.4	62.4	0	0	0	37.6	0	37.6	
Passenger Vehicles	0	380	380	0	0	0	217	0	217	597
% Passenger Vehicles	0	97.4	97.4	0	0	0	92.3	0	92.3	95.5
Large 2 Axle Vehicles	0	8	8	0	0	0	15	0	15	23
% Large 2 Axle Vehicles	0	2.1	2.1	0	0	0	6.4	0	6.4	3.7
3 Axle Vehicles	0	1	1	0	0	0	1	0	1	2
% 3 Axle Vehicles	0	0.3	0.3	0	0	0	0.4	0	0.4	0.3
4+ Axle Trucks	0	1	1	0	0	0	2	0	2	3
% 4+ Axle Trucks	0	0.3	0.3	0	0	0	0.9	0	0.9	0.5

Start Time	Haven Avenue Southbound			Olive Way (North) Westbound			Haven Avenue Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 08:00 AM										
08:00 AM	0	53	53	0	0	0	<b>50</b>	0	<b>50</b>	<b>103</b>
08:15 AM	0	52	52	0	0	0	35	0	35	87
08:30 AM	0	<b>62</b>	<b>62</b>	0	0	0	29	0	29	91
08:45 AM	0	59	59	0	0	0	27	0	27	86
Total Volume	0	226	226	0	0	0	141	0	141	367
% App. Total	0	100		0	0		100	0		
PHF	.000	.911	.911	.000	.000	.000	.705	.000	.705	.891

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Olive Way (North)  
 Weather: Clear

File Name : 03\_RNC\_Haven\_Olive N AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 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:

	08:00 AM			07:00 AM			07:45 AM		
+0 mins.	0	53	53	0	0	0	30	0	30
+15 mins.	0	52	52	0	0	0	50	0	50
+30 mins.	0	62	62	0	0	0	35	0	35
+45 mins.	0	59	59	0	0	0	29	0	29
Total Volume	0	226	226	0	0	0	144	0	144
% App. Total	0	100		0	0		100	0	
PHF	.000	.911	.911	.000	.000	.000	.720	.000	.720

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Olive Way (North)  
 Weather: Clear

File Name : 03\_RNC\_Haven\_Olive N AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

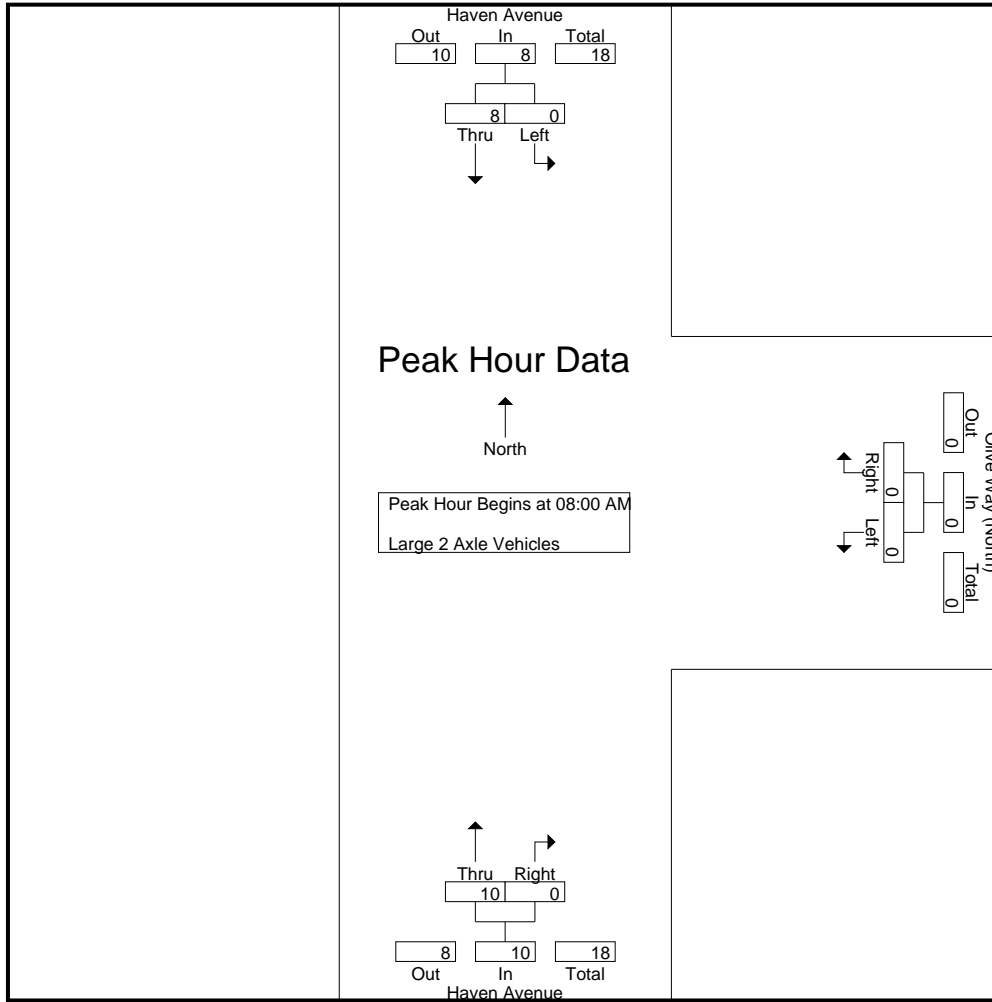
Start Time	Haven Avenue Southbound			Olive Way (North) Westbound			Haven Avenue Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	0	0	0	0	0	0	1	0	1	1
07:15 AM	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	1	0	1	1
07:45 AM	0	0	0	0	0	0	3	0	3	3
Total	0	0	0	0	0	0	5	0	5	5
08:00 AM	0	1	1	0	0	0	4	0	4	5
08:15 AM	0	0	0	0	0	0	2	0	2	2
08:30 AM	0	4	4	0	0	0	2	0	2	6
08:45 AM	0	3	3	0	0	0	2	0	2	5
Total	0	8	8	0	0	0	10	0	10	18
Grand Total	0	8	8	0	0	0	15	0	15	23
Apprch %	0	100		0	0		100	0		
Total %	0	34.8	34.8	0	0	0	65.2	0	65.2	

Start Time	Haven Avenue Southbound			Olive Way (North) Westbound			Haven Avenue Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
08:00 AM	0	1	1	0	0	0	4	0	4	5
08:15 AM	0	0	0	0	0	0	2	0	2	2
08:30 AM	0	4	4	0	0	0	2	0	2	6
08:45 AM	0	3	3	0	0	0	2	0	2	5
Total Volume	0	8	8	0	0	0	10	0	10	18
% App. Total	0	100		0	0		100	0		
PHF	.000	.500	.500	.000	.000	.000	.625	.000	.625	.750

Peak Hour Analysis From 08:00 AM to 08:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 08:00 AM

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Olive Way (North)  
 Weather: Clear

File Name : 03\_RNC\_Haven\_Olive N AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 2



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

	08:00 AM			08:00 AM			08:00 AM		
+0 mins.	0	1	1	0	0	0	4	0	4
+15 mins.	0	0	0	0	0	0	2	0	2
+30 mins.	0	4	4	0	0	0	2	0	2
+45 mins.	0	3	3	0	0	0	2	0	2
Total Volume	0	8	8	0	0	0	10	0	10
% App. Total	0	100		0	0		100	0	
PHF	.000	.500	.500	.000	.000	.000	.625	.000	.625

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Olive Way (North)  
 Weather: Clear

File Name : 03\_RNC\_Haven\_Olive N AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 1

Groups Printed- 3 Axle Vehicles

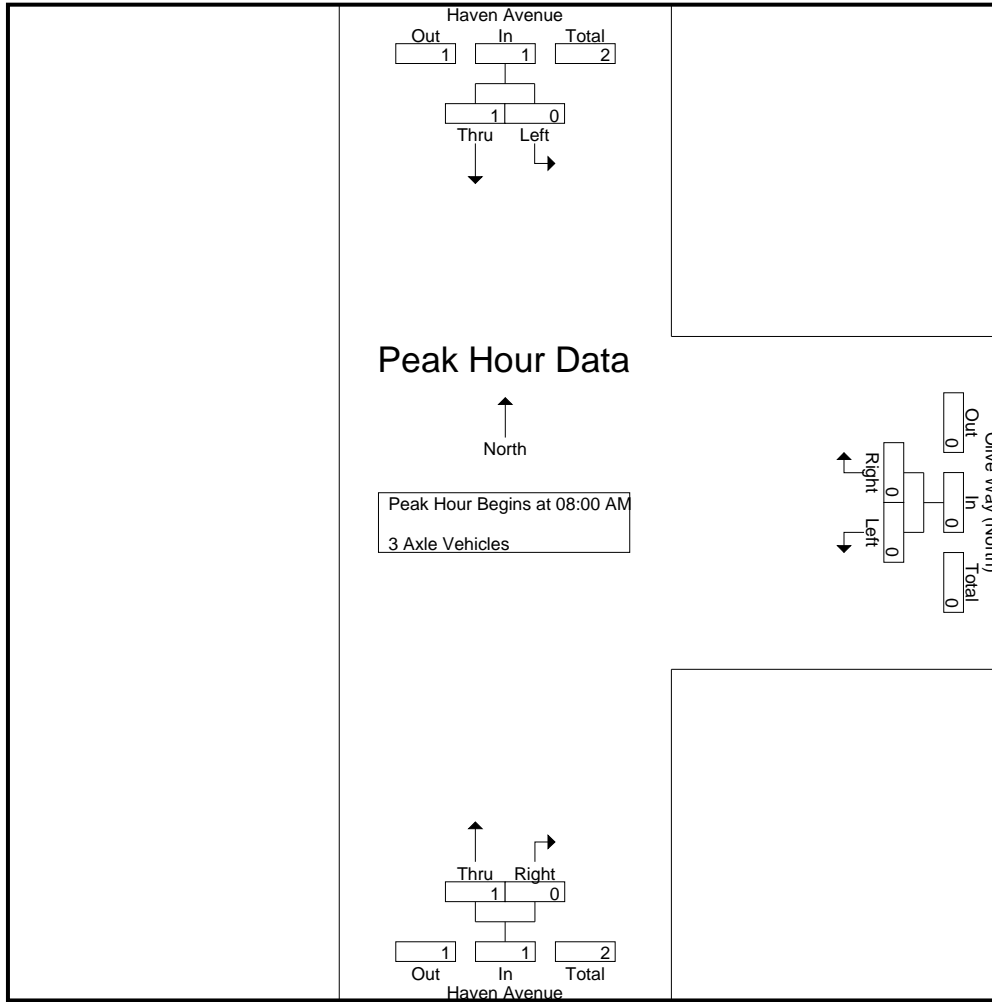
Start Time	Haven Avenue Southbound			Olive Way (North) Westbound			Haven Avenue Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	1	1	0	0	0	1	0	1	2
08:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	1	1	0	0	0	1	0	1	2
Grand Total	0	1	1	0	0	0	1	0	1	2
Apprch %	0	100		0	0		100	0		
Total %	0	50	50	0	0	0	50	0	50	

Start Time	Haven Avenue Southbound			Olive Way (North) Westbound			Haven Avenue Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
08:00 AM	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	1	1	0	0	0	1	0	1	2
08:45 AM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	1	0	0	0	1	0	1	2
% App. Total	0	100		0	0		100	0		
PHF	.000	.250	.250	.000	.000	.000	.250	.000	.250	.250

Peak Hour Analysis From 08:00 AM to 08:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 08:00 AM

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Olive Way (North)  
 Weather: Clear

File Name : 03\_RNC\_Haven\_Olive N AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 2



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

	08:00 AM			08:00 AM			08:00 AM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	1	1	0	0	0	1	0	1
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	0	1	1	0	0	0	1	0	1
% App. Total	0	100		0	0		100	0	
PHF	.000	.250	.250	.000	.000	.000	.250	.000	.250



City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Olive Way (North)  
 Weather: Clear

File Name : 03\_RNC\_Haven\_Olive N AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 1

Groups Printed- 4+ Axle Trucks

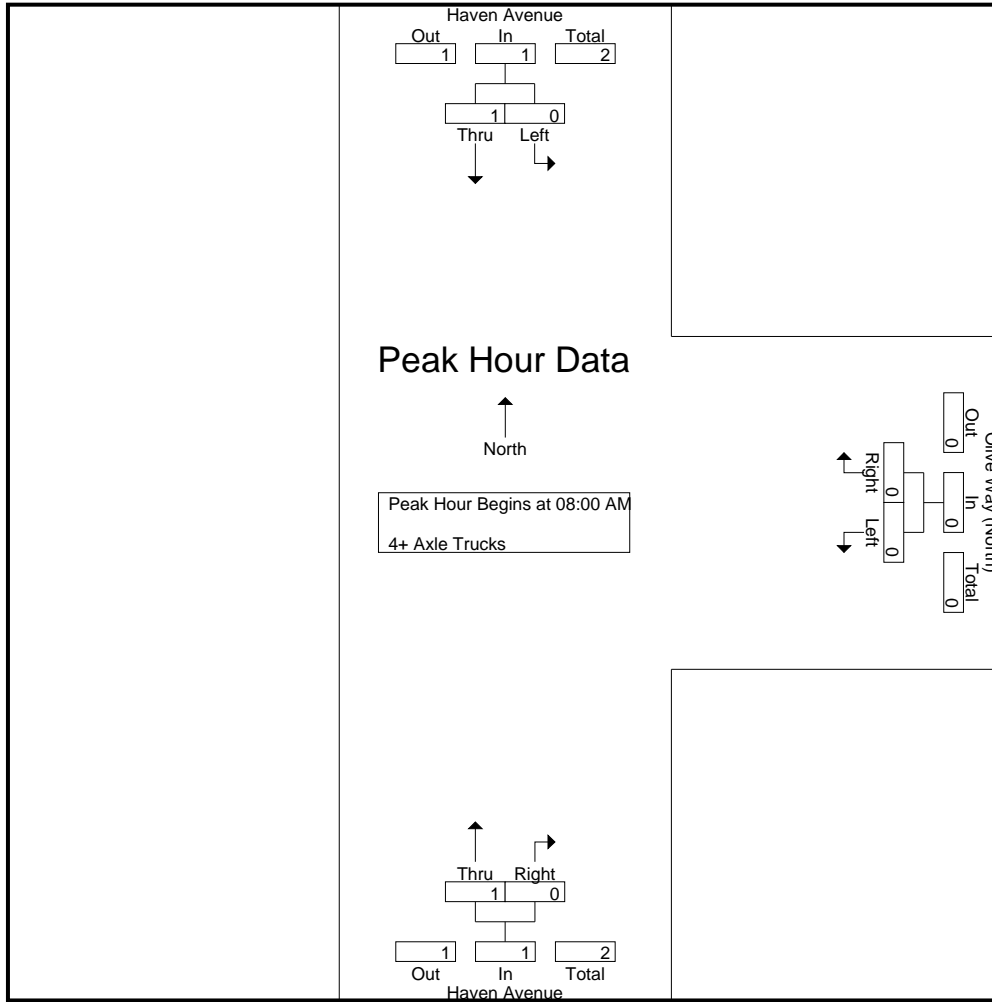
Start Time	Haven Avenue Southbound			Olive Way (North) Westbound			Haven Avenue Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	1	0	1	1
Total	0	0	0	0	0	0	1	0	1	1
08:00 AM	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	1	1	0	0	0	1	0	1	2
08:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	1	1	0	0	0	1	0	1	2
Grand Total	0	1	1	0	0	0	2	0	2	3
Apprch %	0	100		0	0		100	0		
Total %	0	33.3	33.3	0	0	0	66.7	0	66.7	

Start Time	Haven Avenue Southbound			Olive Way (North) Westbound			Haven Avenue Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
08:00 AM	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	1	1	0	0	0	1	0	1	2
08:45 AM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	1	0	0	0	1	0	1	2
% App. Total	0	100		0	0		100	0		
PHF	.000	.250	.250	.000	.000	.000	.250	.000	.250	.250

Peak Hour Analysis From 08:00 AM to 08:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 08:00 AM

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Olive Way (North)  
 Weather: Clear

File Name : 03\_RNC\_Haven\_Olive N AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 2



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

	08:00 AM			08:00 AM			08:00 AM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	1	1	0	0	0	1	0	1
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	0	1	1	0	0	0	1	0	1
% App. Total	0	100		0	0		100	0	
PHF	.000	.250	.250	.000	.000	.000	.250	.000	.250

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Olive Way (North)  
 Weather: Clear

File Name : 03\_RNC\_Haven\_Olive N PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 1

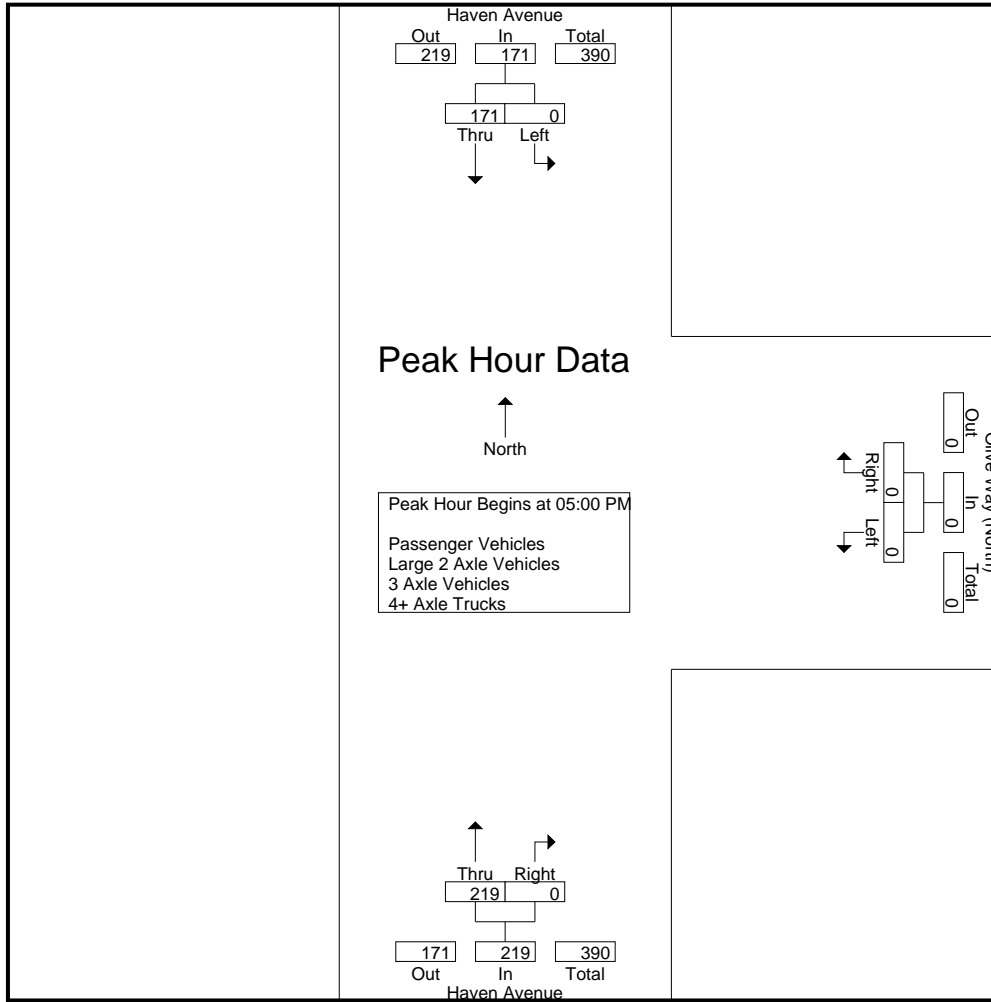
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Haven Avenue Southbound			Olive Way (North) Westbound			Haven Avenue Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	0	45	45	0	0	0	47	0	47	92
04:15 PM	0	55	55	0	0	0	43	0	43	98
04:30 PM	0	55	55	0	0	0	51	1	52	107
04:45 PM	0	48	48	0	0	0	37	0	37	85
Total	0	203	203	0	0	0	178	1	179	382
05:00 PM	0	43	43	0	0	0	52	0	52	95
05:15 PM	0	46	46	0	0	0	50	0	50	96
05:30 PM	0	40	40	0	0	0	59	0	59	99
05:45 PM	0	42	42	0	0	0	58	0	58	100
Total	0	171	171	0	0	0	219	0	219	390
Grand Total	0	374	374	0	0	0	397	1	398	772
Apprch %	0	100		0	0		99.7	0.3		
Total %	0	48.4	48.4	0	0	0	51.4	0.1	51.6	
Passenger Vehicles	0	363	363	0	0	0	391	1	392	755
% Passenger Vehicles	0	97.1	97.1	0	0	0	98.5	100	98.5	97.8
Large 2 Axle Vehicles	0	11	11	0	0	0	4	0	4	15
% Large 2 Axle Vehicles	0	2.9	2.9	0	0	0	1	0	1	1.9
3 Axle Vehicles	0	0	0	0	0	0	1	0	1	1
% 3 Axle Vehicles	0	0	0	0	0	0	0.3	0	0.3	0.1
4+ Axle Trucks	0	0	0	0	0	0	1	0	1	1
% 4+ Axle Trucks	0	0	0	0	0	0	0.3	0	0.3	0.1

Start Time	Haven Avenue Southbound			Olive Way (North) Westbound			Haven Avenue Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 05:00 PM										
05:00 PM	0	43	43	0	0	0	52	0	52	95
05:15 PM	0	<b>46</b>	<b>46</b>	0	0	0	50	0	50	96
05:30 PM	0	40	40	0	0	0	<b>59</b>	0	<b>59</b>	99
05:45 PM	0	42	42	0	0	0	58	0	58	<b>100</b>
Total Volume	0	171	171	0	0	0	219	0	219	390
% App. Total	0	100		0	0		100	0		
PHF	.000	.929	.929	.000	.000	.000	.928	.000	.928	.975

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Olive Way (North)  
 Weather: Clear

File Name : 03\_RNC\_Haven\_Olive N PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 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:

	04:00 PM			04:00 PM			05:00 PM		
+0 mins.	0	45	45	0	0	0	52	0	52
+15 mins.	0	<b>55</b>	<b>55</b>	0	0	0	50	0	50
+30 mins.	0	55	55	0	0	0	<b>59</b>	0	<b>59</b>
+45 mins.	0	48	48	0	0	0	58	0	58
Total Volume	0	203	203	0	0	0	219	0	219
% App. Total	0	100		0	0		100	0	
PHF	.000	.923	.923	.000	.000	.000	.928	.000	.928

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Olive Way (North)  
 Weather: Clear

File Name : 03\_RNC\_Haven\_Olive N PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

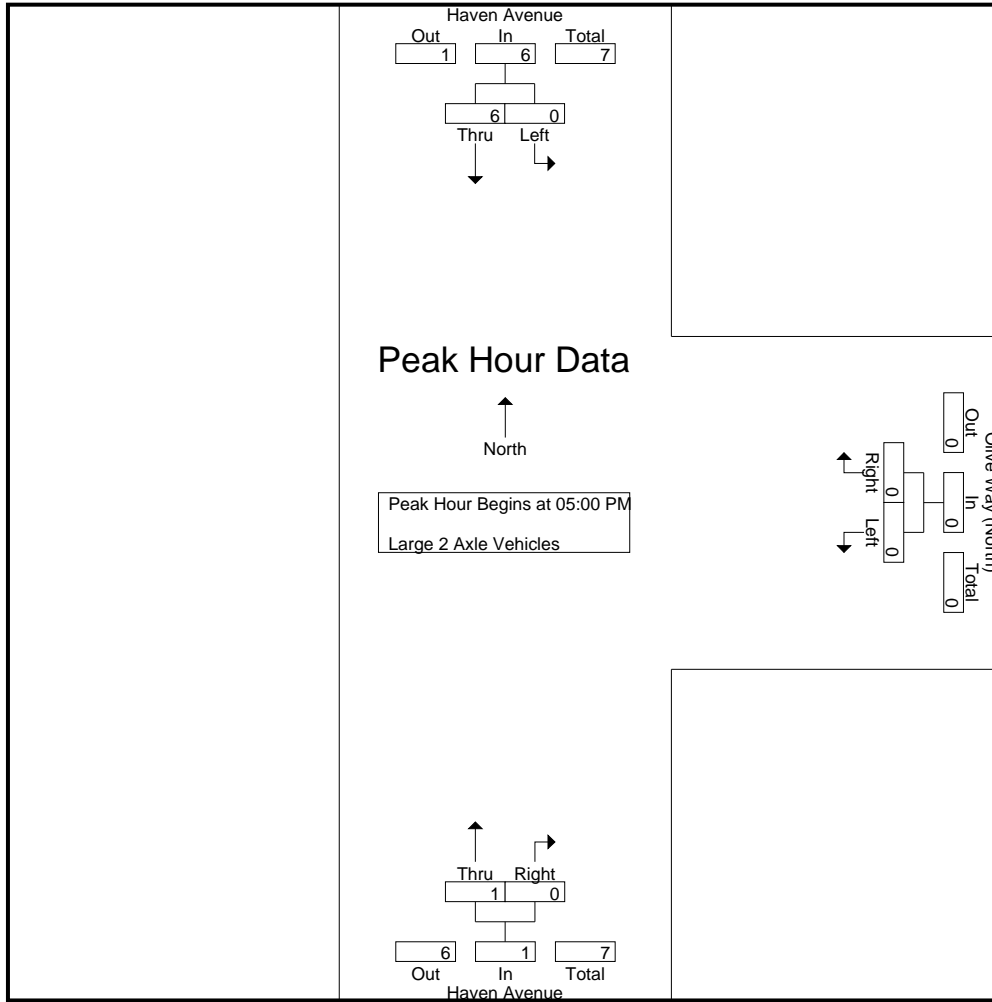
Start Time	Haven Avenue Southbound			Olive Way (North) Westbound			Haven Avenue Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	0	1	1	0	0	0	1	0	1	2
04:15 PM	0	1	1	0	0	0	1	0	1	2
04:30 PM	0	2	2	0	0	0	1	0	1	3
04:45 PM	0	1	1	0	0	0	0	0	0	1
Total	0	5	5	0	0	0	3	0	3	8
05:00 PM	0	1	1	0	0	0	1	0	1	2
05:15 PM	0	5	5	0	0	0	0	0	0	5
05:30 PM	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	6	6	0	0	0	1	0	1	7
Grand Total	0	11	11	0	0	0	4	0	4	15
Apprch %	0	100		0	0		100	0		
Total %	0	73.3	73.3	0	0	0	26.7	0	26.7	

Start Time	Haven Avenue Southbound			Olive Way (North) Westbound			Haven Avenue Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
05:00 PM	0	1	1	0	0	0	1	0	1	2
05:15 PM	0	5	5	0	0	0	0	0	0	5
05:30 PM	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	6	6	0	0	0	1	0	1	7
% App. Total	0	100		0	0		100	0		
PHF	.000	.300	.300	.000	.000	.000	.250	.000	.250	.350

Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 05:00 PM

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Olive Way (North)  
 Weather: Clear

File Name : 03\_RNC\_Haven\_Olive N PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 2



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

	05:00 PM			05:00 PM			05:00 PM		
+0 mins.	0	1	1	0	0	0	1	0	1
+15 mins.	0	5	5	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	0	6	6	0	0	0	1	0	1
% App. Total	0	100		0	0		100	0	
PHF	.000	.300	.300	.000	.000	.000	.250	.000	.250

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Olive Way (North)  
 Weather: Clear

File Name : 03\_RNC\_Haven\_Olive N PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 1

Groups Printed- 3 Axle Vehicles

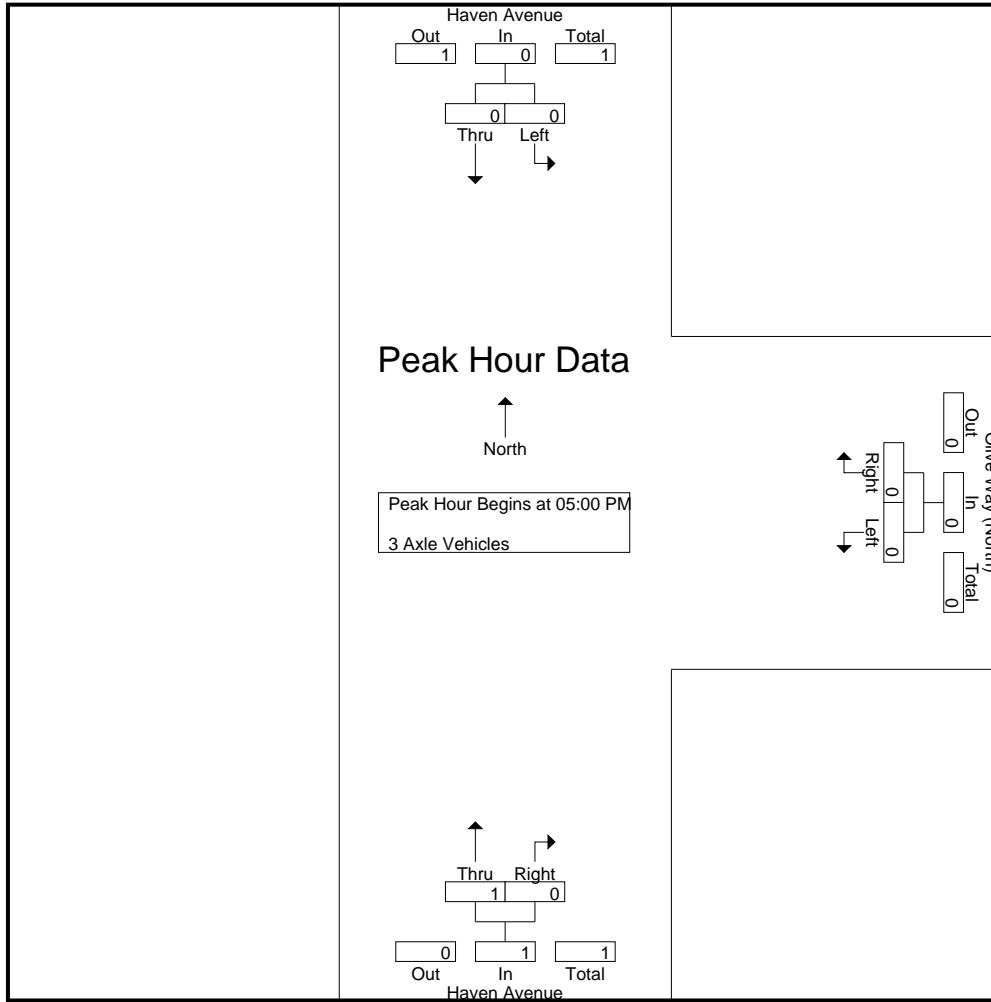
Start Time	Haven Avenue Southbound			Olive Way (North) Westbound			Haven Avenue Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	1	0	1	1
Total	0	0	0	0	0	0	1	0	1	1
Grand Total	0	0	0	0	0	0	1	0	1	1
Apprch %	0	0	0	0	0	0	100	0	100	100
Total %	0	0	0	0	0	0	100	0	100	100

Start Time	Haven Avenue Southbound			Olive Way (North) Westbound			Haven Avenue Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	1	0	1	1
Total Volume	0	0	0	0	0	0	1	0	1	1
% App. Total	0	0	0	0	0	0	100	0	100	100
PHF	.000	.000	.000	.000	.000	.000	.250	.000	.250	.250

Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 05:00 PM

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Olive Way (North)  
 Weather: Clear

File Name : 03\_RNC\_Haven\_Olive N PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 2



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

	05:00 PM			05:00 PM			05:00 PM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	1	0	1
Total Volume	0	0	0	0	0	0	1	0	1
% App. Total	0	0	0	0	0	0	100	0	100
PHF	.000	.000	.000	.000	.000	.000	.250	.000	.250



City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Olive Way (North)  
 Weather: Clear

File Name : 03\_RNC\_Haven\_Olive N PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 1

Groups Printed- 4+ Axle Trucks

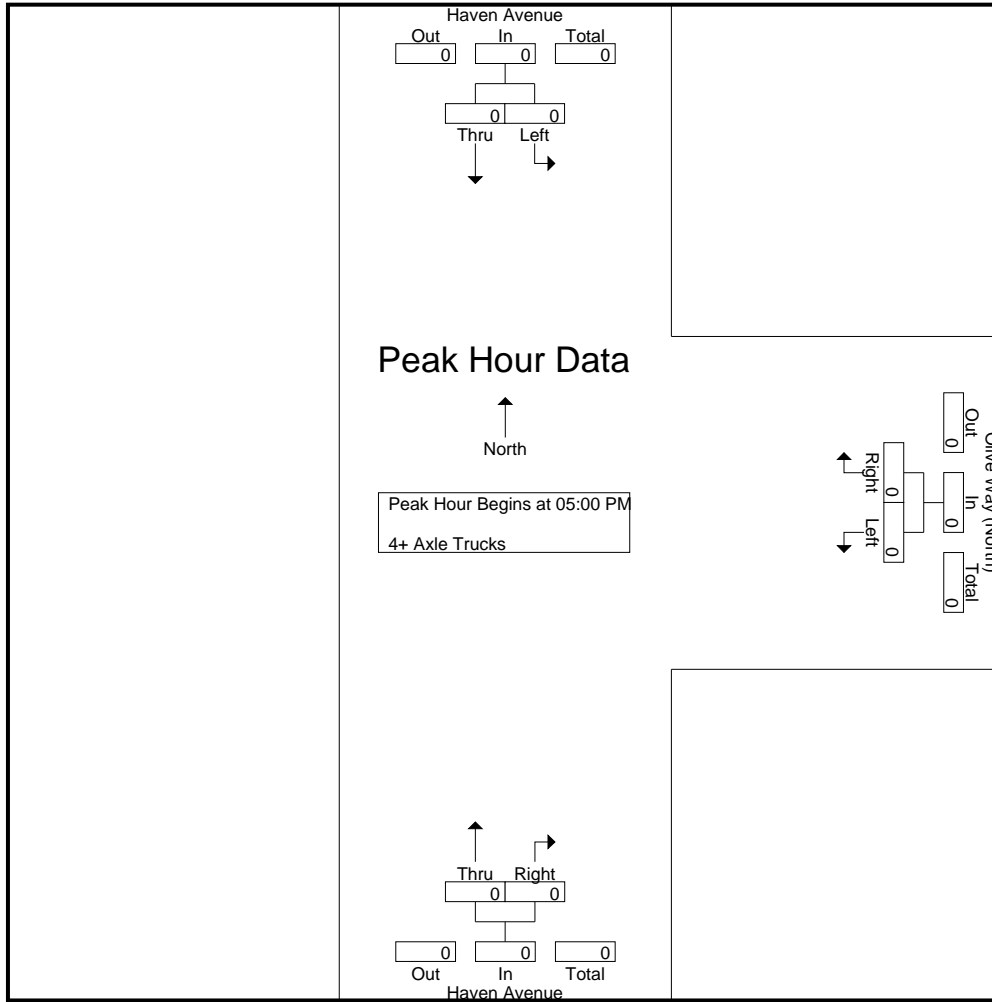
Start Time	Haven Avenue Southbound			Olive Way (North) Westbound			Haven Avenue Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	0	0	0	0	0	0	1	0	1	1
04:15 PM	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	1	0	1	1
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	1	0	1	1
Apprch %	0	0	0	0	0	0	100	0	100	
Total %	0	0	0	0	0	0	100	0	100	

Start Time	Haven Avenue Southbound			Olive Way (North) Westbound			Haven Avenue Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0	0	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 05:00 PM

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Olive Way (North)  
 Weather: Clear

File Name : 03\_RNC\_Haven\_Olive N PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 2



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

	05:00 PM			05:00 PM			05:00 PM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000

Location: Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Olive Way (North)



Date: 6/2/2021  
 Day: Wednesday

PEDESTRIANS

	North Leg Haven Avenue	East Leg Olive Way (North)	South Leg Haven Avenue	West Leg Dead End	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	1	0	0	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	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	1	0	0	1

	North Leg Haven Avenue	East Leg Olive Way (North)	South Leg Haven Avenue	West Leg Dead End	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
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

Location: Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Olive Way (North)



Date: 6/2/2021  
 Day: Wednesday

BICYCLES

	Southbound Haven Avenue			Westbound Olive Way (North)			Northbound Haven Avenue			Eastbound Dead End			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

	Southbound Haven Avenue			Westbound Olive Way (North)			Northbound Haven Avenue			Eastbound Dead End			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Olive Way (South)  
 Weather: Clear

File Name : 04\_RNC\_Haven\_Olive S AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 1

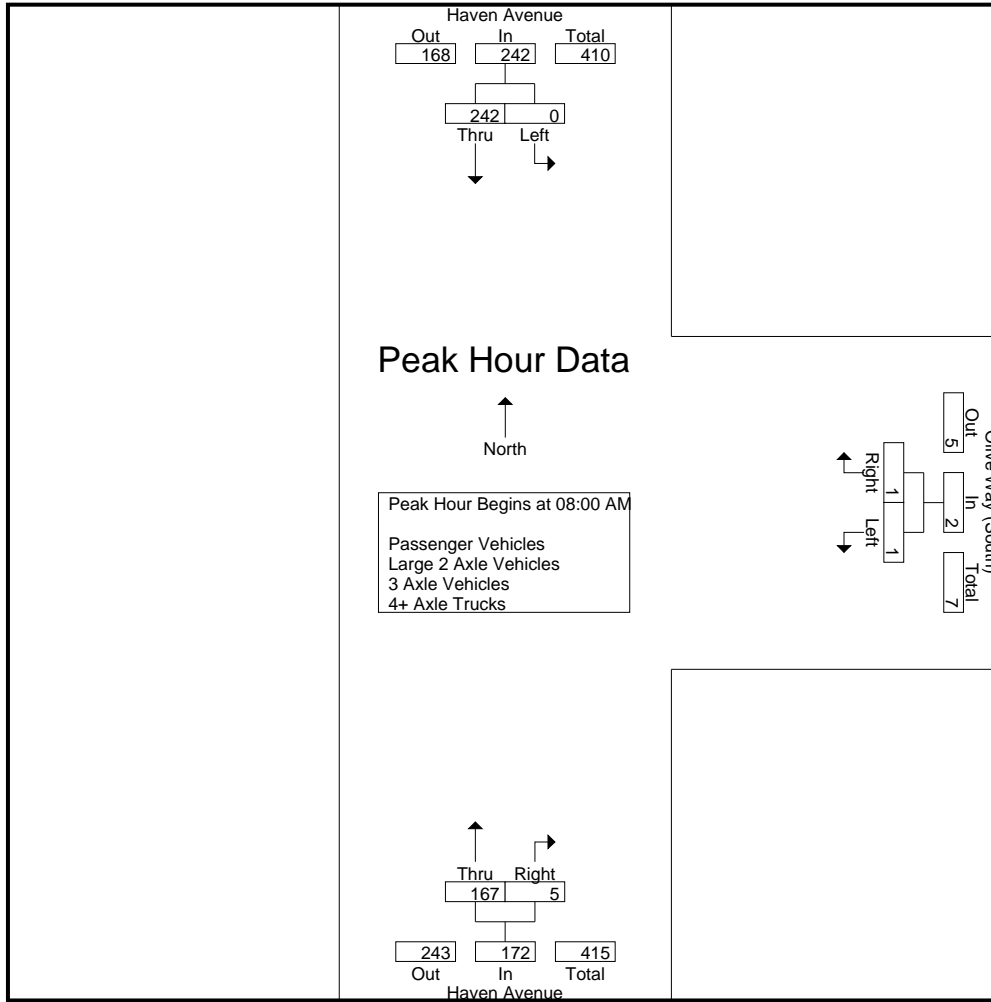
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Haven Avenue Southbound			Olive Way (South) Westbound			Haven Avenue Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	0	47	47	1	0	1	26	2	28	76
07:15 AM	0	39	39	0	1	1	17	1	18	58
07:30 AM	0	56	56	0	1	1	28	2	30	87
07:45 AM	0	50	50	0	1	1	31	1	32	83
Total	0	192	192	1	3	4	102	6	108	304
08:00 AM	0	56	56	1	0	1	56	1	57	114
08:15 AM	0	58	58	0	0	0	43	1	44	102
08:30 AM	0	56	56	0	0	0	29	3	32	88
08:45 AM	0	72	72	0	1	1	39	0	39	112
Total	0	242	242	1	1	2	167	5	172	416
Grand Total	0	434	434	2	4	6	269	11	280	720
Apprch %	0	100		33.3	66.7		96.1	3.9		
Total %	0	60.3	60.3	0.3	0.6	0.8	37.4	1.5	38.9	
Passenger Vehicles	0	428	428	2	4	6	256	11	267	701
% Passenger Vehicles	0	98.6	98.6	100	100	100	95.2	100	95.4	97.4
Large 2 Axle Vehicles	0	4	4	0	0	0	11	0	11	15
% Large 2 Axle Vehicles	0	0.9	0.9	0	0	0	4.1	0	3.9	2.1
3 Axle Vehicles	0	1	1	0	0	0	2	0	2	3
% 3 Axle Vehicles	0	0.2	0.2	0	0	0	0.7	0	0.7	0.4
4+ Axle Trucks	0	1	1	0	0	0	0	0	0	1
% 4+ Axle Trucks	0	0.2	0.2	0	0	0	0	0	0	0.1

Start Time	Haven Avenue Southbound			Olive Way (South) Westbound			Haven Avenue Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 08:00 AM										
08:00 AM	0	56	56	1	0	1	56	1	57	114
08:15 AM	0	58	58	0	0	0	43	1	44	102
08:30 AM	0	56	56	0	0	0	29	3	32	88
08:45 AM	0	72	72	0	1	1	39	0	39	112
Total Volume	0	242	242	1	1	2	167	5	172	416
% App. Total	0	100		50	50		97.1	2.9		
PHF	.000	.840	.840	.250	.250	.500	.746	.417	.754	.912

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Olive Way (South)  
 Weather: Clear

File Name : 04\_RNC\_Haven\_Olive S AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 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:

	08:00 AM			07:00 AM			08:00 AM		
+0 mins.	0	56	56	1	0	1	56	1	57
+15 mins.	0	58	58	0	1	1	43	1	44
+30 mins.	0	56	56	0	1	1	29	3	32
+45 mins.	0	72	72	0	1	1	39	0	39
Total Volume	0	242	242	1	3	4	167	5	172
% App. Total	0	100		25	75		97.1	2.9	
PHF	.000	.840	.840	.250	.750	1.000	.746	.417	.754

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Olive Way (South)  
 Weather: Clear

File Name : 04\_RNC\_Haven\_Olive S AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

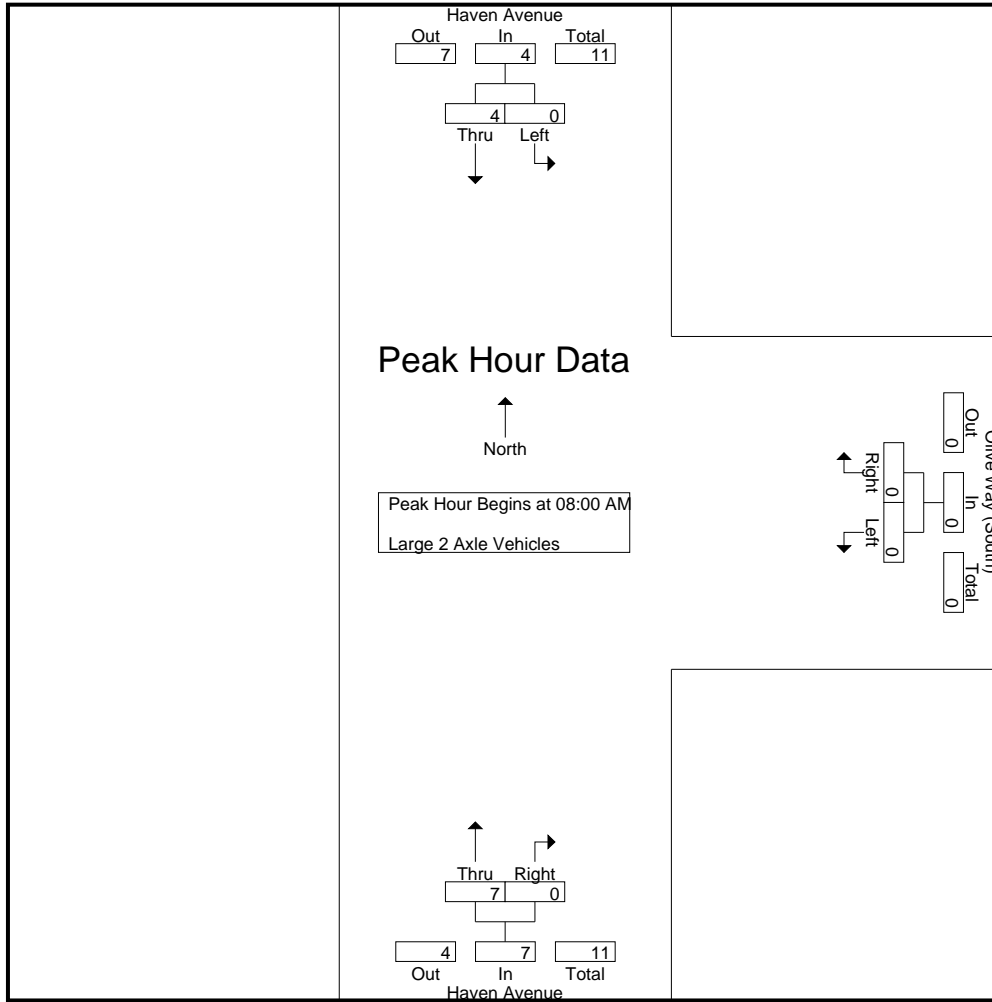
Start Time	Haven Avenue Southbound			Olive Way (South) Westbound			Haven Avenue Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	1	0	1	1
07:45 AM	0	0	0	0	0	0	3	0	3	3
Total	0	0	0	0	0	0	4	0	4	4
08:00 AM	0	0	0	0	0	0	2	0	2	2
08:15 AM	0	0	0	0	0	0	3	0	3	3
08:30 AM	0	3	3	0	0	0	2	0	2	5
08:45 AM	0	1	1	0	0	0	0	0	0	1
Total	0	4	4	0	0	0	7	0	7	11
Grand Total	0	4	4	0	0	0	11	0	11	15
Apprch %	0	100		0	0		100	0		
Total %	0	26.7	26.7	0	0	0	73.3	0	73.3	

Start Time	Haven Avenue Southbound			Olive Way (South) Westbound			Haven Avenue Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
08:00 AM	0	0	0	0	0	0	2	0	2	2
08:15 AM	0	0	0	0	0	0	3	0	3	3
08:30 AM	0	3	3	0	0	0	2	0	2	5
08:45 AM	0	1	1	0	0	0	0	0	0	1
Total Volume	0	4	4	0	0	0	7	0	7	11
% App. Total	0	100		0	0		100	0		
PHF	.000	.333	.333	.000	.000	.000	.583	.000	.583	.550

Peak Hour Analysis From 08:00 AM to 08:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 08:00 AM

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Olive Way (South)  
 Weather: Clear

File Name : 04\_RNC\_Haven\_Olive S AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 2



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

	08:00 AM			08:00 AM			08:00 AM		
+0 mins.	0	0	0	0	0	0	2	0	2
+15 mins.	0	0	0	0	0	0	3	0	3
+30 mins.	0	3	3	0	0	0	2	0	2
+45 mins.	0	1	1	0	0	0	0	0	0
Total Volume	0	4	4	0	0	0	7	0	7
% App. Total	0	100		0	0		100	0	
PHF	.000	.333	.333	.000	.000	.000	.583	.000	.583



City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Olive Way (South)  
 Weather: Clear

File Name : 04\_RNC\_Haven\_Olive S AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 1

Groups Printed- 3 Axle Vehicles

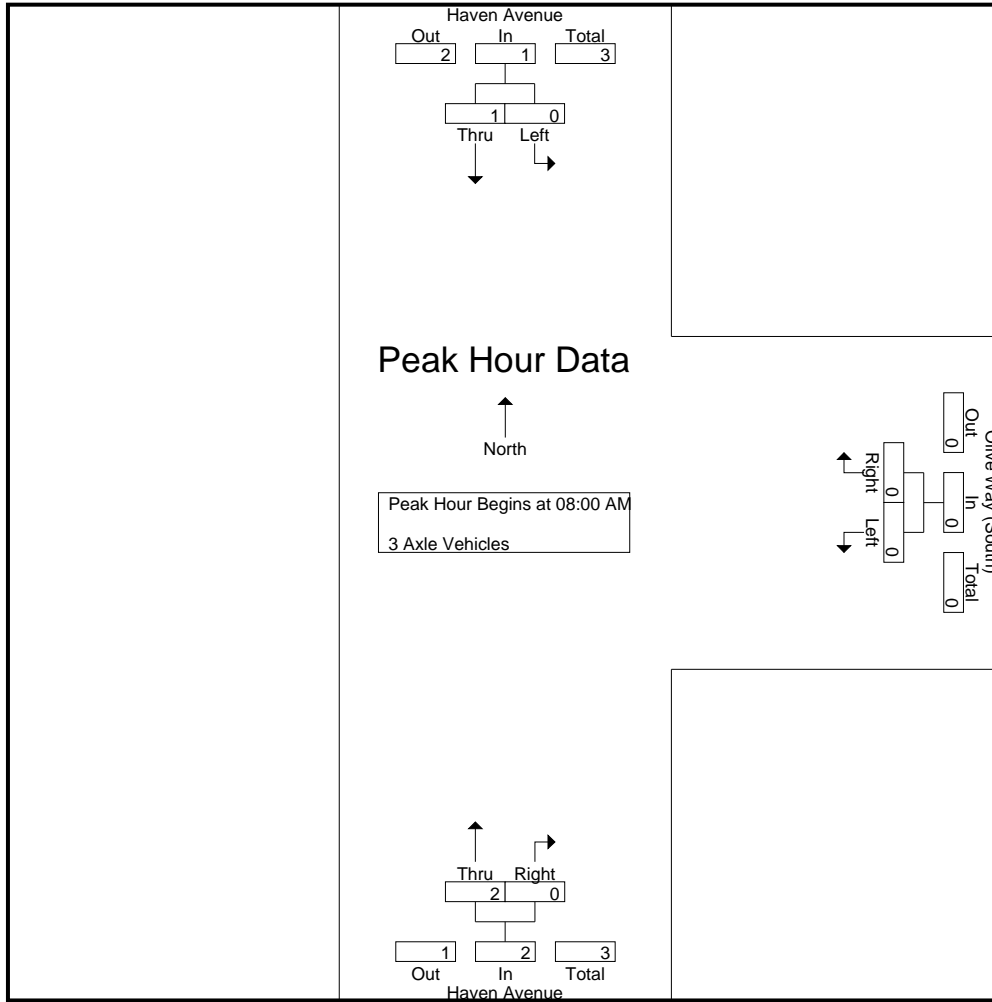
Start Time	Haven Avenue Southbound			Olive Way (South) Westbound			Haven Avenue Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	1	1	0	0	0	2	0	2	3
08:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	1	1	0	0	0	2	0	2	3
Grand Total	0	1	1	0	0	0	2	0	2	3
Apprch %	0	100		0	0		100	0		
Total %	0	33.3	33.3	0	0	0	66.7	0	66.7	

Start Time	Haven Avenue Southbound			Olive Way (South) Westbound			Haven Avenue Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
08:00 AM	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	1	1	0	0	0	2	0	2	3
08:45 AM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	1	0	0	0	2	0	2	3
% App. Total	0	100		0	0		100	0		
PHF	.000	.250	.250	.000	.000	.000	.250	.000	.250	.250

Peak Hour Analysis From 08:00 AM to 08:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 08:00 AM

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Olive Way (South)  
 Weather: Clear

File Name : 04\_RNC\_Haven\_Olive S AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 2



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

	08:00 AM			08:00 AM			08:00 AM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	1	1	0	0	0	2	0	2
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	0	1	1	0	0	0	2	0	2
% App. Total	0	100		0	0		100	0	
PHF	.000	.250	.250	.000	.000	.000	.250	.000	.250

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Olive Way (South)  
 Weather: Clear

File Name : 04\_RNC\_Haven\_Olive S AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 1

Groups Printed- 4+ Axle Trucks

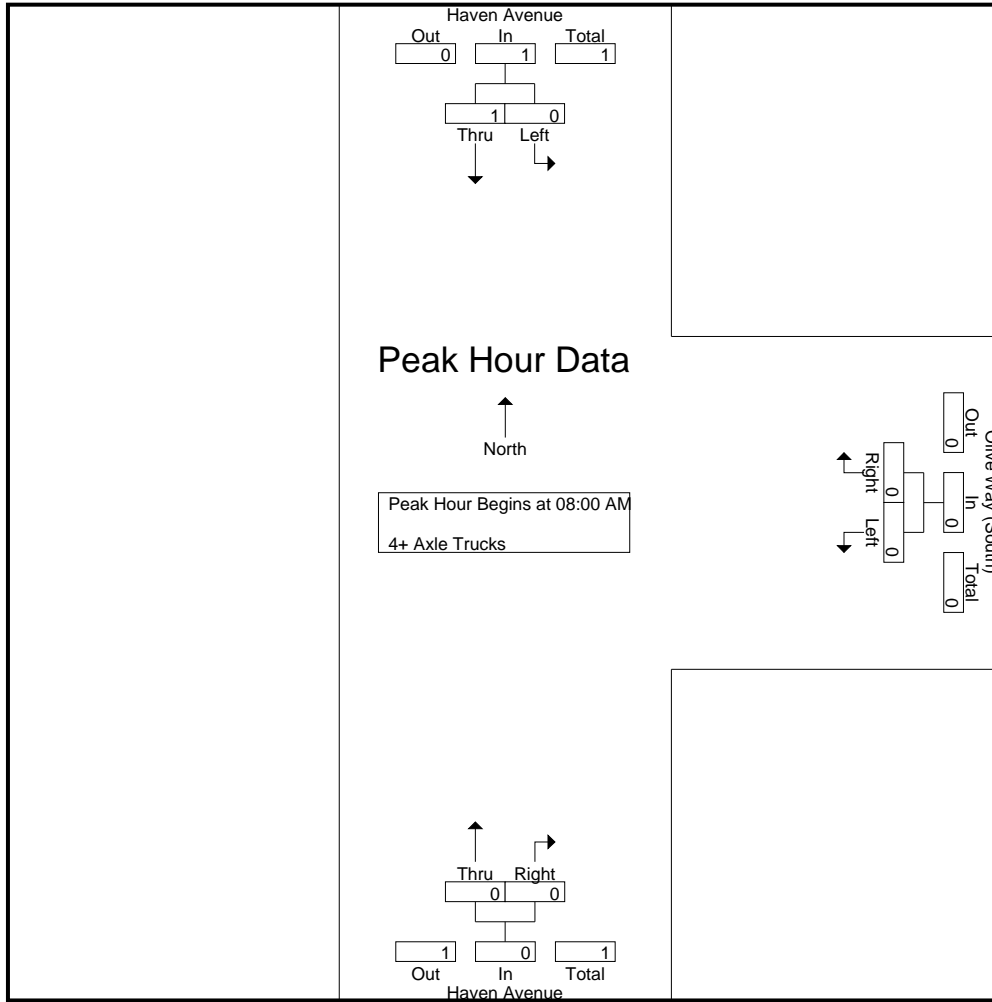
Start Time	Haven Avenue Southbound			Olive Way (South) Westbound			Haven Avenue Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	1	1	0	0	0	0	0	0	1
08:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	1	1	0	0	0	0	0	0	1
Grand Total	0	1	1	0	0	0	0	0	0	1
Apprch %	0	100		0	0		0	0		
Total %	0	100	100	0	0	0	0	0	0	

Start Time	Haven Avenue Southbound			Olive Way (South) Westbound			Haven Avenue Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
08:00 AM	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	1	1	0	0	0	0	0	0	1
08:45 AM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	1	0	0	0	0	0	0	1
% App. Total	0	100		0	0		0	0		
PHF	.000	.250	.250	.000	.000	.000	.000	.000	.000	.250

Peak Hour Analysis From 08:00 AM to 08:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 08:00 AM

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Olive Way (South)  
 Weather: Clear

File Name : 04\_RNC\_Haven\_Olive S AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 2



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

	08:00 AM			08:00 AM			08:00 AM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	1	1	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	0	1	1	0	0	0	0	0	0
% App. Total	0	100		0	0		0	0	
PHF	.000	.250	.250	.000	.000	.000	.000	.000	.000

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Olive Way (South)  
 Weather: Clear

File Name : 04\_RNC\_Haven\_Olive S PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 1

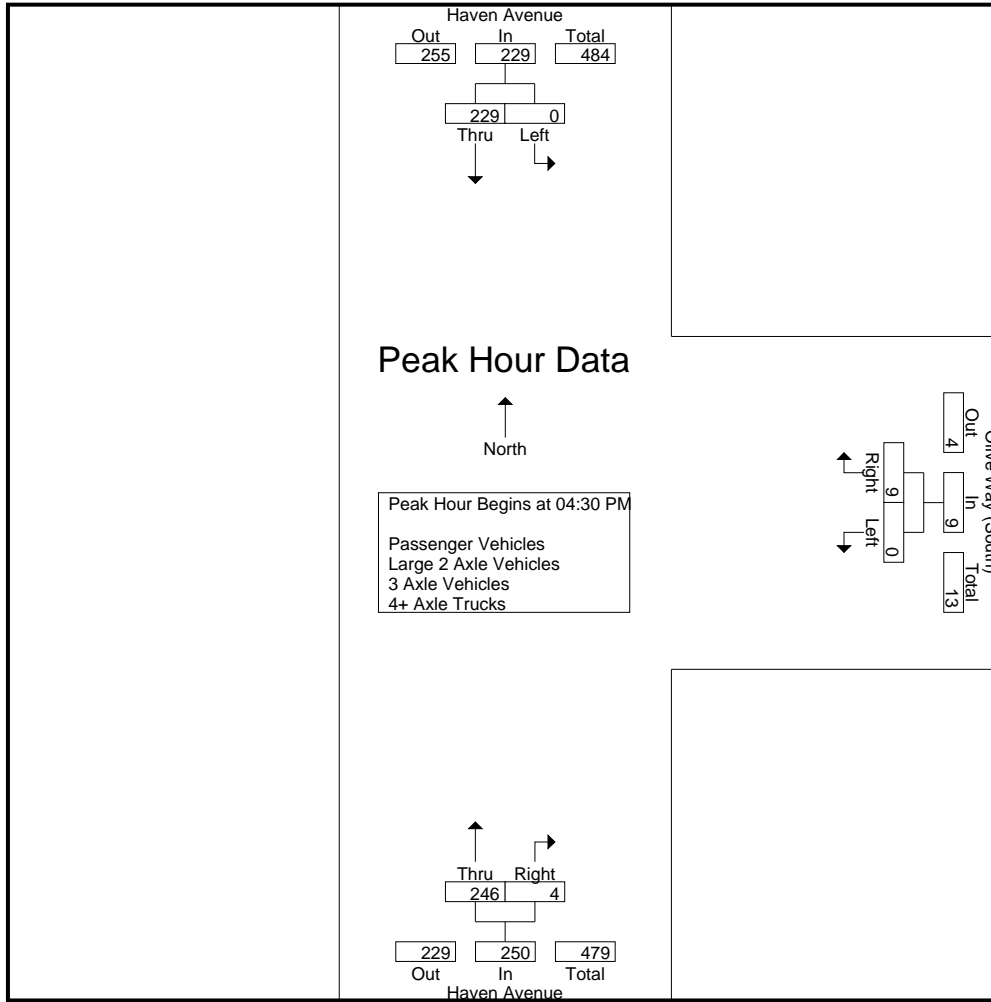
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Haven Avenue Southbound			Olive Way (South) Westbound			Haven Avenue Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	0	56	56	0	2	2	58	0	58	116
04:15 PM	0	65	65	0	0	0	51	0	51	116
04:30 PM	0	65	65	0	2	2	62	1	63	130
04:45 PM	0	66	66	0	4	4	48	1	49	119
Total	0	252	252	0	8	8	219	2	221	481
05:00 PM	0	48	48	0	0	0	74	0	74	122
05:15 PM	0	50	50	0	3	3	62	2	64	117
05:30 PM	0	51	51	0	1	1	69	0	69	121
05:45 PM	0	52	52	0	4	4	65	1	66	122
Total	0	201	201	0	8	8	270	3	273	482
Grand Total	0	453	453	0	16	16	489	5	494	963
Apprch %	0	100		0	100		99	1		
Total %	0	47	47	0	1.7	1.7	50.8	0.5	51.3	
Passenger Vehicles	0	444	444	0	16	16	484	5	489	949
% Passenger Vehicles	0	98	98	0	100	100	99	100	99	98.5
Large 2 Axle Vehicles	0	9	9	0	0	0	3	0	3	12
% Large 2 Axle Vehicles	0	2	2	0	0	0	0.6	0	0.6	1.2
3 Axle Vehicles	0	0	0	0	0	0	1	0	1	1
% 3 Axle Vehicles	0	0	0	0	0	0	0.2	0	0.2	0.1
4+ Axle Trucks	0	0	0	0	0	0	1	0	1	1
% 4+ Axle Trucks	0	0	0	0	0	0	0.2	0	0.2	0.1

Start Time	Haven Avenue Southbound			Olive Way (South) Westbound			Haven Avenue Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	0	65	65	0	2	2	62	1	63	<b>130</b>
04:45 PM	0	<b>66</b>	<b>66</b>	0	<b>4</b>	<b>4</b>	48	1	49	119
05:00 PM	0	48	48	0	0	0	<b>74</b>	0	<b>74</b>	122
05:15 PM	0	50	50	0	3	3	62	<b>2</b>	64	117
Total Volume	0	229	229	0	9	9	246	4	250	488
% App. Total	0	100		0	100		98.4	1.6		
PHF	.000	.867	.867	.000	.563	.563	.831	.500	.845	.938

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Olive Way (South)  
 Weather: Clear

File Name : 04\_RNC\_Haven\_Olive S PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 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:

	04:00 PM			04:30 PM			05:00 PM		
+0 mins.	0	56	56	0	2	2	74	0	74
+15 mins.	0	65	65	0	4	4	62	2	64
+30 mins.	0	65	65	0	0	0	69	0	69
+45 mins.	0	<b>66</b>	<b>66</b>	0	3	3	65	1	66
Total Volume	0	252	252	0	9	9	270	3	273
% App. Total	0	100		0	100		98.9	1.1	
PHF	.000	.955	.955	.000	.563	.563	.912	.375	.922

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Olive Way (South)  
 Weather: Clear

File Name : 04\_RNC\_Haven\_Olive S PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

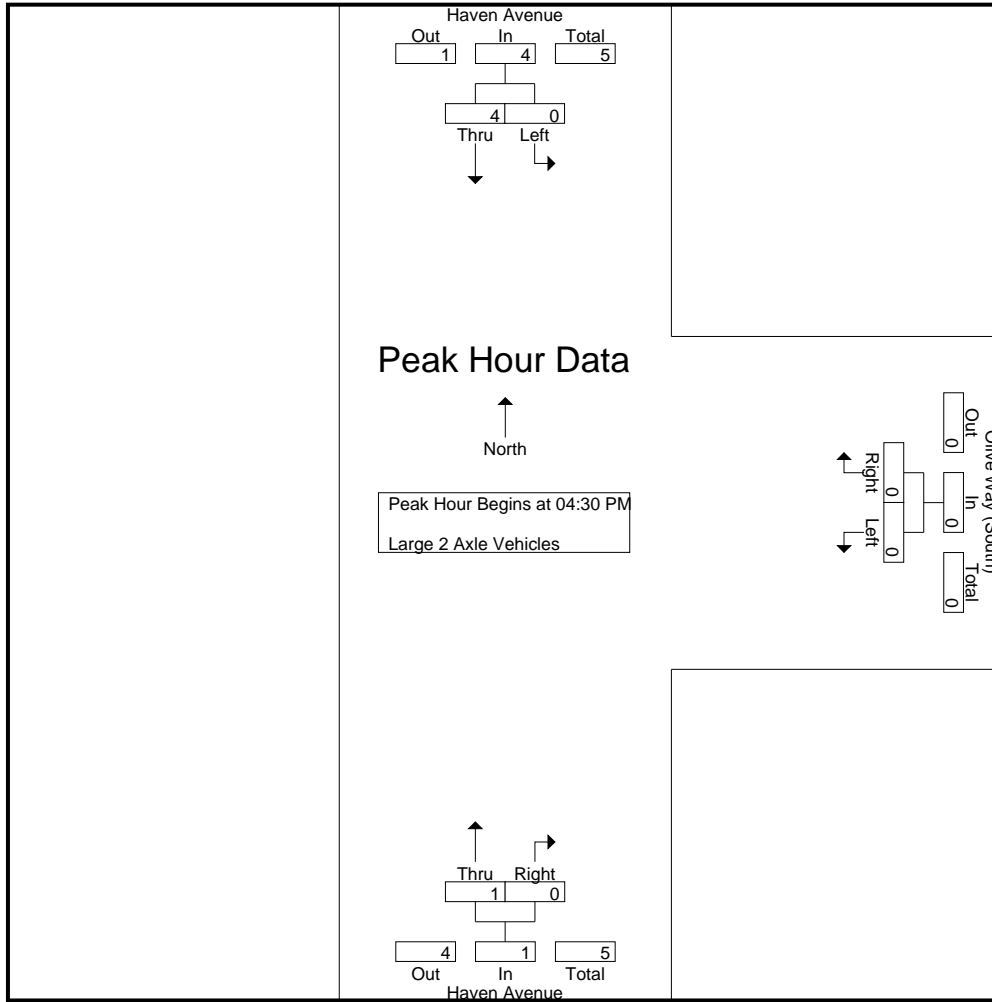
Start Time	Haven Avenue Southbound			Olive Way (South) Westbound			Haven Avenue Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	0	1	1	0	0	0	0	0	0	1
04:15 PM	0	2	2	0	0	0	1	0	1	3
04:30 PM	0	1	1	0	0	0	0	0	0	1
04:45 PM	0	1	1	0	0	0	0	0	0	1
Total	0	5	5	0	0	0	1	0	1	6
05:00 PM	0	0	0	0	0	0	1	0	1	1
05:15 PM	0	2	2	0	0	0	0	0	0	2
05:30 PM	0	1	1	0	0	0	0	0	0	1
05:45 PM	0	1	1	0	0	0	1	0	1	2
Total	0	4	4	0	0	0	2	0	2	6
Grand Total	0	9	9	0	0	0	3	0	3	12
Apprch %	0	100		0	0		100	0		
Total %	0	75	75	0	0	0	25	0	25	

Start Time	Haven Avenue Southbound			Olive Way (South) Westbound			Haven Avenue Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:30 PM	0	1	1	0	0	0	0	0	0	1
04:45 PM	0	1	1	0	0	0	0	0	0	1
05:00 PM	0	0	0	0	0	0	1	0	1	1
05:15 PM	0	2	2	0	0	0	0	0	0	2
Total Volume	0	4	4	0	0	0	1	0	1	5
% App. Total	0	100		0	0		100	0		
PHF	.000	.500	.500	.000	.000	.000	.250	.000	.250	.625

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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Olive Way (South)  
 Weather: Clear

File Name : 04\_RNC\_Haven\_Olive S PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 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:

	04:30 PM			04:30 PM			04:30 PM		
+0 mins.	0	1	1	0	0	0	0	0	0
+15 mins.	0	1	1	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	1	0	1
+45 mins.	0	2	2	0	0	0	0	0	0
Total Volume	0	4	4	0	0	0	1	0	1
% App. Total	0	100		0	0		100	0	
PHF	.000	.500	.500	.000	.000	.000	.250	.000	.250



City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Olive Way (South)  
 Weather: Clear

File Name : 04\_RNC\_Haven\_Olive S PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 1

Groups Printed- 3 Axle Vehicles

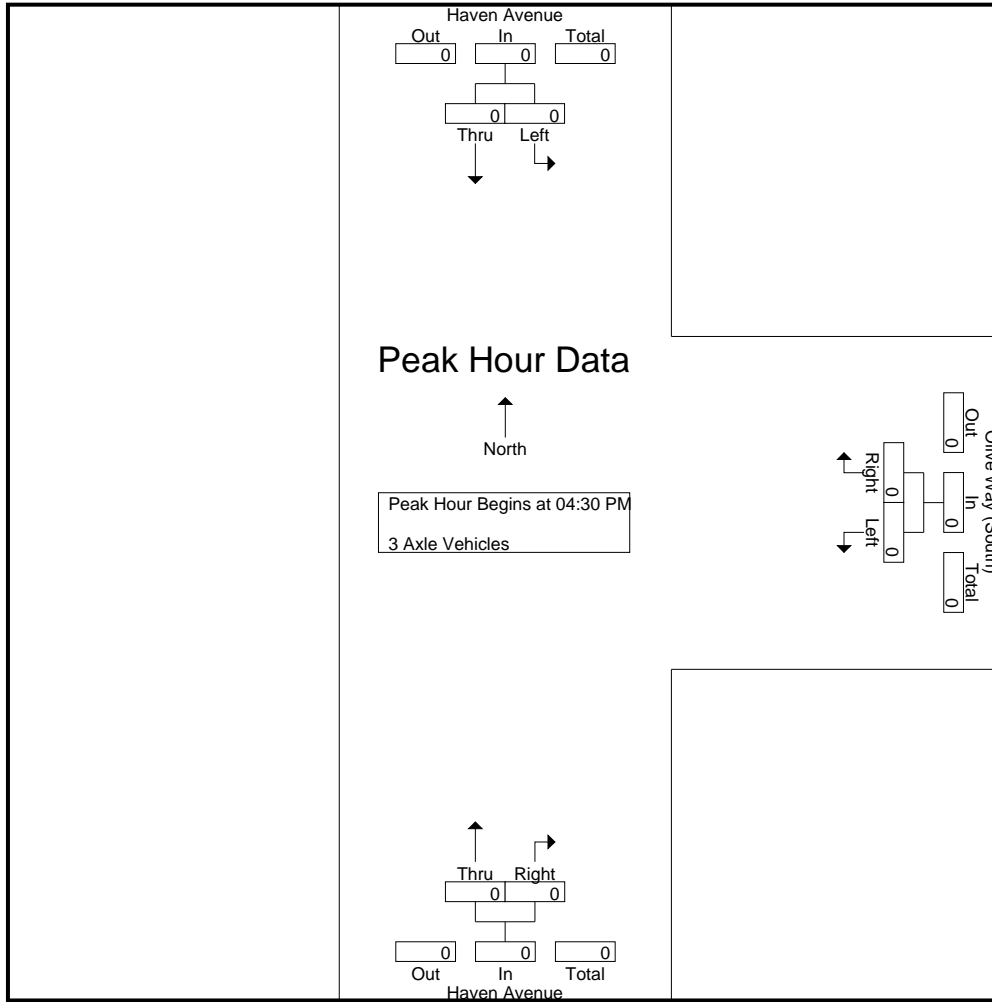
Start Time	Haven Avenue Southbound			Olive Way (South) Westbound			Haven Avenue Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	1	0	1	1
Total	0	0	0	0	0	0	1	0	1	1
Grand Total	0	0	0	0	0	0	1	0	1	1
Apprch %	0	0	0	0	0	0	100	0	100	100
Total %	0	0	0	0	0	0	100	0	100	100

Start Time	Haven Avenue Southbound			Olive Way (South) Westbound			Haven Avenue Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0	0	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Olive Way (South)  
 Weather: Clear

File Name : 04\_RNC\_Haven\_Olive S PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 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:

	04:30 PM			04:30 PM			04:30 PM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Olive Way (South)  
 Weather: Clear

File Name : 04\_RNC\_Haven\_Olive S PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 1

Groups Printed- 4+ Axle Trucks

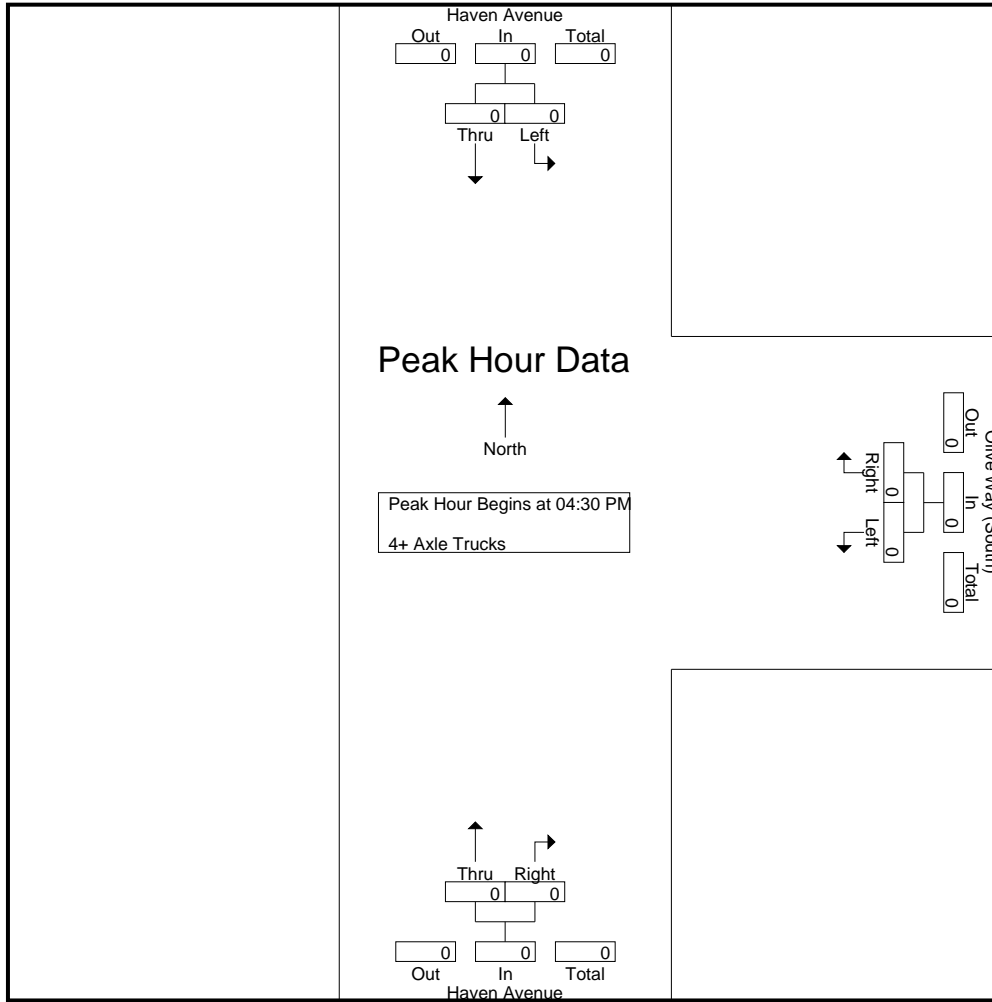
Start Time	Haven Avenue Southbound			Olive Way (South) Westbound			Haven Avenue Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	1	0	1	1
Total	0	0	0	0	0	0	1	0	1	1
Grand Total	0	0	0	0	0	0	1	0	1	1
Apprch %	0	0	0	0	0	0	100	0	100	100
Total %	0	0	0	0	0	0	100	0	100	100

Start Time	Haven Avenue Southbound			Olive Way (South) Westbound			Haven Avenue Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0	0	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Olive Way (South)  
 Weather: Clear

File Name : 04\_RNC\_Haven\_Olive S PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 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:

	04:30 PM			04:30 PM			04:30 PM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000

Location: Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Olive Way (South)



Date: 6/2/2021  
 Day: Wednesday

PEDESTRIANS

	North Leg Haven Avenue	East Leg Olive Way (South)	South Leg Haven Avenue	West Leg Dead End	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	2	0	0	2
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	2	0	0	2

	North Leg Haven Avenue	East Leg Olive Way (South)	South Leg Haven Avenue	West Leg Dead End	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	3	0	0	3
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	3	0	0	3

Location: Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Olive Way (South)



Date: 6/2/2021  
 Day: Wednesday

BICYCLES

	Southbound Haven Avenue			Westbound Olive Way (South)			Northbound Haven Avenue			Eastbound Dead End			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

	Southbound Haven Avenue			Westbound Olive Way (South)			Northbound Haven Avenue			Eastbound Dead End			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	2	0	0	0	0	2
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	3	0	0	0	0	0	0	0	0	0	0	3
TOTAL VOLUMES:	0	3	0	0	0	0	0	2	0	0	0	0	5

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

Start Time	Haven Avenue Southbound					College Drive Westbound					Haven Avenue Northbound					Amber Lane Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
	07:00 AM	2	44	0	0	46	6	0	1	1	7	0	28	13	0	41	0	0	2	1	2	2	96
07:15 AM	0	35	0	0	35	2	0	0	0	2	0	18	17	0	35	0	0	6	5	6	5	78	83
07:30 AM	1	56	0	0	57	4	0	3	3	7	1	23	18	0	42	0	0	5	4	5	7	111	118
07:45 AM	0	52	0	0	52	3	0	2	2	5	3	37	12	0	52	0	0	1	1	1	3	110	113
Total	3	187	0	0	190	15	0	6	6	21	4	106	60	0	170	0	0	14	11	14	17	395	412
08:00 AM	1	61	1	0	63	8	0	0	0	8	1	57	17	0	75	0	0	3	3	3	3	149	152
08:15 AM	3	59	0	0	62	1	0	1	0	2	2	44	18	0	64	0	0	2	2	2	2	130	132
08:30 AM	3	58	0	0	61	8	0	2	2	10	2	28	19	0	49	0	0	5	4	5	6	125	131
08:45 AM	7	65	1	0	73	5	0	0	0	5	2	40	22	0	64	0	0	2	2	2	2	144	146
Total	14	243	2	0	259	22	0	3	2	25	7	169	76	0	252	0	0	12	11	12	13	548	561
Grand Total	17	430	2	0	449	37	0	9	8	46	11	275	136	0	422	0	0	26	22	26	30	943	973
% Approach	3.8	95.8	0.4			80.4	0	19.6			2.6	65.2	32.2			0	0	100					
% Total	1.8	45.6	0.2		47.6	3.9	0	1		4.9	1.2	29.2	14.4		44.8	0	0	2.8		2.8	3.1	96.9	
Passenger Vehicles	17	419	2		438	28	0	9		45	10	253	129		392	0	0	26		48	0	0	923
Large 2 Axle Vehicles	100	97.4	100	0	97.6	75.7	0	100	100	83.3	90.9	92	94.9	0	92.9	0	0	100	100	100	0	0	94.9
% Large 2 Axle Vehicles	0	9	0	0	9	8	0	0	0	8	1	19	7		27	0	0	0		0	0	0	44
% 3 Axle Vehicles	0	2.1	0	0	2	21.6	0	0	0	14.8	9.1	6.9	5.1	0	6.4	0	0	0	0	0	0	0	4.5
% 3 Axle Vehicles	0	1	0	0	1	1	0	0	0	1	0	2	0		2	0	0	0		0	0	0	4
% 4+ Axle Trucks	0	0.2	0	0	0.2	2.7	0	0	0	1.9	0	0.7	0		0.5	0	0	0		0	0	0	0.4
% 4+ Axle Trucks	0	1	0	0	1	0	0	0	0	0	0	1	0		1	0	0	0		0	0	0	2
% 4+ Axle Trucks	0	0.2	0	0	0.2	0	0	0	0	0	0	0.4	0		0.2	0	0	0		0	0	0	0.2

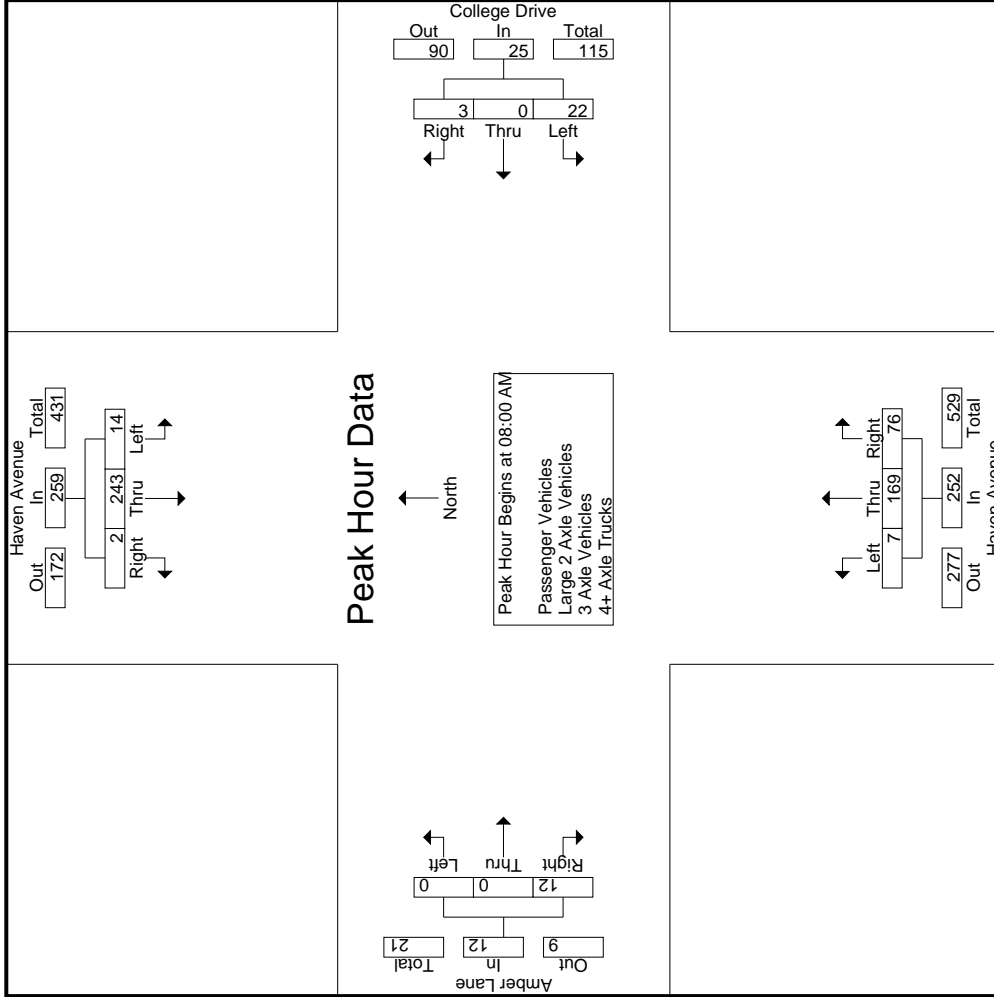
Start Time	Haven Avenue Southbound					College Drive Westbound					Haven Avenue Northbound					Amber Lane Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
	08:00 AM	1	61	1		63	8	0	0		8	1	57	17		75	0	0	3		3	0	0
08:15 AM	3	59	0		62	1	0	1		2	2	44	18		64	0	0	2		2	2	0	130
08:30 AM	3	58	0		61	8	0	2		10	2	28	19		49	0	0	5		5	5	0	125
08:45 AM	7	65	1		73	5	0	0		5	2	40	22		64	0	0	2		2	2	0	144
Total Volume	14	243	2		259	22	0	3		25	7	169	76		252	0	0	12		12	0	0	548
% App. Total	5.4	93.8	0.8		95.0	6.88	0	12		12	2.8	67.1	30.2		84.0	0	0	100		100	0	0	.919
PHF	.500	.935	.500		.887	.688	.000	.375		.625	.875	.741	.864		.840	.000	.000	.600		.600	.000	.600	.919

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

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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Amber Lane/College Drive  
 Weather: Clear

File Name : 05\_RNC\_Haven\_College AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 2





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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Amber Lane/College Drive  
 Weather: Clear

File Name : 05\_RNC\_Haven\_College AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 3

Start Time	Haven Avenue Southbound			College Drive Westbound			Haven Avenue Northbound			Amber Lane Eastbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1												
Peak Hour for Each Approach Begins at:												
+0 mins.	1	61	1	3	0	2	1	57	17	0	0	6
+15 mins.	3	59	0	8	0	0	2	44	18	0	0	5
+30 mins.	3	58	0	1	0	1	2	28	19	0	0	1
+45 mins.	7	65	1	8	0	2	2	40	22	0	0	3
Total Volume	14	243	2	20	0	5	7	169	76	0	0	15
% App. Total	5.4	93.8	0.8	80	0	20	2.8	67.1	30.2	0	0	100
PHF	.500	.935	.500	.625	.000	.625	.875	.741	.864	.000	.000	.625

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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Amber Lane/College Drive  
 Weather: Clear

File Name : 05\_RNC\_Haven\_College AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

Start Time	Haven Avenue Southbound				College Drive Westbound				Haven Avenue Northbound				Amber Lane Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	0	0	2	0	0	0	2	0	1	0	0	0	0	3	3
07:15 AM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	3	3
07:45 AM	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0	3	3
Total	0	0	0	0	0	3	0	0	0	3	0	4	3	0	0	0	10	10
08:00 AM	0	0	0	0	0	2	0	0	0	2	0	4	1	0	0	0	7	7
08:15 AM	0	0	0	0	0	1	0	0	0	1	0	6	0	0	0	0	7	7
08:30 AM	0	5	0	0	5	2	0	0	0	2	1	2	2	0	0	0	12	12
08:45 AM	0	4	0	0	4	0	0	0	0	0	0	3	1	0	0	0	8	8
Total	0	9	0	0	9	5	0	0	0	5	1	15	4	0	0	0	34	34
Grand Total	0	9	0	0	9	8	0	0	0	8	1	19	7	0	0	0	44	44
Approach %	0	100	0	0	0	100	0	0	0	0	3.7	70.4	25.9	0	0	0	100	100
Total %	0	20.5	0	0	20.5	18.2	0	0	0	18.2	2.3	43.2	15.9	0	0	0	100	100

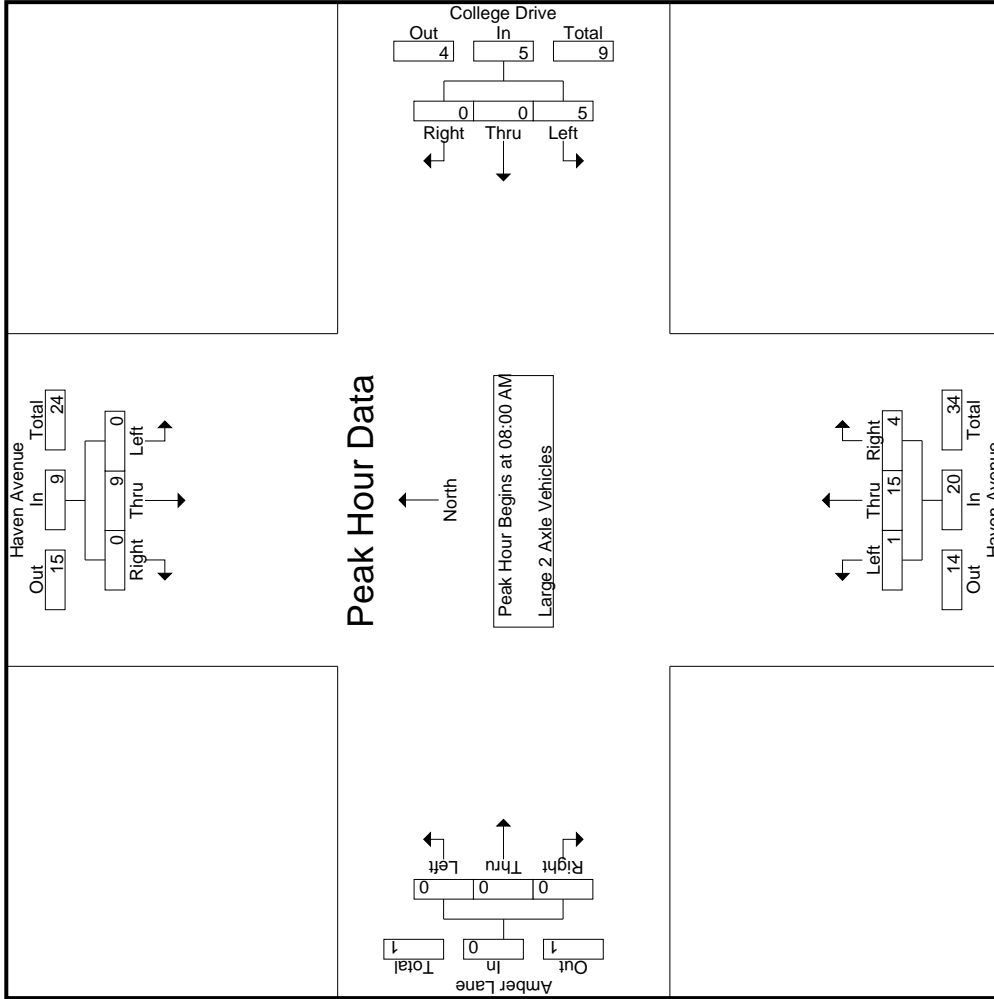
Start Time	Haven Avenue Southbound				College Drive Westbound				Haven Avenue Northbound				Amber Lane Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
08:00 AM	0	0	0	0	0	2	0	0	0	2	0	4	1	0	0	0	0	0
08:15 AM	0	0	0	0	0	1	0	0	0	1	0	6	0	0	0	0	0	0
08:30 AM	0	5	0	0	5	2	0	0	0	2	1	2	2	0	0	0	0	0
08:45 AM	0	4	0	0	4	0	0	0	0	0	0	3	1	0	0	0	0	0
Total Volume	0	9	0	0	9	5	0	0	0	5	1	15	4	0	0	0	0	0
% App. Total	0	100	0	0	0	100	0	0	0	0	5	75	20	0	0	0	0	0
PHF	.000	.450	.000	.000	.450	.625	.000	.000	.000	.625	.250	.625	.500	.000	.833	.000	.000	.708

Peak Hour Analysis From 08:00 AM to 08:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 08:00 AM

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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Amber Lane/College Drive  
 Weather: Clear

File Name : 05\_RNC\_Haven\_College AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 2



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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Amber Lane/College Drive  
 Weather: Clear

File Name : 05\_RNC\_Haven\_College AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 3

Start Time	Haven Avenue Southbound			College Drive Westbound			Haven Avenue Northbound			Amber Lane Eastbound					
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right			
Peak Hour Analysis From 08:00 AM to 08:45 AM - Peak 1 of 1															
Peak Hour for Each Approach Begins at:															
+0 mins.	0	0	0	08:00 AM	2	0	0	08:00 AM	4	1	5	08:00 AM	0	0	0
+15 mins.	0	0	0		1	0	0		6	0	6		0	0	0
+30 mins.	0	5	0		2	0	0		2	2	5		0	0	0
+45 mins.	0	4	0		0	0	0		3	1	4		0	0	0
Total Volume	0	9	0		5	0	0		15	4	20		0	0	0
% App. Total	0	100	0	08:00 AM	100	0	0	08:00 AM	5	75	20	08:00 AM	0	0	0
PHF	.000	.450	.000	.625	.000	.000	.625	.250	.625	.500	.833	.000	.000	.000	

Groups Printed- 3 Axle Vehicles

Start Time	Haven Avenue Southbound				College Drive Westbound				Haven Avenue Northbound				Amber Lane Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1
08:30 AM	0	1	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	2
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	1	0	0	0	0	2	0	0	0	0	0	0	0	3
Grand Total	0	1	0	0	1	1	0	0	0	1	0	2	0	0	0	0	0	4
Approach %	0	100	0	0	25	0	100	0	0	50	0	0	0	0	0	0	0	100
Total %	0	25	0	0	25	0	50	0	0	50	0	0	0	0	0	0	0	100

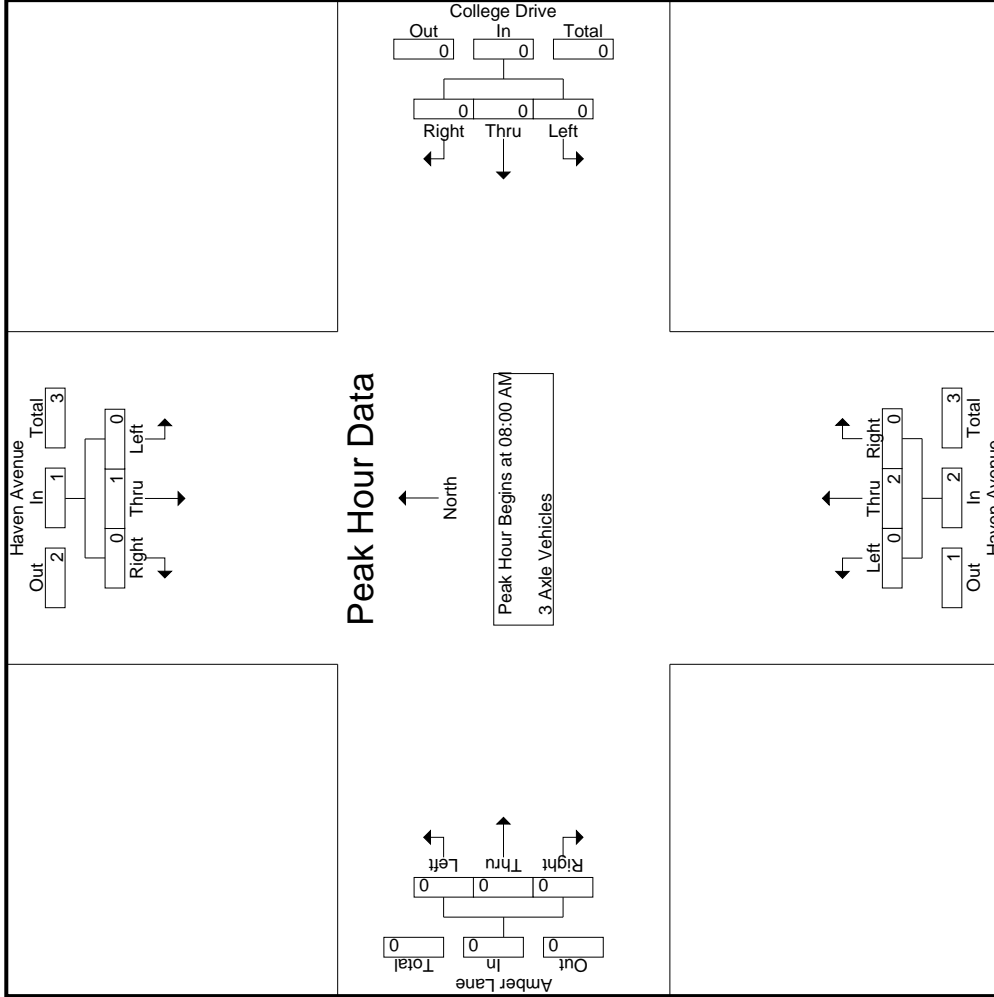
Start Time	Haven Avenue Southbound				College Drive Westbound				Haven Avenue Northbound				Amber Lane Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
08:30 AM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	2
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	0	1	0	0	0	0	0	0	2	0	0	0	0	0	3
% App. Total	.000	.250	.000	.000	.250	.000	.000	.000	.000	.500	.000	.500	.000	.000	.000	.000	.000	.375
PHF	.000	.250	.000	.000	.250	.000	.000	.000	.000	.500	.000	.500	.000	.000	.000	.000	.000	.375

Peak Hour Analysis From 08:00 AM to 08:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 08:00 AM

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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Amber Lane/College Drive  
 Weather: Clear

File Name : 05\_RNC\_Haven\_College AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 2



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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Amber Lane/College Drive  
 Weather: Clear

File Name : 05\_RNC\_Haven\_College AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 3

Start Time	Haven Avenue Southbound			College Drive Westbound			Haven Avenue Northbound			Amber Lane Eastbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 08:00 AM to 08:45 AM - Peak 1 of 1												
Peak Hour for Each Approach Begins at:												
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	1	0	0	0	0
+30 mins.	0	1	0	0	0	0	0	1	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	0	0	0	0	2	0	0	0	0
% App. Total	0	100	0	0	0	0	0	100	0	0	0	0
PHF	.000	.250	.000	.000	.000	.000	.000	.500	.000	.000	.000	.000

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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Amber Lane/College Drive  
 Weather: Clear

File Name : 05\_RNC\_Haven\_College AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 1

Groups Printed- 4+ Axle Trucks

Start Time	Haven Avenue Southbound				College Drive Westbound				Haven Avenue Northbound				Amber Lane Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1
Total	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
Grand Total	0	1	0	0	1	0	0	0	0	0	1	0	0	0	0	0	2	2
Approach %	0	100	0	0	0	0	0	0	0	0	100	0	0	0	0	0	100	100
Total %	0	50	0	0	50	0	0	0	0	0	50	0	0	0	0	0	100	100

Start Time	Haven Avenue Southbound				College Drive Westbound				Haven Avenue Northbound				Amber Lane Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
% App. Total	0	100	0	0	100	0	0	0	0	0	0	0	0	0	0	0	100	100
PHF	.000	.250	.000	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.250

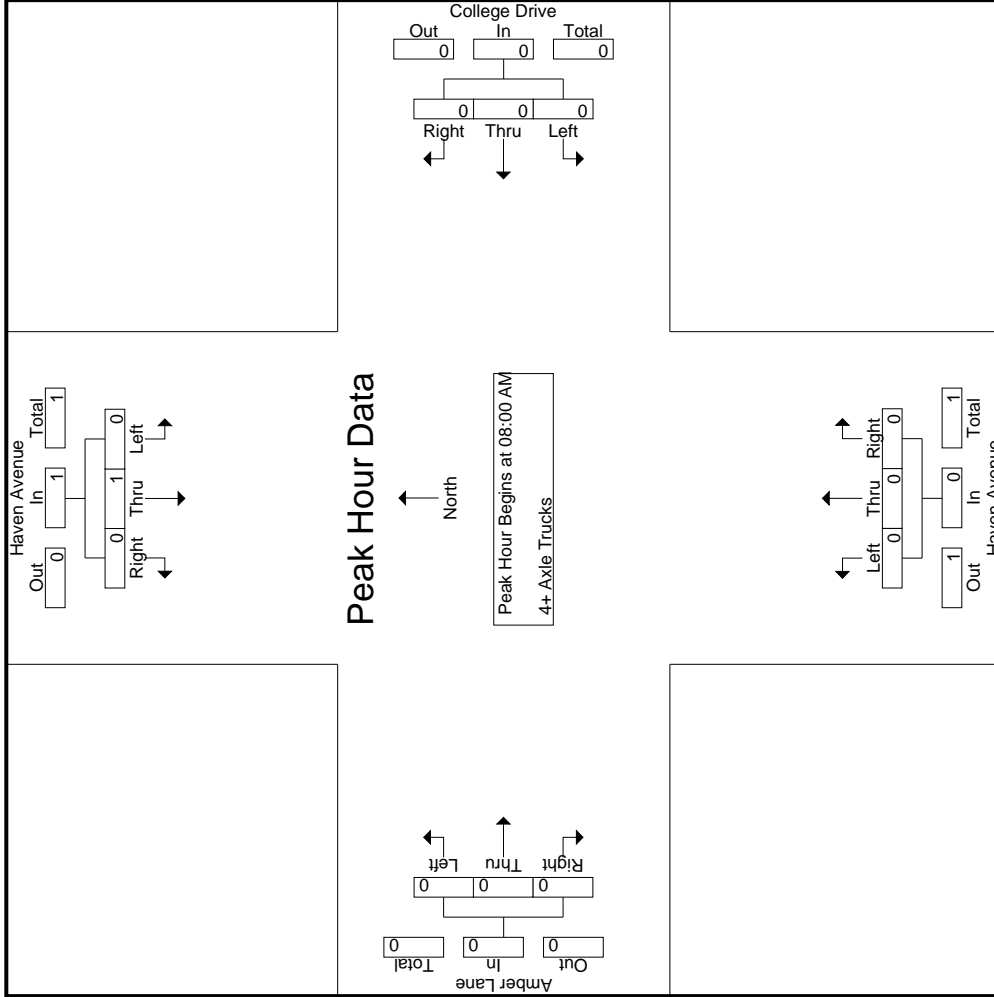
Peak Hour Analysis From 08:00 AM to 08:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 08:00 AM



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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Amber Lane/College Drive  
 Weather: Clear

File Name : 05\_RNC\_Haven\_College AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 2



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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Amber Lane/College Drive  
 Weather: Clear

File Name : 05\_RNC\_Haven\_College AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 3

Start Time	Haven Avenue Southbound			College Drive Westbound			Haven Avenue Northbound			Amber Lane Eastbound			
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 08:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Each Approach Begins at:													
	08:00 AM				08:00 AM				08:00 AM				
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	1	0	1	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	1	0	0	0	0	0	0	0	0	0
% App. Total	0	100	0	.250	0	0	0	.000	.000	.000	.000	.000	.000
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000

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

Start Time	Haven Avenue Southbound				College Drive Westbound				Haven Avenue Northbound				Amber Lane Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	60	0	0	60	8	0	1	1	9	2	56	4	0	62	3	134	137
04:15 PM	0	67	0	0	67	10	0	0	0	10	2	52	4	0	58	3	138	141
04:30 PM	0	65	1	0	66	19	0	1	0	20	1	63	4	0	68	7	163	170
04:45 PM	0	66	0	0	66	5	0	0	0	5	3	47	2	0	52	4	127	131
Total	0	258	1	0	259	42	0	2	1	44	8	218	14	0	240	17	562	579
05:00 PM	0	54	0	0	54	10	0	0	0	10	5	72	3	0	80	3	148	151
05:15 PM	1	51	0	0	52	4	0	0	0	4	2	64	2	0	68	4	128	132
05:30 PM	2	52	0	0	54	4	0	1	0	5	4	68	2	0	74	4	139	143
05:45 PM	0	52	0	0	52	6	0	0	0	6	5	67	3	0	75	3	136	136
Total	3	209	0	0	212	24	0	1	0	25	16	271	10	0	297	11	551	562
Grand Total	3	467	1	0	471	66	0	3	1	69	24	489	24	0	537	28	1113	1141
% Approach	0.6	99.2	0.2			95.7	0	4.3			4.5	91.1	4.5			2.5	97.5	
% Total	0.3	42	0.1		42.3	5.9	0	0.3		6.2	2.2	43.9	2.2		48.2	3.2	97.5	
Passenger Vehicles	3	456	1		460	58	0	3		62	24	483	18		525	63	1110	
Large 2 Axle Vehicles	100	97.6	100		97.7	87.9	0	100		88.6	100	98.8	75		97.8	100	97.3	
% Large 2 Axle Vehicles	0	11	0		11	8	0	0		8	0	4	6		10	0	29	
% 3 Axle Vehicles	0	2.4	0		2.3	12.1	0	0		11.4	0	0.8	25		1.9	0	2.5	
% 3 Axle Vehicles	0	0	0		0	0	0	0		0	0	1	0		0	0	1	
% 4+ Axle Trucks	0	0	0		0	0	0	0		0	0	0.2	0		0.2	0	0.1	
% 4+ Axle Trucks	0	0	0		0	0	0	0		0	0	0.2	0		0.2	0	0.1	

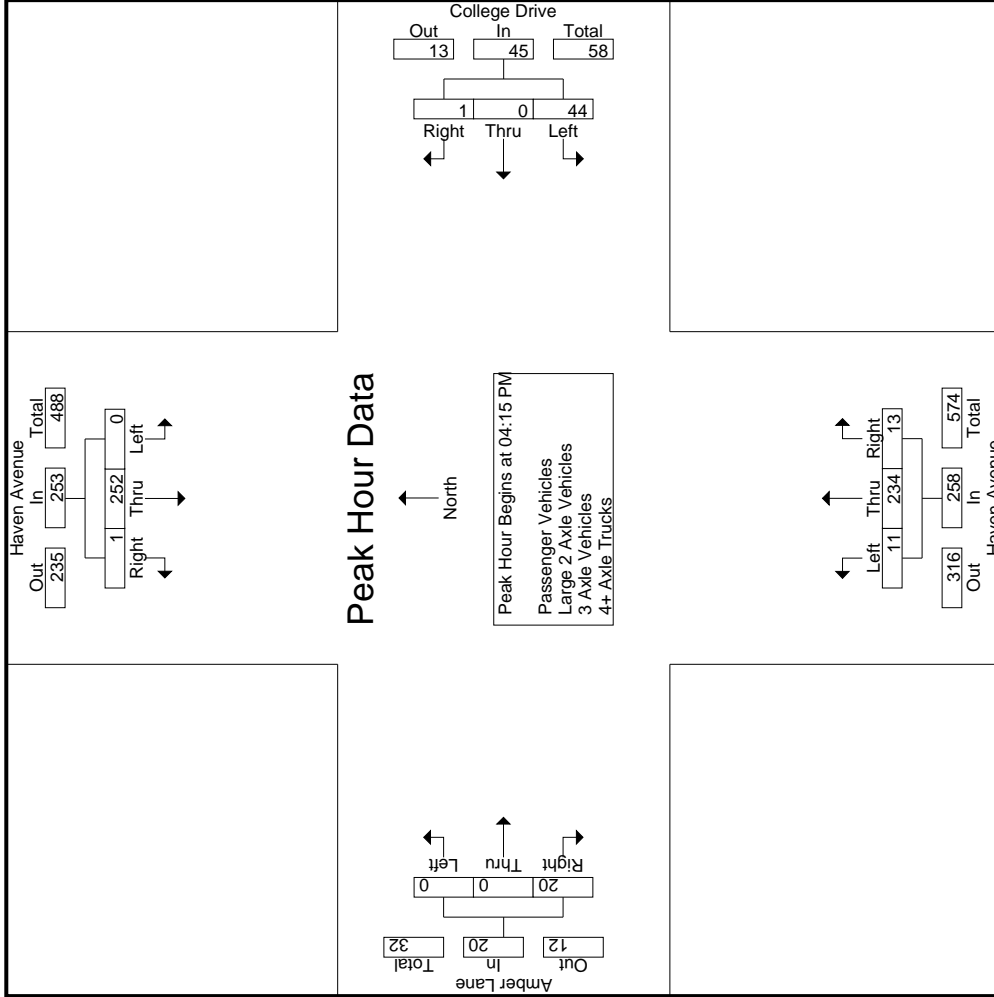
Start Time	Haven Avenue Southbound				College Drive Westbound				Haven Avenue Northbound				Amber Lane Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:15 PM	0	67	0		67	10	0	0		10	2	52	4		58	3	138	
04:30 PM	0	65	1		66	19	0	1		20	1	63	4		68	9	163	
04:45 PM	0	66	0		66	5	0	0		5	3	47	2		52	4	127	
05:00 PM	0	54	0		54	10	0	0		10	5	72	3		80	4	148	
Total Volume	0	252	1		253	44	0	1		45	11	234	13		258	20	576	
% App. Total	0	99.6	0.4		100	97.8	0	2.2		100	4.3	90.7	5		100	0	100	
PHF	.000	.940	.250		.944	.579	.000	.250		.563	.550	.813	.813		.806	.556	.883	

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 04:15 PM

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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Amber Lane/College Drive  
 Weather: Clear

File Name : 05\_RNC\_Haven\_College PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 2



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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Amber Lane/College Drive  
 Weather: Clear

File Name : 05\_RNC\_Haven\_College PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 3

Start Time	Haven Avenue Southbound			College Drive Westbound			Haven Avenue Northbound			Amber Lane Eastbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1												
Peak Hour for Each Approach Begins at:												
+0 mins.	0	60	0	10	0	0	5	72	3	0	0	9
+15 mins.	0	67	0	19	0	1	2	64	2	0	0	4
+30 mins.	0	65	1	5	0	0	4	68	2	0	0	4
+45 mins.	0	66	0	10	0	0	5	67	3	0	0	4
Total Volume	0	258	1	44	0	1	16	271	10	0	0	21
% App. Total	0	99.6	0.4	97.8	0	2.2	5.4	91.2	3.4	0	0	100
PHF	.000	.963	.250	.579	.000	.250	.800	.941	.833	.000	.000	.583

Groups Printed- Large 2 Axle Vehicles

Start Time	Haven Avenue Southbound				College Drive Westbound				Haven Avenue Northbound				Amber Lane Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	1	0	0	1	2	0	0	0	2	0	0	0	0	0	0	3	3
04:15 PM	0	2	0	0	2	1	0	0	0	1	0	0	0	0	0	0	4	4
04:30 PM	0	1	0	0	1	0	0	0	0	0	2	1	0	0	0	0	4	4
04:45 PM	0	1	0	0	1	1	0	0	0	1	0	0	0	0	0	0	3	3
Total	0	5	0	0	5	4	0	0	0	4	0	3	2	0	5	0	14	14
05:00 PM	0	1	0	0	1	2	0	0	0	2	0	1	1	0	0	0	5	5
05:15 PM	0	3	0	0	3	1	0	0	0	1	0	0	0	0	0	0	4	4
05:30 PM	0	1	0	0	1	1	0	0	0	1	0	1	0	0	0	0	3	3
05:45 PM	0	1	0	0	1	0	0	0	0	0	0	2	0	0	0	0	3	3
Total	0	6	0	0	6	4	0	0	0	4	0	1	4	0	5	0	15	15
Grand Total	0	11	0	0	11	8	0	0	0	8	0	4	6	0	10	0	29	29
Approach %	0	100	0	0	0	100	0	0	0	27.6	0	40	60	0	34.5	0	100	100
Total %	0	37.9	0	0	37.9	27.6	0	0	0	27.6	0	13.8	20.7	0	34.5	0	100	100

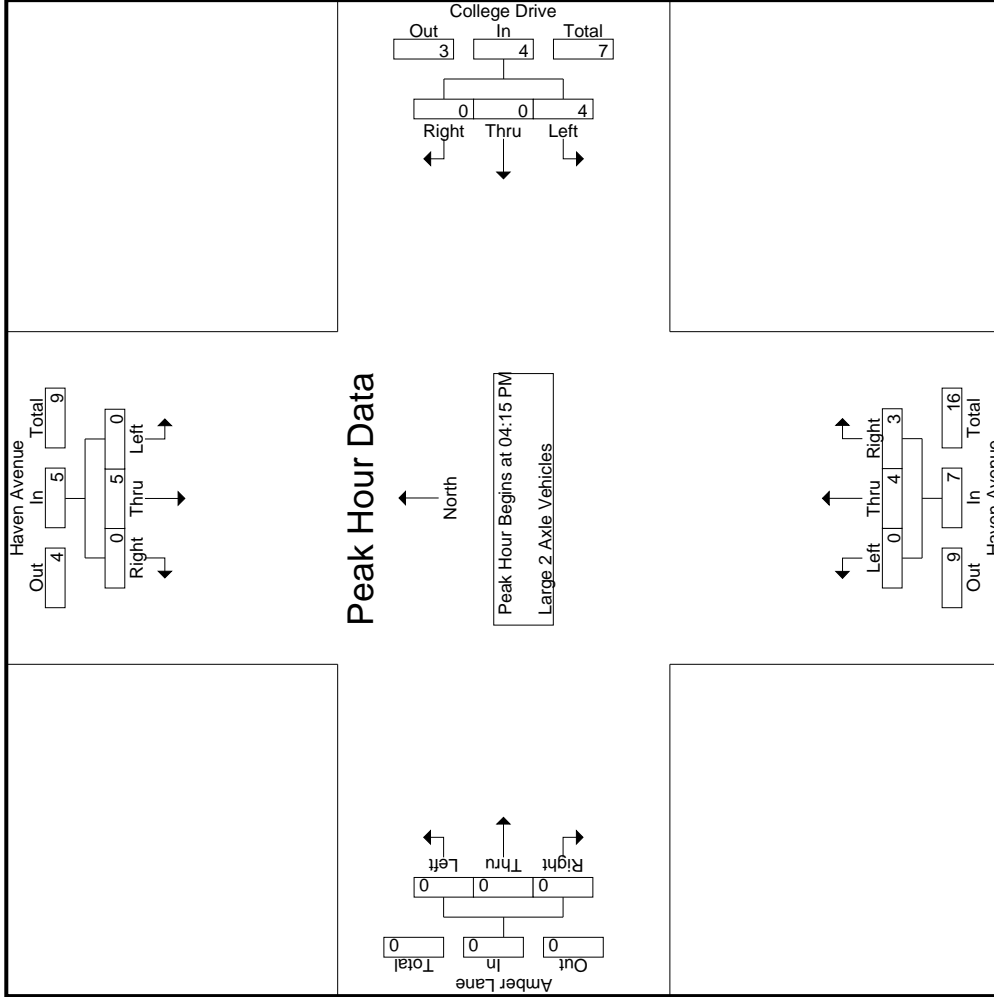
Start Time	Haven Avenue Southbound				College Drive Westbound				Haven Avenue Northbound				Amber Lane Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:15 PM	0	2	0	0	2	1	0	0	0	1	0	0	0	0	0	0	0	0
04:30 PM	0	1	0	0	1	0	0	0	0	0	0	2	1	0	0	0	0	0
04:45 PM	0	1	0	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0
05:00 PM	0	1	0	0	1	2	0	0	0	2	0	1	0	0	0	0	0	0
Total Volume	0	5	0	0	5	4	0	0	0	4	0	4	3	0	7	0	0	0
% App. Total	0	100	0	0	100	100	0	0	0	100	0	57.1	42.9	0	100	0	0	0
PHF	.000	.625	.000	.000	.625	.500	.000	.000	.000	.500	.000	.500	.750	.000	.583	.000	.000	.800

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

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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Amber Lane/College Drive  
 Weather: Clear

File Name : 05\_RNC\_Haven\_College PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 2



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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Amber Lane/College Drive  
 Weather: Clear

File Name : 05\_RNC\_Haven\_College PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 3

Start Time	Haven Avenue Southbound			College Drive Westbound			Haven Avenue Northbound			Amber Lane Eastbound					
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right			
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1															
Peak Hour for Each Approach Begins at:	04:15 PM														
+0 mins.	0	2	0	1	0	0	1	0	0	1	0	0	0	0	0
+15 mins.	0	1	0	0	0	0	0	0	0	2	1	1	0	0	0
+30 mins.	0	1	0	1	0	0	1	0	0	0	0	1	0	0	0
+45 mins.	0	1	0	2	0	0	2	0	0	1	1	1	0	0	0
Total Volume	0	5	0	4	0	0	4	0	0	4	3	3	0	0	0
% App. Total	0	100	0	100	0	0	0	57.1	42.9	0	0	0	0	0	0
PHF	.000	.625	.000	.500	.000	.000	.500	.000	.750	.000	.000	.000	.000	.000	.000



Groups Printed- 3 Axle Vehicles

Start Time	Haven Avenue Southbound				College Drive Westbound				Haven Avenue Northbound				Amber Lane Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1
Total	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1
Grand Total	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1
Approach %	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0	0	0	100
Total %	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0	0	0	100

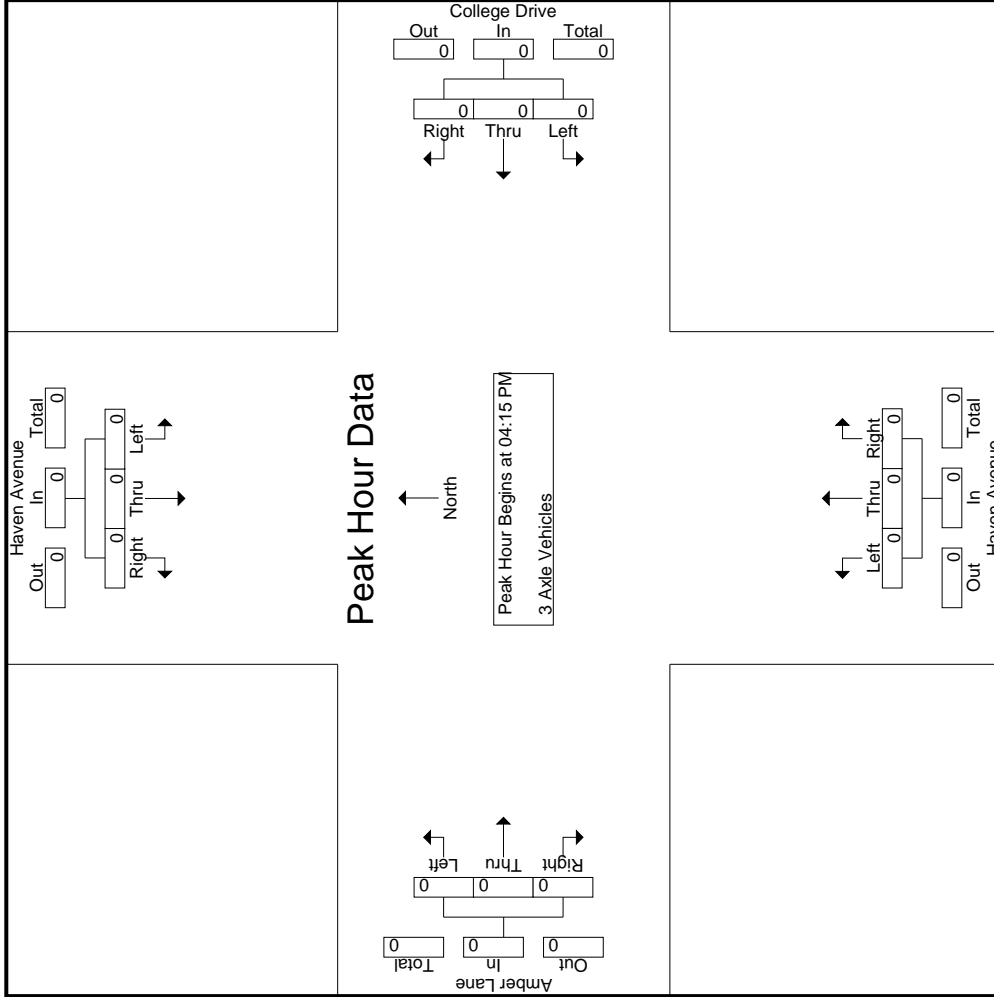
Start Time	Haven Avenue Southbound				College Drive Westbound				Haven Avenue Northbound				Amber Lane Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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

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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Amber Lane/College Drive  
 Weather: Clear

File Name : 05\_RNC\_Haven\_College PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 2



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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Amber Lane/College Drive  
 Weather: Clear

File Name : 05\_RNC\_Haven\_College PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 3

Start Time	Haven Avenue Southbound			College Drive Westbound			Haven Avenue Northbound			Amber Lane Eastbound					
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right			
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1															
Peak Hour for Each Approach Begins at:															
+0 mins.	0	0	0	04:15 PM	0	0	0	04:15 PM	0	0	0	04:15 PM	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Amber Lane/College Drive  
 Weather: Clear

File Name : 05\_RNC\_Haven\_College PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 1

Groups Printed- 4+ Axle Trucks

Start Time	Haven Avenue Southbound				College Drive Westbound				Haven Avenue Northbound				Amber Lane Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Grand Total	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
% Apprch %	0	0	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100
Total %	0	0	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100

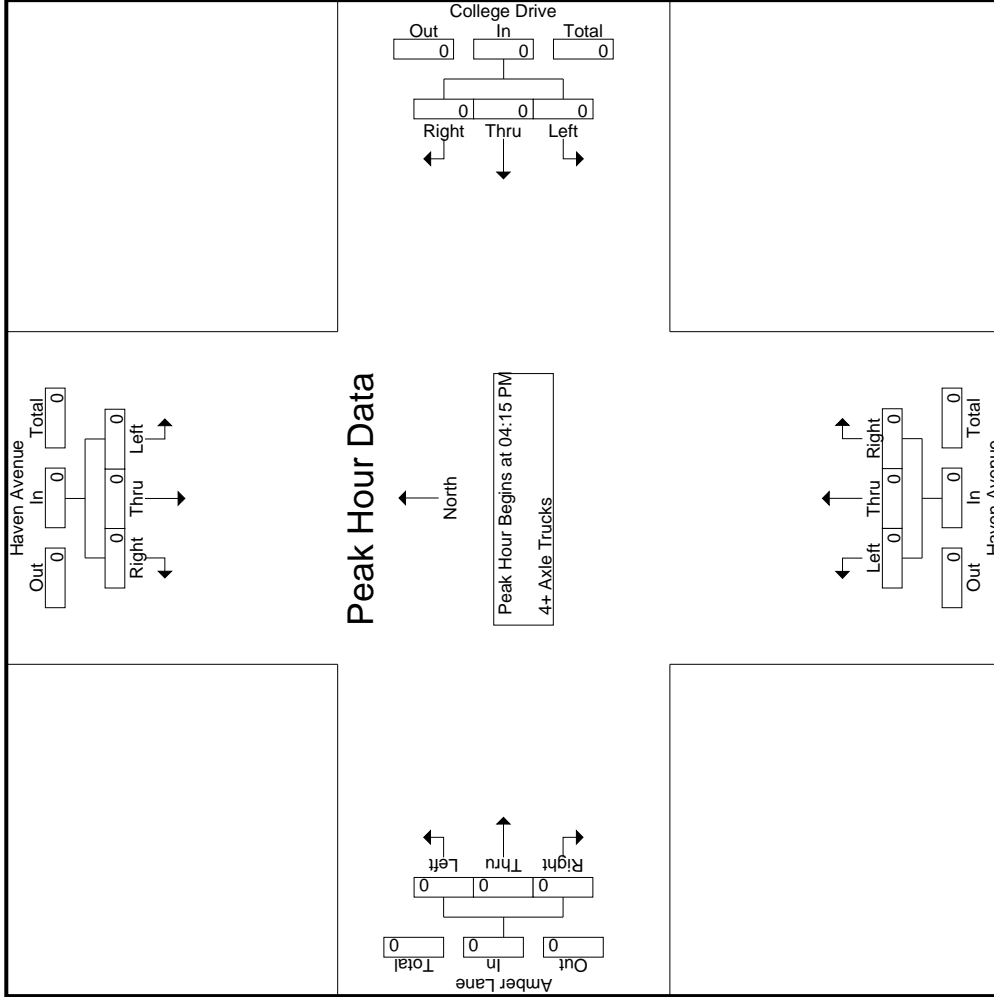
Start Time	Haven Avenue Southbound				College Drive Westbound				Haven Avenue Northbound				Amber Lane Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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

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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Amber Lane/College Drive  
 Weather: Clear

File Name : 05\_RNC\_Haven\_College PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 2



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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Amber Lane/College Drive  
 Weather: Clear

File Name : 05\_RNC\_Haven\_College PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 3

Start Time	Haven Avenue Southbound			College Drive Westbound			Haven Avenue Northbound			Amber Lane Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1													
Peak Hour for Each Approach Begins at:													
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0	0	0	0	0	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Location: Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Amber Lane/College Drive



Date: 6/2/2021  
 Day: Wednesday

PEDESTRIANS

	North Leg Haven Avenue	East Leg Amber Lane	South Leg Haven Avenue	West Leg College Drive	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	1	1
7:15 AM	0	0	0	2	2
7:30 AM	1	2	2	1	6
7:45 AM	0	0	0	0	0
8:00 AM	0	0	1	3	4
8:15 AM	0	0	0	0	0
8:30 AM	2	0	0	2	4
8:45 AM	0	0	0	1	1
TOTAL VOLUMES:	3	2	3	10	18

	North Leg Haven Avenue	East Leg Amber Lane	South Leg Haven Avenue	West Leg College Drive	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	1	1
4:15 PM	0	0	0	1	1
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	1	1
5:00 PM	0	0	0	2	2
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	2	2
5:45 PM	1	2	0	0	3
TOTAL VOLUMES:	1	2	0	7	10

Location: Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Amber Lane/College Drive



Date: 6/2/2021  
 Day: Wednesday

BICYCLES

	Southbound Haven Avenue			Westbound Amber Lane			Northbound Haven Avenue			Eastbound College Drive			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

	Southbound Haven Avenue			Westbound Amber Lane			Northbound Haven Avenue			Eastbound College Drive			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	2	0	0	0	0	2
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	3	0	0	0	0	0	2	0	0	0	0	5
TOTAL VOLUMES:	0	3	0	0	0	0	0	4	0	0	0	0	7



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

Start Time	Haven Avenue Southbound					Lemon Avenue Westbound					Haven Avenue Northbound					Lemon Avenue Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
	07:00 AM	0	67	2	0	69	46	2	0	0	48	22	38	8	1	68	3	4	10	4	17	5	202
07:15 AM	0	62	16	0	78	58	11	0	0	69	18	39	10	0	67	3	3	16	13	22	13	236	249
07:30 AM	0	74	10	0	84	59	14	1	1	74	12	48	22	2	82	11	3	15	12	29	15	269	284
07:45 AM	3	96	9	2	108	52	17	3	1	72	17	61	31	3	109	20	10	14	8	44	14	333	347
Total	3	299	37	2	339	215	44	4	2	263	69	186	71	6	326	37	20	55	37	112	47	1040	1087
08:00 AM	2	81	10	0	93	52	14	2	0	68	16	73	12	1	101	9	6	19	12	34	13	296	309
08:15 AM	1	86	9	0	96	36	8	0	0	44	13	67	24	1	104	6	2	15	10	23	11	267	278
08:30 AM	0	80	12	0	92	54	12	0	0	66	23	48	27	6	98	11	6	15	12	32	18	288	306
08:45 AM	1	94	8	1	103	38	13	0	0	51	31	69	21	1	121	10	8	25	11	43	13	318	331
Total	4	341	39	1	384	180	47	2	0	229	83	257	84	9	424	36	22	74	45	132	55	1169	1224
Grand Total	7	640	76	3	723	395	91	6	2	492	152	443	155	15	750	73	42	129	82	244	102	2209	2311
% Approach	1	88.5	10.5			80.3	18.5	1.2			20.3	59.1	20.7			29.9	17.2	52.9					
% Total	0.3	29	3.4			17.9	4.1	0.3			6.9	20.1	7			3.3	1.9	5.8			4.4	95.6	
Passenger Vehicles	7	626	76		712	389	82	6		479	146	416	149		725	71	40	129		322	0	0	2238
Large 2 Axle Vehicles	100	97.8	100		98.1	98.5	90.1	100		100	96.1	93.9	96.1		93.3	97.3	95.2	100		98.8	0	0	96.8
% 3 Axle Vehicles	0	1.9	0		1.7	4	7	0		11	4	22	5		32	2	2	0		4	0	0	59
% 4+ Axle Trucks	0	0.2	0		0.1	0	2	0		2	2.6	5	3.2		4.2	2.7	4.8	0		1.2	0	0	2.6
% 4+ Axle Trucks	0	0.2	0		0.1	0.5	0	0		0.4	0.7	0.7	0.6		0.5	0	0	0		0	0	0	0.3

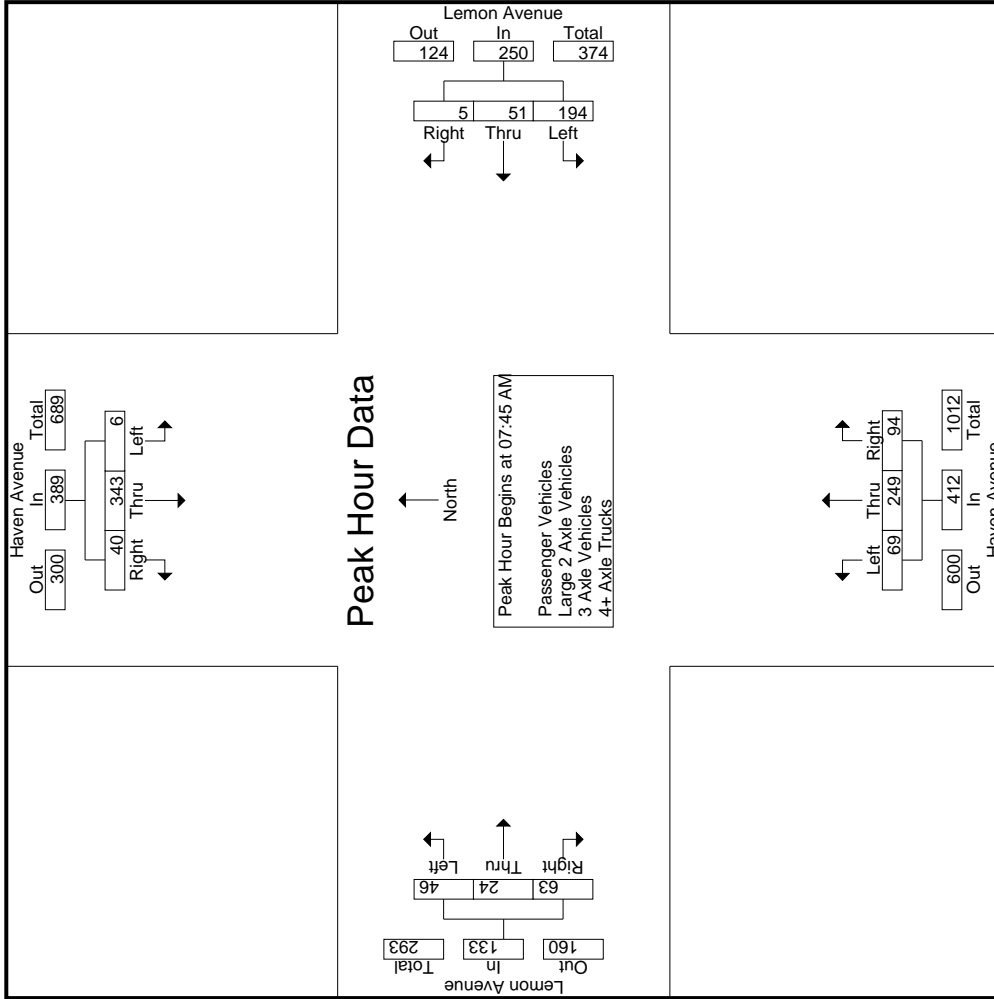
Start Time	Haven Avenue Southbound					Lemon Avenue Westbound					Haven Avenue Northbound					Lemon Avenue Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
	07:45 AM	3	96	9		108	52	17	3		72	17	61	31		109	20	10	14		44		
08:00 AM	2	81	10		93	52	14	2		68	16	73	12		101	9	6	19		34			296
08:15 AM	1	86	9		96	36	8	0		44	13	67	24		104	6	2	15		23			267
08:30 AM	0	80	12		92	54	12	0		66	23	48	27		98	11	6	15		32			288
Total Volume	6	343	40		389	194	51	5		250	69	249	94		412	46	24	63		133			1184
% App. Total	1.5	88.2	10.3			77.6	20.4	2			16.7	60.4	22.8			34.6	18	47.4					.889
PHF	.500	.893	.833		.900	.898	.750	.417		.868	.750	.853	.758		.945	.575	.600	.829		.756			

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

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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Lemon Avenue  
 Weather: Clear

File Name : 06\_RNC\_Haven\_Lemon AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 2



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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Lemon Avenue  
 Weather: Clear

File Name : 06\_RNC\_Haven\_Lemon AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 3

Start Time	Haven Avenue Southbound			Lemon Avenue Westbound			Haven Avenue Northbound			Lemon Avenue Eastbound						
	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 Each Approach Begins at:																
	07:45 AM				07:15 AM				08:00 AM			07:45 AM				
+0 mins.	3	96	9	108	58	11	0	69	16	73	12	101	20	10	14	44
+15 mins.	2	81	10	93	59	14	1	74	13	67	24	104	9	6	19	34
+30 mins.	1	86	9	96	52	17	3	72	23	48	27	98	6	2	15	23
+45 mins.	0	80	12	92	52	14	2	68	31	69	21	121	11	6	15	32
Total Volume	6	343	40	389	221	56	6	283	83	257	84	424	46	24	63	133
% App. Total	1.5	88.2	10.3		78.1	19.8	2.1		19.6	60.6	19.8		34.6	18	47.4	
PHF	.500	.893	.833	.900	.936	.824	.500	.956	.669	.880	.778	.876	.575	.600	.829	.756

Groups Printed- Large 2 Axle Vehicles

Start Time	Haven Avenue Southbound				Lemon Avenue Westbound				Haven Avenue Northbound				Lemon Avenue Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	4	4
07:15 AM	0	0	0	0	0	1	0	0	0	1	1	0	0	0	0	0	3	3
07:30 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	3	3
07:45 AM	0	1	0	0	1	0	2	0	0	2	5	1	0	0	1	0	10	10
<b>Total</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>7</b>	<b>2</b>	<b>7</b>	<b>0</b>	<b>11</b>	<b>0</b>	<b>20</b>	<b>20</b>
08:00 AM	0	1	0	0	1	0	3	0	0	3	1	6	1	0	8	0	12	12
08:15 AM	0	2	0	0	2	1	0	0	1	1	4	1	1	5	1	1	9	10
08:30 AM	0	2	0	0	2	1	0	0	0	1	0	2	1	0	3	0	6	6
08:45 AM	0	4	0	0	4	1	1	0	0	2	1	3	0	0	4	1	11	11
<b>Total</b>	<b>0</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>9</b>	<b>3</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>7</b>	<b>2</b>	<b>15</b>	<b>3</b>	<b>1</b>	<b>20</b>	<b>1</b>	<b>38</b>	<b>39</b>
<b>Grand Total</b>	<b>0</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>4</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>11</b>	<b>4</b>	<b>22</b>	<b>5</b>	<b>1</b>	<b>31</b>	<b>1</b>	<b>58</b>	<b>59</b>
% Approach	0	100	0	0	0	36.4	63.6	0	0	19	12.9	71	16.1	0	53.4	1.7	98.3	
% Total	0	20.7	0	0	20.7	6.9	12.1	0	0	19	6.9	37.9	8.6	0	53.4	3.4	3.4	0

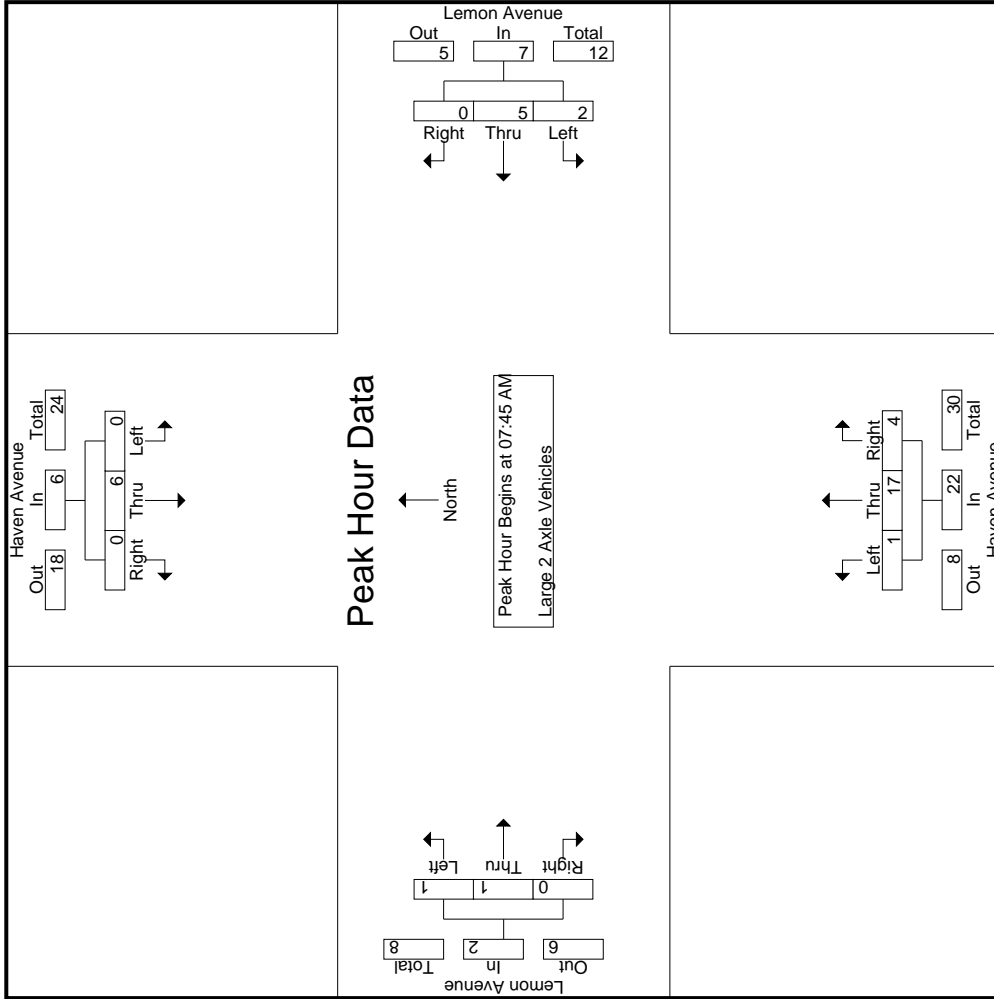
Start Time	Haven Avenue Southbound				Lemon Avenue Westbound				Haven Avenue Northbound				Lemon Avenue Eastbound																		
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Int. Total
07:45 AM	0	1	0	0	1	0	2	0	0	2	0	5	1	0	6	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	10
08:00 AM	0	1	0	0	1	0	3	0	0	3	1	6	1	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12
08:15 AM	0	2	0	0	2	1	0	0	1	1	0	4	1	1	5	1	0	0	0	0	1	0	0	0	0	0	0	0	0	1	9
08:30 AM	0	2	0	0	2	1	0	0	0	1	0	2	1	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
<b>Total Volume</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>2</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>7</b>	<b>1</b>	<b>17</b>	<b>4</b>	<b>1</b>	<b>22</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>50</b>	<b>50</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>37</b>	
% App. Total	0	100	0	0	0	28.6	71.4	0	0	18.2	4.5	77.3	18.2	0	68.8	.250	.250	.000	0	.500	.688	.250	.250	.000	.000	.500	.000	.500	.771		
PHF	.000	.750	.000	.000	.750	.500	.417	.000	.000	.583	.250	.708	1.00	1.00	.688	.250	.250	.000	.500	.500	.688	.250	.250	.000	.500	.000	.500	.771			

Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:45 AM

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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Lemon Avenue  
 Weather: Clear

File Name : 06\_RNC\_Haven\_Lemon AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 2



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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Lemon Avenue  
 Weather: Clear

File Name : 06\_RNC\_Haven\_Lemon AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 3

Start Time	Haven Avenue Southbound			Lemon Avenue Westbound			Haven Avenue Northbound			Lemon Avenue Eastbound						
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total			
Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1																
Peak Hour for Each Approach Begins at:																
	07:45 AM				07:45 AM				07:45 AM				07:45 AM			
+0 mins.	0	1	0	1	0	2	0	2	0	5	1	6	0	1	0	1
+15 mins.	0	1	0	1	0	3	0	3	0	6	1	8	0	0	0	0
+30 mins.	0	2	0	2	1	0	0	1	0	4	1	5	1	0	0	1
+45 mins.	0	2	0	2	1	0	0	1	0	2	1	3	0	0	0	0
Total Volume	0	6	0	6	2	5	0	7	1	17	4	22	1	1	0	2
% App. Total	0	100	0	100	28.6	71.4	0	71.4	4.5	77.3	18.2	71.4	50	50	0	50
PHF	.000	.750	.000	.750	.500	.417	.000	.583	.250	.708	1.000	.688	.250	.250	.000	.500

Groups Printed- 3 Axle Vehicles

Start Time	Haven Avenue Southbound				Lemon Avenue Westbound				Haven Avenue Northbound				Lemon Avenue Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	1	0	1	0	0	1	0	0	0	0	0	0	1	1
Total	0	0	0	0	1	0	1	0	0	1	0	1	0	0	0	0	2	2
08:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1
08:15 AM	0	0	0	0	0	0	1	0	0	1	0	1	0	0	0	0	1	1
08:30 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	2
08:45 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1
Total	0	1	0	0	1	0	1	0	0	1	2	0	0	0	0	0	5	5
Grand Total	0	1	0	0	1	0	2	0	0	2	1	3	0	0	0	0	7	7
% Approach	0	100	0	0	0	0	100	0	0	25	75	0	0	0	0	0	100	100
Total %	0	14.3	0	0	14.3	0	28.6	0	0	28.6	14.3	42.9	0	0	57.1	0	100	100

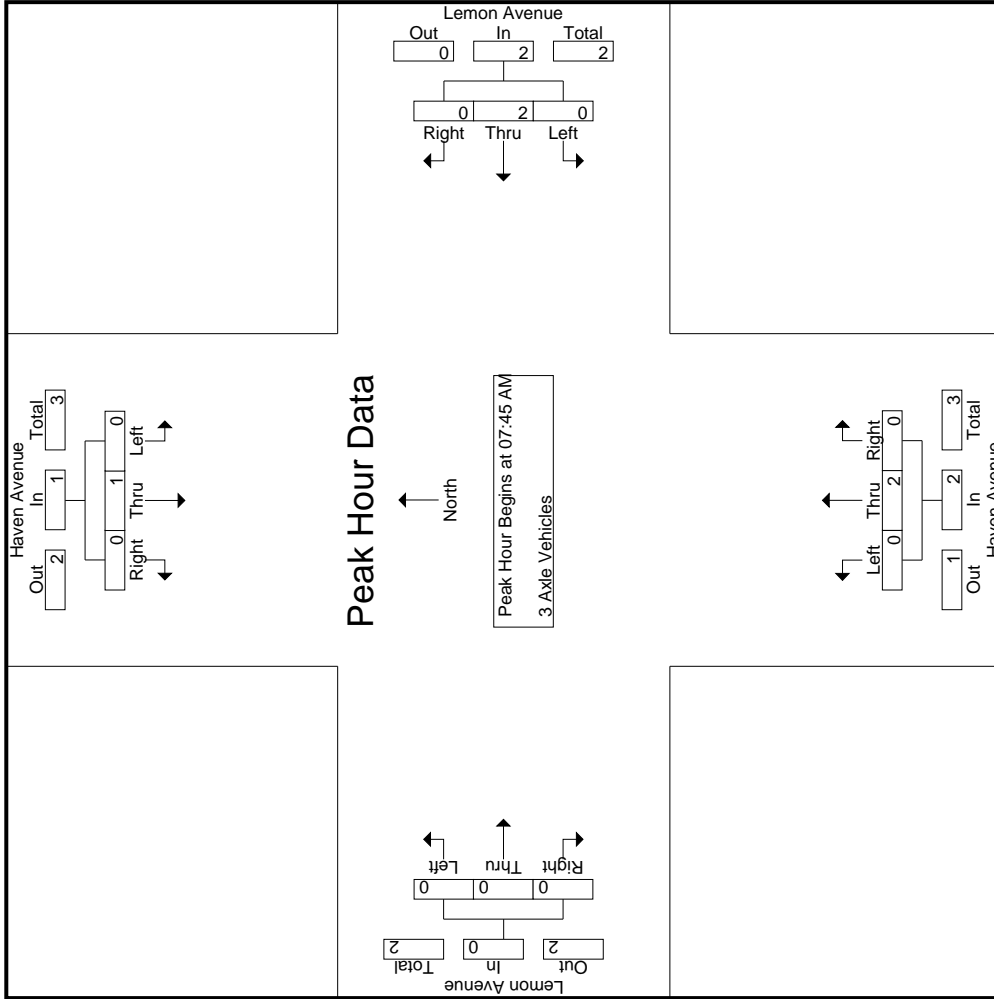
Start Time	Haven Avenue Southbound				Lemon Avenue Westbound				Haven Avenue Northbound				Lemon Avenue Eastbound											
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total	
07:45 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
08:30 AM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Total Volume	0	1	0	0	1	0	2	0	0	2	0	2	0	0	2	0	0	0	0	0	0	0	0	5
% App. Total	0	100	0	0	0	0	100	0	0	100	0	100	0	0	100	0	0	0	0	0	0	0	0	.625
PHF	.000	.250	.000	.000	.250	.000	.500	.000	.000	.500	.000	.500	.000	.000	.500	.000	.000	.000	.000	.000	.000	.000	.000	.625

Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:45 AM

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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Lemon Avenue  
 Weather: Clear

File Name : 06\_RNC\_Haven\_Lemon AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 2





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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Lemon Avenue  
 Weather: Clear

File Name : 06\_RNC\_Haven\_Lemon AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 3

Start Time	Haven Avenue Southbound			Lemon Avenue Westbound			Haven Avenue Northbound			Lemon Avenue Eastbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1												
Peak Hour for Each Approach Begins at:												
+0 mins.	0	0	0	0	1	0	1	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	1	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	1	0	0	0	0
+45 mins.	0	1	0	0	1	0	0	0	0	0	0	0
Total Volume	0	1	0	0	2	0	2	0	0	0	0	0
% App. Total	0	100	0	0	100	0	0	100	0	0	0	0
PHF	.000	.250	.000	.000	.500	.000	.500	.000	.000	.000	.000	.000

Groups Printed- 4+ Axle Trucks

Start Time	Haven Avenue Southbound				Lemon Avenue Westbound				Haven Avenue Northbound				Lemon Avenue Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1
Total	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	2	2
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1
08:30 AM	0	1	0	0	0	0	1	0	0	0	2	0	0	0	0	0	3	3
08:45 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1
Total	0	1	0	0	0	2	1	1	0	2	0	0	0	0	0	0	5	5
Grand Total	0	1	0	0	0	2	1	2	1	0	0	0	0	0	0	0	7	7
% Approach	0	100	0	0	0	100	50	25	25	57.1	0	0	0	0	0	0	100	100
Total %	0	14.3	0	0	28.6	14.3	28.6	14.3	57.1	0	0	0	0	0	0	0	100	100

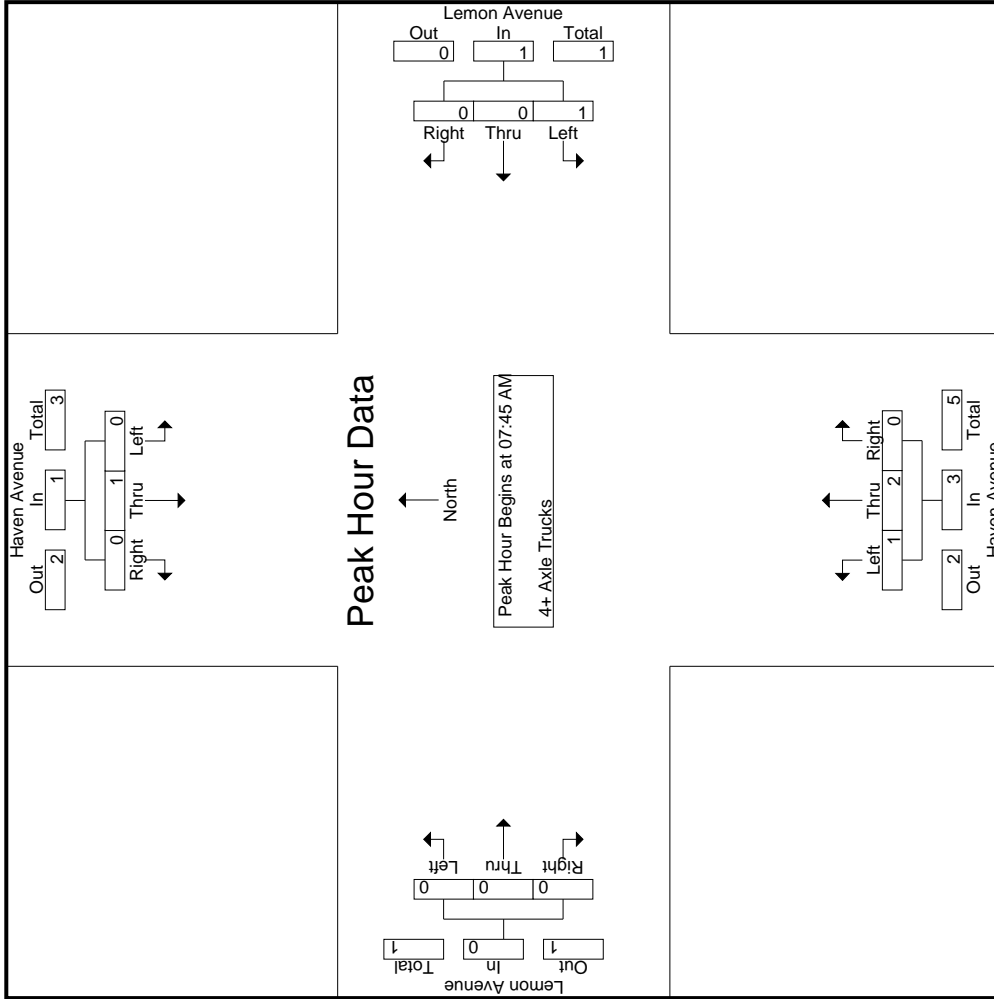
Start Time	Haven Avenue Southbound				Lemon Avenue Westbound				Haven Avenue Northbound				Lemon Avenue Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	1	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0
Total Volume	0	1	0	0	1	1	0	0	0	0	2	0	0	0	0	0	0	0
% App. Total	0	100	0	0	100	33.3	66.7	0	0	3	0	0	0	0	0	0	0	5
PHF	.000	.250	.000	.000	.250	.250	.500	.000	.375	.000	.000	.000	.000	.000	.000	.000	.417	.417

Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:45 AM

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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Lemon Avenue  
 Weather: Clear

File Name : 06\_RNC\_Haven\_Lemon AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 2



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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Lemon Avenue  
 Weather: Clear

File Name : 06\_RNC\_Haven\_Lemon AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 3

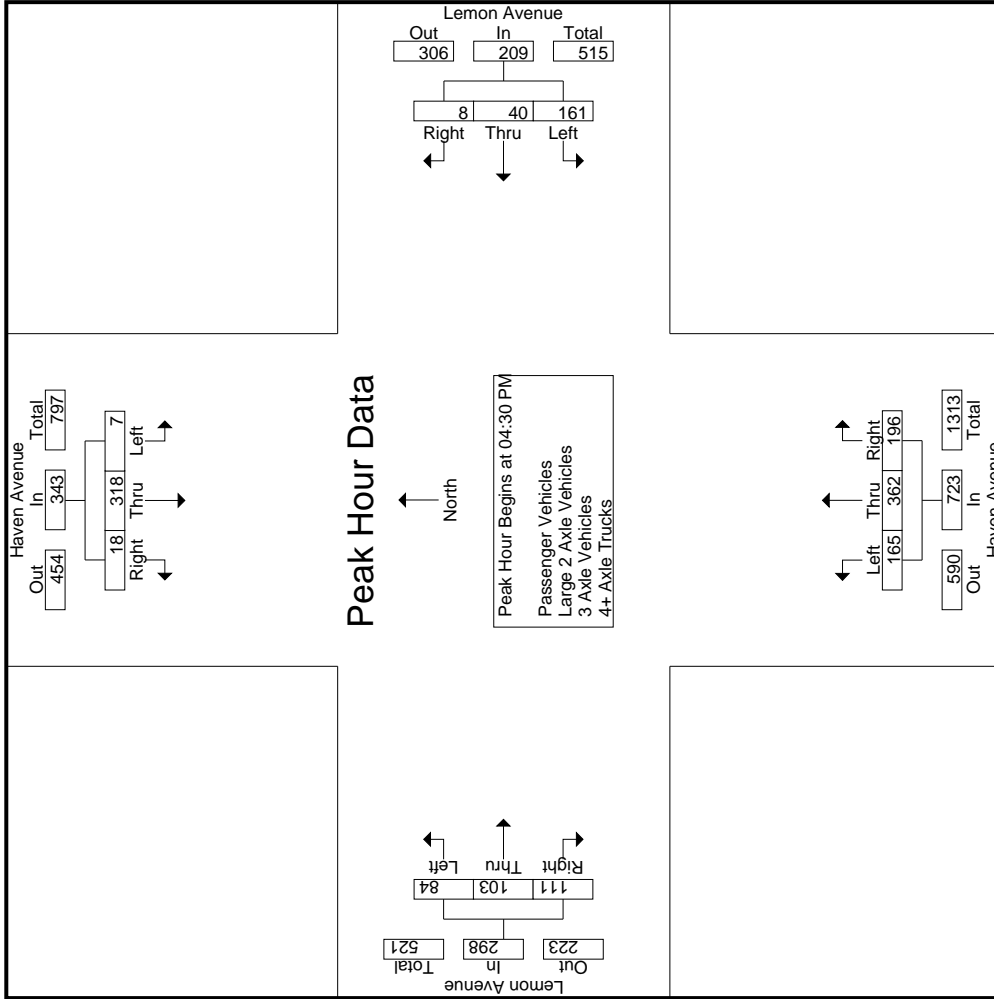
Start Time	Haven Avenue Southbound			Lemon Avenue Westbound			Haven Avenue Northbound			Lemon Avenue Eastbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1												
Peak Hour for Each Approach Begins at:												
	07:45 AM			07:45 AM			07:45 AM			07:45 AM		
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	1	0	0	1	0	0	0	0	0
+45 mins.	0	1	0	0	0	0	1	0	0	0	0	0
Total Volume	0	1	0	1	0	0	1	2	0	0	0	0
% App. Total	0	100	0	100	0	0	33.3	66.7	0	0	0	0
PHF	.000	.250	.000	.250	.000	.000	.250	.500	.000	.000	.000	.000

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

Start Time	Haven Avenue Southbound					Lemon Avenue Westbound					Haven Avenue Northbound					Lemon Avenue Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
	04:00 PM	0	73	5	0	78	36	5	1	1	42	32	79	34	3	145	12	19	14	5	45	9	310
04:15 PM	0	97	6	0	103	34	10	2	0	46	43	95	49	5	187	10	11	18	10	39	15	375	390
04:30 PM	1	85	4	0	90	42	9	4	1	55	40	80	36	6	156	21	30	28	7	79	14	380	394
04:45 PM	2	98	4	0	104	40	11	0	0	51	37	89	45	1	171	15	26	26	9	67	10	393	403
Total	3	353	19	0	375	152	35	7	2	194	152	343	164	15	659	58	86	86	31	230	48	1458	1506
05:00 PM	2	61	6	0	69	49	13	2	0	64	36	96	54	10	186	26	21	24	10	71	20	390	410
05:15 PM	2	74	4	0	80	30	7	2	1	39	52	97	61	5	210	22	26	33	10	81	16	410	426
05:30 PM	2	66	3	0	71	31	7	2	0	40	28	98	64	4	190	29	11	24	10	64	14	365	379
05:45 PM	2	65	6	1	73	36	8	1	0	45	33	112	43	4	188	15	21	28	8	64	13	370	383
Total	8	266	19	1	293	146	35	7	1	188	149	403	222	23	774	92	79	109	38	280	63	1535	1598
Grand Total	11	619	38	1	668	298	70	14	3	382	301	746	386	38	1433	150	165	195	69	510	111	2993	3104
% Approach	1.6	92.7	5.7	0	99.0	78	18.3	3.7	0	21	52.1	26.9	10	12.8	10.1	24.9	12.9	47.9	17	3.6	96.4	0	0
% Total	0.4	20.7	1.3	0	22.3	10	2.3	0.5	0	12.8	10.1	24.9	12.9	47.9	5	5.5	6.5	17	3.6	96.4	0	0	0
% Passenger Vehicles	10	605	38	0	654	296	69	13	0	381	299	736	381	1453	147	165	189	567	0	0	0	3055	
% Large 2 Axle Vehicles	90.9	97.7	100	100	97.8	99.3	98.6	92.9	100	99	99.3	98.7	98.7	97.4	98.8	98	100	96.9	95.7	97.9	0	0	98.4
% 3 Axle Vehicles	1	14	0	0	15	2	1	1	0	4	1	9	4	15	3	0	6	12	0	0	0	0	46
% 4+ Axle Trucks	9.1	2.3	0	0	2.2	0.7	1.4	7.1	0	1	0.3	1.2	1	2.6	1	2	0	3.1	4.3	2.1	0	0	1.5

Start Time	Haven Avenue Southbound					Lemon Avenue Westbound					Haven Avenue Northbound					Lemon Avenue Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
	04:30 PM	1	85	4	0	90	42	9	4	0	55	40	80	36	80	36	21	28	79	380	0	0	0
04:45 PM	2	98	4	0	104	40	11	0	0	51	37	89	45	5	171	15	26	26	67	393	0	0	0
05:00 PM	2	61	6	0	69	49	13	2	0	64	36	96	54	6	186	26	26	24	71	390	0	0	0
05:15 PM	2	74	4	0	80	30	7	2	1	39	52	97	61	5	210	22	26	33	81	410	0	0	0
Total Volume	7	318	18	0	343	161	40	8	0	209	165	362	196	723	84	103	111	298	1573	0	0	0	0
% App. Total	2	92.7	5.2	0	99.9	77	19.1	3.8	0	22.8	50.1	27.1	10	28.2	34.6	37.2	8.8	8.8	8.8	8.8	8.8	8.8	8.8
PHF	.875	.811	.750	.825	.825	.821	.769	.500	.816	.793	.933	.803	.861	.808	.858	.841	.920	.959	.959	.959	.959	.959	.959

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 04:30 PM



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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Lemon Avenue  
 Weather: Clear

File Name : 06\_RNC\_Haven\_Lemon PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 3

Start Time	Haven Avenue Southbound			Lemon Avenue Westbound			Haven Avenue Northbound			Lemon Avenue Eastbound				
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1														
Peak Hour for Each Approach Begins at:														
	04:00 PM			04:15 PM			05:00 PM			04:30 PM				
+0 mins.	0	73	5	34	10	2	46	36	96	54	21	30	28	79
+15 mins.	0	97	6	42	9	4	55	52	97	61	15	26	26	67
+30 mins.	1	85	4	40	11	0	51	28	98	64	26	21	24	71
+45 mins.	2	98	4	49	13	2	64	33	112	43	22	26	33	81
Total Volume	3	353	19	165	43	8	216	149	403	222	84	103	111	298
% App. Total	0.8	94.1	5.1	76.4	19.9	3.7	19.3	52.1	28.7	28.2	34.6	37.2	37.2	92.0
PHF	.375	.901	.792	.842	.827	.500	.844	.716	.900	.867	.808	.858	.841	.920

Groups Printed- Large 2 Axle Vehicles

Start Time	Haven Avenue Southbound				Lemon Avenue Westbound				Haven Avenue Northbound				Lemon Avenue Eastbound						
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total	
04:00 PM	0	1	0	0	1	0	0	0	0	0	0	1	3	1	4	0	0	0	6
04:15 PM	0	2	0	0	2	0	1	0	0	1	0	1	1	0	2	0	1	0	6
04:30 PM	0	3	0	0	3	0	0	0	0	0	1	0	0	0	2	0	0	7	
04:45 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	2	
Total	0	7	0	0	7	0	1	4	4	1	9	4	1	9	3	1	20	21	
05:00 PM	0	3	0	0	3	1	0	0	0	1	2	0	0	2	1	0	1	8	
05:15 PM	1	2	0	0	3	0	1	0	0	1	0	0	0	0	2	0	0	6	
05:30 PM	0	0	0	0	0	1	0	1	0	0	1	0	0	1	1	1	1	3	
05:45 PM	0	2	0	0	2	0	0	0	0	0	2	0	0	2	1	1	1	6	
Total	1	7	0	0	8	2	1	0	0	3	5	0	0	5	1	0	3	25	
Grand Total	1	14	0	0	15	2	1	1	0	4	1	9	4	1	14	3	0	6	46
% Approach	6.7	93.3	0	0	0	50	25	25	0	7.1	64.3	28.6	0	0	33.3	0	66.7	0	42
Total %	2.4	33.3	0	0	35.7	4.8	2.4	2.4	0	9.5	2.4	21.4	9.5	7.1	21.4	0	14.3	8.7	91.3

Start Time	Haven Avenue Southbound				Lemon Avenue Westbound				Haven Avenue Northbound				Lemon Avenue Eastbound						
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total	
04:30 PM	0	3	0	0	3	0	0	0	0	0	1	1	0	0	2	0	0	2	7
04:45 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	2
05:00 PM	0	3	0	0	3	1	0	0	0	1	0	0	0	0	2	0	1	2	8
05:15 PM	1	2	0	0	3	0	1	0	0	0	0	0	0	0	0	0	2	2	6
Total Volume	1	9	0	0	10	1	1	0	0	2	1	4	0	0	5	3	0	6	23
% App. Total	10	90	0	0	0	50	50	0	0	0	20	80	0	0	0	50	0	50	719
PHF	.250	.750	.000	.000	.833	.250	.250	.500	.000	.500	.250	.500	.500	.000	.625	.375	.750	.719	

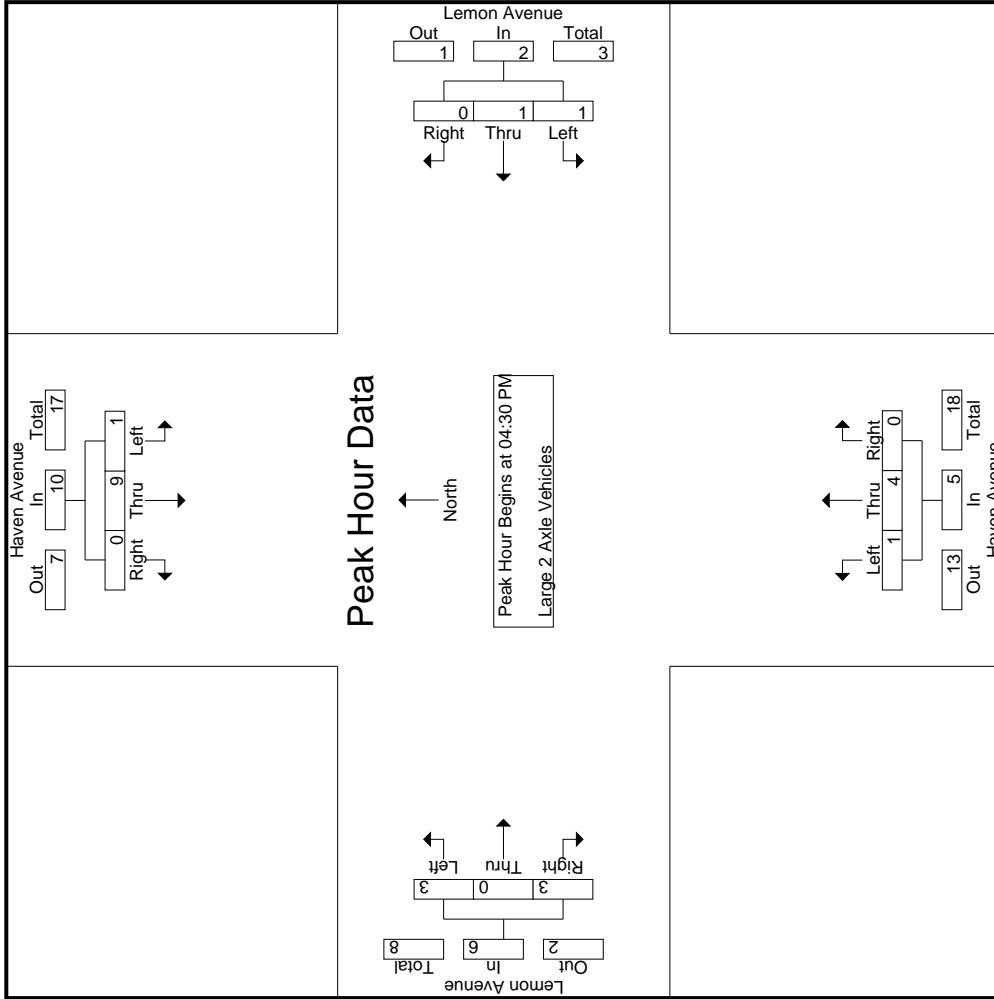
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 04:30 PM



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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Lemon Avenue  
 Weather: Clear

File Name : 06\_RNC\_Haven\_Lemon PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 2



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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Lemon Avenue  
 Weather: Clear

File Name : 06\_RNC\_Haven\_Lemon PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 3

Start Time	Haven Avenue Southbound			Lemon Avenue Westbound			Haven Avenue Northbound			Lemon Avenue Eastbound					
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right			
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1															
Peak Hour for Each Approach Begins at:															
+0 mins.	0	3	0	0	0	0	0	0	0	1	1	0	2	0	0
+15 mins.	0	1	0	0	0	0	0	0	0	1	1	0	1	0	0
+30 mins.	0	3	0	1	0	0	1	0	0	2	0	0	2	0	1
+45 mins.	1	2	0	0	1	0	0	0	0	0	0	0	0	0	2
Total Volume	1	9	0	1	1	0	1	4	0	4	4	0	5	3	3
% App. Total	10	90	0	50	50	0	20	80	0	20	80	0	50	50	50
PHF	.250	.750	.000	.250	.250	.000	.250	.500	.000	.250	.500	.000	.375	.375	.750

Groups Printed- 3 Axle Vehicles

Start Time	Haven Avenue Southbound				Lemon Avenue Westbound				Haven Avenue Northbound				Lemon Avenue Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1
Total	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1
Grand Total	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1
% Approach	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0	0	0	100
Total %	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0	0	100	100

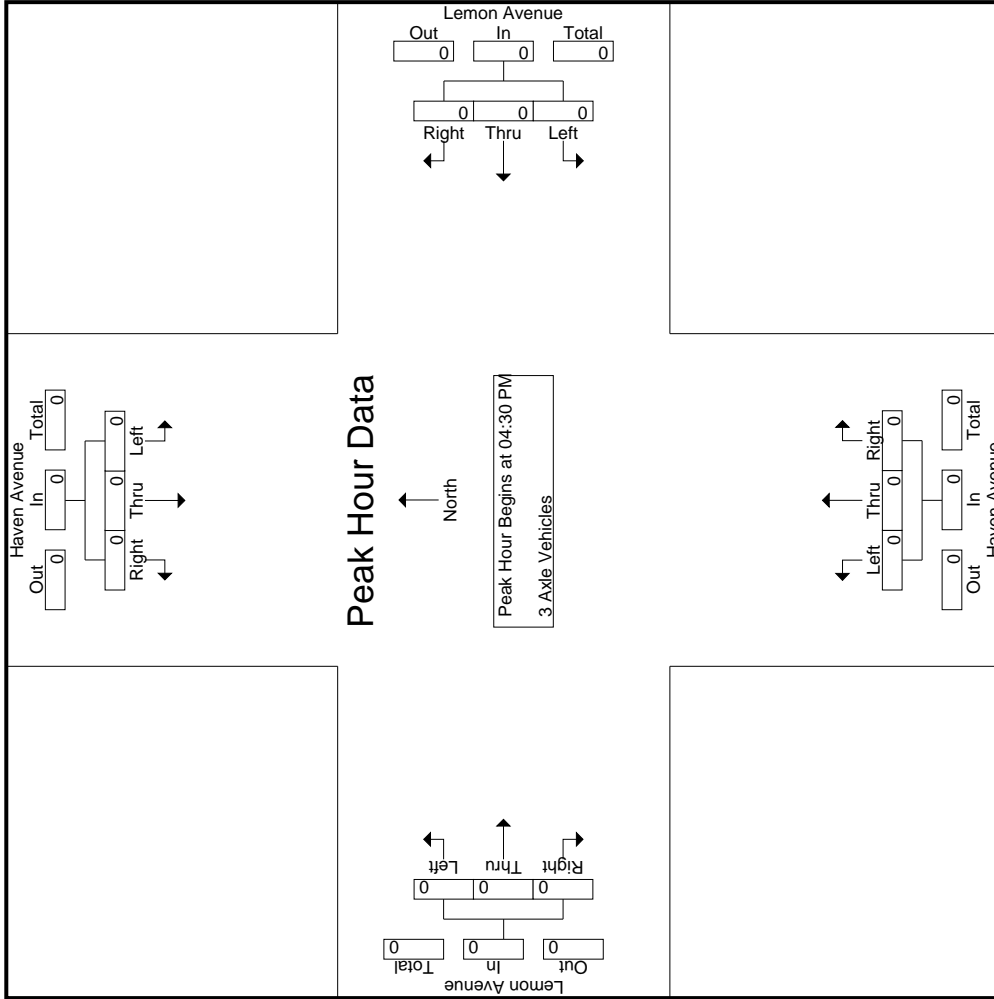
Start Time	Haven Avenue Southbound				Lemon Avenue Westbound				Haven Avenue Northbound				Lemon Avenue Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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

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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Lemon Avenue  
 Weather: Clear

File Name : 06\_RNC\_Haven\_Lemon PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 2



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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Lemon Avenue  
 Weather: Clear

File Name : 06\_RNC\_Haven\_Lemon PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 3

Start Time	Haven Avenue Southbound			Lemon Avenue Westbound			Haven Avenue Northbound			Lemon Avenue Eastbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1												
Peak Hour for Each Approach Begins at:												
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0	0	0	0	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Groups Printed- 4+ Axle Trucks

Start Time	Haven Avenue Southbound				Lemon Avenue Westbound				Haven Avenue Northbound				Lemon Avenue Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	1
04:45 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1	1
Total	0	0	0	0	0	1	0	1	0	2	0	0	0	0	0	0	2	2
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	1	0	1	0	2	0	0	0	0	0	0	2	2
% Approach	0	0	0	0	0	50	0	50	0	100	0	0	0	0	0	0	100	100
Total %	0	0	0	0	0	50	0	50	0	100	0	0	0	0	0	0	100	100

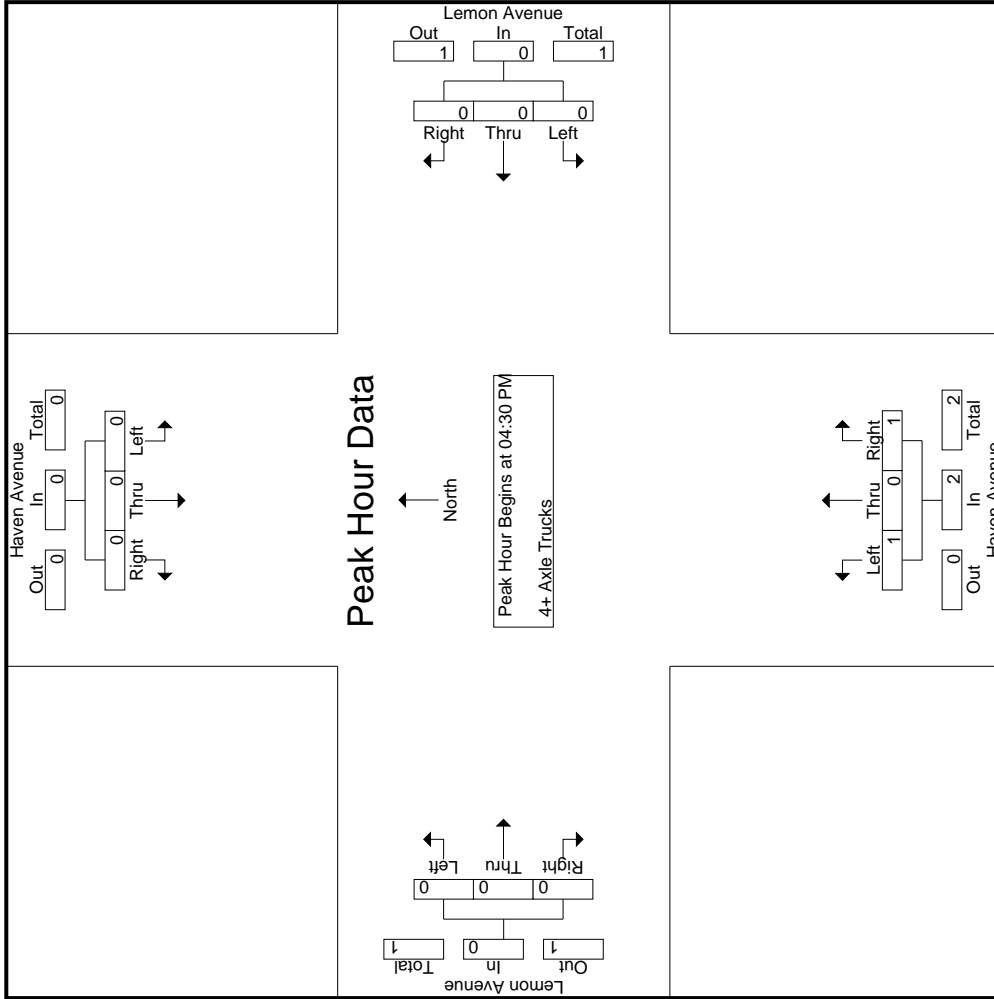
Start Time	Haven Avenue Southbound				Lemon Avenue Westbound				Haven Avenue Northbound				Lemon Avenue Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	1	0	1	0	2	0	0	2
% App. Total	0	0	0	0	0	0	0	0	0	0	50	0	50	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.250	.250	.250	.000	.250	.000	.500	.500	.000	.000	.000	.500	.500

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

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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Lemon Avenue  
 Weather: Clear

File Name : 06\_RNC\_Haven\_Lemon PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 2



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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Lemon Avenue  
 Weather: Clear

File Name : 06\_RNC\_Haven\_Lemon PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 3

Start Time	Haven Avenue Southbound			Lemon Avenue Westbound			Haven Avenue Northbound			Lemon Avenue Eastbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1												
Peak Hour for Each Approach Begins at:												
+0 mins.	0	0	0	0	0	0	0	0	1	0	0	0
+15 mins.	0	0	0	0	0	0	1	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	1	0	1	0	0	0
% App. Total	0	0	0	0	0	0	50	0	50	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000



Location: Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Lemon Avenue



Date: 6/2/2021  
 Day: Wednesday

PEDESTRIANS

	North Leg Haven Avenue Pedestrians	East Leg Lemon Avenue Pedestrians	South Leg Haven Avenue Pedestrians	West Leg Lemon Avenue Pedestrians	
7:00 AM	0	0	4	3	7
7:15 AM	0	0	1	1	2
7:30 AM	0	2	2	0	4
7:45 AM	0	0	1	1	2
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	1	0	0	0	1
8:45 AM	3	3	3	1	10
TOTAL VOLUMES:	4	5	11	6	26

	North Leg Haven Avenue Pedestrians	East Leg Lemon Avenue Pedestrians	South Leg Haven Avenue Pedestrians	West Leg Lemon Avenue Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	1	0	1
4:30 PM	0	3	3	2	8
4:45 PM	0	2	2	1	5
5:00 PM	0	0	1	0	1
5:15 PM	0	3	3	0	6
5:30 PM	2	1	1	0	4
5:45 PM	0	2	3	0	5
TOTAL VOLUMES:	2	11	14	3	30

Location: Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: Lemon Avenue



Date: 6/2/2021  
 Day: Wednesday

BICYCLES

	Southbound Haven Avenue			Westbound Lemon Avenue			Northbound Haven Avenue			Eastbound Lemon Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	1	0	0	1	0	0	0	0	0	0	0	2

	Southbound Haven Avenue			Westbound Lemon Avenue			Northbound Haven Avenue			Eastbound Lemon Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	2	0	0	0	0	2
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
TOTAL VOLUMES:	0	0	0	0	0	0	0	3	0	0	0	1	4

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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: SR-210 Westbound Ramps  
 Weather: Clear

File Name : 07\_RNC\_Haven\_210W AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 1

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

Start Time	Haven Avenue Southbound						Haven Avenue Northbound						SR-210 Westbound On Ramp Eastbound											
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		Left		Thru		Right	
	App. Total	RTOR	App. Total	RTOR	App. Total	RTOR	App. Total	RTOR	App. Total	RTOR	App. Total	RTOR	App. Total	RTOR	App. Total	RTOR	App. Total	RTOR	App. Total	RTOR	Exclu. Total	Inclu. Total	Int. Total	
07:00 AM	0	106	54	20	160	38	3	53	61	52	0	0	113	0	0	0	0	0	0	58	397	455		
07:15 AM	0	115	72	34	187	29	1	42	63	73	0	0	136	0	0	0	0	0	0	63	399	462		
07:30 AM	0	121	58	30	179	31	0	43	64	80	0	0	144	0	0	0	0	0	0	61	431	492		
07:45 AM	0	150	54	20	204	36	1	48	57	111	0	0	168	0	0	0	0	0	0	56	481	537		
<b>Total</b>	0	492	238	104	730	134	5	186	245	316	0	0	561	0	0	0	0	0	0	238	1708	1946		
08:00 AM	0	150	59	18	209	46	1	61	55	106	0	0	161	0	0	0	0	0	0	64	505	569		
08:15 AM	0	115	66	18	181	35	1	55	62	117	0	0	179	0	0	0	0	0	0	53	479	532		
08:30 AM	0	128	51	17	179	35	1	46	41	79	0	0	120	0	0	0	0	0	0	52	417	469		
08:45 AM	0	171	57	15	228	56	2	91	59	94	0	0	153	0	0	0	0	0	0	71	551	622		
<b>Total</b>	0	564	233	68	797	172	5	253	217	396	0	0	613	0	0	0	0	0	0	240	1952	2192		
<b>Grand Total</b>	0	1056	471	172	1527	306	10	439	462	712	0	0	1174	0	0	0	0	0	0	478	3660	4138		
% Approach	0	69.2	30.8		53.2	1	45.8		39.4	60.6	0	0	32.1	0	0	0	0	0	0	11.6	88.4			
% Total	0	28.9	12.9		41.7	12	13.9	0.3	12.6	19.5	0	0	32.1	0	0	0	0	0	0	11.6	88.4			
% Passenger Vehicles	0	1034	469		1674	97.7	7	424	447	684	0	0	1131	0	0	0	0	0	0	0	0	4038		
% Large 2 Axle Vehicles	0	97.9	99.6		98.5	97.7	70	96.6	96.8	96.1	0	0	96.3	0	0	0	0	0	0	0	0	97.6		
% 3 Axle Vehicles	0	15	1		17	9	2	9	9	24	0	0	33	0	0	0	0	0	0	0	0	71		
% 4+ Axle Trucks	0	1.4	0.2		0.6	1	1	2.1	1.9	3.4	0	0	2.8	0	0	0	0	0	0	0	0	1.7		
% 3 Axle Vehicles	0	2	0		2	0	0	4	4	0	0	4	0	0	0	0	0	0	0	0	0	11		
% 4+ Axle Trucks	0	0.2	0		0.1	0	0	0.9	0.9	0	0	0.3	0	0	0	0	0	0	0	0	0	0.3		
% 4+ Axle Trucks	0	5	1		6	2	1	2	2	4	0	0	6	0	0	0	0	0	0	0	0	18		
% 4+ Axle Trucks	0	0.5	0.2		0.4	10	0.5	0.3	0.4	0.6	0	0	0.5	0	0	0	0	0	0	0	0	0.4		

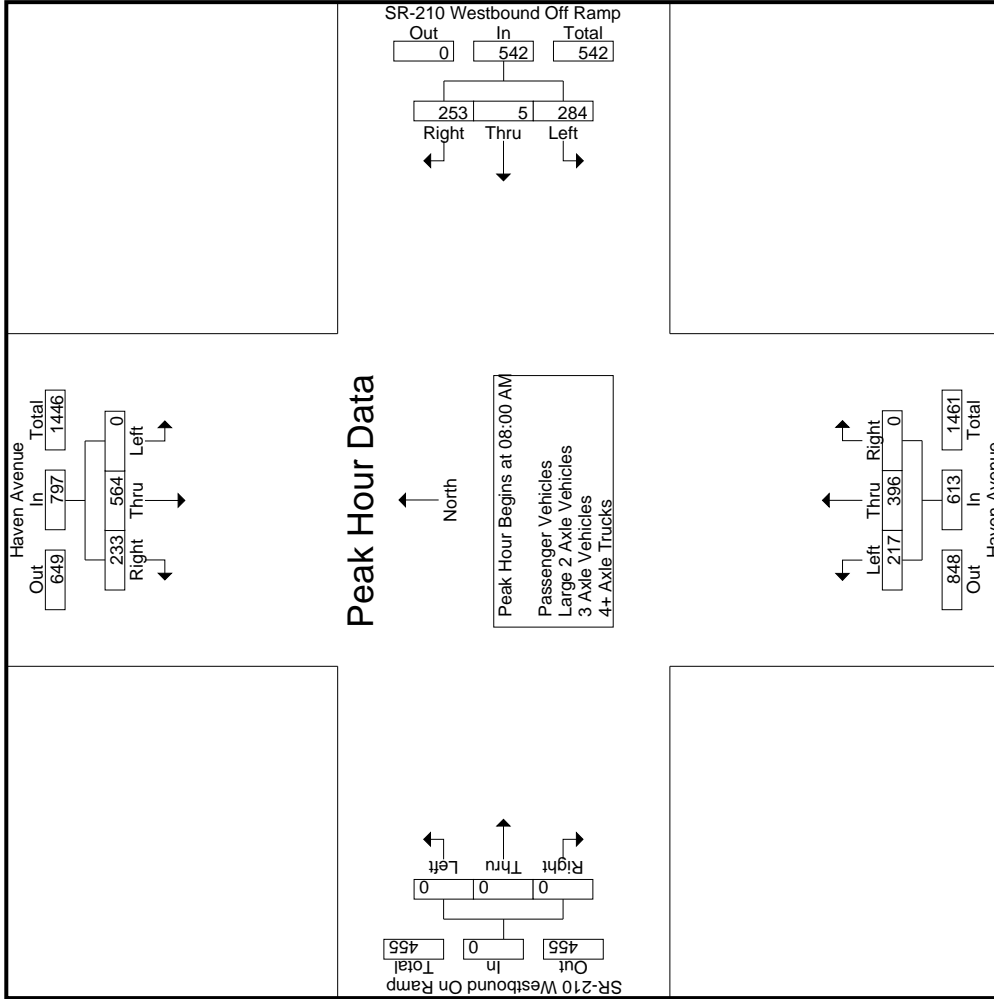
Start Time	Haven Avenue Southbound						Haven Avenue Northbound						SR-210 Westbound On Ramp Eastbound											
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		Left		Thru		Right	
	App. Total	RTOR	App. Total	RTOR	App. Total	RTOR	App. Total	RTOR	App. Total	RTOR	App. Total	RTOR	App. Total	RTOR	App. Total	RTOR	App. Total	RTOR	App. Total	RTOR	Exclu. Total	Inclu. Total	Int. Total	
08:00 AM	0	150	59		209	73	1	61	55	106	0	0	161	0	0	0	0	0	0	0	0	0	505	
08:15 AM	0	115	66		181	63	1	42	62	117	0	0	179	0	0	0	0	0	0	0	0	0	479	
08:30 AM	0	128	51		179	71	1	46	41	79	0	0	120	0	0	0	0	0	0	0	0	0	417	
08:45 AM	0	171	57		228	77	2	91	59	94	0	0	153	0	0	0	0	0	0	0	0	0	551	
<b>Total Volume</b>	0	564	233		797	284	5	253	217	396	0	0	613	0	0	0	0	0	0	0	0	0	1952	
<b>% App. Total</b>	0	70.8	29.2		46.7	52.4	0.9	46.7	35.4	64.6	0	0	0	0	0	0	0	0	0	0	0	0	88.6	
PHF	.000	.825	.883		.874	.922	.625	.695	.797	.846	.000	.856	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.886	

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

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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: SR-210 Westbound Ramps  
 Weather: Clear

File Name : 07\_RNC\_Haven\_210W AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 2



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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: SR-210 Westbound Ramps  
 Weather: Clear

File Name : 07\_RNC\_Haven\_210W AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 3

Start Time	Haven Avenue Southbound			SR-210 Westbound Off Ramp Westbound			Haven Avenue Northbound			SR-210 Westbound On Ramp Eastbound					
	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 Each Approach Begins at:															
	08:00 AM				08:00 AM				07:30 AM				07:00 AM		
+0 mins.	0	150	59	209	73	1	61	135	80	0	0	144	0	0	0
+15 mins.	0	115	66	181	63	1	55	119	111	0	0	168	0	0	0
+30 mins.	0	128	51	179	71	1	46	118	106	0	0	161	0	0	0
+45 mins.	0	171	57	228	77	2	91	170	117	0	0	179	0	0	0
Total Volume	0	564	233	797	284	5	253	542	414	0	0	652	0	0	0
% App. Total	0	70.8	29.2		52.4	0.9	46.7		63.5	0	0		0	0	0
PHF	.000	.825	.883	.874	.922	.625	.695	.797	.930	.885	.000	.911	.000	.000	.000

Groups Printed- Large 2 Axle Vehicles

Start Time	Haven Avenue Southbound				SR-210 Westbound Off Ramp				Haven Avenue Northbound				SR-210 Westbound On Ramp Eastbound				Exclu. Total	Inclu. Total	Int. Total				
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left				Thru	Right	RTOR	App. Total
07:00 AM	0	3	0	0	3	0	0	1	1	1	0	2	0	0	2	0	0	0	0	0	1	6	7
07:15 AM	0	2	1	1	3	2	1	1	0	4	3	0	0	0	3	0	0	0	0	0	1	10	11
07:30 AM	0	0	0	0	0	0	0	0	0	0	1	4	0	0	5	0	0	0	0	0	0	5	5
07:45 AM	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	3	3
Total	0	5	1	1	6	2	1	2	1	5	4	9	0	0	13	0	0	0	0	0	2	24	26
08:00 AM	0	1	0	0	1	0	0	3	3	3	2	4	0	0	6	0	0	0	0	0	3	10	13
08:15 AM	0	3	0	0	3	2	0	1	0	3	0	6	0	0	6	0	0	0	0	0	0	12	12
08:30 AM	0	2	0	0	2	1	1	2	1	4	0	5	0	0	5	0	0	0	0	0	1	11	12
08:45 AM	0	4	0	0	4	0	0	1	0	1	3	0	0	0	3	0	0	0	0	0	0	8	8
Total	0	10	0	0	10	3	1	7	4	11	5	15	0	0	20	0	0	0	0	0	4	41	45
Grand Total	0	15	1	1	16	5	2	9	5	16	9	24	0	0	33	0	0	0	0	0	6	65	71
% Approach	0	93.8	6.2			31.2	12.5	56.2			27.3	72.7	0	0		0	0	0	0		8.5	91.5	
Total %	0	23.1	1.5			7.7	3.1	13.8			13.8	36.9	0	0	50.8	0	0	0	0				

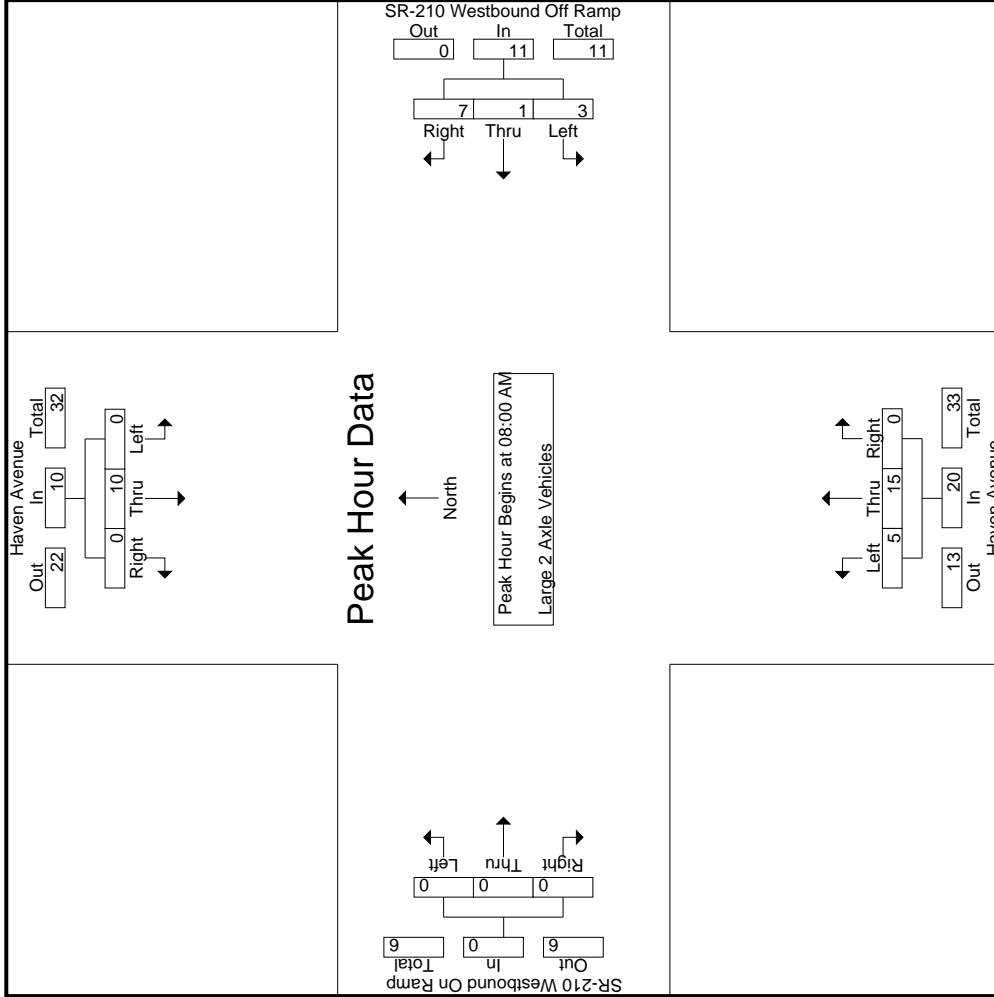
Start Time	Haven Avenue Southbound				SR-210 Westbound Off Ramp				Haven Avenue Northbound				SR-210 Westbound On Ramp Eastbound				Exclu. Total	Inclu. Total	Int. Total				
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left				Thru	Right	RTOR	App. Total
08:00 AM	0	1	0	0	1	0	0	0	0	0	2	4	0	0	2	0	0	0	0	0	0	0	0
08:15 AM	0	3	0	0	3	2	1	1	0	3	0	6	0	0	6	0	0	0	0	0	0	0	0
08:30 AM	0	2	0	0	2	1	1	2	1	4	0	5	0	0	5	0	0	0	0	0	0	0	0
08:45 AM	0	4	0	0	4	0	0	1	0	1	3	0	0	0	3	0	0	0	0	0	0	0	0
Total Volume	0	10	0	0	10	3	1	7	4	11	5	15	0	0	20	0	0	0	0	0	0	0	0
% App. Total	0	100	0	0		27.3	9.1	63.6			25	75	0	0		0	0	0	0				
PHF	.000	.625	.000		.625	.375	.250	.583	.688	.688	.417	.625	.000	.833	.000	.000	.000	.000	.000	.000	.000	.854	

Peak Hour Analysis From 08:00 AM to 08:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 08:00 AM

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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: SR-210 Westbound Ramps  
 Weather: Clear

File Name : 07\_RNC\_Haven\_210W AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 2



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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: SR-210 Westbound Ramps  
 Weather: Clear

File Name : 07\_RNC\_Haven\_210W AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 3

Start Time	Haven Avenue Southbound			SR-210 Westbound Off Ramp Westbound			Haven Avenue Northbound			SR-210 Westbound On Ramp Eastbound			
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 08:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Each Approach Begins at:													
08:00 AM	0	1	0	1	0	0	3	3	2	4	0	6	0
+0 mins.	0	3	0	3	0	0	1	3	0	6	0	6	0
+15 mins.	0	2	0	2	1	1	2	4	0	5	0	5	0
+30 mins.	0	4	0	4	0	0	1	1	3	0	0	3	0
+45 mins.	0	10	0	10	3	1	7	11	5	15	0	20	0
Total Volume	0	100	0	100	27.3	9.1	63.6	98.0	25	75	0	100	0
% App. Total	.000	.625	.000	.625	.375	.250	.583	.688	.417	.625	.000	.833	.000
PHF													



Groups Printed- 3 Axle Vehicles

Start Time	Haven Avenue Southbound				SR-210 Westbound Off Ramp				Haven Avenue Northbound				SR-210 Westbound On Ramp Eastbound				Exclu. Total	Inclu. Total	Int. Total					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left				Thru	Right	RTOR	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	
07:15 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
07:30 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	1	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0	0	0	3	3
08:00 AM	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	0	0	0	0	0	0	0	2	2
08:15 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1
08:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1	1
08:45 AM	0	1	0	0	1	0	0	1	1	1	1	0	0	0	1	0	0	0	0	0	0	1	3	4
Total	0	1	0	0	1	0	0	3	1	3	3	0	0	0	3	0	0	0	0	0	0	1	7	8
Grand Total	0	2	0	0	2	0	0	4	1	4	4	0	0	0	4	0	0	0	0	0	0	1	10	11
% Approach	0	100	0	0	0	0	0	100	0	40	100	0	0	0	40	0	0	0	0	0	0	9.1	90.9	
Total %	0	20	0	0	20	0	0	40	0	40	40	0	0	0	40	0	0	0	0	0	0	9.1	90.9	

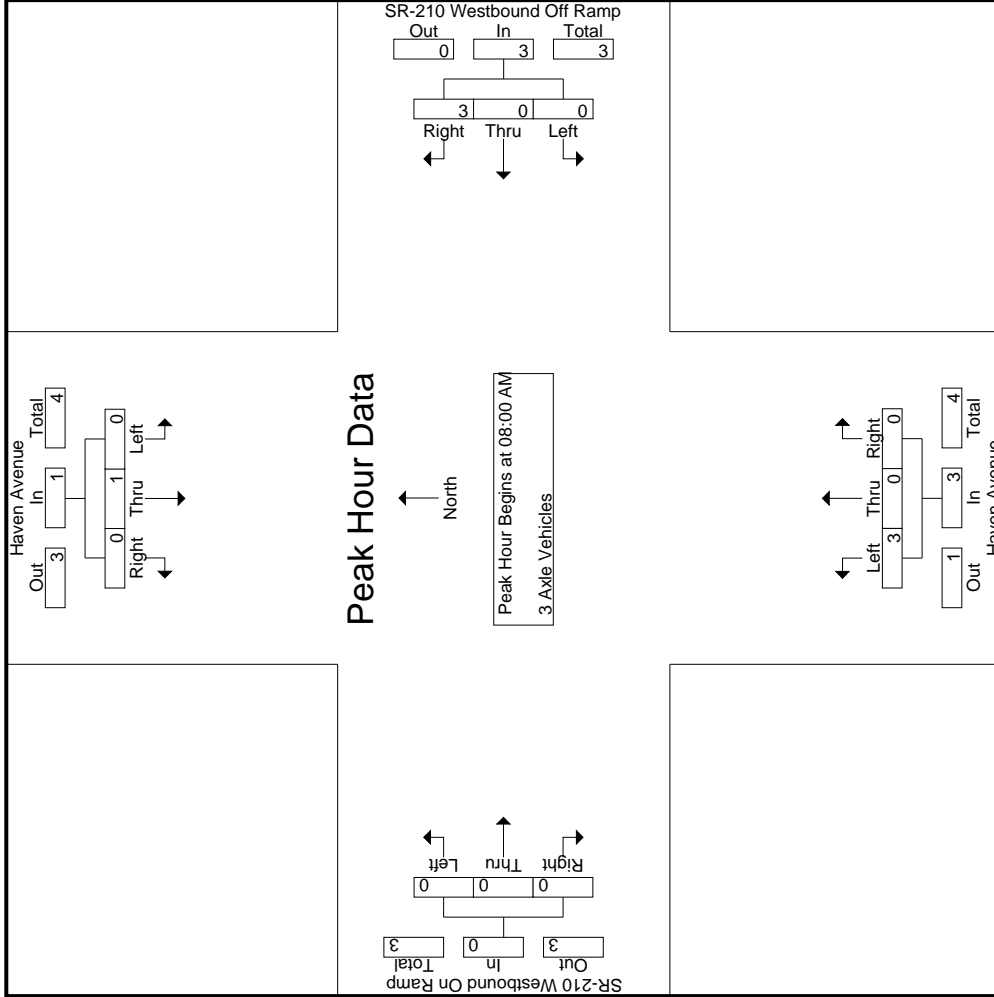
Start Time	Haven Avenue Southbound				SR-210 Westbound Off Ramp				Haven Avenue Northbound				SR-210 Westbound On Ramp Eastbound				Exclu. Total	Inclu. Total	Int. Total					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left				Thru	Right	RTOR	App. Total	
08:00 AM	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	2
08:15 AM	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	1
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
08:45 AM	0	1	0	0	1	0	0	1	1	1	1	0	0	0	1	0	0	0	0	0	0	0	0	3
Total Volume	0	1	0	0	1	0	0	3	3	3	3	0	0	0	3	0	0	0	0	0	0	0	0	7
% App. Total	0	100	0	0	0	0	0	100	0	75	100	0	0	0	75	0	0	0	0	0	0	0	0	.583
PHF	.000	.250	.000	.000	.250	.000	.000	.750	.750	.750	.750	.000	.000	.000	.750	.000	.000	.000	.000	.000	.000	.000	.000	.583

Peak Hour Analysis From 08:00 AM to 08:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 08:00 AM

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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: SR-210 Westbound Ramps  
 Weather: Clear

File Name : 07\_RNC\_Haven\_210W AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 2



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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: SR-210 Westbound Ramps  
 Weather: Clear

File Name : 07\_RNC\_Haven\_210W AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 3

Start Time	Haven Avenue Southbound			SR-210 Westbound Off Ramp Westbound			Haven Avenue Northbound			SR-210 Westbound On Ramp Eastbound					
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total		
Peak Hour Analysis From 08:00 AM to 08:45 AM - Peak 1 of 1															
Peak Hour for Each Approach Begins at:															
	08:00 AM				08:00 AM				08:00 AM				08:00 AM		
+0 mins.	0	0	0	0	0	0	1	1	0	0	0	0	0	0	
+15 mins.	0	0	0	0	0	0	1	1	0	0	0	0	0	0	
+30 mins.	0	0	0	0	0	0	0	0	1	0	0	0	0	0	
+45 mins.	0	1	0	1	0	0	1	1	1	0	0	0	0	0	
Total Volume	0	1	0	1	0	0	3	3	3	0	0	0	0	0	
% App. Total	0	100	0	0	0	0	100	.750	.750	.000	.000	.000	.000	.000	
PHF	.000	.250	.000	.250	.000	.000	.750	.750	.750	.000	.000	.000	.000	.000	

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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: SR-210 Westbound Ramps  
 Weather: Clear

File Name : 07\_RNC\_Haven\_210W AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 1

Groups Printed- 4+ Axle Trucks

Start Time	Haven Avenue Southbound				SR-210 Westbound Off Ramp				Haven Avenue Northbound				SR-210 Westbound On Ramp Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	0	0	1	0	0	0	2	0	0	0	0	0	0	2	2
07:15 AM	0	1	0	0	1	0	0	1	0	1	0	0	0	0	0	1	2	3
07:30 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	2	2
Total	0	2	0	0	2	1	1	1	0	3	1	1	0	0	2	1	7	8
08:00 AM	0	1	0	0	1	0	0	0	0	0	2	0	0	0	2	0	3	3
08:15 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
08:30 AM	0	1	0	0	1	1	0	1	0	2	1	0	0	1	1	0	4	4
08:45 AM	0	1	0	0	1	0	0	0	0	0	1	0	0	1	1	0	2	2
Total	0	3	1	0	4	1	0	1	0	2	1	3	0	0	4	0	10	10
Grand Total	0	5	1	0	6	2	1	2	1	5	2	4	0	0	6	1	17	18
% Approach	0	83.3	16.7		35.3	40	20	40		33.3	66.7	0	0	0	35.3	5.6	94.4	
Total %	0	29.4	5.9		29.4	11.8	5.9	11.8		11.8	23.5	0	0	0	0	0	0	

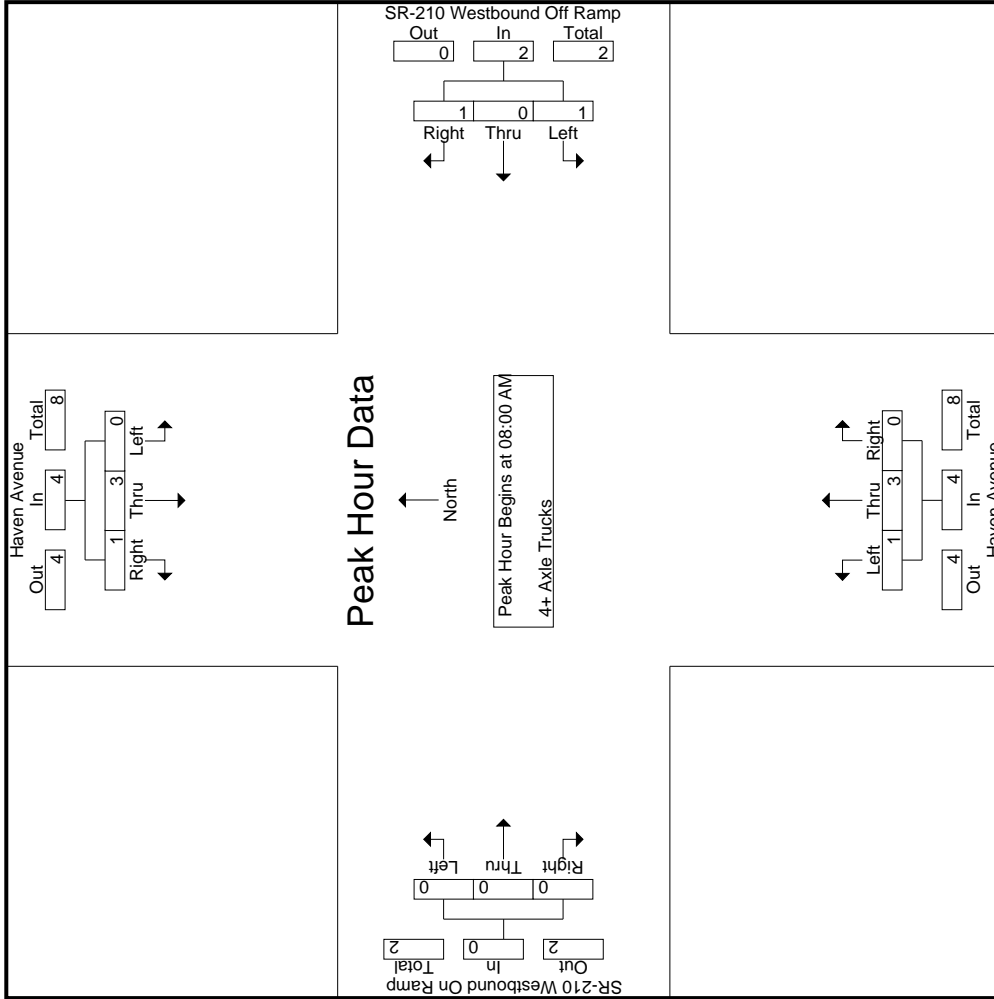
Start Time	Haven Avenue Southbound				SR-210 Westbound Off Ramp				Haven Avenue Northbound				SR-210 Westbound On Ramp Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
08:00 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	1	0	0	1	1	0	1	0	2	1	0	0	1	1	0	0	0
08:45 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	1	1	0	0	0
Total Volume	0	3	1		4	1	0	1		2	1	3	0	4	4	0	0	0
% App. Total	0	.75	.25		.250	.50	.00	.50		.250	.25	.75	.00	.500	.000	.000	.000	.625
PHF	.000	.750	.250		1.00	.250	.000	.250		.250	.250	.375	.000	.500	.000	.000	.000	.625

Peak Hour Analysis From 08:00 AM to 08:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 08:00 AM

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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: SR-210 Westbound Ramps  
 Weather: Clear

File Name : 07\_RNC\_Haven\_210W AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 2



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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: SR-210 Westbound Ramps  
 Weather: Clear

File Name : 07\_RNC\_Haven\_210W AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 3

Start Time	Haven Avenue Southbound			SR-210 Westbound Off Ramp Westbound			Haven Avenue Northbound			SR-210 Westbound On Ramp Eastbound					
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total		
Peak Hour Analysis From 08:00 AM to 08:45 AM - Peak 1 of 1															
Peak Hour for Each Approach Begins at:															
	08:00 AM				08:00 AM				08:00 AM				08:00 AM		
+0 mins.	0	1	0	1	0	0	0	0	0	0	0	0	0	0	
+15 mins.	0	0	1	1	0	0	0	0	0	0	0	0	0	0	
+30 mins.	0	1	0	1	1	0	1	2	1	0	0	0	0	0	
+45 mins.	0	1	0	1	0	0	0	0	0	0	0	0	0	0	
Total Volume	0	3	1	4	1	0	1	2	1	3	0	4	0	0	
% App. Total	0	.75	.25	1.000	.250	.000	.250	.250	.250	.75	.000	.500	.000	.000	
PHF	.000	.750	.250	1.000	.250	.000	.250	.250	.250	.375	.000	.500	.000	.000	

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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: SR-210 Westbound Ramps  
 Weather: Clear

File Name : 07\_RNC\_Haven\_210W PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 1

Start Time	Haven Avenue Southbound						SR-210 Westbound Off Ramp						Haven Avenue Northbound						SR-210 Westbound On Ramp																			
	Left		Thru		Right		RTOR		App. Total		Westbound		Left		Thru		Right		RTOR		App. Total		Eastbound		Left		Thru		Right		RTOR		App. Total		Inclu. Total		Int. Total	
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Inclu. Total	Int. Total						
04:00 PM	0	156	46	16	202	66	0	71	49	137	79	132	0	0	211	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	65	550	615				
04:15 PM	0	156	60	22	216	94	0	90	56	184	78	156	0	0	234	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	78	634	712				
04:30 PM	0	187	55	26	242	79	1	73	42	153	80	152	0	0	232	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	68	627	695				
04:45 PM	0	170	74	29	244	85	2	53	32	140	84	164	0	0	248	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	61	632	693				
Total	0	669	235	93	904	324	3	287	179	614	321	604	0	0	925	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	272	2443	2715				
05:00 PM	0	161	57	19	218	78	0	82	41	160	108	148	0	0	256	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	634	694				
05:15 PM	0	153	61	16	214	92	0	89	48	181	111	182	0	0	293	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	64	688	752				
05:30 PM	0	155	52	26	207	85	0	76	39	161	95	155	0	0	250	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	65	618	683				
05:45 PM	0	156	43	16	199	79	1	69	40	149	79	171	0	0	250	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	56	598	654				
Total	0	625	213	77	838	334	1	316	168	651	393	656	0	0	1049	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	245	2538	2783				
Grand Total	0	1294	448	170	1742	658	4	603	347	1265	714	1260	0	0	1974	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	517	4981	5498				
% Approach %	0	74.3	25.7			52	0.3	47.7			36.2	63.8	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9.4	90.6					
1 Total %	0	26	9		35	13.2	0.1	12.1		25.4	14.3	25.3	0	0	39.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
% Passenger Vehicles	0	1274	439		1881	651	3	592		1589	706	1249			1955	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5425				
% Large 2 Axle Vehicles	0	98.5	98	98.8	98.4	98.9	75	98.2	98.8	98.6	98.9	99.1	0	0	99	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	98.7				
% 3 Axle Vehicles	0	1.5	1.1	0.6	1.3	0.9	25	1.3	1.2	1.2	0.4	0.9	0	0	0.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	58				
% 4+ Axle Trucks	0	0	0	0	0.1	0	0	0.2	0	0.1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.1				
% 4+ Axle Trucks	0	1	3		5	1	0	2	0	3	5	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13				
% 4+ Axle Trucks	0	0.1	0.7	0.6	0.3	0.2	0	0.3	0	0.2	0.7	0	0	0	0.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2				

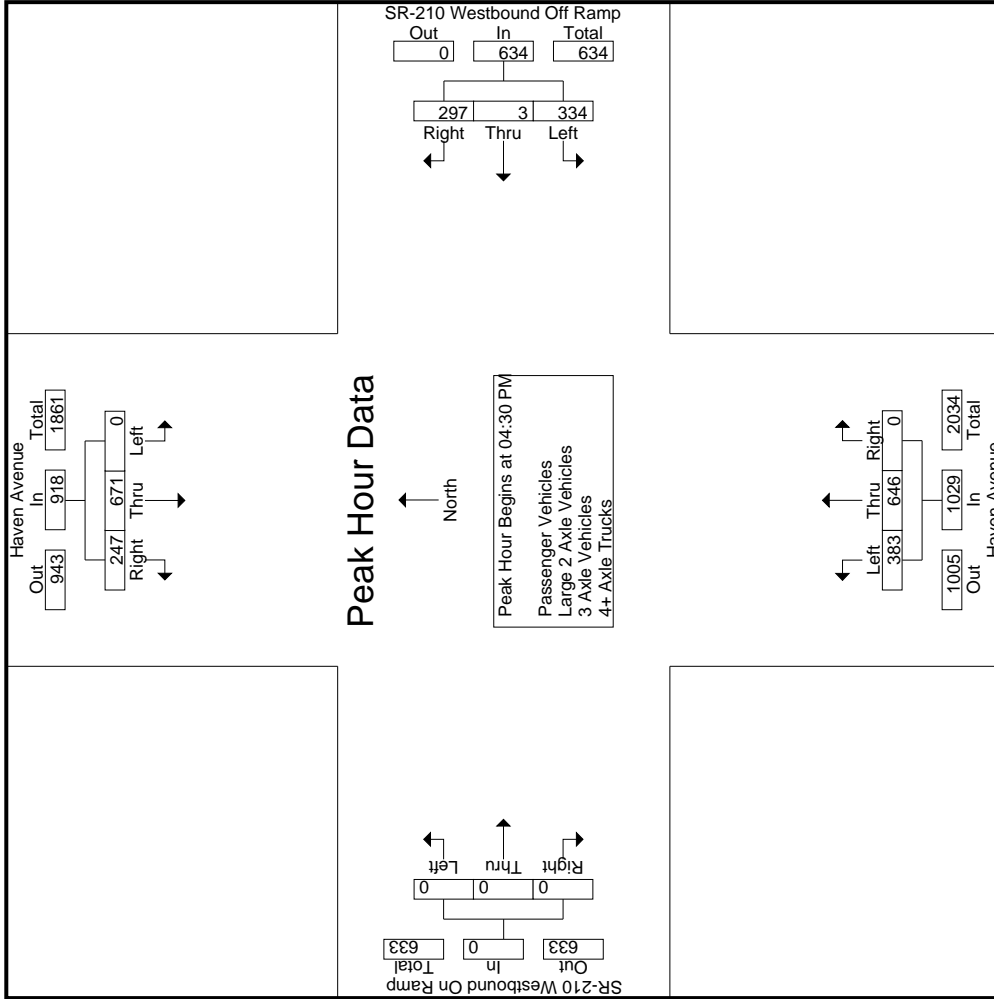
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 04:30 PM

Start Time	Haven Avenue Southbound			SR-210 Westbound Off Ramp			Haven Avenue Northbound			SR-210 Westbound On Ramp		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
04:30 PM	0	187	55	79	1	73	80	152	0	232	0	0
04:45 PM	0	170	74	85	2	53	84	164	0	248	0	0
05:00 PM	0	161	57	78	0	82	108	148	0	256	0	0
05:15 PM	0	153	61	92	0	89	111	182	0	293	0	0
Total Volume	0	671	247	334	3	297	383	646	0	1029	0	0
% App. Total	0	73.1	26.9	52.7	0.5	46.8	37.2	62.8	0	0	0	0
PHF	.000	.897	.834	.908	.375	.834	.863	.887	.000	.878	.000	.000

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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: SR-210 Westbound Ramps  
 Weather: Clear

File Name : 07\_RNC\_Haven\_210W PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 2





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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: SR-210 Westbound Ramps  
 Weather: Clear

File Name : 07\_RNC\_Haven\_210W PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 3

Start Time	Haven Avenue Southbound			SR-210 Westbound Off Ramp Westbound			Haven Avenue Northbound			SR-210 Westbound On Ramp Eastbound			
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
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			05:00 PM			05:00 PM			04:00 PM			
+0 mins.	0	156	60	216	78	0	82	160	108	148	0	256	0
+15 mins.	0	187	55	242	92	0	89	181	111	182	0	293	0
+30 mins.	0	170	74	244	85	0	76	161	95	155	0	250	0
+45 mins.	0	161	57	218	79	1	69	149	79	171	0	250	0
Total Volume	0	674	246	920	334	1	316	651	393	656	0	1049	0
% App. Total	0	73.3	26.7	.943	51.3	0.2	48.5	.899	37.5	62.5	0	.895	0
PHF	.000	.901	.831	.943	.908	.250	.888	.899	.885	.901	.000	.895	.000

Groups Printed- Large 2 Axle Vehicles

Start Time	Haven Avenue Southbound				SR-210 Westbound Off Ramp				Haven Avenue Northbound				SR-210 Westbound On Ramp Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	0	0	0	0	1	0	0	0	1	0	1	0	0	0	0	2	2
04:15 PM	0	2	0	0	2	1	0	2	1	3	0	0	0	0	0	1	5	6
04:30 PM	0	2	1	1	3	2	0	1	1	3	1	3	0	0	4	2	10	12
04:45 PM	0	0	0	0	0	0	1	0	0	1	1	1	0	0	2	0	3	3
Total	0	4	1	1	5	4	1	3	2	8	2	5	0	0	7	3	20	23
05:00 PM	0	4	2	0	6	0	0	1	1	1	0	1	0	0	0	1	8	9
05:15 PM	0	4	0	0	4	1	0	2	0	3	0	1	0	0	0	0	8	8
05:30 PM	0	3	2	0	5	0	0	1	1	1	0	1	0	0	0	1	7	8
05:45 PM	0	4	0	0	4	1	0	1	0	2	1	3	0	0	4	0	10	10
Total	0	15	4	0	19	2	0	5	2	7	1	6	0	0	7	2	33	35
Grand Total	0	19	5	1	24	6	1	8	4	15	3	11	0	0	14	5	53	58
% Apprch %	0	79.2	20.8		45.3	40	6.7	53.3		28.3	21.4	78.6	0	0	26.4	8.6	91.4	
Total %	0	35.8	9.4			11.3	1.9	15.1			5.7	20.8	0	0				

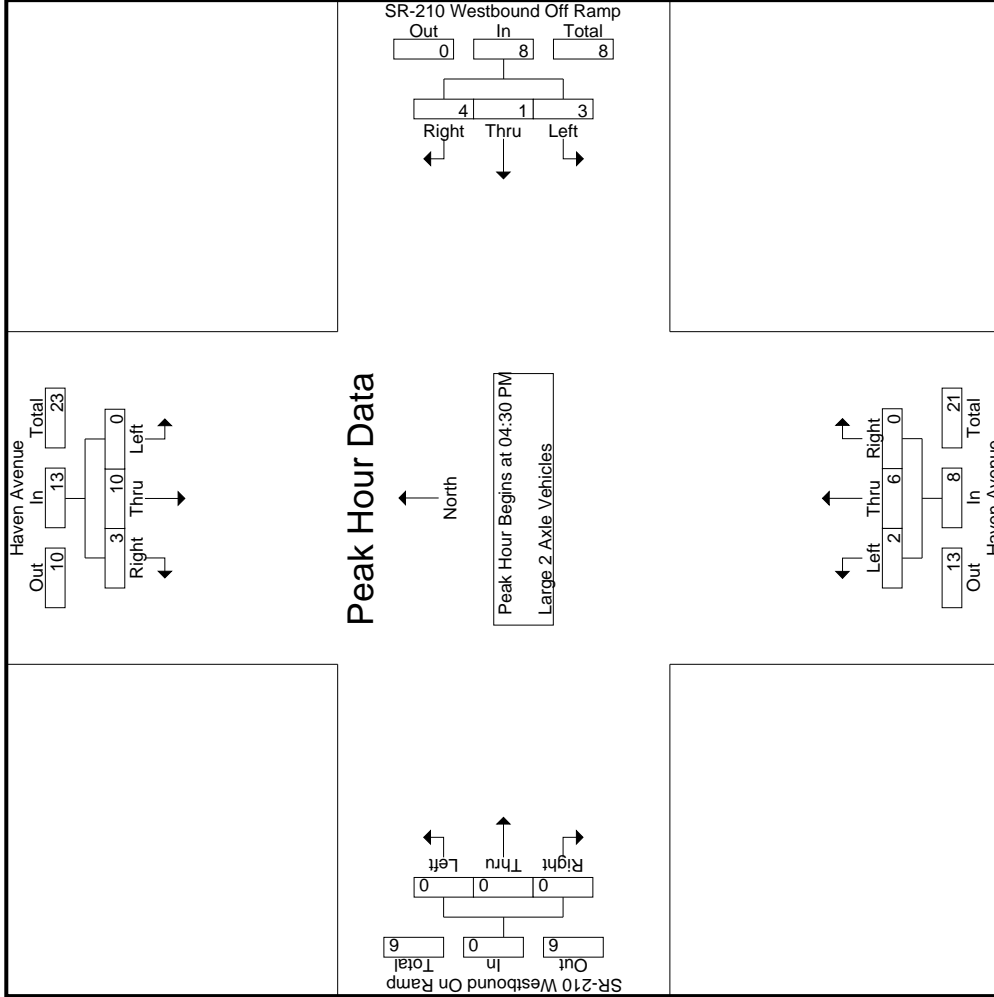
Start Time	Haven Avenue Southbound				SR-210 Westbound Off Ramp				Haven Avenue Northbound				SR-210 Westbound On Ramp Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:30 PM	0	2	1		3	2	0	1		3	1	3	0	0	4	0	0	10
04:45 PM	0	0	0		0	0	1	0		1	1	1	0	0	2	0	0	3
05:00 PM	0	4	2		6	0	0	1		1	0	1	0	0	1	0	0	8
05:15 PM	0	4	0		4	1	0	2		3	0	1	0	0	1	0	0	8
Total Volume	0	10	3		13	3	1	4		8	2	6	0	0	8	0	0	29
% App. Total	0	76.9	23.1		45.3	37.5	12.5	50		28.3	25	75	0	0	26.4	8.6	91.4	
PHF	.000	.625	.375		.542	.375	.250	.500		.667	.500	.500	.000	.000	.500	.000	.000	.725

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

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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: SR-210 Westbound Ramps  
 Weather: Clear

File Name : 07\_RNC\_Haven\_210W PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 2



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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: SR-210 Westbound Ramps  
 Weather: Clear

File Name : 07\_RNC\_Haven\_210W PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 3

Start Time	Haven Avenue Southbound			SR-210 Westbound Off Ramp Westbound			Haven Avenue Northbound			SR-210 Westbound On Ramp Eastbound			
	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 Each Approach Begins at:												
	04:30 PM												
+0 mins.	0	2	1	3	2	0	1	3	1	3	0	4	0
+15 mins.	0	0	0	0	0	1	0	1	1	1	0	2	0
+30 mins.	0	4	2	6	0	0	1	1	0	1	0	1	0
+45 mins.	0	4	0	4	1	0	2	3	0	1	0	1	0
Total Volume	0	10	3	13	3	1	4	8	2	6	0	8	0
% App. Total	0	76.9	23.1		37.5	12.5	50		25	75	0		0
PHF	.000	.625	.375	.542	.375	.250	.500	.667	.500	.500	.000	.000	.000

Groups Printed- 3 Axle Vehicles

Start Time	Haven Avenue Southbound				SR-210 Westbound Off Ramp Westbound				Haven Avenue Northbound				SR-210 Westbound On Ramp Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	1
Total	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	1
Grand Total	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	2
% Approach	0	0	100		50	0	0	100		50	0	0	0	0	0	0	0	100
Total %	0	0	50		50	0	0	50		50	0	0	0	0	0	0	0	100

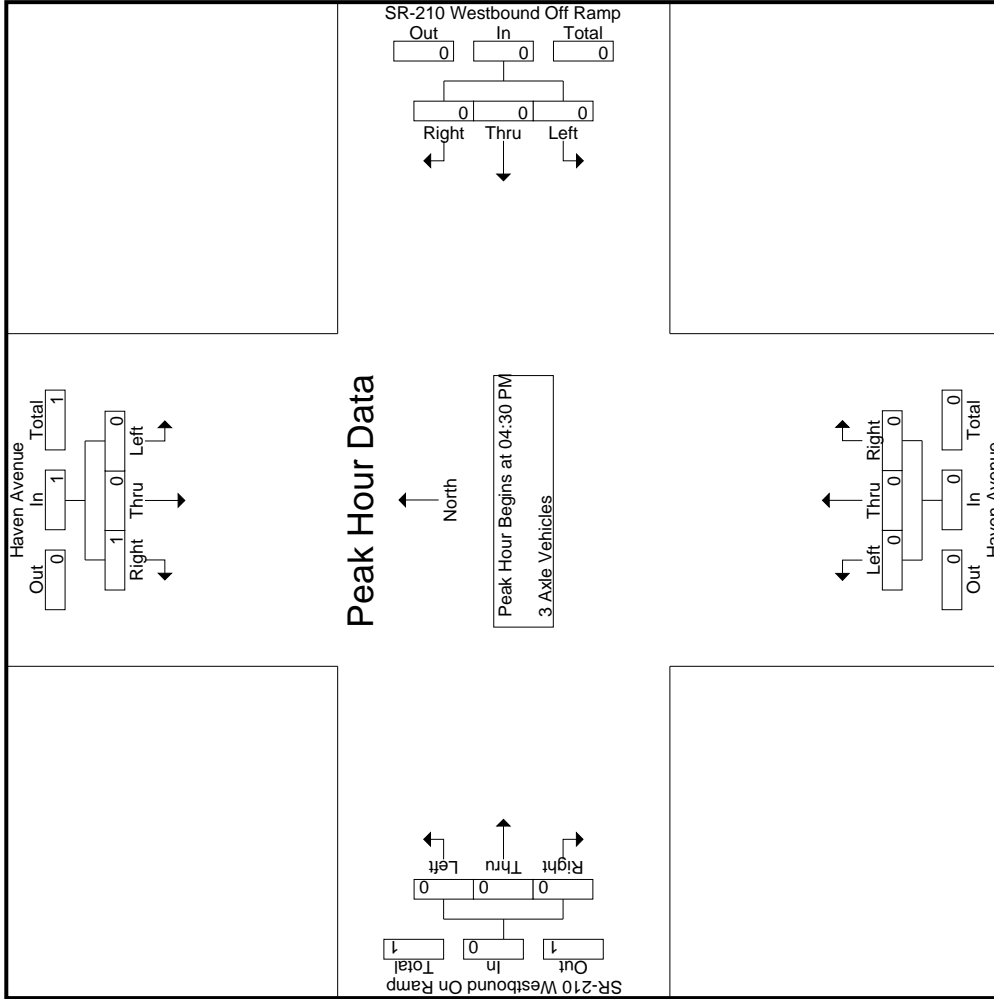
Start Time	Haven Avenue Southbound				SR-210 Westbound Off Ramp Westbound				Haven Avenue Northbound				SR-210 Westbound On Ramp Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:30 PM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	1		1	0	0	0		0	0	0	0		0	0	0	1
% App. Total	0	0	100		100	0	0	0		0	0	0	0		0	0	0	100
PHF	.000	.000	.250		.250	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.250

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

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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: SR-210 Westbound Ramps  
 Weather: Clear

File Name : 07\_RNC\_Haven\_210W PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 2



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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: SR-210 Westbound Ramps  
 Weather: Clear

File Name : 07\_RNC\_Haven\_210W PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 3

Start Time	Haven Avenue Southbound			SR-210 Westbound Off Ramp Westbound			Haven Avenue Northbound			SR-210 Westbound On Ramp Eastbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1												
Peak Hour for Each Approach Begins at:												
+0 mins.	0	0	1	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	1	0	0	0	0	0	0	0	0	0
% App. Total	0	0	100	0	0	0	0	0	0	0	0	0
PHF	.000	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000

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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: SR-210 Westbound Ramps  
 Weather: Clear

File Name : 07\_RNC\_Haven\_210W PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 1

Groups Printed- 4+ Axle Trucks

Start Time	Haven Avenue Southbound				SR-210 Westbound Off Ramp				Haven Avenue Northbound				SR-210 Westbound On Ramp Eastbound				Exclu. Total	Inclu. Total	Int. Total				
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left				Thru	Right	RTOR	App. Total
04:00 PM	0	1	1	1	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	1	4	5
04:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1	1
04:30 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
Total	0	1	1	1	2	0	0	2	0	2	3	0	0	0	3	0	0	0	0	0	1	7	8
05:00 PM	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	2
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	2	2
05:45 PM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Total	0	0	2	0	2	1	0	0	0	1	2	0	0	0	2	0	0	0	0	0	0	5	5
Grand Total	0	1	3	1	4	1	0	2	0	3	5	0	0	0	5	0	0	0	0	0	1	12	13
% Approach	0	25	75		33.3	0	66.7			100	0	0	0		41.7	0	0	0	0		7.7	92.3	
Total %	0	8.3	25		33.3	0	16.7			25	41.7	0	0		41.7	0	0	0	0		7.7	92.3	

Start Time	Haven Avenue Southbound				SR-210 Westbound Off Ramp				Haven Avenue Northbound				SR-210 Westbound On Ramp Eastbound				Exclu. Total	Inclu. Total	Int. Total				
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left				Thru	Right	RTOR	App. Total
04:30 PM	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1
05:00 PM	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	1	1	1	0	0	0	2	3	0	0	0	0	0	0	0	0	0	0	0	4
% App. Total	0	0	0	100	66.7	33.3	0	66.7		75	0	0	0		0	0	0	0	0		0	0	.500
PHF	.000	.000	.250	.250	.250	.250	.000	.500	.750	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.500

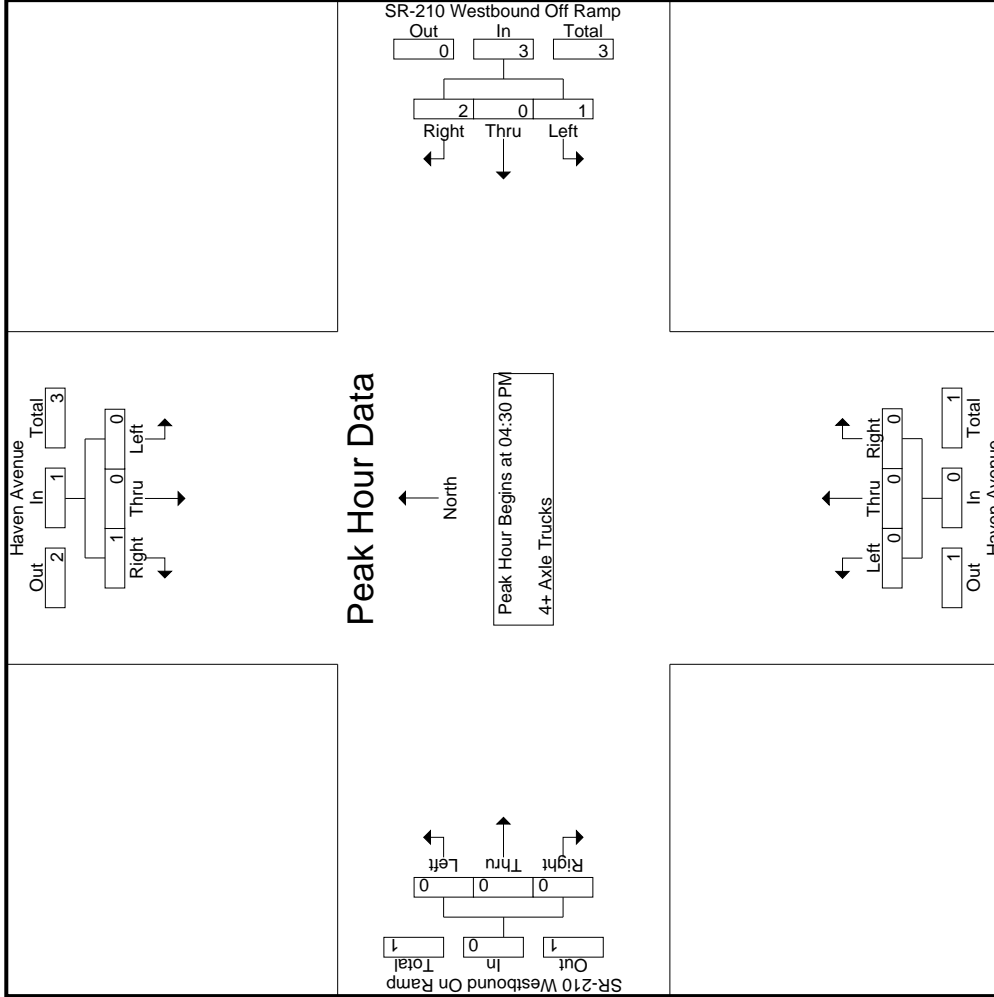
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 04:30 PM



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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: SR-210 Westbound Ramps  
 Weather: Clear

File Name : 07\_RNC\_Haven\_210W PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 2



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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: SR-210 Westbound Ramps  
 Weather: Clear

File Name : 07\_RNC\_Haven\_210W PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 3

Start Time	Haven Avenue Southbound			SR-210 Westbound Off Ramp Westbound			Haven Avenue Northbound			SR-210 Westbound On Ramp Eastbound					
	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 Each Approach Begins at:															
	04:30 PM				04:30 PM				04:30 PM				04:30 PM		
+0 mins.	0	0	0	0	0	0	1	1	0	0	0	0	0	0	
+15 mins.	0	0	0	0	0	0	1	1	0	0	0	0	0	0	
+30 mins.	0	0	1	1	1	0	0	1	0	0	0	0	0	0	
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total Volume	0	0	1	1	1	0	2	3	0	0	0	0	0	0	
% App. Total	0	0	100	100	33.3	0	66.7	75	0	0	0	0	0	0	
PHF	.000	.000	.250	.250	.250	.000	.500	.750	.000	.000	.000	.000	.000	.000	

Location: Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: SR-210 Westbound Ramps



Date: 6/2/2021  
 Day: Wednesday

PEDESTRIANS

	North Leg Haven Avenue	East Leg SR-210 Westbound Ramps	South Leg Haven Avenue	West Leg SR-210 Westbound Ramps	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	3	0	1	4
7:30 AM	0	0	0	0	0
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	3	0	2	5

	North Leg Haven Avenue	East Leg SR-210 Westbound Ramps	South Leg Haven Avenue	West Leg SR-210 Westbound Ramps	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	1	1
4:45 PM	0	2	0	0	2
5:00 PM	0	1	0	0	1
5:15 PM	0	0	0	0	0
5:30 PM	0	1	0	2	3
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	4	0	3	7

Location: Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: SR-210 Westbound Ramps



Date: 6/2/2021  
 Day: Wednesday

BICYCLES

	Southbound Haven Avenue			Westbound SR-210 Westbound Ramps			Northbound Haven Avenue			Eastbound SR-210 Westbound Ramps			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

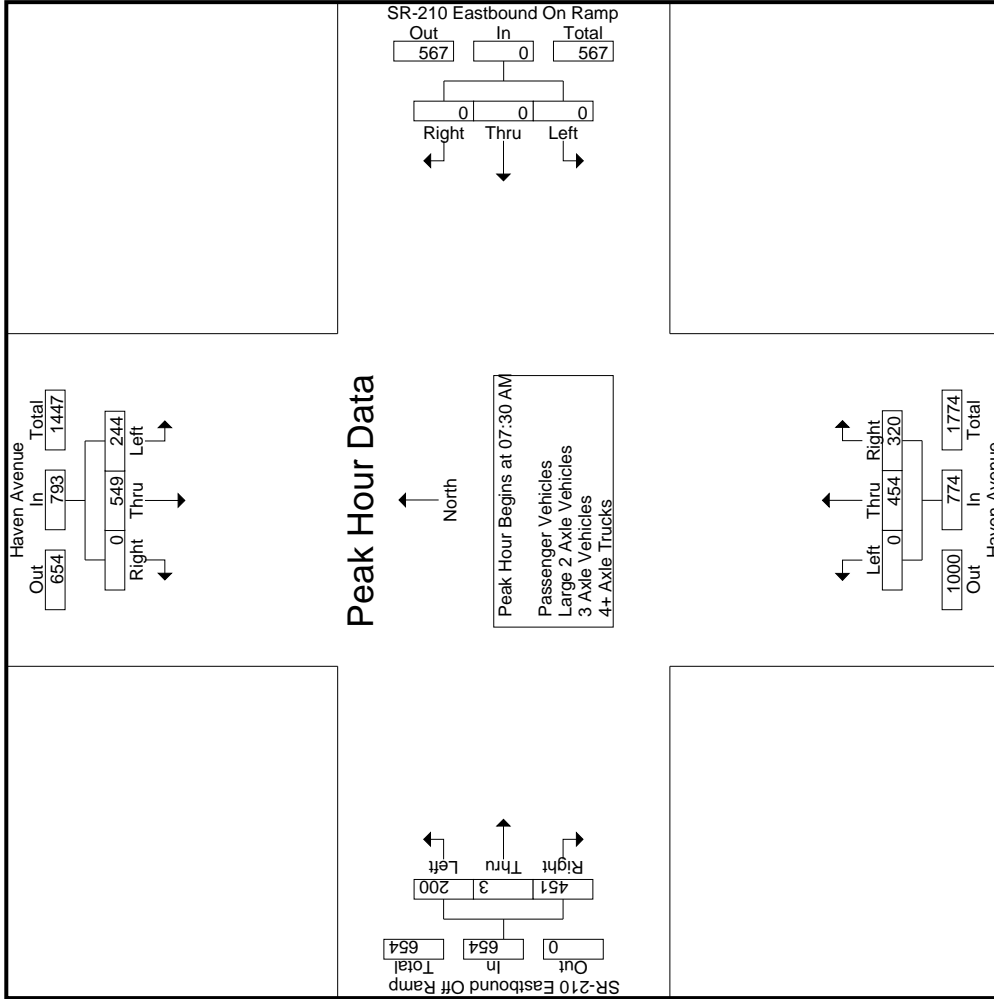
	Southbound Haven Avenue			Westbound SR-210 Westbound Ramps			Northbound Haven Avenue			Eastbound SR-210 Westbound Ramps			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	2	0	0	0	0	2
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	1	0	0	1
5:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
TOTAL VOLUMES:	0	1	0	0	0	0	0	3	0	1	0	0	5

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

Start Time	Haven Avenue Southbound						Haven Avenue Northbound						SR-210 Eastbound Off Ramp Eastbound											
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		Left		Thru		Right	
07:00 AM	61	117	0	0	0	0	0	99	75	9	174	17	0	63	53	80	62	432	494					
07:15 AM	57	86	0	0	0	0	0	97	83	16	180	33	0	70	50	103	66	426	492					
07:30 AM	55	126	0	0	0	0	0	106	91	7	197	44	0	81	63	125	70	503	573					
07:45 AM	72	141	0	0	0	0	0	116	97	14	213	50	0	117	82	167	96	593	689					
<b>Total</b>	<b>245</b>	<b>470</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>418</b>	<b>346</b>	<b>46</b>	<b>764</b>	<b>144</b>	<b>0</b>	<b>331</b>	<b>248</b>	<b>475</b>	<b>294</b>	<b>1954</b>	<b>2248</b>					
08:00 AM	67	150	0	0	0	0	0	110	69	14	179	53	1	104	68	158	82	554	636					
08:15 AM	50	132	0	0	0	0	0	122	63	11	185	53	2	149	88	204	99	571	670					
08:30 AM	59	133	0	0	0	0	0	97	45	8	142	33	0	129	109	162	117	496	613					
08:45 AM	82	163	0	0	0	0	0	105	67	9	172	39	0	114	93	153	102	570	672					
<b>Total</b>	<b>258</b>	<b>578</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>434</b>	<b>244</b>	<b>42</b>	<b>678</b>	<b>178</b>	<b>3</b>	<b>496</b>	<b>358</b>	<b>677</b>	<b>400</b>	<b>2191</b>	<b>2591</b>					
<b>Grand Total</b>	<b>503</b>	<b>1048</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>852</b>	<b>590</b>	<b>88</b>	<b>1442</b>	<b>322</b>	<b>3</b>	<b>827</b>	<b>606</b>	<b>1152</b>	<b>694</b>	<b>4145</b>	<b>4839</b>					
% Approach	32.4	67.6	0	0	0	0	0	59.1	40.9	14.2	28	0.3	71.8	0	0	0	0	0	0					
% Total	12.1	25.3	0	0	0	0	0	20.6	14.2	34.8	7.8	0.1	20	27.8	14.3	85.7	0	0	0					
% Passenger Vehicles	489	1031	0	0	0	0	0	823	575	1483	307	2	801	1703	0	0	0	0	0					
% Large 2 Axle Vehicles	97.2	98.4	0	0	0	0	0	96.6	97.5	96.6	95.3	66.7	96.9	97.9	96.9	0	0	0	0					
% 3 Axle Vehicles	9	13	0	0	0	0	0	21	9	31	12	1	12	32	0	0	0	0	0					
% 4+ Axle Trucks	1.8	1.2	0	0	0	0	0	2.5	1.5	1.1	3.7	33.3	1.5	1.2	1.8	0	0	0	0					
% 4+ Axle Trucks	0.2	0.1	0	0	0	0	0	0.6	0.3	0	0	0	0.7	0.8	0.6	0	0	0	0					
% 4+ Axle Trucks	4	3	0	0	0	0	3	4	4	9	3	0	8	12	0	0	0	0	0					
% 4+ Axle Trucks	0.8	0.3	0	0	0	0	0.4	0.7	2.3	0.6	0.9	0	1	0.2	0.7	0	0	0	0					

Start Time	Haven Avenue Southbound						Haven Avenue Northbound						SR-210 Eastbound On Ramp Westbound						SR-210 Eastbound Off Ramp Eastbound					
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		Left		Thru		Right	
07:30 AM	55	126	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:45 AM	72	141	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
08:00 AM	67	150	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
08:15 AM	50	132	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Total Volume</b>	<b>244</b>	<b>549</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	
% App. Total	30.8	69.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PHF	.847	.915	.000	.914	.000	.000	.000	.000	.000	.825	.908	.943	.375	.757	.801	.936								

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:30 AM



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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: SR-210 Eastbound Ramps  
 Weather: Clear

File Name : 08\_RNC\_Haven\_210E AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 3

Start Time	Haven Avenue Southbound			SR-210 Eastbound On Ramp Westbound			Haven Avenue Northbound			SR-210 Eastbound Off Ramp Eastbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1												
Peak Hour for Each Approach Begins at:												
+0 mins.	67	150	0	0	0	0	0	0	91	50	0	117
+15 mins.	50	132	0	0	0	0	0	106	97	53	1	104
+30 mins.	59	133	0	0	0	0	0	110	69	53	2	149
+45 mins.	82	163	0	0	0	0	0	122	63	33	0	129
Total Volume	258	578	0	0	0	0	0	454	320	189	3	499
% App. Total	30.9	69.1	0	0	0	0	0	58.7	41.3	27.4	0.4	72.2
PHF	.787	.887	.000	.000	.000	.000	.000	.930	.825	.892	.375	.837
			.853	.000	.000	.000	.000	.908	.908	.892	.375	.847

Groups Printed- Large 2 Axle Vehicles

Start Time	Haven Avenue Southbound				SR-210 Eastbound On Ramp Westbound				Haven Avenue Northbound				SR-210 Eastbound Off Ramp Eastbound				Exclu. Total	Inclu. Total	Int. Total	
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR				App. Total
07:00 AM	2	1	0	0	0	0	0	0	0	1	0	0	1	0	2	2	3	2	7	9
07:15 AM	1	3	0	0	0	0	0	0	0	3	2	0	5	0	2	1	2	1	11	12
07:30 AM	0	0	0	0	0	0	0	0	0	5	0	0	5	1	0	2	3	2	8	10
07:45 AM	0	0	0	0	0	0	0	0	0	1	1	1	2	2	0	0	3	1	5	6
Total	3	4	0	0	0	0	0	0	0	10	3	1	13	4	0	7	11	6	31	37
08:00 AM	0	2	0	0	0	0	0	0	0	4	1	0	5	2	1	1	4	0	11	11
08:15 AM	1	4	0	0	0	0	0	0	0	2	2	0	4	4	0	4	8	2	17	19
08:30 AM	2	1	0	0	0	0	0	0	0	4	0	0	4	1	0	0	1	0	8	8
08:45 AM	3	2	0	0	0	0	0	0	0	1	3	0	4	1	0	0	1	0	10	10
Total	6	9	0	0	0	0	0	0	0	11	6	0	17	8	1	5	14	2	46	48
Grand Total	9	13	0	0	0	0	0	0	0	21	9	1	30	12	1	12	7	8	77	85
% Apprch %	40.9	59.1	0	0	0	0	0	0	0	70	30	0	48	48	4	48	15.6	9.4	90.6	
Total %	11.7	16.9	0	0	0	0	0	0	0	27.3	11.7	39	15.6	15.6	1.3	15.6	32.5			

Start Time	Haven Avenue Southbound				SR-210 Eastbound On Ramp Westbound				Haven Avenue Northbound				SR-210 Eastbound Off Ramp Eastbound				Exclu. Total	Inclu. Total	Int. Total	
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR				App. Total
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	2	0	0	0	0	0	0	0	4	1	1	4	2	1	1	4	1	4	11
08:15 AM	1	4	0	0	0	0	0	0	0	2	2	2	4	4	0	4	8	4	8	17
Total Volume	1	6	0	0	0	0	0	0	0	12	4	4	16	9	1	8	18	41	41	41
% App. Total	14.3	85.7	0	0	0	0	0	0	0	75	25	25	44.4	50	5.6	44.4	50	50	50	50
PHF	.250	.375	.000	.350	.000	.000	.000	.000	.000	.600	.500	.800	.563	.563	.250	.500	.563	.603	.603	.603

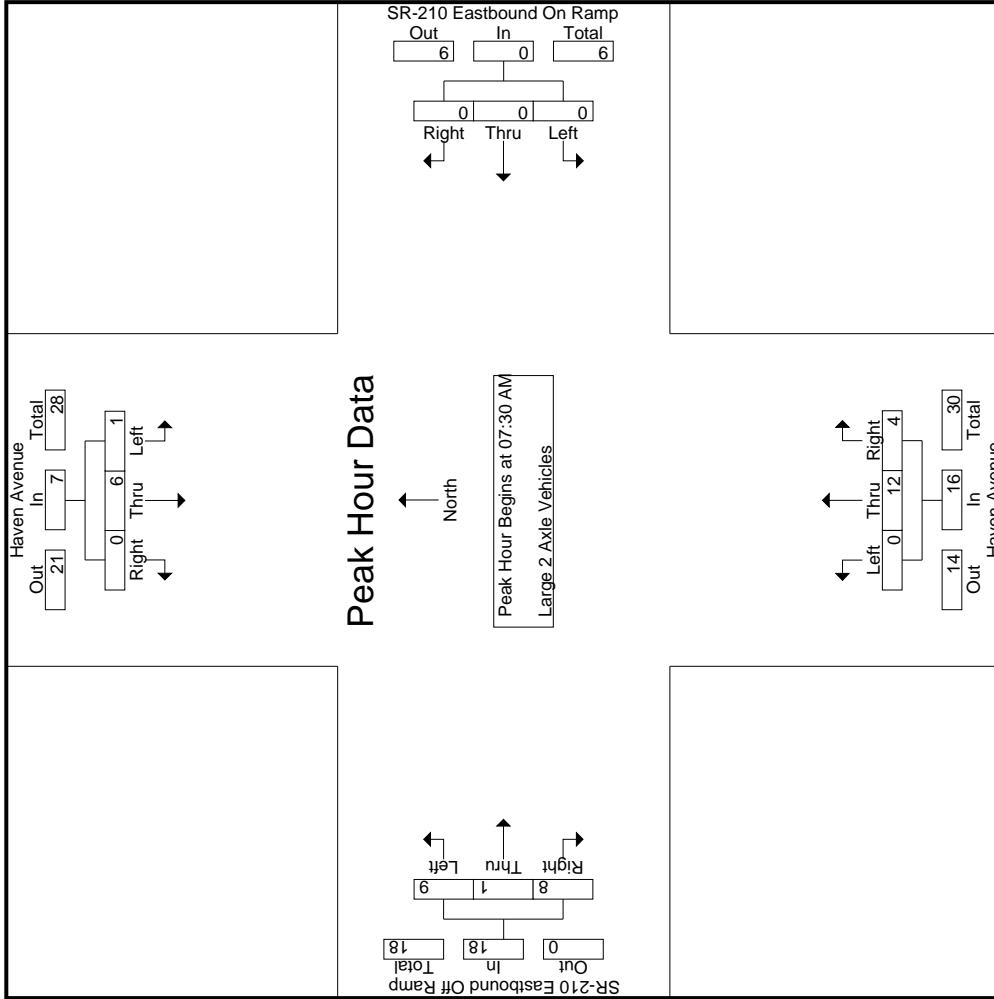
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:30 AM



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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: SR-210 Eastbound Ramps  
 Weather: Clear

File Name : 08\_RNC\_Haven\_210E AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 2



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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: SR-210 Eastbound Ramps  
 Weather: Clear

File Name : 08\_RNC\_Haven\_210E AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 3

Start Time	Haven Avenue Southbound			SR-210 Eastbound On Ramp Westbound			Haven Avenue Northbound			SR-210 Eastbound Off Ramp Eastbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1												
Peak Hour for Each Approach Begins at:												
+0 mins.	0	0	0	0	0	0	0	0	0	1	0	2
+15 mins.	0	0	0	0	0	0	0	1	1	2	0	1
+30 mins.	0	2	0	0	0	0	0	4	1	2	1	1
+45 mins.	1	4	0	0	0	0	0	2	2	4	0	4
Total Volume	1	6	0	0	0	0	0	12	4	9	1	8
% App. Total	14.3	85.7	0	0	0	0	0	75	25	50	5.6	44.4
PHF	.250	.375	.000	.000	.000	.000	.000	.600	.500	.563	.250	.500
			.350	.000	.000	.000	.000	.800	.800	.563	.250	.500

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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: SR-210 Eastbound Ramps  
 Weather: Clear

File Name : 08\_RNC\_Haven\_210E AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 1

Groups Printed- 3 Axle Vehicles

Start Time	Haven Avenue Southbound				SR-210 Eastbound On Ramp Westbound				Haven Avenue Northbound				SR-210 Eastbound Off Ramp Eastbound				Exclu. Total	Inclu. Total	Int. Total						
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left				Thru	Right	RTOR	App. Total		
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
07:15 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	2	3	
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
07:45 AM	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
Total	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	1	1	1	1	1	1	3	4
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	1	1	1	1	1	1	2	3
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	0	0	1	1	1	1	1	1	3	4
08:45 AM	1	0	0	0	1	0	0	0	0	0	2	0	0	2	0	0	3	2	2	3	2	3	2	6	8
Total	1	0	0	0	1	0	0	0	0	0	4	2	0	6	0	0	5	4	4	5	4	5	4	12	16
Grand Total	1	1	0	0	2	0	0	0	0	0	5	2	0	7	0	0	6	5	6	6	6	6	5	15	20
% Approach	50	50	0	0	0	0	0	0	0	0	71.4	28.6	0	0	0	0	100	0	0	0	40	40	25	75	
Total %	6.7	6.7	0	0	13.3	0	0	0	0	0	33.3	13.3	0	0	46.7	0	40	0	40	40	40	40	25	75	

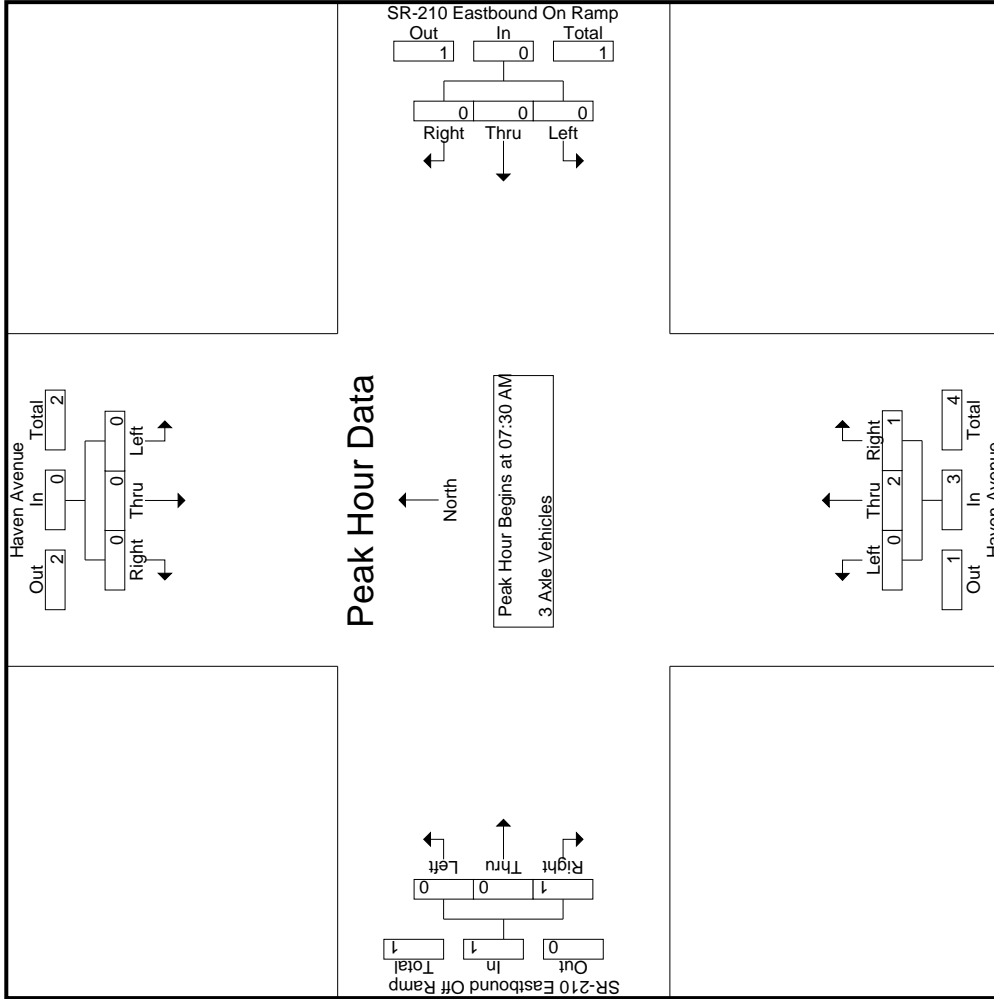
Start Time	Haven Avenue Southbound				SR-210 Eastbound On Ramp Westbound				Haven Avenue Northbound				SR-210 Eastbound Off Ramp Eastbound				Exclu. Total	Inclu. Total	Int. Total						
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left				Thru	Right	RTOR	App. Total		
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:45 AM	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
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
08:15 AM	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
Total Volume	0	0	0	0	0	0	0	0	0	0	2	1	3	3	0	0	0	0	0	0	1	1	1	4	4
% App. Total	0	0	0	0	0	0	0	0	0	0	66.7	33.3	0	0	0	0	100	0	0	0	100	0	0	0	.500
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.500	.250	.750	.250	.000	.250	.250	.250	.000	.000	.250	.250	.250	.500	

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:30 AM

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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: SR-210 Eastbound Ramps  
 Weather: Clear

File Name : 08\_RNC\_Haven\_210E AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 2



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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: SR-210 Eastbound Ramps  
 Weather: Clear

File Name : 08\_RNC\_Haven\_210E AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 3

Start Time	Haven Avenue Southbound			SR-210 Eastbound On Ramp Westbound			Haven Avenue Northbound			SR-210 Eastbound Off Ramp Eastbound			
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1													
Peak Hour for Each Approach Begins at:													
	07:30 AM				07:30 AM				07:30 AM				
+0 mins.	0	0	0	0	0	0	0	0	1	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	1	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	1	1
Total Volume	0	0	0	0	0	0	0	0	2	1	0	1	1
% App. Total	0	0	0	0	0	0	0	0	66.7	33.3	0	100	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.500	.250	.000	.250	.250

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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: SR-210 Eastbound Ramps  
 Weather: Clear

File Name : 08\_RNC\_Haven\_210E AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 1

Groups Printed- 4+ Axle Trucks

Start Time	Haven Avenue Southbound				SR-210 Eastbound On Ramp Westbound				Haven Avenue Northbound				SR-210 Eastbound Off Ramp Eastbound				Exclu. Total	Inclu. Total	Int. Total				
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left				Thru	Right	RTOR	App. Total
07:00 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2
07:15 AM	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	4	4
07:30 AM	1	0	0	0	1	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	3	3
07:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1	2	2
Total	2	2	0	0	4	0	0	0	0	0	1	2	0	3	1	0	3	0	4	0	0	11	11
08:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0	1	1	2	0	1	3	4
08:15 AM	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	4	0	4	1	1	5	6
08:30 AM	1	1	0	0	2	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	3	3
08:45 AM	1	0	0	0	1	0	0	0	0	0	1	1	1	1	1	0	0	0	0	1	1	3	4
Total	2	1	0	0	3	0	0	0	0	0	2	2	2	4	2	0	5	1	7	3	14	17	17
Grand Total	4	3	0	0	7	0	0	0	0	0	3	4	2	7	3	0	8	1	11	3	25	28	28
% Apprch %	57.1	42.9	0	0	0	0	0	0	0	0	42.9	57.1	16	28	27.3	0	72.7	0	44	10.7	89.3	89.3	89.3
Total %	16	12	0	0	28	0	0	0	0	0	12	16	28	28	12	0	32	0	44	10.7	89.3	89.3	89.3

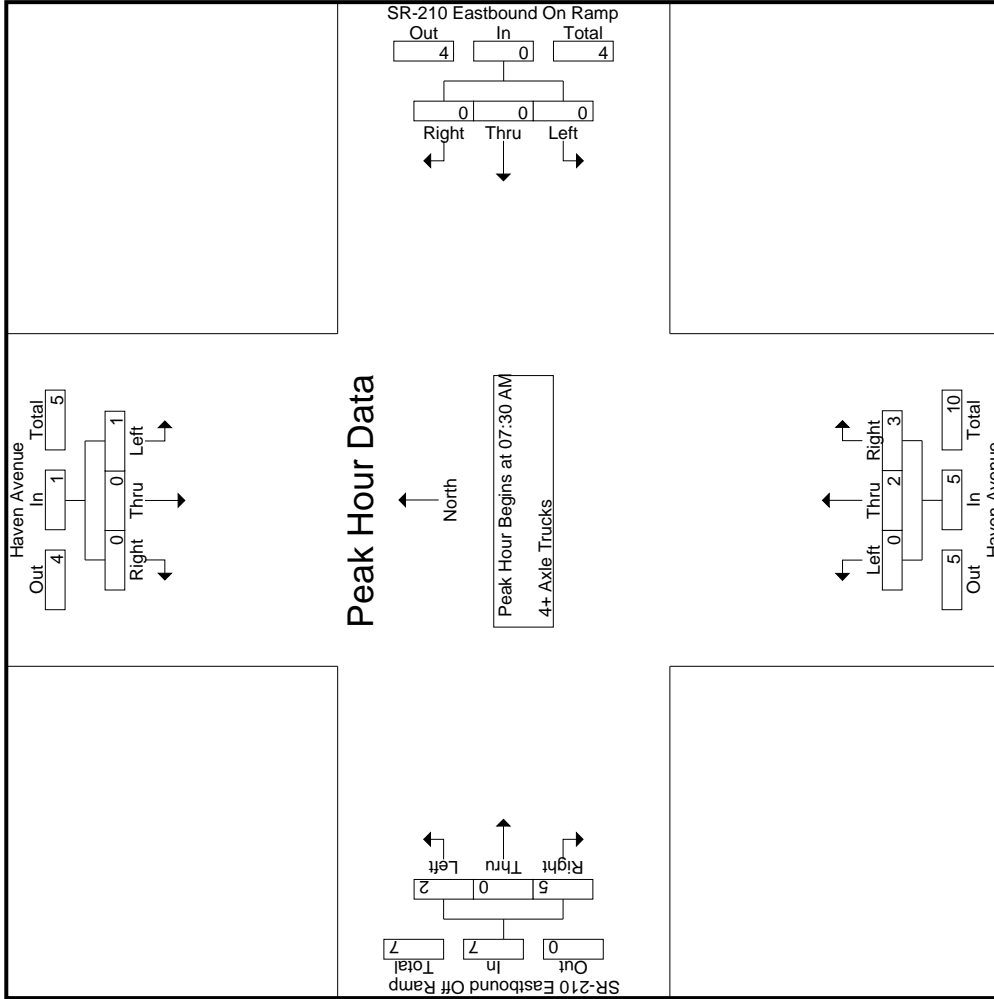
Start Time	Haven Avenue Southbound				SR-210 Eastbound On Ramp Westbound				Haven Avenue Northbound				SR-210 Eastbound Off Ramp Eastbound				Exclu. Total	Inclu. Total	Int. Total				
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left				Thru	Right	RTOR	App. Total
07:30 AM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
07:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1	2
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	5
Total Volume	1	0	0	0	1	0	0	0	0	0	2	3	3	7	2	0	5	7	13	0	71.4	13	13
% App. Total	100	0	0	0	0	0	0	0	0	0	40	60	60	71.4	28.6	0	71.4	0	71.4	0	31.3	68.7	68.7
PHF	.250	.000	.000	.000	.250	.000	.000	.000	.000	.000	.500	.375	.375	.625	.500	.000	.313	.438	.650	.438	.650	.650	.650

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:30 AM

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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: SR-210 Eastbound Ramps  
 Weather: Clear

File Name : 08\_RNC\_Haven\_210E AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 2



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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: SR-210 Eastbound Ramps  
 Weather: Clear

File Name : 08\_RNC\_Haven\_210E AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 3

Start Time	Haven Avenue Southbound			SR-210 Eastbound On Ramp Westbound			Haven Avenue Northbound			SR-210 Eastbound Off Ramp Eastbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1												
Peak Hour for Each Approach Begins at:												
+0 mins.	1	0	0	0	0	0	0	0	2	0	0	0
+15 mins.	0	0	0	0	0	0	1	0	1	1	0	0
+30 mins.	0	0	0	0	0	0	1	0	1	1	0	1
+45 mins.	0	0	0	0	0	0	0	1	1	0	0	4
Total Volume	1	0	0	0	0	0	2	3	5	2	0	5
% App. Total	100	0	0	0	0	0	40	60	71.4	28.6	0	71.4
PHF	.250	.000	.000	.000	.000	.000	.500	.375	.625	.500	.000	.313



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

Start Time	Haven Avenue Southbound					SR-210 Eastbound On Ramp Westbound					Haven Avenue Northbound					SR-210 Eastbound Off Ramp Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
	04:00 PM	68	154	0	0	222	0	0	0	0	0	0	176	128	40	304	35	0	46	33	81	73	607
04:15 PM	84	165	0	0	249	0	0	0	0	0	0	207	118	34	325	32	0	48	34	80	68	654	722
04:30 PM	79	182	0	0	261	0	0	0	0	0	0	181	131	43	312	44	0	38	30	82	73	655	728
04:45 PM	78	186	0	0	264	0	0	0	0	0	0	225	156	44	381	29	0	45	38	74	82	719	801
Total	309	687	0	0	996	0	0	0	0	0	0	789	533	161	1322	140	0	177	135	317	296	2635	2931
05:00 PM	76	167	0	0	243	0	0	0	0	0	0	213	143	47	356	35	1	45	33	81	80	680	760
05:15 PM	75	170	0	0	245	0	0	0	0	0	0	272	153	27	425	27	1	52	40	80	67	750	817
05:30 PM	70	162	0	0	232	0	0	0	0	0	0	215	134	52	349	33	3	47	32	83	84	664	748
05:45 PM	66	176	0	0	242	0	0	0	0	0	0	210	115	34	325	33	1	55	46	89	80	656	736
Total	287	675	0	0	962	0	0	0	0	0	0	910	545	160	1455	128	6	199	151	333	311	2750	3061
Grand Total	596	1362	0	0	1958	0	0	0	0	0	0	1699	1078	321	2777	268	6	376	286	650	607	5385	5992
% Approach	30.4	69.6	0	0	36.4	0	0	0	0	0	0	61.2	38.8	20	51.6	41.2	0.9	57.8	7	12.1	10.1	89.9	
% Passenger Vehicles	586	1344	0	0	1930	0	0	0	0	0	0	1683	1065	99.4	3067	266	6	363	96.9	912	0	0	5909
% Large 2 Axle Vehicles	9	15	0	0	24	0	0	0	0	0	0	12	9	0.6	23	2	0	3	0.8	8	0	0	55
% 3 Axle Vehicles	1.5	1.1	0	0	1.2	0	0	0	0	0	0	0.7	0.8	0.6	0.7	0.7	0	0.8	1	0.9	0	0	0.9
% 4+ Axle Trucks	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4+ Axle Trucks	1	2	0	0	3	0	0	0	0	0	0	4	4	0	8	0	0	10	0	16	0	0	27
% 4+ Axle Trucks	0.2	0.1	0	0	0.2	0	0	0	0	0	0	0.2	0.4	0	0.3	0	0	2.7	2.1	1.7	0	0	0.5

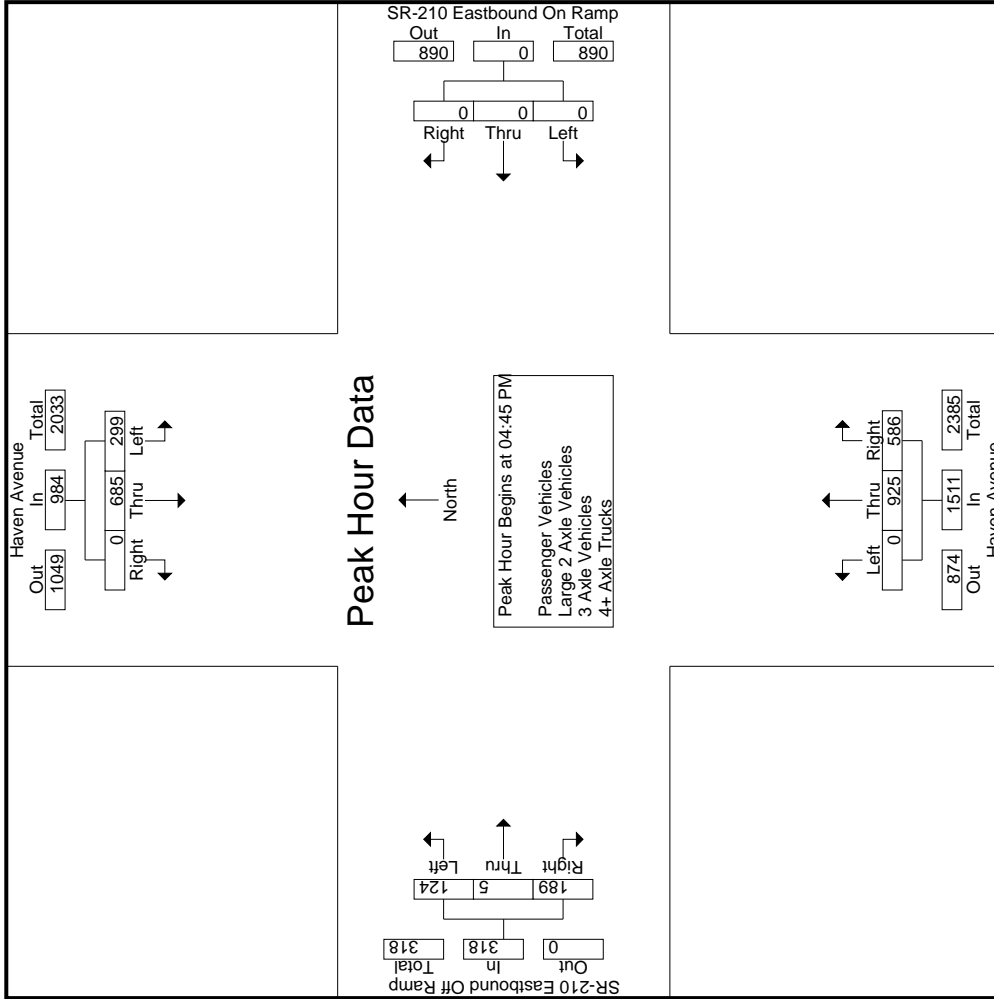
Start Time	Haven Avenue Southbound					SR-210 Eastbound On Ramp Westbound					Haven Avenue Northbound					SR-210 Eastbound Off Ramp Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
	04:45 PM	78	186	0	0	264	0	0	0	0	0	0	225	156	45	381	29	0	45	34	74	82	719
05:00 PM	76	167	0	0	243	0	0	0	0	0	0	213	143	47	356	35	1	45	33	81	80	680	760
05:15 PM	75	170	0	0	245	0	0	0	0	0	0	272	153	27	425	27	1	52	40	80	67	750	817
05:30 PM	70	162	0	0	232	0	0	0	0	0	0	215	134	52	349	33	3	47	32	83	84	664	748
05:45 PM	66	176	0	0	242	0	0	0	0	0	0	210	115	34	325	33	1	55	46	89	80	656	736
Total	309	687	0	0	996	0	0	0	0	0	0	789	533	161	1322	140	0	177	135	317	296	2635	2931
PHF	.958	.921	.000	.932	.000	.000	.000	.000	.000	.000	.000	.850	.939	.889	.417	.909	.958	.909	.417	.958	.958	.958	.958

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

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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: SR-210 Eastbound Ramps  
 Weather: Clear

File Name : 08\_RNC\_Haven\_210E PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 2



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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: SR-210 Eastbound Ramps  
 Weather: Clear

File Name : 08\_RNC\_Haven\_210E PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 3

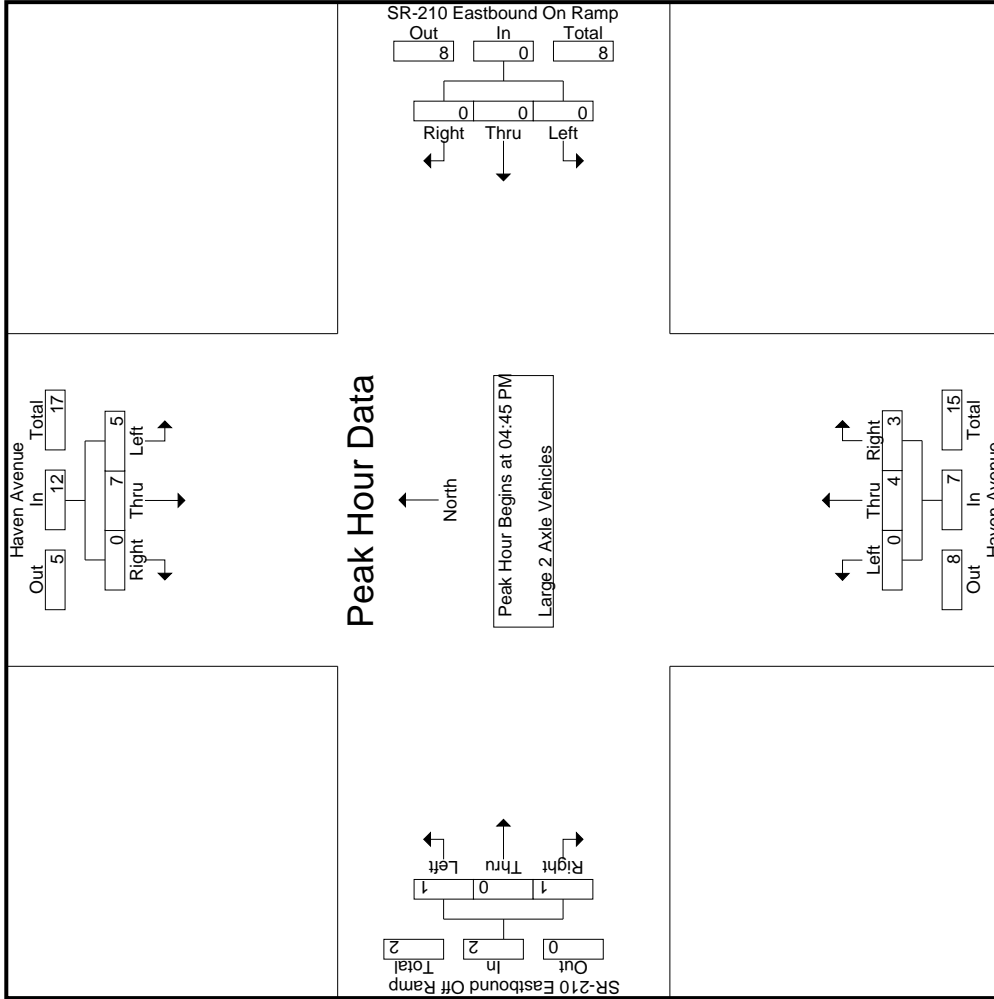
Start Time	Haven Avenue Southbound			SR-210 Eastbound On Ramp Westbound			Haven Avenue Northbound			SR-210 Eastbound Off Ramp Eastbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1												
Peak Hour for Each Approach Begins at:												
+0 mins.	84	165	0	0	0	0	0	0	0	0	0	0
+15 mins.	79	182	0	0	0	0	0	0	0	27	1	45
+30 mins.	78	186	0	0	0	0	0	272	153	33	3	52
+45 mins.	76	167	0	0	0	0	0	215	134	33	1	47
Total Volume	317	700	0	0	0	0	0	925	586	128	6	199
% App. Total	31.2	68.8	0	0	0	0	0	61.2	38.8	38.4	1.8	59.8
PHF	.943	.941	.000	.000	.000	.000	.000	.850	.939	.914	.500	.905
				04:00 PM	04:45 PM	05:00 PM						
				0	0	35	381	225	156	381	1	45
				0	0	27	356	213	143	356	1	52
				0	0	33	425	272	153	425	3	47
				0	0	33	349	215	134	349	1	55
				0	0	1017	1511	925	586	1511	6	199
				0	0	963	889	850	939	889	1.8	59.8
				.000	.000	.000	.000	.850	.939	.914	.500	.905

Groups Printed- Large 2 Axle Vehicles

Start Time	Haven Avenue Southbound				SR-210 Eastbound On Ramp Westbound				Haven Avenue Northbound				SR-210 Eastbound Off Ramp Eastbound				Exclu. Total	Inclu. Total	Int. Total				
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left				Thru	Right	RTOR	App. Total
04:00 PM	0	2	0	0	2	0	0	0	0	0	1	2	0	0	3	0	0	1	1	1	6	7	
04:15 PM	1	2	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3
04:30 PM	1	1	0	0	2	0	0	0	0	0	4	1	0	5	0	0	0	0	0	0	0	7	7
04:45 PM	0	0	0	0	0	0	0	0	0	0	2	1	0	3	0	0	0	0	0	0	0	3	3
Total	2	5	0	0	7	0	0	0	0	0	7	4	0	11	0	0	1	1	1	1	1	19	20
05:00 PM	1	3	0	0	4	0	0	0	0	0	0	1	1	1	1	1	0	0	0	1	1	6	7
05:15 PM	2	3	0	0	5	0	0	0	0	0	1	0	0	1	1	0	1	1	1	1	1	7	8
05:30 PM	2	1	0	0	3	0	0	0	0	0	1	1	0	2	0	0	0	0	0	0	0	5	5
05:45 PM	2	3	0	0	5	0	0	0	0	0	3	3	1	6	1	0	1	1	2	2	2	13	15
Total	7	10	0	0	17	0	0	0	0	0	5	5	2	10	2	0	2	2	4	4	4	31	35
Grand Total	9	15	0	0	24	0	0	0	0	0	12	9	2	21	2	0	3	3	5	5	5	50	55
% Approach	37.5	62.5	0	0	0	0	0	0	0	0	57.1	42.9	0	0	40	0	60	0	10	0	9.1	90.9	
Total %	18	30	0	0	48	0	0	0	0	0	24	18	0	42	4	0	6	0	0	0	0	0	0

Start Time	Haven Avenue Southbound				SR-210 Eastbound On Ramp Westbound				Haven Avenue Northbound				SR-210 Eastbound Off Ramp Eastbound				Exclu. Total	Inclu. Total	Int. Total				
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left				Thru	Right	RTOR	App. Total
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
05:00 PM	1	3	0	0	4	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	1	6
05:15 PM	2	3	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	7	
05:30 PM	2	1	0	0	3	0	0	0	0	0	1	1	0	2	0	0	0	0	0	0	0	0	5
Total Volume	5	7	0	0	12	0	0	0	0	0	4	3	3	7	1	0	1	1	1	1	2	21	21
% App. Total	41.7	58.3	0	0	0	0	0	0	0	0	57.1	42.9	0	0	50	0	50	0	0	0	.250	.750	
PHF	.625	.583	.000	.000	.600	.000	.000	.000	.000	.000	.500	.750	.583	.250	.000	.250	.500	.500	.500	.500	.500	.500	.750

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 04:45 PM



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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: SR-210 Eastbound Ramps  
 Weather: Clear

File Name : 08\_RNC\_Haven\_210E PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 3

Start Time	Haven Avenue Southbound			SR-210 Eastbound On Ramp Westbound			Haven Avenue Northbound			SR-210 Eastbound Off Ramp Eastbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1												
Peak Hour for Each Approach Begins at:	04:45 PM											
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	1	3	0	0	0	0	0	0	1	1	0	0
+30 mins.	2	3	0	0	0	0	0	0	0	0	0	1
+45 mins.	2	1	0	0	0	0	0	0	1	1	0	0
Total Volume	5	7	0	0	0	0	0	4	3	7	1	1
% App. Total	41.7	58.3	0	0	0	0	0	57.1	42.9	583	50	50
PHF	.625	.583	.000	.600	.000	.000	.000	.500	.750	.583	.250	.250

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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: SR-210 Eastbound Ramps  
 Weather: Clear

File Name : 08\_RNC\_Haven\_210E PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 1

Groups Printed- 3 Axle Vehicles

Start Time	Haven Avenue Southbound				SR-210 Eastbound On Ramp Westbound				Haven Avenue Northbound				SR-210 Eastbound Off Ramp Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
% Approach	0	100	0	0	100	0	0	0	0	0	0	0	0	0	0	0	100	100
Total %	0	100	0	0	100	0	0	0	0	0	0	0	0	0	0	0	100	100

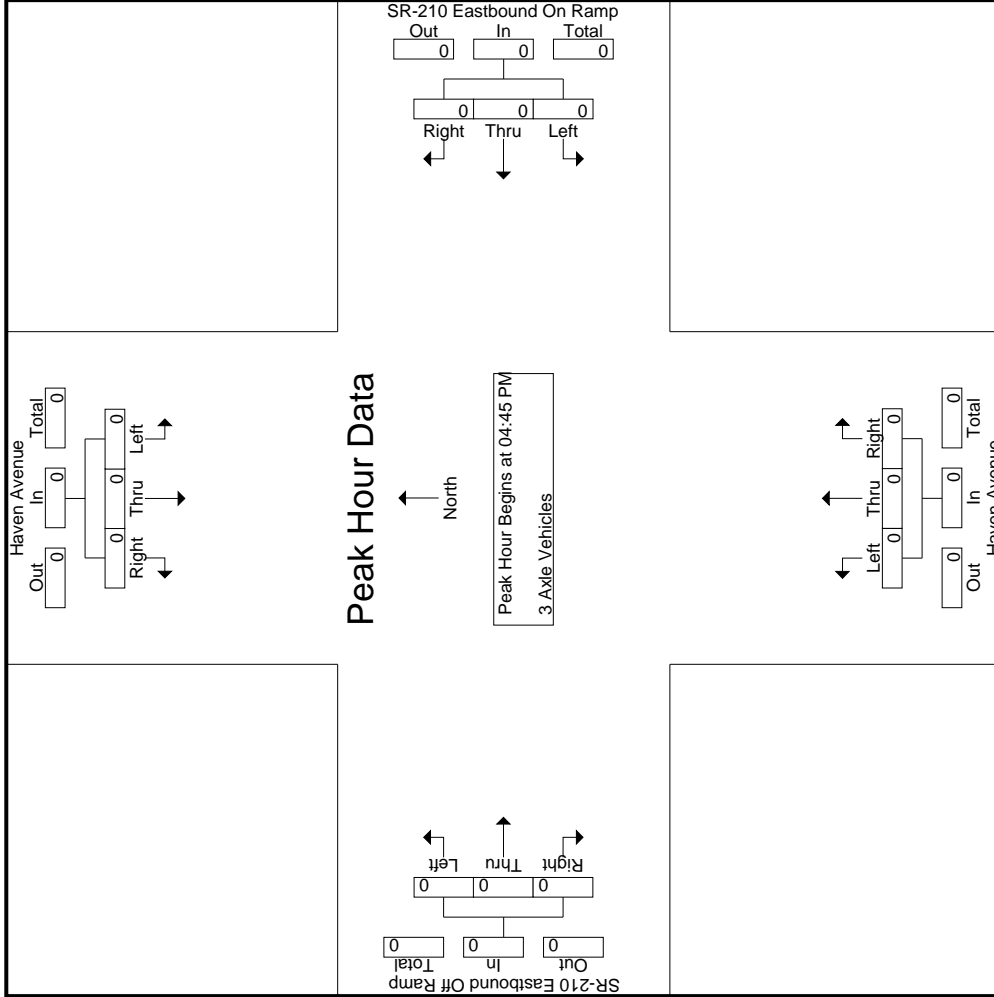
Start Time	Haven Avenue Southbound				SR-210 Eastbound On Ramp Westbound				Haven Avenue Northbound				SR-210 Eastbound Off Ramp Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 04:45 PM

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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: SR-210 Eastbound Ramps  
 Weather: Clear

File Name : 08\_RNC\_Haven\_210E PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 2





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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: SR-210 Eastbound Ramps  
 Weather: Clear

File Name : 08\_RNC\_Haven\_210E PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 3

Start Time	Haven Avenue Southbound			SR-210 Eastbound On Ramp Westbound			Haven Avenue Northbound			SR-210 Eastbound Off Ramp Eastbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1												
Peak Hour for Each Approach Begins at:												
	04:45 PM			04:45 PM			04:45 PM			04:45 PM		
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0	0	0	0	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: SR-210 Eastbound Ramps  
 Weather: Clear

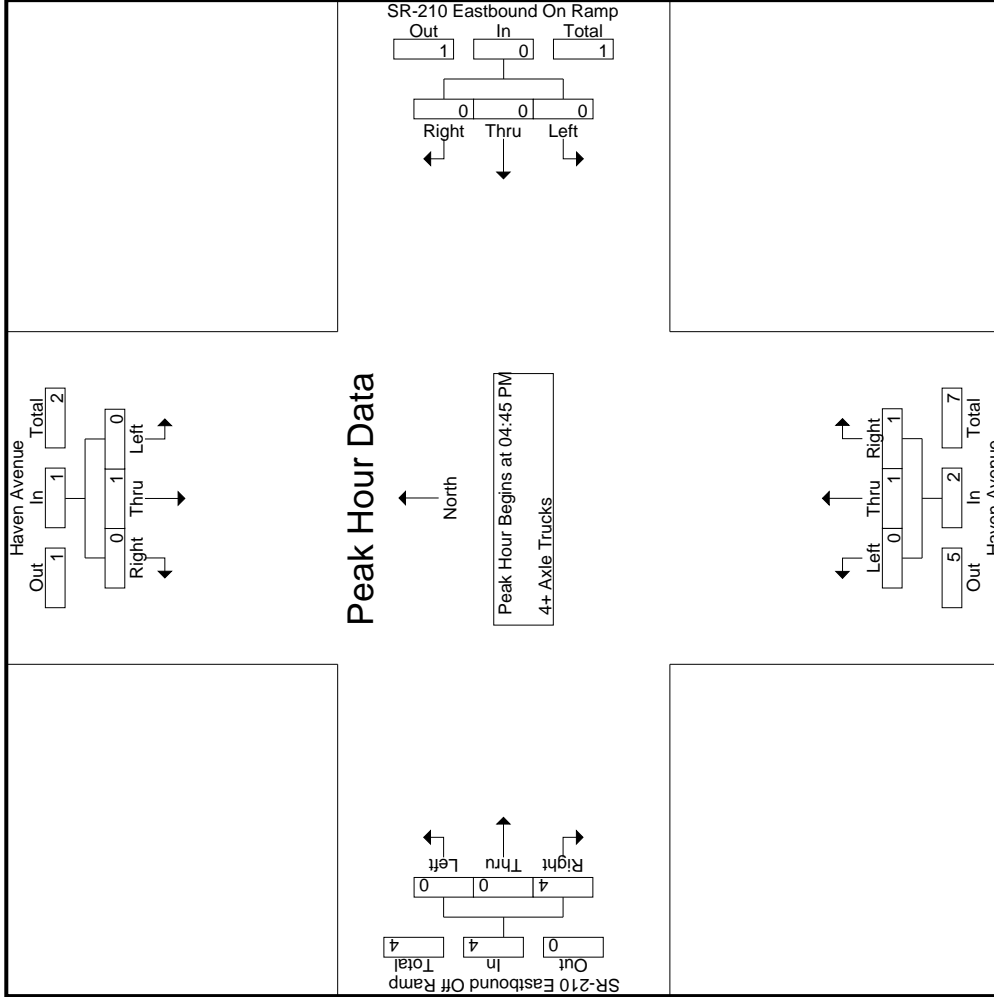
File Name : 08\_RNC\_Haven\_210E PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 1

Groups Printed- 4+ Axle Trucks

Start Time	Haven Avenue Southbound				SR-210 Eastbound On Ramp Westbound				Haven Avenue Northbound				SR-210 Eastbound Off Ramp Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	1	0	0	0	1	0	0	0	0	0	0	2	0	0	2	0	5	5
04:15 PM	0	0	0	0	0	0	0	0	0	0	1	3	0	0	4	0	4	4
04:30 PM	0	1	0	0	1	0	0	0	0	0	0	0	1	1	1	1	2	3
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	1
Total	1	1	0	0	2	0	0	0	0	0	3	4	0	0	7	1	12	13
05:00 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	4	5
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	1	2	3
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	6
Total	0	1	0	0	1	0	0	0	0	0	1	0	0	0	1	5	9	14
Grand Total	1	2	0	0	3	0	0	0	0	0	4	4	0	0	8	6	21	27
% Approach	33.3	66.7	0	0	0	0	0	0	0	0	50	50	0	0	100	22.2	77.8	
Total %	4.8	9.5	0	0	14.3	0	0	0	0	38.1	0	0	0	47.6	47.6			

Start Time	Haven Avenue Southbound				SR-210 Eastbound On Ramp Westbound				Haven Avenue Northbound				SR-210 Eastbound Off Ramp Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	3	3	4
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2
Total Volume	0	1	0	0	1	0	0	0	0	0	0	0	0	0	4	4	7	7
% App. Total	0	100	0	0	.250	0	0	0	0	.000	.250	.500	.000	.000	.333	.333	.438	
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.250	.250	.500	.000	.000	.000	.333	.333	.438	

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 04:45 PM



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

City of Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: SR-210 Eastbound Ramps  
 Weather: Clear

File Name : 08\_RNC\_Haven\_210E PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 3

Start Time	Haven Avenue Southbound			SR-210 Eastbound On Ramp Westbound			Haven Avenue Northbound			SR-210 Eastbound Off Ramp Eastbound					
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total		
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1															
Peak Hour for Each Approach Begins at:															
	04:45 PM				04:45 PM				04:45 PM				04:45 PM		
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
+15 mins.	0	1	0	1	0	0	0	0	0	0	0	0	3	0	
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
+45 mins.	0	0	0	0	0	0	0	0	1	0	0	1	0	1	
Total Volume	0	1	0	1	0	0	0	0	1	1	0	2	0	4	
% App. Total	0	100	0	.250	0	0	0	.000	.250	.50	0	100	0	.333	
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.250	.250	.000	.333	.000	.333	

Location: Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: SR-210 Eastbound Ramps



Date: 6/2/2021  
 Day: Wednesday

PEDESTRIANS

	North Leg Haven Avenue	East Leg SR-210 Eastbound Ramps	South Leg Haven Avenue	West Leg SR-210 Eastbound Ramps	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	3	0	1	4
7:30 AM	0	0	0	0	0
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	3	0	2	5

	North Leg Haven Avenue	East Leg SR-210 Eastbound Ramps	South Leg Haven Avenue	West Leg SR-210 Eastbound Ramps	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
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	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	1	0	2	3
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	1	0	3	4

Location: Rancho Cucamonga  
 N/S: Haven Avenue  
 E/W: SR-210 Eastbound Ramps



Date: 6/2/2021  
 Day: Wednesday

BICYCLES

	Southbound Haven Avenue			Westbound SR-210 Eastbound Ramps			Northbound Haven Avenue			Eastbound SR-210 Eastbound Ramps			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	1	0	0	0	0	1

	Southbound Haven Avenue			Westbound SR-210 Eastbound Ramps			Northbound Haven Avenue			Eastbound SR-210 Eastbound Ramps			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	2	0	0	0	0	2
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
5:30 PM	0	0	0	1	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
TOTAL VOLUMES:	0	0	0	1	0	0	0	4	0	0	0	0	5

City of Rancho Cucamonga  
 N/S: Driveway 2  
 E/W: Wilson Avenue  
 Weather: Clear

File Name : 09\_RNC\_DW2\_Wilson AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 1

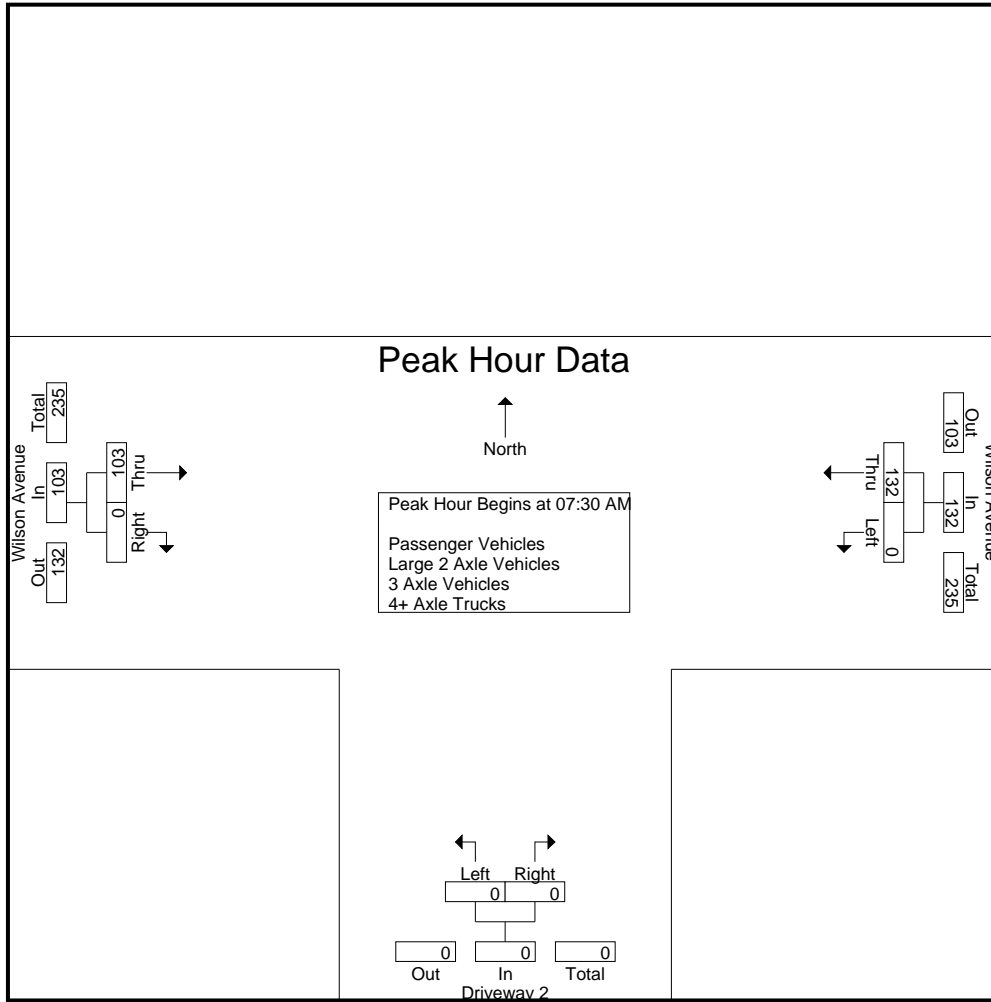
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Wilson Avenue Westbound			Driveway 2 Northbound			Wilson Avenue Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	0	18	18	0	0	0	9	0	9	27
07:15 AM	0	21	21	0	0	0	8	0	8	29
07:30 AM	0	30	30	0	0	0	29	0	29	59
07:45 AM	0	40	40	0	0	0	39	0	39	79
Total	0	109	109	0	0	0	85	0	85	194
08:00 AM	0	33	33	0	0	0	20	0	20	53
08:15 AM	0	29	29	0	0	0	15	0	15	44
08:30 AM	0	27	27	0	0	0	16	0	16	43
08:45 AM	0	25	25	0	0	0	17	0	17	42
Total	0	114	114	0	0	0	68	0	68	182
Grand Total	0	223	223	0	0	0	153	0	153	376
Apprch %	0	100		0	0		100	0		
Total %	0	59.3	59.3	0	0	0	40.7	0	40.7	
Passenger Vehicles	0	219	219	0	0	0	148	0	148	367
% Passenger Vehicles	0	98.2	98.2	0	0	0	96.7	0	96.7	97.6
Large 2 Axle Vehicles	0	3	3	0	0	0	3	0	3	6
% Large 2 Axle Vehicles	0	1.3	1.3	0	0	0	2	0	2	1.6
3 Axle Vehicles	0	1	1	0	0	0	2	0	2	3
% 3 Axle Vehicles	0	0.4	0.4	0	0	0	1.3	0	1.3	0.8
4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0
% 4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0

Start Time	Wilson Avenue Westbound			Driveway 2 Northbound			Wilson Avenue Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	0	30	30	0	0	0	29	0	29	59
07:45 AM	0	<b>40</b>	<b>40</b>	0	0	0	<b>39</b>	0	<b>39</b>	<b>79</b>
08:00 AM	0	33	33	0	0	0	20	0	20	53
08:15 AM	0	29	29	0	0	0	15	0	15	44
Total Volume	0	132	132	0	0	0	103	0	103	235
% App. Total	0	100		0	0		100	0		
PHF	.000	.825	.825	.000	.000	.000	.660	.000	.660	.744

City of Rancho Cucamonga  
 N/S: Driveway 2  
 E/W: Wilson Avenue  
 Weather: Clear

File Name : 09\_RNC\_DW2\_Wilson AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 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:

	07:30 AM			07:00 AM			07:30 AM		
+0 mins.	0	30	30	0	0	0	29	0	29
+15 mins.	0	<b>40</b>	<b>40</b>	0	0	0	<b>39</b>	0	<b>39</b>
+30 mins.	0	33	33	0	0	0	20	0	20
+45 mins.	0	29	29	0	0	0	15	0	15
Total Volume	0	132	132	0	0	0	103	0	103
% App. Total	0	100		0	0		100	0	
PHF	.000	.825	.825	.000	.000	.000	.660	.000	.660



City of Rancho Cucamonga  
 N/S: Driveway 2  
 E/W: Wilson Avenue  
 Weather: Clear

File Name : 09\_RNC\_DW2\_Wilson AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

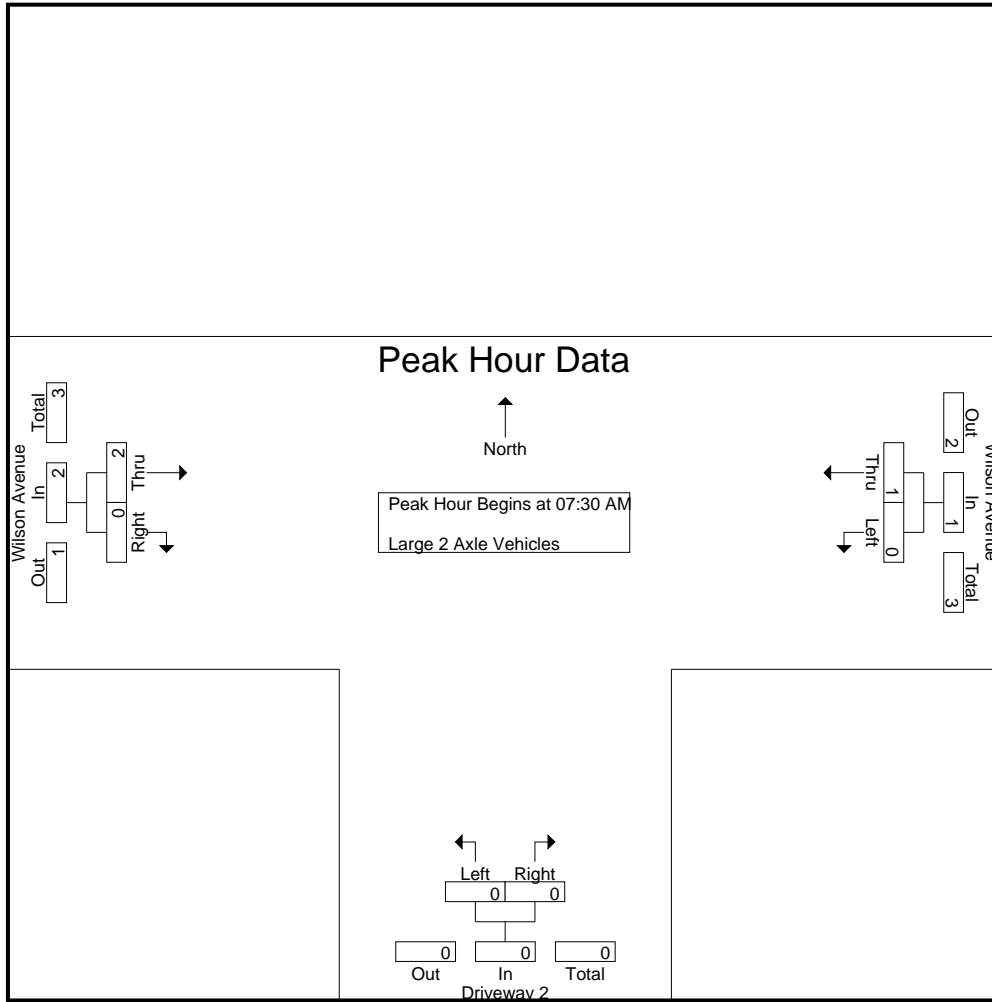
Start Time	Wilson Avenue Westbound			Driveway 2 Northbound			Wilson Avenue Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	1	1	0	0	0	1	0	1	2
07:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	1	1	0	0	0	1	0	1	2
08:00 AM	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	1	0	1	1
08:30 AM	0	1	1	0	0	0	1	0	1	2
08:45 AM	0	1	1	0	0	0	0	0	0	1
Total	0	2	2	0	0	0	2	0	2	4
Grand Total	0	3	3	0	0	0	3	0	3	6
Apprch %	0	100		0	0		100	0		
Total %	0	50	50	0	0	0	50	0	50	

Start Time	Wilson Avenue Westbound			Driveway 2 Northbound			Wilson Avenue Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:30 AM	0	1	1	0	0	0	1	0	1	2
07:45 AM	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	1	0	1	1
Total Volume	0	1	1	0	0	0	2	0	2	3
% App. Total	0	100		0	0		100	0		
PHF	.000	.250	.250	.000	.000	.000	.500	.000	.500	.375

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:30 AM

City of Rancho Cucamonga  
 N/S: Driveway 2  
 E/W: Wilson Avenue  
 Weather: Clear

File Name : 09\_RNC\_DW2\_Wilson AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 2



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:30 AM			07:30 AM			07:30 AM		
+0 mins.	0	1	1	0	0	0	1	0	1
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	1	0	1
Total Volume	0	1	1	0	0	0	2	0	2
% App. Total	0	100		0	0		100	0	
PHF	.000	.250	.250	.000	.000	.000	.500	.000	.500

City of Rancho Cucamonga  
 N/S: Driveway 2  
 E/W: Wilson Avenue  
 Weather: Clear

File Name : 09\_RNC\_DW2\_Wilson AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 1

Groups Printed- 3 Axle Vehicles

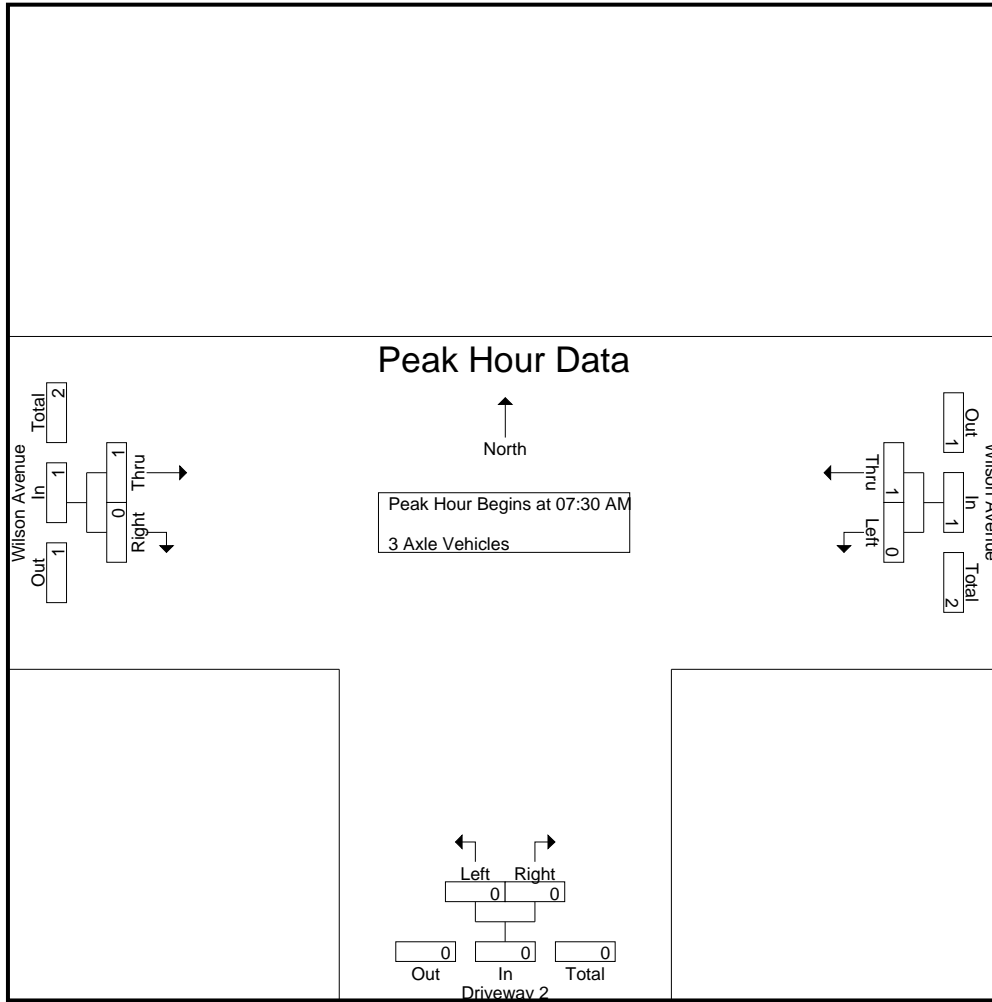
Start Time	Wilson Avenue Westbound			Driveway 2 Northbound			Wilson Avenue Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	1	0	1	1
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	1	0	1	1
08:00 AM	0	1	1	0	0	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	1	0	1	1
08:30 AM	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	1	1	0	0	0	1	0	1	2
Grand Total	0	1	1	0	0	0	2	0	2	3
Apprch %	0	100		0	0		100	0		
Total %	0	33.3	33.3	0	0	0	66.7	0	66.7	

Start Time	Wilson Avenue Westbound			Driveway 2 Northbound			Wilson Avenue Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	1	1	0	0	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	1	0	1	1
Total Volume	0	1	1	0	0	0	1	0	1	2
% App. Total	0	100		0	0		100	0		
PHF	.000	.250	.250	.000	.000	.000	.250	.000	.250	.500

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:30 AM

City of Rancho Cucamonga  
 N/S: Driveway 2  
 E/W: Wilson Avenue  
 Weather: Clear

File Name : 09\_RNC\_DW2\_Wilson AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 2



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:30 AM			07:30 AM			07:30 AM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	1	1	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	1	0	1
Total Volume	0	1	1	0	0	0	1	0	1
% App. Total	0	100		0	0		100	0	
PHF	.000	.250	.250	.000	.000	.000	.250	.000	.250

City of Rancho Cucamonga  
 N/S: Driveway 2  
 E/W: Wilson Avenue  
 Weather: Clear

File Name : 09\_RNC\_DW2\_Wilson AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 1

Groups Printed- 4+ Axle Trucks

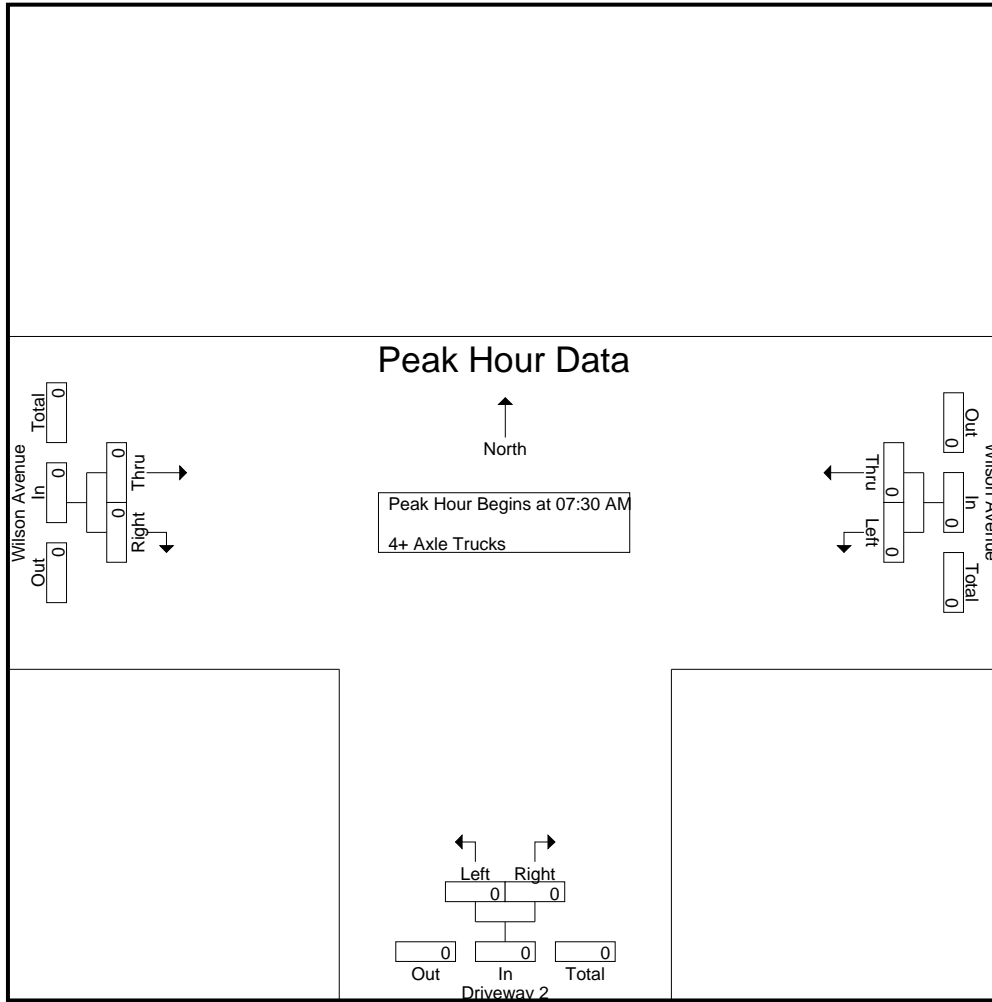
Start Time	Wilson Avenue Westbound			Driveway 2 Northbound			Wilson Avenue Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0		0	0		0	0		
Total %										

Start Time	Wilson Avenue Westbound			Driveway 2 Northbound			Wilson Avenue Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0		0	0		0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:30 AM

City of Rancho Cucamonga  
 N/S: Driveway 2  
 E/W: Wilson Avenue  
 Weather: Clear

File Name : 09\_RNC\_DW2\_Wilson AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 2



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:30 AM			07:30 AM			07:30 AM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000

City of Rancho Cucamonga  
 N/S: Driveway 2  
 E/W: Wilson Avenue  
 Weather: Clear

File Name : 09\_RNC\_DW2\_Wilson PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 1

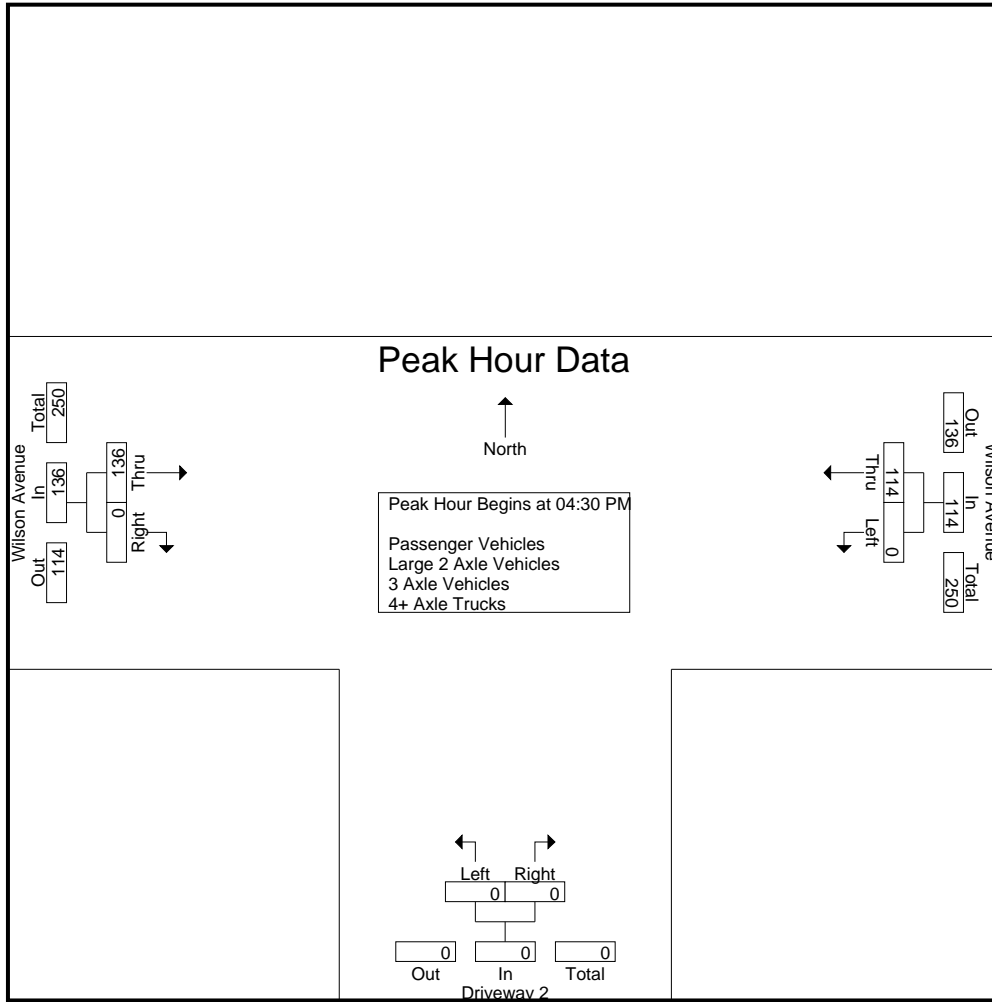
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Wilson Avenue Westbound			Driveway 2 Northbound			Wilson Avenue Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	0	25	25	0	0	0	25	0	25	50
04:15 PM	0	29	29	0	0	0	29	0	29	58
04:30 PM	0	29	29	0	0	0	33	0	33	62
04:45 PM	0	23	23	0	0	0	38	0	38	61
Total	0	106	106	0	0	0	125	0	125	231
05:00 PM	0	23	23	0	0	0	28	0	28	51
05:15 PM	0	39	39	0	0	0	37	0	37	76
05:30 PM	0	23	23	0	0	0	29	0	29	52
05:45 PM	0	26	26	0	0	0	39	0	39	65
Total	0	111	111	0	0	0	133	0	133	244
Grand Total	0	217	217	0	0	0	258	0	258	475
Apprch %	0	100		0	0		100	0		
Total %	0	45.7	45.7	0	0	0	54.3	0	54.3	
Passenger Vehicles	0	212	212	0	0	0	252	0	252	464
% Passenger Vehicles	0	97.7	97.7	0	0	0	97.7	0	97.7	97.7
Large 2 Axle Vehicles	0	5	5	0	0	0	4	0	4	9
% Large 2 Axle Vehicles	0	2.3	2.3	0	0	0	1.6	0	1.6	1.9
3 Axle Vehicles	0	0	0	0	0	0	2	0	2	2
% 3 Axle Vehicles	0	0	0	0	0	0	0.8	0	0.8	0.4
4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0
% 4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0

Start Time	Wilson Avenue Westbound			Driveway 2 Northbound			Wilson Avenue Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	0	29	29	0	0	0	33	0	33	62
04:45 PM	0	23	23	0	0	0	<b>38</b>	0	<b>38</b>	61
05:00 PM	0	23	23	0	0	0	28	0	28	51
05:15 PM	0	<b>39</b>	<b>39</b>	0	0	0	37	0	37	<b>76</b>
Total Volume	0	114	114	0	0	0	136	0	136	250
% App. Total	0	100		0	0		100	0		
PHF	.000	.731	.731	.000	.000	.000	.895	.000	.895	.822

City of Rancho Cucamonga  
 N/S: Driveway 2  
 E/W: Wilson Avenue  
 Weather: Clear

File Name : 09\_RNC\_DW2\_Wilson PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 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:

	04:30 PM			04:00 PM			04:30 PM		
+0 mins.	0	29	29	0	0	0	33	0	33
+15 mins.	0	23	23	0	0	0	<b>38</b>	0	<b>38</b>
+30 mins.	0	23	23	0	0	0	28	0	28
+45 mins.	0	<b>39</b>	<b>39</b>	0	0	0	37	0	37
Total Volume	0	114	114	0	0	0	136	0	136
% App. Total	0	100		0	0		100	0	
PHF	.000	.731	.731	.000	.000	.000	.895	.000	.895



City of Rancho Cucamonga  
 N/S: Driveway 2  
 E/W: Wilson Avenue  
 Weather: Clear

File Name : 09\_RNC\_DW2\_Wilson PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

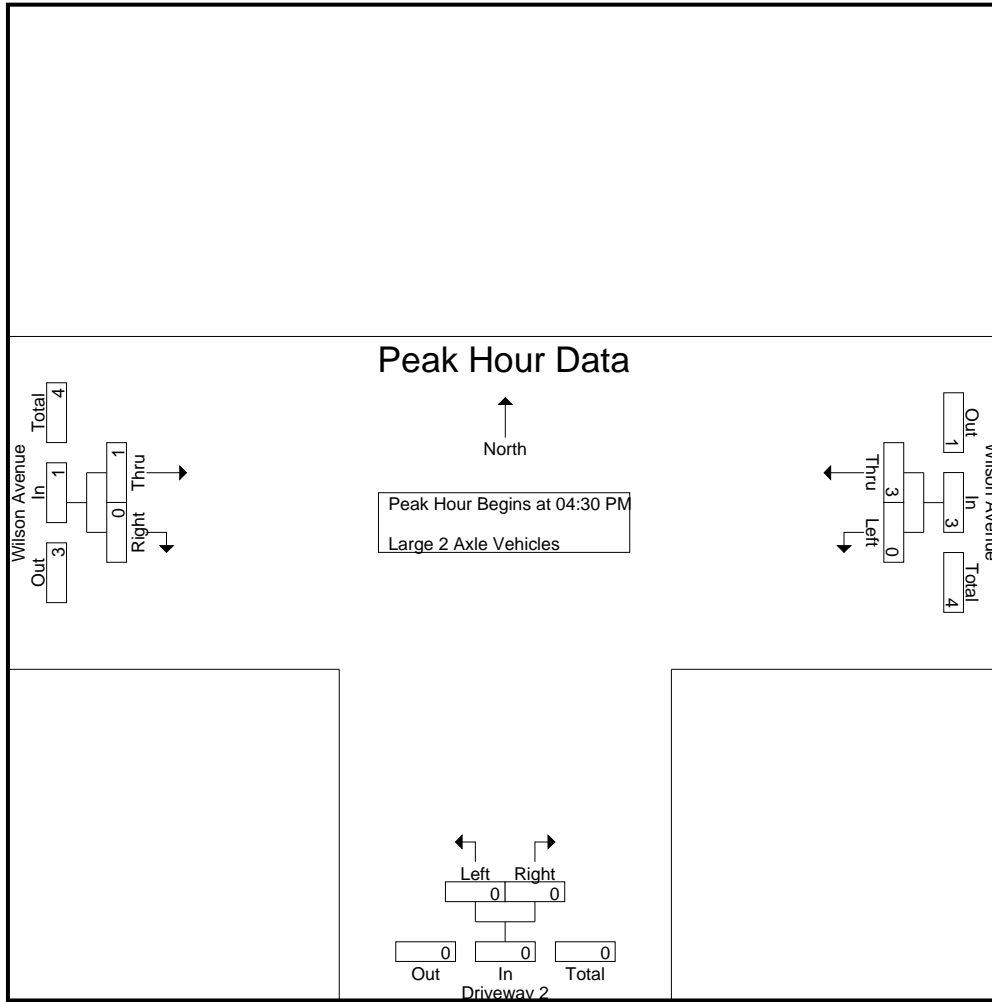
Start Time	Wilson Avenue Westbound			Driveway 2 Northbound			Wilson Avenue Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	0	0	0	0	0	0	1	0	1	1
04:15 PM	0	1	1	0	0	0	0	0	0	1
04:30 PM	0	1	1	0	0	0	1	0	1	2
04:45 PM	0	1	1	0	0	0	0	0	0	1
Total	0	3	3	0	0	0	2	0	2	5
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	1	1	0	0	0	0	0	0	1
05:30 PM	0	1	1	0	0	0	1	0	1	2
05:45 PM	0	0	0	0	0	0	1	0	1	1
Total	0	2	2	0	0	0	2	0	2	4
Grand Total	0	5	5	0	0	0	4	0	4	9
Apprch %	0	100		0	0		100	0		
Total %	0	55.6	55.6	0	0	0	44.4	0	44.4	

Start Time	Wilson Avenue Westbound			Driveway 2 Northbound			Wilson Avenue Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:30 PM	0	1	1	0	0	0	1	0	1	2
04:45 PM	0	1	1	0	0	0	0	0	0	1
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	1	1	0	0	0	0	0	0	1
Total Volume	0	3	3	0	0	0	1	0	1	4
% App. Total	0	100		0	0		100	0		
PHF	.000	.750	.750	.000	.000	.000	.250	.000	.250	.500

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

City of Rancho Cucamonga  
 N/S: Driveway 2  
 E/W: Wilson Avenue  
 Weather: Clear

File Name : 09\_RNC\_DW2\_Wilson PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 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:

	04:30 PM			04:30 PM			04:30 PM		
+0 mins.	0	1	1	0	0	0	1	0	1
+15 mins.	0	1	1	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	1	1	0	0	0	0	0	0
Total Volume	0	3	3	0	0	0	1	0	1
% App. Total	0	100		0	0		100	0	
PHF	.000	.750	.750	.000	.000	.000	.250	.000	.250

City of Rancho Cucamonga  
 N/S: Driveway 2  
 E/W: Wilson Avenue  
 Weather: Clear

File Name : 09\_RNC\_DW2\_Wilson PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 1

Groups Printed- 3 Axle Vehicles

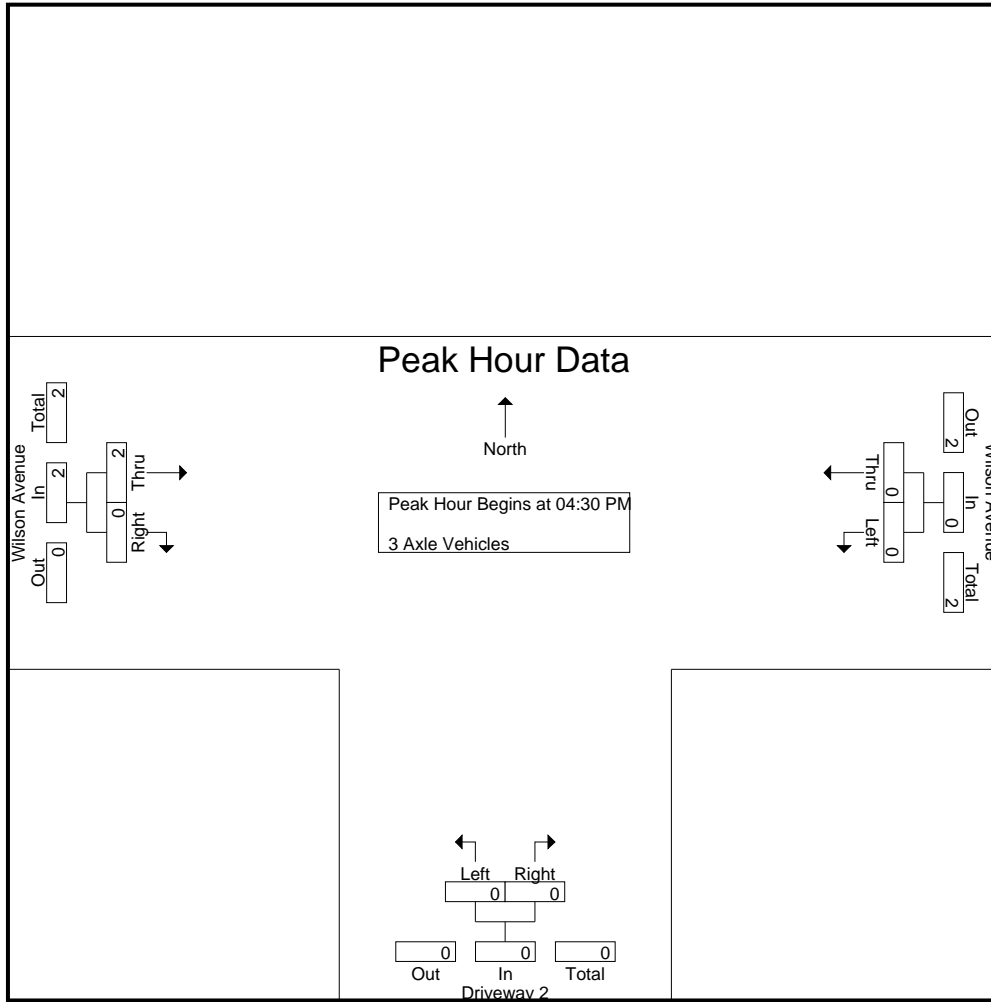
Start Time	Wilson Avenue Westbound			Driveway 2 Northbound			Wilson Avenue Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	2	0	2	2
04:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	2	0	2	2
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	2	0	2	2
Apprch %	0	0	0	0	0	0	100	0	100	
Total %	0	0	0	0	0	0	100	0	100	

Start Time	Wilson Avenue Westbound			Driveway 2 Northbound			Wilson Avenue Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:30 PM	0	0	0	0	0	0	2	0	2	2
04:45 PM	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	2	0	2	2
% App. Total	0	0	0	0	0	0	100	0	100	
PHF	.000	.000	.000	.000	.000	.000	.250	.000	.250	.250

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

City of Rancho Cucamonga  
 N/S: Driveway 2  
 E/W: Wilson Avenue  
 Weather: Clear

File Name : 09\_RNC\_DW2\_Wilson PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 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:

	04:30 PM			04:30 PM			04:30 PM		
+0 mins.	0	0	0	0	0	0	2	0	2
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	2	0	2
% App. Total	0	0	0	0	0	0	100	0	0
PHF	.000	.000	.000	.000	.000	.000	.250	.000	.250

City of Rancho Cucamonga  
 N/S: Driveway 2  
 E/W: Wilson Avenue  
 Weather: Clear

File Name : 09\_RNC\_DW2\_Wilson PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 1

Groups Printed- 4+ Axle Trucks

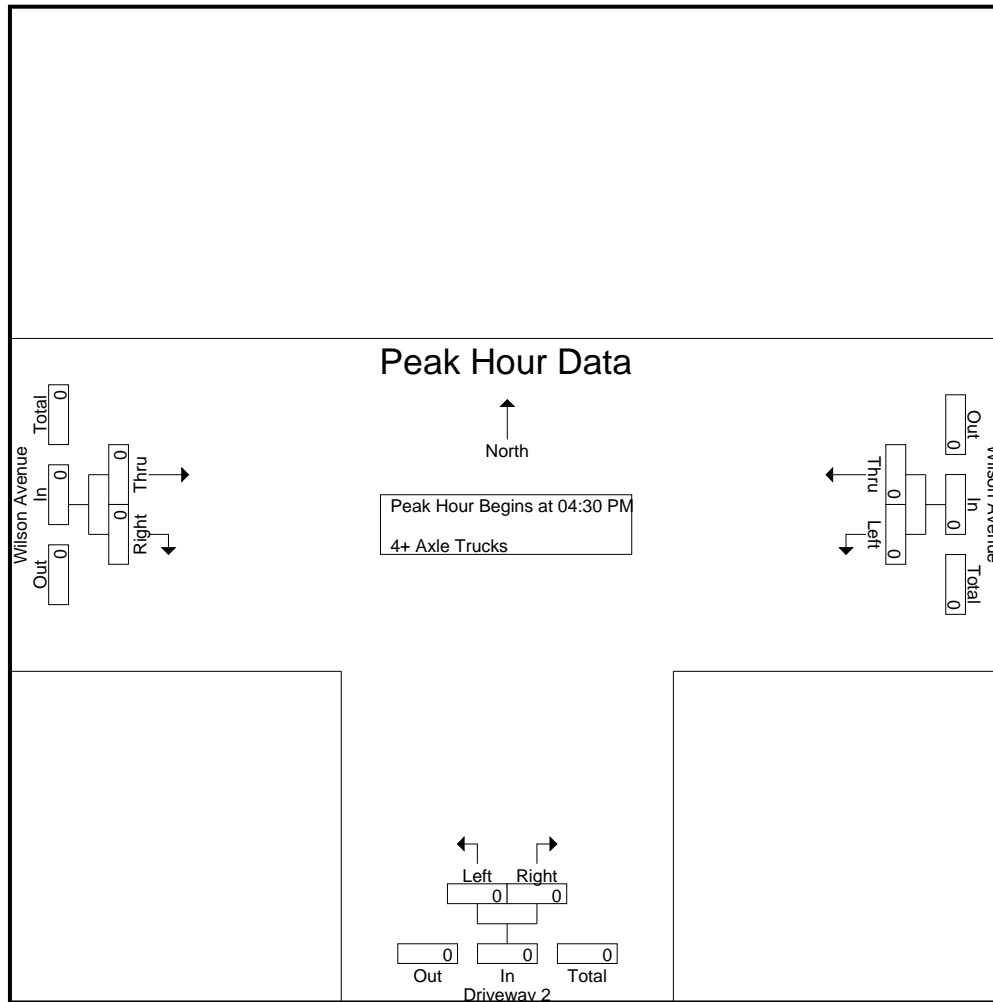
Start Time	Wilson Avenue Westbound			Driveway 2 Northbound			Wilson Avenue Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0		0	0		0	0		
Total %										

Start Time	Wilson Avenue Westbound			Driveway 2 Northbound			Wilson Avenue Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0		0	0		0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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

City of Rancho Cucamonga  
N/S: Driveway 2  
E/W: Wilson Avenue  
Weather: Clear

File Name : 09\_RNC\_DW2\_Wilson PM  
Site Code : 05121260  
Start Date : 6/2/2021  
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:

	04:30 PM			04:30 PM			04:30 PM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000

Location: Rancho Cucamonga  
 N/S: Driveway 2  
 E/W: Wilson Avenue



Date: 6/2/2021  
 Day: Wednesday

PEDESTRIANS

	North Leg Dead End	East Leg Wilson Avenue	South Leg Driveway 2	West Leg Wilson Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	1	0	1
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	3	0	0	0	3
8:00 AM	1	0	2	0	3
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:	4	0	3	0	7

	North Leg Dead End	East Leg Wilson Avenue	South Leg Driveway 2	West Leg Wilson Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
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	2	0	2
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	2	0	2

Location: Rancho Cucamonga  
 N/S: Driveway 2  
 E/W: Wilson Avenue



Date: 6/2/2021  
 Day: Wednesday

BICYCLES

	Southbound Dead End			Westbound Wilson Avenue			Northbound Driveway 2			Eastbound Wilson Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
7:15 AM	0	0	0	0	1	0	0	0	0	0	1	0	2
7:30 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
TOTAL VOLUMES:	0	0	0	0	3	0	0	0	0	0	3	0	6

	Southbound Dead End			Westbound Wilson Avenue			Northbound Driveway 2			Eastbound Wilson Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	2	0	2
4:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
4:45 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
TOTAL VOLUMES:	0	0	0	0	2	0	0	0	0	0	3	0	5



City of Rancho Cucamonga  
 N/S: Driveway 3  
 E/W: Wilson Avenue  
 Weather: Clear

File Name : 10\_RNC\_DW3\_Wilson AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 1

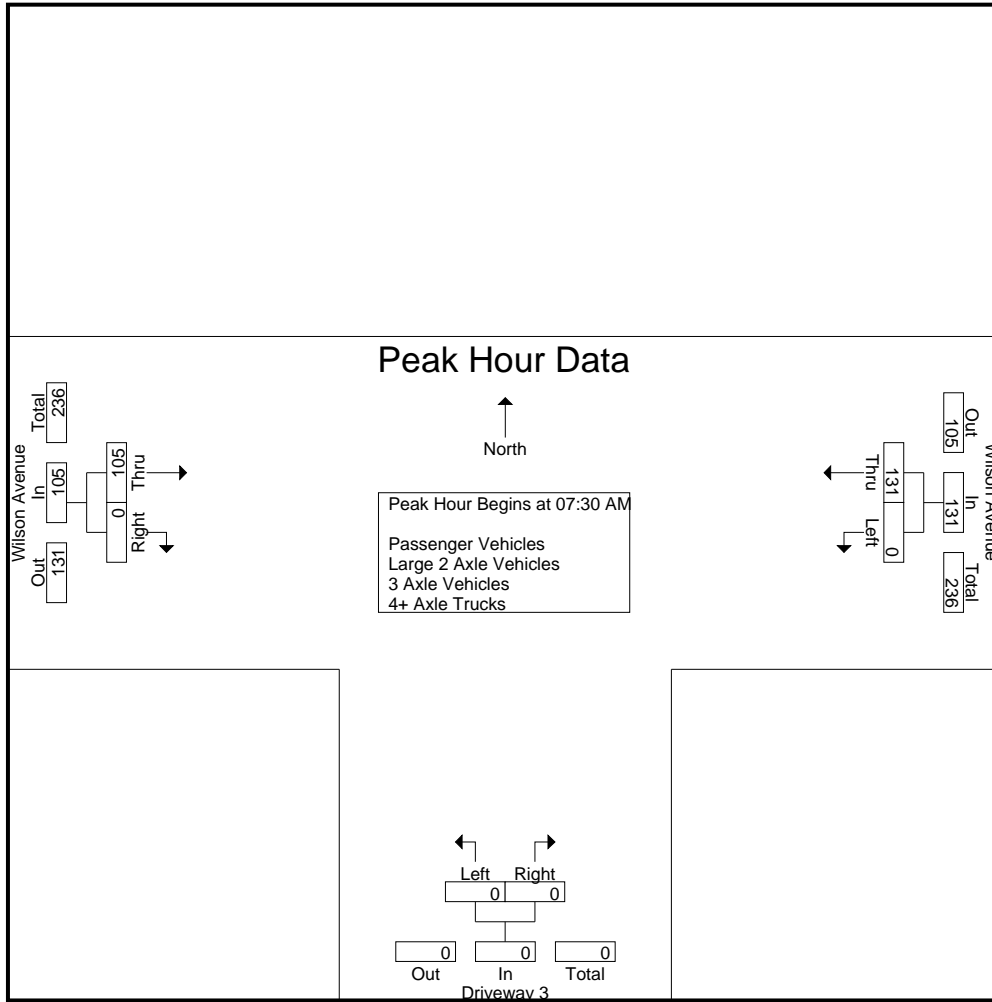
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Wilson Avenue Westbound			Driveway 3 Northbound			Wilson Avenue Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	0	17	17	0	0	0	9	0	9	26
07:15 AM	0	20	20	0	0	0	8	0	8	28
07:30 AM	0	29	29	0	0	0	28	0	28	57
07:45 AM	0	38	38	0	0	0	41	0	41	79
Total	0	104	104	0	0	0	86	0	86	190
08:00 AM	0	35	35	0	0	0	21	0	21	56
08:15 AM	0	29	29	0	0	0	15	0	15	44
08:30 AM	0	25	25	0	0	0	14	0	14	39
08:45 AM	0	26	26	0	0	0	18	0	18	44
Total	0	115	115	0	0	0	68	0	68	183
Grand Total	0	219	219	0	0	0	154	0	154	373
Apprch %	0	100		0	0		100	0		
Total %	0	58.7	58.7	0	0	0	41.3	0	41.3	
Passenger Vehicles	0	214	214	0	0	0	145	0	145	359
% Passenger Vehicles	0	97.7	97.7	0	0	0	94.2	0	94.2	96.2
Large 2 Axle Vehicles	0	3	3	0	0	0	7	0	7	10
% Large 2 Axle Vehicles	0	1.4	1.4	0	0	0	4.5	0	4.5	2.7
3 Axle Vehicles	0	2	2	0	0	0	2	0	2	4
% 3 Axle Vehicles	0	0.9	0.9	0	0	0	1.3	0	1.3	1.1
4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0
% 4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0

Start Time	Wilson Avenue Westbound			Driveway 3 Northbound			Wilson Avenue Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	0	29	29	0	0	0	28	0	28	57
07:45 AM	0	<b>38</b>	<b>38</b>	0	0	0	<b>41</b>	0	<b>41</b>	<b>79</b>
08:00 AM	0	35	35	0	0	0	21	0	21	56
08:15 AM	0	29	29	0	0	0	15	0	15	44
Total Volume	0	131	131	0	0	0	105	0	105	236
% App. Total	0	100		0	0		100	0		
PHF	.000	.862	.862	.000	.000	.000	.640	.000	.640	.747

City of Rancho Cucamonga  
 N/S: Driveway 3  
 E/W: Wilson Avenue  
 Weather: Clear

File Name : 10\_RNC\_DW3\_Wilson AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 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:

	07:30 AM			07:00 AM			07:30 AM		
+0 mins.	0	29	29	0	0	0	28	0	28
+15 mins.	0	<b>38</b>	<b>38</b>	0	0	0	<b>41</b>	0	<b>41</b>
+30 mins.	0	35	35	0	0	0	21	0	21
+45 mins.	0	29	29	0	0	0	15	0	15
Total Volume	0	131	131	0	0	0	105	0	105
% App. Total	0	100		0	0		100	0	
PHF	.000	.862	.862	.000	.000	.000	.640	.000	.640

City of Rancho Cucamonga  
 N/S: Driveway 3  
 E/W: Wilson Avenue  
 Weather: Clear

File Name : 10\_RNC\_DW3\_Wilson AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

Start Time	Wilson Avenue Westbound			Driveway 3 Northbound			Wilson Avenue Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	1	1	0	0	0	1	0	1	2
07:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	1	1	0	0	0	1	0	1	2
08:00 AM	0	0	0	0	0	0	1	0	1	1
08:15 AM	0	0	0	0	0	0	3	0	3	3
08:30 AM	0	1	1	0	0	0	0	0	0	1
08:45 AM	0	1	1	0	0	0	2	0	2	3
Total	0	2	2	0	0	0	6	0	6	8
Grand Total	0	3	3	0	0	0	7	0	7	10
Apprch %	0	100		0	0		100	0		
Total %	0	30	30	0	0	0	70	0	70	

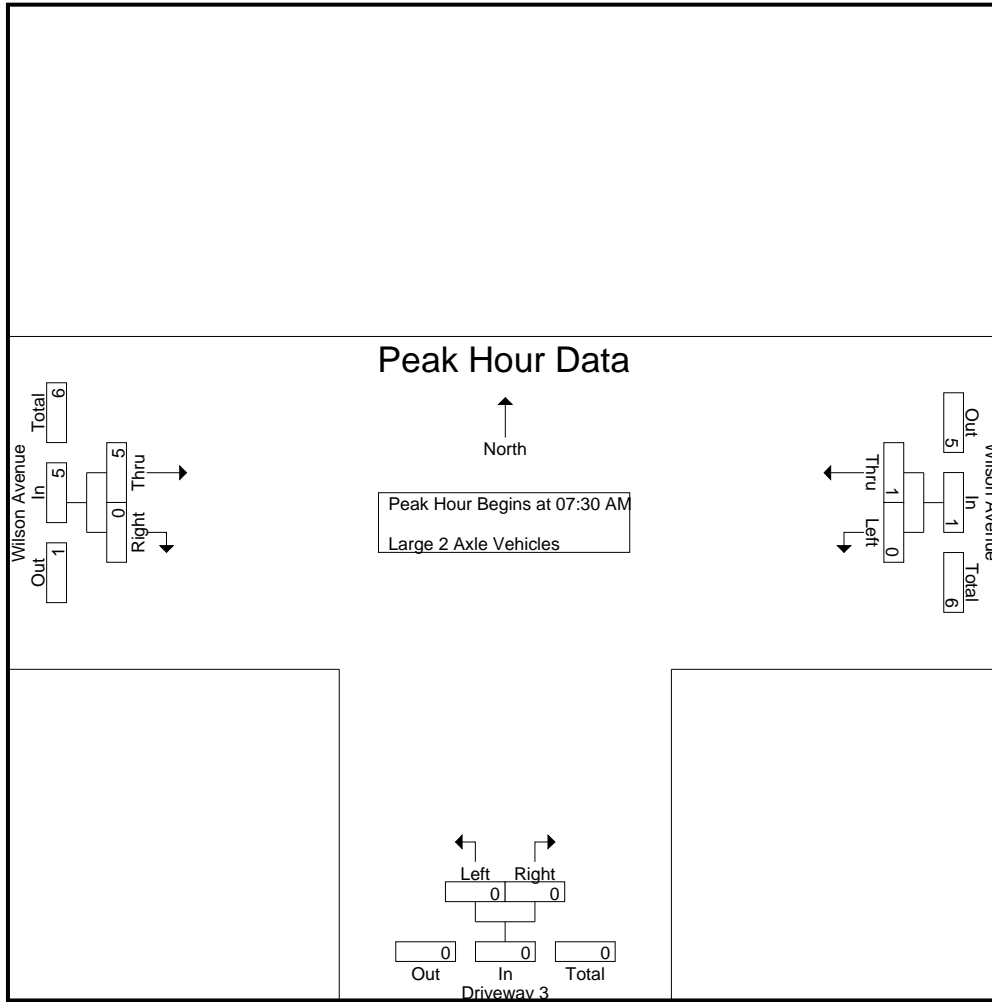
Start Time	Wilson Avenue Westbound			Driveway 3 Northbound			Wilson Avenue Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:30 AM	0	1	1	0	0	0	1	0	1	2
07:45 AM	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	1	0	1	1
08:15 AM	0	0	0	0	0	0	3	0	3	3
Total Volume	0	1	1	0	0	0	5	0	5	6
% App. Total	0	100		0	0		100	0		
PHF	.000	.250	.250	.000	.000	.000	.417	.000	.417	.500

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:30 AM

City of Rancho Cucamonga  
 N/S: Driveway 3  
 E/W: Wilson Avenue  
 Weather: Clear

File Name : 10\_RNC\_DW3\_Wilson AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 2



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:30 AM			07:30 AM			07:30 AM		
+0 mins.	0	1	1	0	0	0	1	0	1
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	1	0	1
+45 mins.	0	0	0	0	0	0	3	0	3
Total Volume	0	1	1	0	0	0	5	0	5
% App. Total	0	100		0	0		100	0	
PHF	.000	.250	.250	.000	.000	.000	.417	.000	.417

City of Rancho Cucamonga  
 N/S: Driveway 3  
 E/W: Wilson Avenue  
 Weather: Clear

File Name : 10\_RNC\_DW3\_Wilson AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 1

Groups Printed- 3 Axle Vehicles

Start Time	Wilson Avenue Westbound			Driveway 3 Northbound			Wilson Avenue Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	1	0	1	1
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	1	0	1	1
08:00 AM	0	2	2	0	0	0	0	0	0	2
08:15 AM	0	0	0	0	0	0	1	0	1	1
08:30 AM	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	2	2	0	0	0	1	0	1	3
Grand Total	0	2	2	0	0	0	2	0	2	4
Apprch %	0	100		0	0		100	0		
Total %	0	50	50	0	0	0	50	0	50	

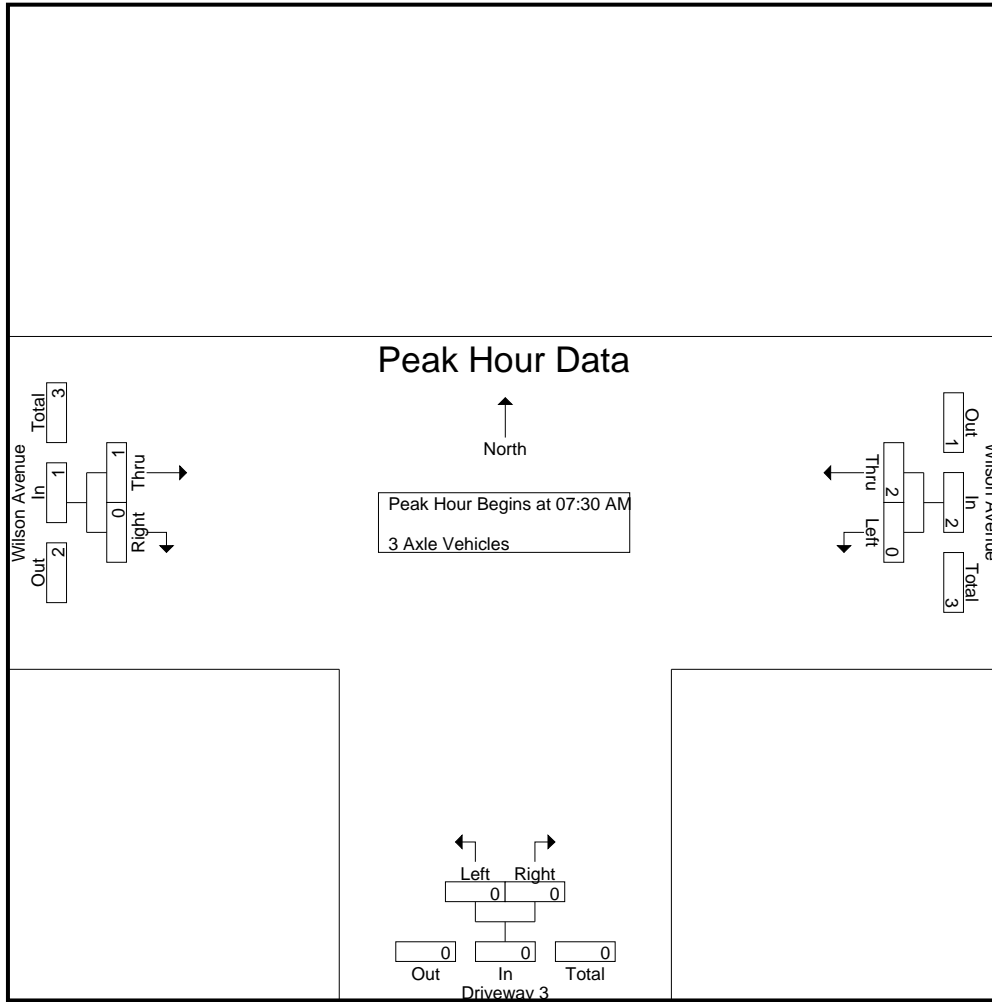
Start Time	Wilson Avenue Westbound			Driveway 3 Northbound			Wilson Avenue Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	2	2	0	0	0	0	0	0	2
08:15 AM	0	0	0	0	0	0	1	0	1	1
Total Volume	0	2	2	0	0	0	1	0	1	3
% App. Total	0	100		0	0		100	0		
PHF	.000	.250	.250	.000	.000	.000	.250	.000	.250	.375

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:30 AM

City of Rancho Cucamonga  
 N/S: Driveway 3  
 E/W: Wilson Avenue  
 Weather: Clear

File Name : 10\_RNC\_DW3\_Wilson AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 2



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:30 AM			07:30 AM			07:30 AM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	2	2	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	1	0	1
Total Volume	0	2	2	0	0	0	1	0	1
% App. Total	0	100		0	0		100	0	
PHF	.000	.250	.250	.000	.000	.000	.250	.000	.250

City of Rancho Cucamonga  
 N/S: Driveway 3  
 E/W: Wilson Avenue  
 Weather: Clear

File Name : 10\_RNC\_DW3\_Wilson AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 1

Groups Printed- 4+ Axle Trucks

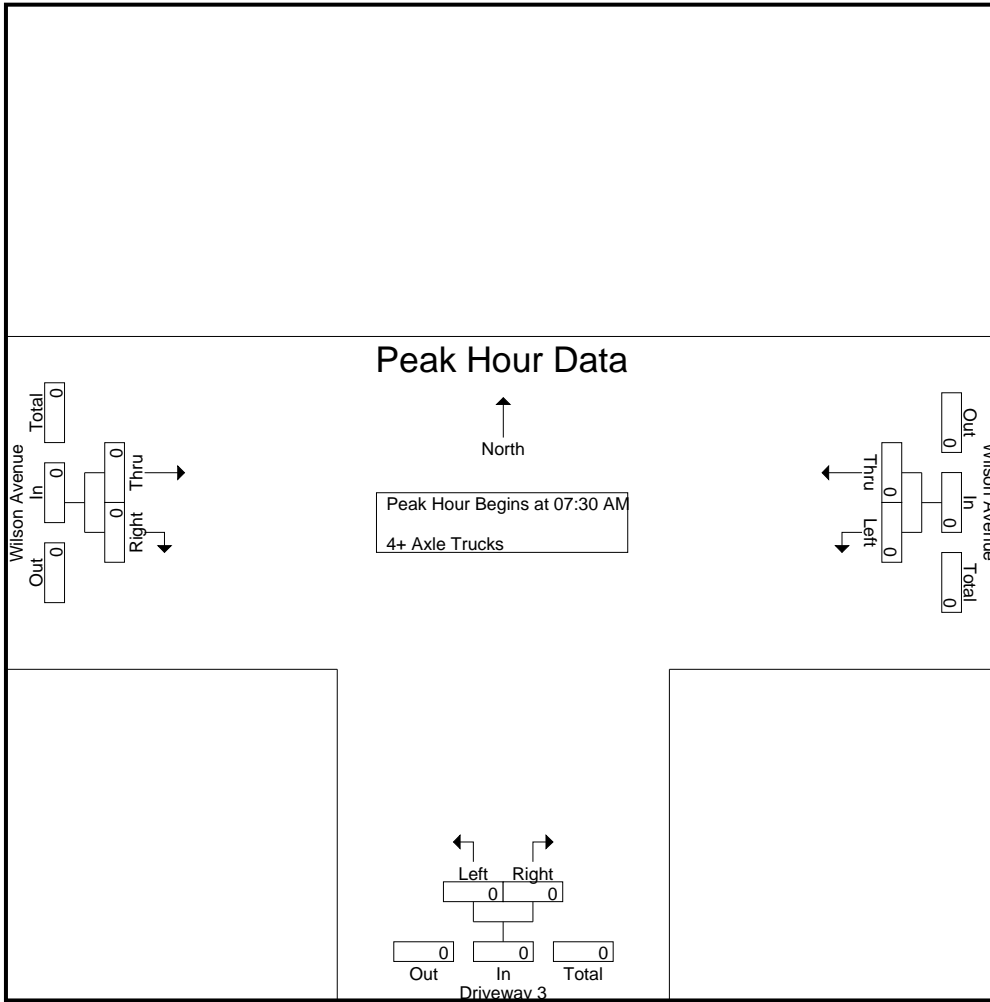
Start Time	Wilson Avenue Westbound			Driveway 3 Northbound			Wilson Avenue Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0		0	0		0	0		
Total %										

Start Time	Wilson Avenue Westbound			Driveway 3 Northbound			Wilson Avenue Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0		0	0		0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:30 AM

City of Rancho Cucamonga  
 N/S: Driveway 3  
 E/W: Wilson Avenue  
 Weather: Clear

File Name : 10\_RNC\_DW3\_Wilson AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 2



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:30 AM			07:30 AM			07:30 AM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000



City of Rancho Cucamonga  
 N/S: Driveway 3  
 E/W: Wilson Avenue  
 Weather: Clear

File Name : 10\_RNC\_DW3\_Wilson PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 1

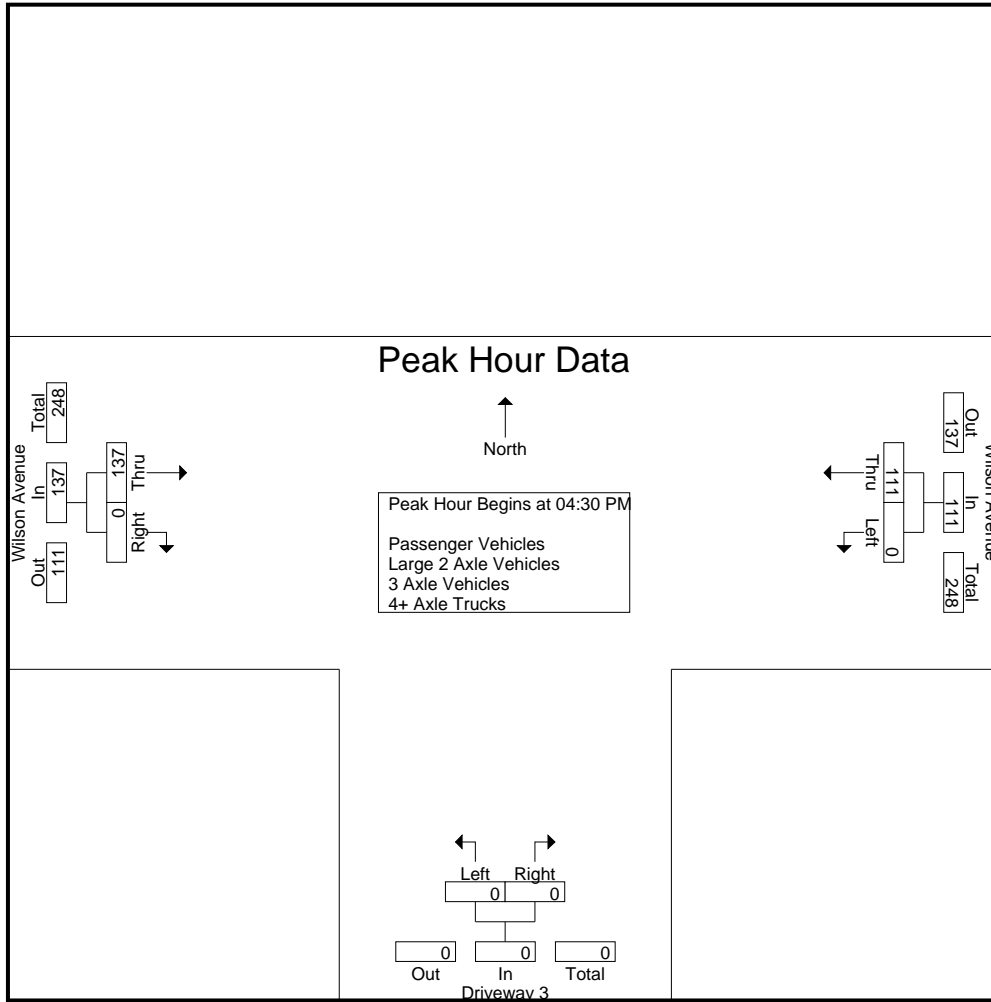
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Wilson Avenue Westbound			Driveway 3 Northbound			Wilson Avenue Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	0	24	24	0	0	0	25	0	25	49
04:15 PM	0	29	29	0	0	0	30	0	30	59
04:30 PM	0	30	30	0	0	0	33	0	33	63
04:45 PM	0	22	22	0	0	0	37	0	37	59
Total	0	105	105	0	0	0	125	0	125	230
05:00 PM	0	22	22	0	0	0	29	0	29	51
05:15 PM	0	37	37	0	0	0	38	0	38	75
05:30 PM	0	21	21	0	0	0	27	0	27	48
05:45 PM	0	26	26	0	0	0	38	0	38	64
Total	0	106	106	0	0	0	132	0	132	238
Grand Total	0	211	211	0	0	0	257	0	257	468
Apprch %	0	100		0	0		100	0		
Total %	0	45.1	45.1	0	0	0	54.9	0	54.9	
Passenger Vehicles	0	206	206	0	0	0	253	0	253	459
% Passenger Vehicles	0	97.6	97.6	0	0	0	98.4	0	98.4	98.1
Large 2 Axle Vehicles	0	5	5	0	0	0	3	0	3	8
% Large 2 Axle Vehicles	0	2.4	2.4	0	0	0	1.2	0	1.2	1.7
3 Axle Vehicles	0	0	0	0	0	0	1	0	1	1
% 3 Axle Vehicles	0	0	0	0	0	0	0.4	0	0.4	0.2
4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0
% 4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0

Start Time	Wilson Avenue Westbound			Driveway 3 Northbound			Wilson Avenue Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	0	30	30	0	0	0	33	0	33	63
04:45 PM	0	22	22	0	0	0	37	0	37	59
05:00 PM	0	22	22	0	0	0	29	0	29	51
05:15 PM	0	<b>37</b>	<b>37</b>	0	0	0	<b>38</b>	0	<b>38</b>	<b>75</b>
Total Volume	0	111	111	0	0	0	137	0	137	248
% App. Total	0	100		0	0		100	0		
PHF	.000	.750	.750	.000	.000	.000	.901	.000	.901	.827

City of Rancho Cucamonga  
 N/S: Driveway 3  
 E/W: Wilson Avenue  
 Weather: Clear

File Name : 10\_RNC\_DW3\_Wilson PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 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:

	04:30 PM			04:00 PM			04:30 PM		
+0 mins.	0	30	30	0	0	0	33	0	33
+15 mins.	0	22	22	0	0	0	37	0	37
+30 mins.	0	22	22	0	0	0	29	0	29
+45 mins.	0	<b>37</b>	<b>37</b>	0	0	0	<b>38</b>	0	<b>38</b>
Total Volume	0	111	111	0	0	0	137	0	137
% App. Total	0	100		0	0		100	0	
PHF	.000	.750	.750	.000	.000	.000	.901	.000	.901

City of Rancho Cucamonga  
 N/S: Driveway 3  
 E/W: Wilson Avenue  
 Weather: Clear

File Name : 10\_RNC\_DW3\_Wilson PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

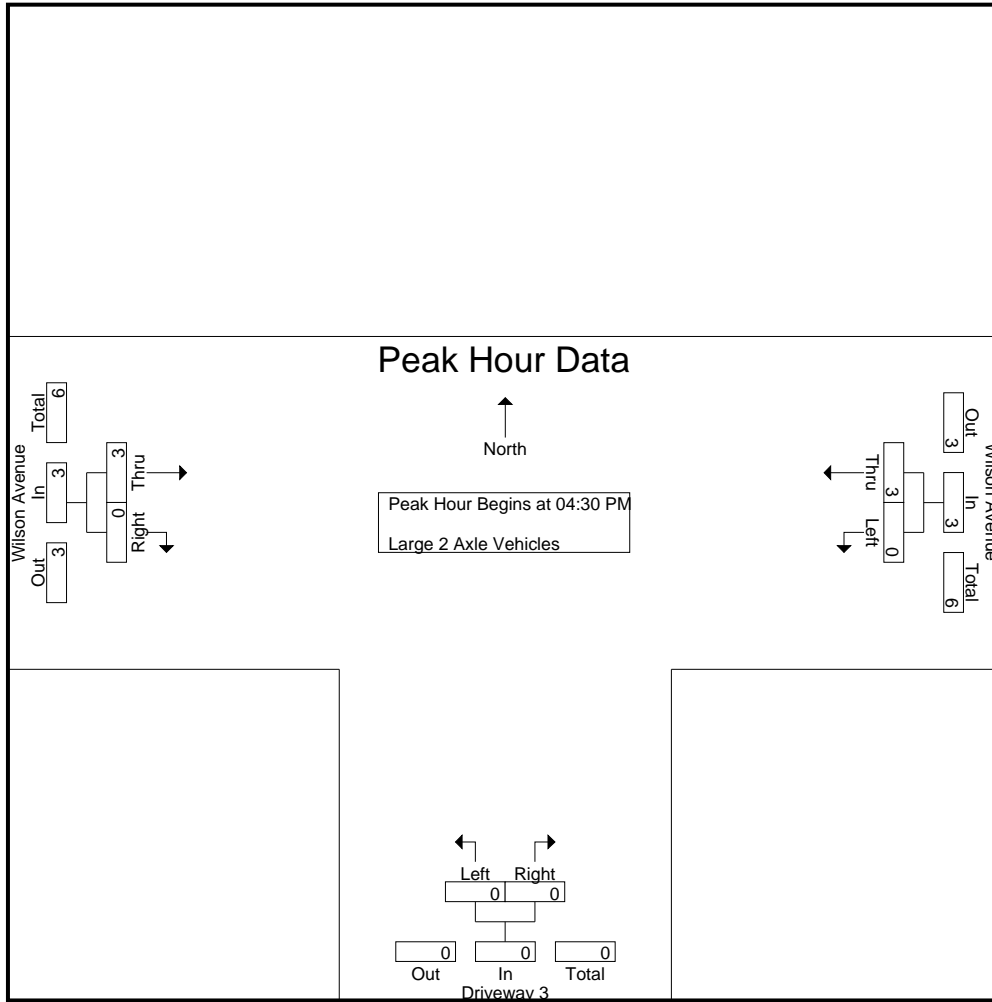
Start Time	Wilson Avenue Westbound			Driveway 3 Northbound			Wilson Avenue Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	1	1	0	0	0	0	0	0	1
04:30 PM	0	1	1	0	0	0	3	0	3	4
04:45 PM	0	1	1	0	0	0	0	0	0	1
Total	0	3	3	0	0	0	3	0	3	6
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	1	1	0	0	0	0	0	0	1
05:30 PM	0	1	1	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	2	2	0	0	0	0	0	0	2
Grand Total	0	5	5	0	0	0	3	0	3	8
Apprch %	0	100		0	0		100	0		
Total %	0	62.5	62.5	0	0	0	37.5	0	37.5	

Start Time	Wilson Avenue Westbound			Driveway 3 Northbound			Wilson Avenue Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:30 PM	0	1	1	0	0	0	3	0	3	4
04:45 PM	0	1	1	0	0	0	0	0	0	1
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	1	1	0	0	0	0	0	0	1
Total Volume	0	3	3	0	0	0	3	0	3	6
% App. Total	0	100		0	0		100	0		
PHF	.000	.750	.750	.000	.000	.000	.250	.000	.250	.375

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

City of Rancho Cucamonga  
 N/S: Driveway 3  
 E/W: Wilson Avenue  
 Weather: Clear

File Name : 10\_RNC\_DW3\_Wilson PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 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:

	04:30 PM			04:30 PM			04:30 PM		
+0 mins.	0	1	1	0	0	0	3	0	3
+15 mins.	0	1	1	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	1	1	0	0	0	0	0	0
Total Volume	0	3	3	0	0	0	3	0	3
% App. Total	0	100		0	0		100	0	
PHF	.000	.750	.750	.000	.000	.000	.250	.000	.250

City of Rancho Cucamonga  
 N/S: Driveway 3  
 E/W: Wilson Avenue  
 Weather: Clear

File Name : 10\_RNC\_DW3\_Wilson PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 1

Groups Printed- 3 Axle Vehicles

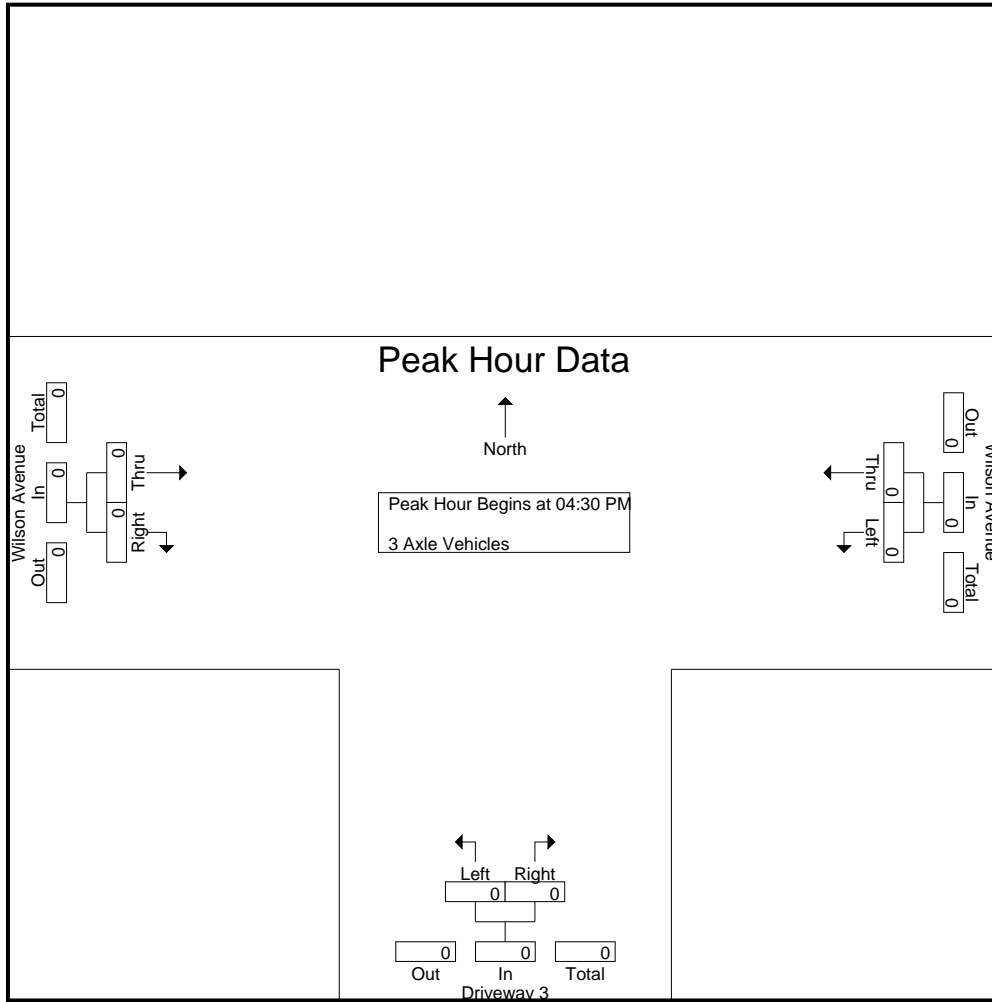
Start Time	Wilson Avenue Westbound			Driveway 3 Northbound			Wilson Avenue Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	1	0	1	1
05:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	1	0	1	1
Grand Total	0	0	0	0	0	0	1	0	1	1
Apprch %	0	0	0	0	0	0	100	0	100	100
Total %	0	0	0	0	0	0	100	0	100	100

Start Time	Wilson Avenue Westbound			Driveway 3 Northbound			Wilson Avenue Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0	0	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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

City of Rancho Cucamonga  
 N/S: Driveway 3  
 E/W: Wilson Avenue  
 Weather: Clear

File Name : 10\_RNC\_DW3\_Wilson PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 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:

	04:30 PM			04:30 PM			04:30 PM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000

City of Rancho Cucamonga  
 N/S: Driveway 3  
 E/W: Wilson Avenue  
 Weather: Clear

File Name : 10\_RNC\_DW3\_Wilson PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 1

Groups Printed- 4+ Axle Trucks

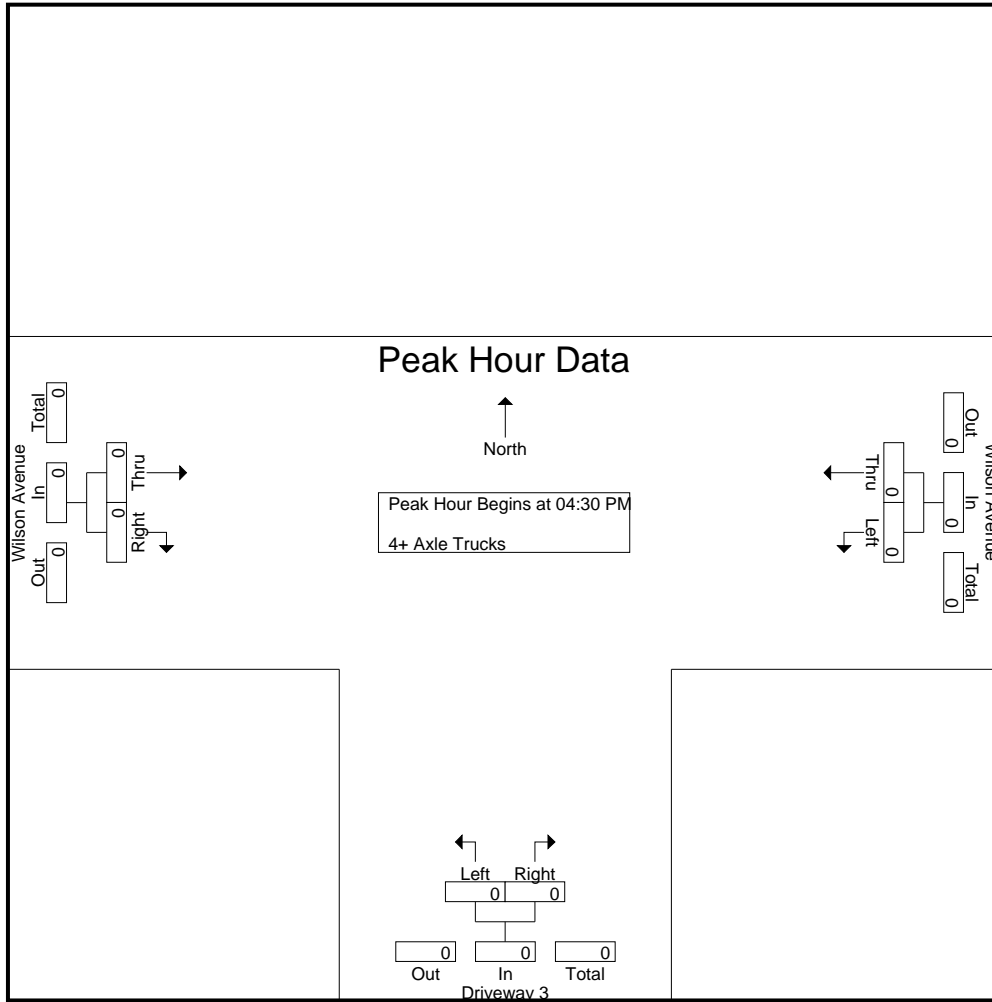
Start Time	Wilson Avenue Westbound			Driveway 3 Northbound			Wilson Avenue Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0		0	0		0	0		
Total %										

Start Time	Wilson Avenue Westbound			Driveway 3 Northbound			Wilson Avenue Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0		0	0		0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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

City of Rancho Cucamonga  
 N/S: Driveway 3  
 E/W: Wilson Avenue  
 Weather: Clear

File Name : 10\_RNC\_DW3\_Wilson PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 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:

	04:30 PM			04:30 PM			04:30 PM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000



Location: Rancho Cucamonga  
 N/S: Driveway 3  
 E/W: Wilson Avenue



Date: 6/2/2021  
 Day: Wednesday

PEDESTRIANS

	North Leg Dead End	East Leg Wilson Avenue	South Leg Driveway 3	West Leg Wilson Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
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	2	0	2
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	2	0	2

	North Leg Dead End	East Leg Wilson Avenue	South Leg Driveway 3	West Leg Wilson Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
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

Location: Rancho Cucamonga  
 N/S: Driveway 3  
 E/W: Wilson Avenue



Date: 6/2/2021  
 Day: Wednesday

BICYCLES

	Southbound Dead End			Westbound Wilson Avenue			Northbound Driveway 3			Eastbound Wilson Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
7:15 AM	0	0	0	0	1	0	0	0	0	0	1	0	2
7:30 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
TOTAL VOLUMES:	0	0	0	0	3	0	0	0	0	0	3	0	6

	Southbound Dead End			Westbound Wilson Avenue			Northbound Driveway 3			Eastbound Wilson Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	2	0	2
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	1	0	0	0	0	0	1	0	2
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
TOTAL VOLUMES:	0	0	0	0	3	0	0	0	0	0	3	0	6

City of Rancho Cucamonga  
 N/S: Driveway 4  
 E/W: Wilson Avenue  
 Weather: Clear

File Name : 11\_RNC\_DW4\_Wilson AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 1

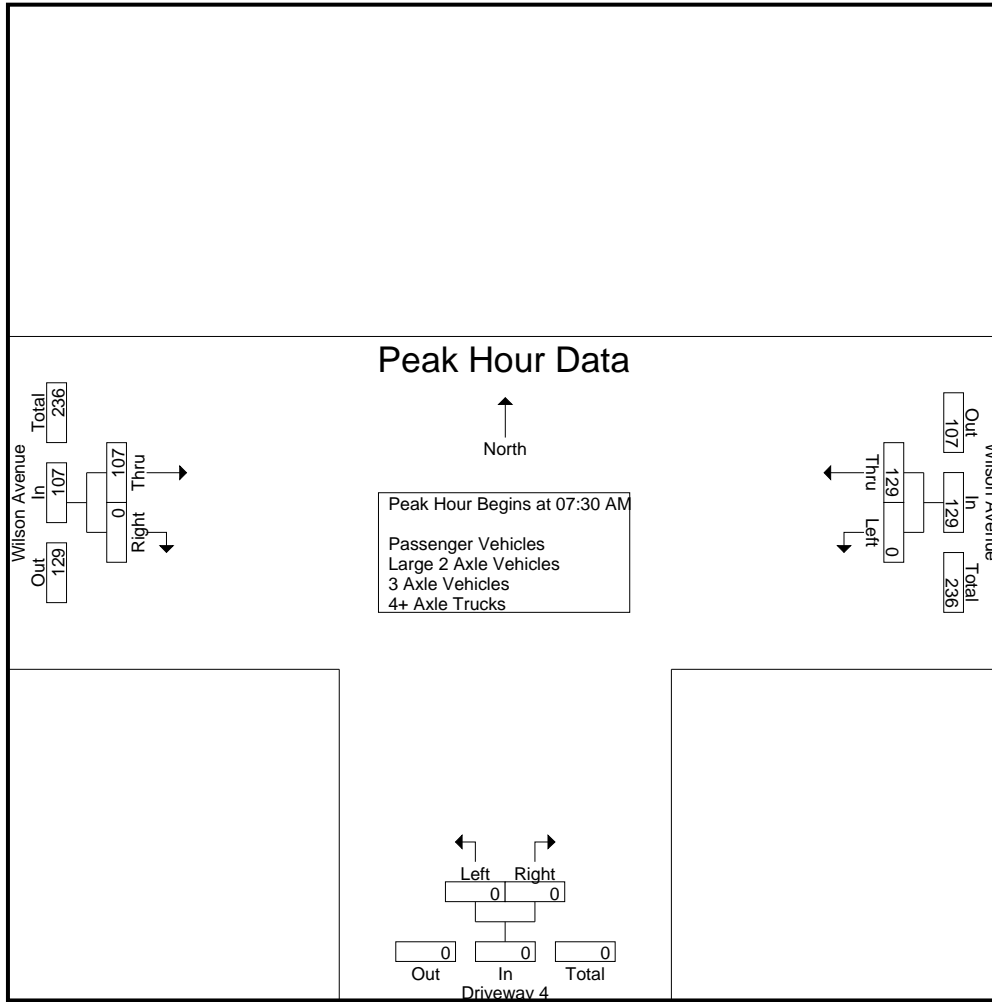
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Wilson Avenue Westbound			Driveway 4 Northbound			Wilson Avenue Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	0	16	16	0	0	0	9	0	9	25
07:15 AM	0	19	19	0	0	0	8	0	8	27
07:30 AM	0	29	29	0	0	0	30	0	30	59
07:45 AM	0	41	41	0	0	0	46	0	46	87
Total	0	105	105	0	0	0	93	0	93	198
08:00 AM	0	33	33	0	0	0	17	0	17	50
08:15 AM	0	26	26	0	0	0	14	0	14	40
08:30 AM	0	23	23	0	0	0	15	0	15	38
08:45 AM	0	24	24	0	0	0	18	0	18	42
Total	0	106	106	0	0	0	64	0	64	170
Grand Total	0	211	211	0	0	0	157	0	157	368
Apprch %	0	100		0	0		100	0		
Total %	0	57.3	57.3	0	0	0	42.7	0	42.7	
Passenger Vehicles	0	206	206	0	0	0	151	0	151	357
% Passenger Vehicles	0	97.6	97.6	0	0	0	96.2	0	96.2	97
Large 2 Axle Vehicles	0	3	3	0	0	0	4	0	4	7
% Large 2 Axle Vehicles	0	1.4	1.4	0	0	0	2.5	0	2.5	1.9
3 Axle Vehicles	0	2	2	0	0	0	2	0	2	4
% 3 Axle Vehicles	0	0.9	0.9	0	0	0	1.3	0	1.3	1.1
4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0
% 4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0

Start Time	Wilson Avenue Westbound			Driveway 4 Northbound			Wilson Avenue Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	0	29	29	0	0	0	30	0	30	59
07:45 AM	0	41	41	0	0	0	46	0	46	87
08:00 AM	0	33	33	0	0	0	17	0	17	50
08:15 AM	0	26	26	0	0	0	14	0	14	40
Total Volume	0	129	129	0	0	0	107	0	107	236
% App. Total	0	100		0	0		100	0		
PHF	.000	.787	.787	.000	.000	.000	.582	.000	.582	.678

City of Rancho Cucamonga  
 N/S: Driveway 4  
 E/W: Wilson Avenue  
 Weather: Clear

File Name : 11\_RNC\_DW4\_Wilson AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 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:

	07:30 AM			07:00 AM			07:30 AM		
+0 mins.	0	29	29	0	0	0	30	0	30
+15 mins.	0	<b>41</b>	<b>41</b>	0	0	0	<b>46</b>	0	<b>46</b>
+30 mins.	0	33	33	0	0	0	17	0	17
+45 mins.	0	26	26	0	0	0	14	0	14
Total Volume	0	129	129	0	0	0	107	0	107
% App. Total	0	100		0	0		100	0	
PHF	.000	.787	.787	.000	.000	.000	.582	.000	.582

City of Rancho Cucamonga  
 N/S: Driveway 4  
 E/W: Wilson Avenue  
 Weather: Clear

File Name : 11\_RNC\_DW4\_Wilson AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

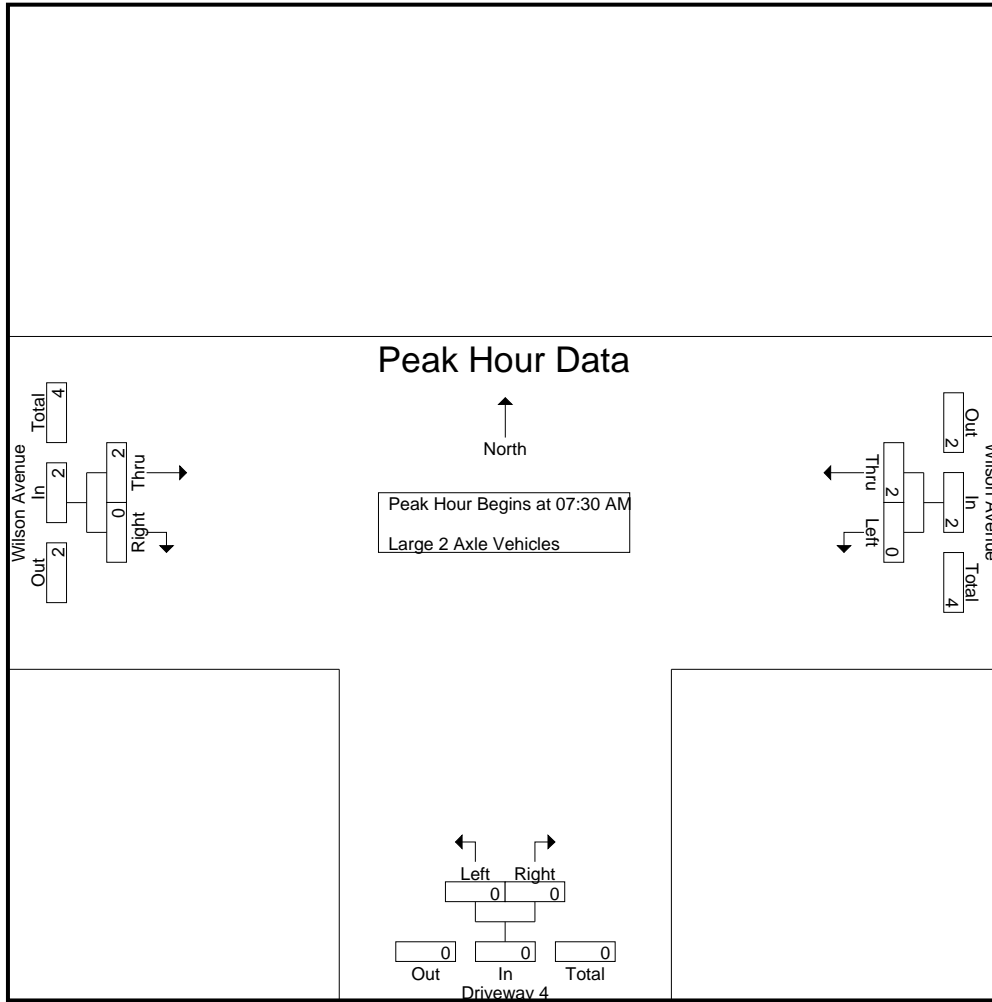
Start Time	Wilson Avenue Westbound			Driveway 4 Northbound			Wilson Avenue Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	1	1	0	0	0	1	0	1	2
07:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	1	1	0	0	0	1	0	1	2
08:00 AM	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	1	1	0	0	0	1	0	1	2
08:30 AM	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	1	1	0	0	0	2	0	2	3
Total	0	2	2	0	0	0	3	0	3	5
Grand Total	0	3	3	0	0	0	4	0	4	7
Apprch %	0	100		0	0		100	0		
Total %	0	42.9	42.9	0	0	0	57.1	0	57.1	

Start Time	Wilson Avenue Westbound			Driveway 4 Northbound			Wilson Avenue Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:30 AM	0	1	1	0	0	0	1	0	1	2
07:45 AM	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	1	1	0	0	0	1	0	1	2
Total Volume	0	2	2	0	0	0	2	0	2	4
% App. Total	0	100		0	0		100	0		
PHF	.000	.500	.500	.000	.000	.000	.500	.000	.500	.500

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:30 AM

City of Rancho Cucamonga  
 N/S: Driveway 4  
 E/W: Wilson Avenue  
 Weather: Clear

File Name : 11\_RNC\_DW4\_Wilson AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 2



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:30 AM			07:30 AM			07:30 AM		
+0 mins.	0	1	1	0	0	0	1	0	1
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	1	1	0	0	0	1	0	1
Total Volume	0	2	2	0	0	0	2	0	2
% App. Total	0	100		0	0		100	0	
PHF	.000	.500	.500	.000	.000	.000	.500	.000	.500

City of Rancho Cucamonga  
 N/S: Driveway 4  
 E/W: Wilson Avenue  
 Weather: Clear

File Name : 11\_RNC\_DW4\_Wilson AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 1

Groups Printed- 3 Axle Vehicles

Start Time	Wilson Avenue Westbound			Driveway 4 Northbound			Wilson Avenue Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	1	0	1	1
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	1	0	1	1
08:00 AM	0	2	2	0	0	0	0	0	0	2
08:15 AM	0	0	0	0	0	0	1	0	1	1
08:30 AM	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	2	2	0	0	0	1	0	1	3
Grand Total	0	2	2	0	0	0	2	0	2	4
Apprch %	0	100		0	0		100	0		
Total %	0	50	50	0	0	0	50	0	50	

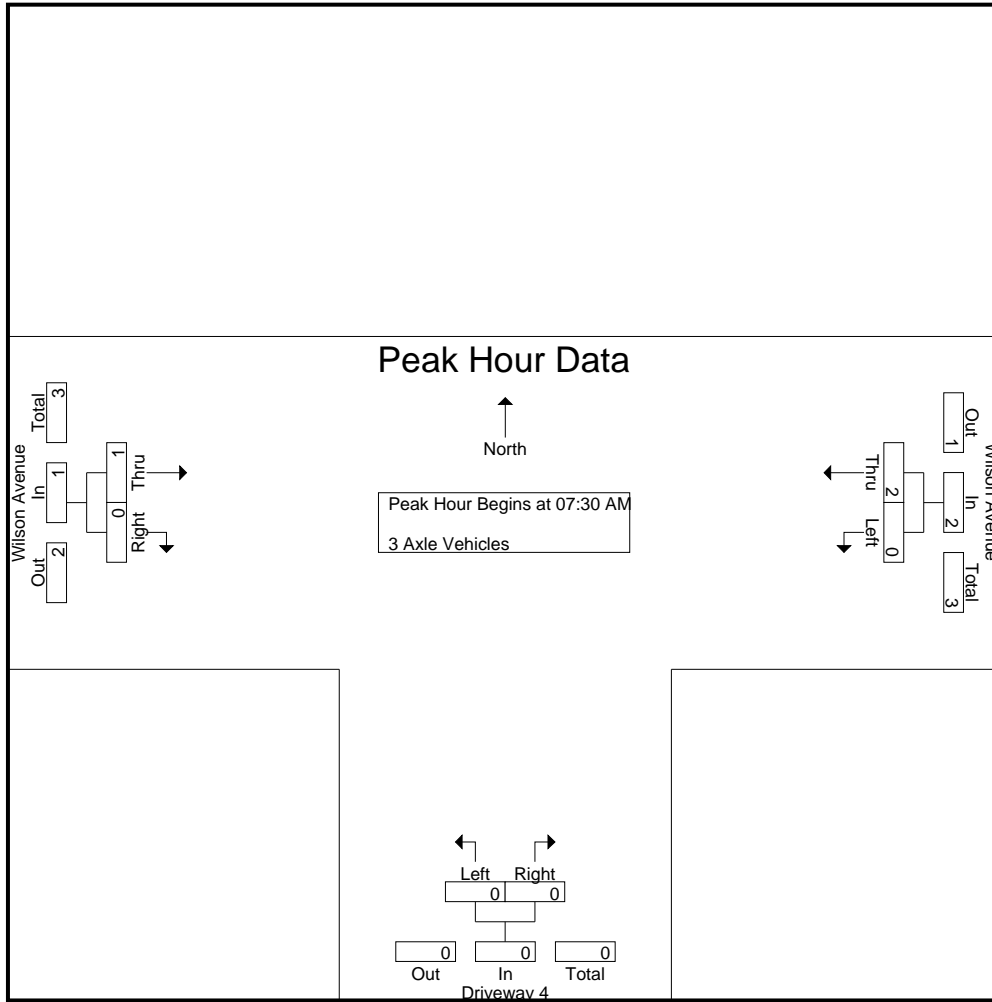
Start Time	Wilson Avenue Westbound			Driveway 4 Northbound			Wilson Avenue Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	2	2	0	0	0	0	0	0	2
08:15 AM	0	0	0	0	0	0	1	0	1	1
Total Volume	0	2	2	0	0	0	1	0	1	3
% App. Total	0	100		0	0		100	0		
PHF	.000	.250	.250	.000	.000	.000	.250	.000	.250	.375

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:30 AM

City of Rancho Cucamonga  
 N/S: Driveway 4  
 E/W: Wilson Avenue  
 Weather: Clear

File Name : 11\_RNC\_DW4\_Wilson AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 2



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:30 AM			07:30 AM			07:30 AM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	2	2	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	1	0	1
Total Volume	0	2	2	0	0	0	1	0	1
% App. Total	0	100		0	0		100	0	
PHF	.000	.250	.250	.000	.000	.000	.250	.000	.250



City of Rancho Cucamonga  
 N/S: Driveway 4  
 E/W: Wilson Avenue  
 Weather: Clear

File Name : 11\_RNC\_DW4\_Wilson AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 1

Groups Printed- 4+ Axle Trucks

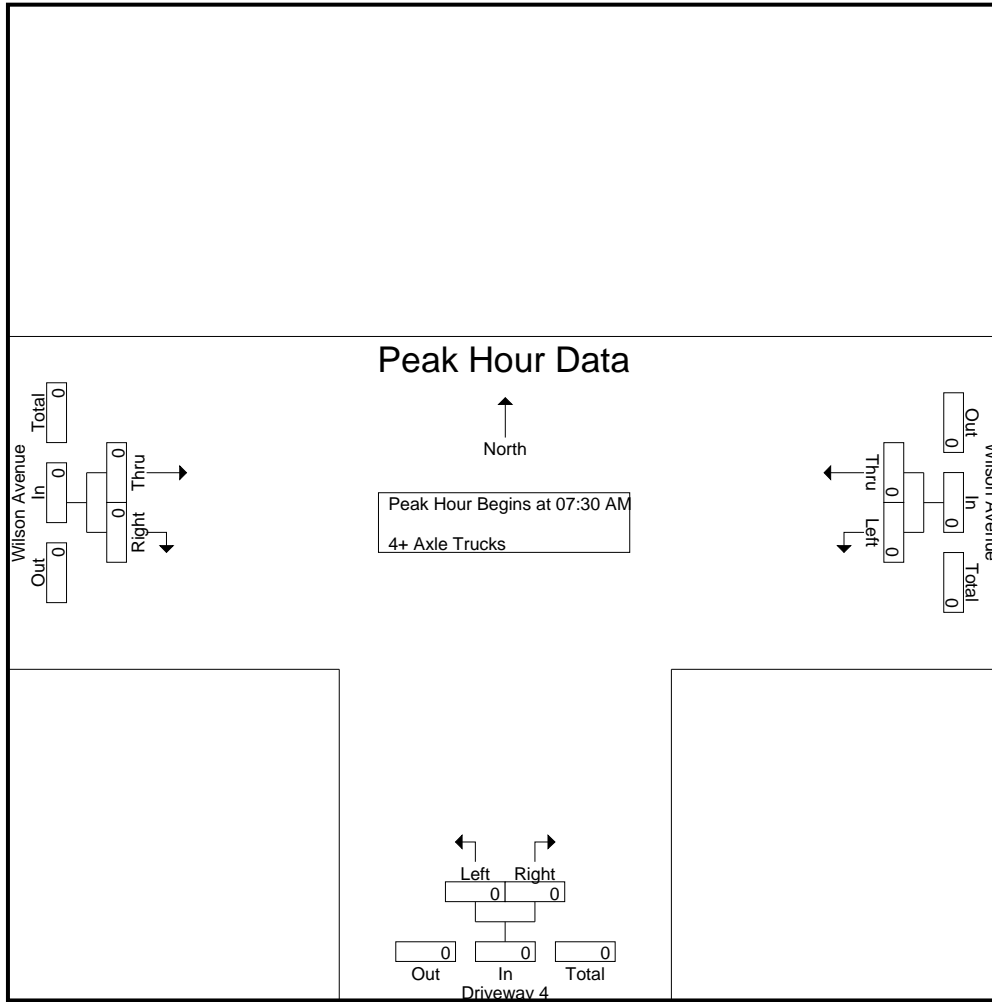
Start Time	Wilson Avenue Westbound			Driveway 4 Northbound			Wilson Avenue Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0		0	0		0	0		
Total %										

Start Time	Wilson Avenue Westbound			Driveway 4 Northbound			Wilson Avenue Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0		0	0		0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:30 AM

City of Rancho Cucamonga  
 N/S: Driveway 4  
 E/W: Wilson Avenue  
 Weather: Clear

File Name : 11\_RNC\_DW4\_Wilson AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 2



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:30 AM			07:30 AM			07:30 AM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000

City of Rancho Cucamonga  
 N/S: Driveway 4  
 E/W: Wilson Avenue  
 Weather: Clear

File Name : 11\_RNC\_DW4\_Wilson PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 1

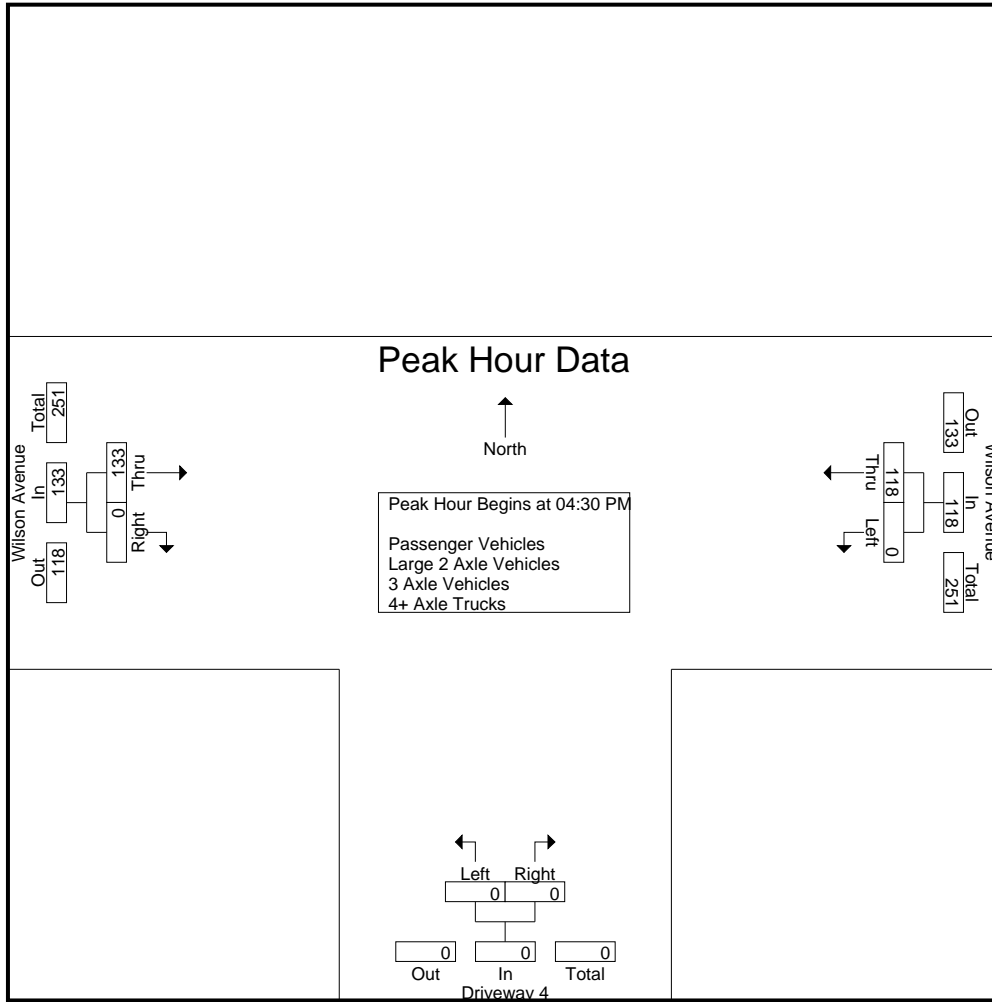
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Wilson Avenue Westbound			Driveway 4 Northbound			Wilson Avenue Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	0	21	21	0	0	0	25	0	25	46
04:15 PM	0	27	27	0	0	0	26	0	26	53
04:30 PM	0	29	29	0	0	0	32	0	32	61
04:45 PM	0	26	26	0	0	0	38	0	38	64
Total	0	103	103	0	0	0	121	0	121	224
05:00 PM	0	27	27	0	0	0	27	0	27	54
05:15 PM	0	36	36	0	0	0	36	0	36	72
05:30 PM	0	23	23	0	0	0	25	0	25	48
05:45 PM	0	25	25	0	0	0	42	0	42	67
Total	0	111	111	0	0	0	130	0	130	241
Grand Total	0	214	214	0	0	0	251	0	251	465
Apprch %	0	100		0	0		100	0		
Total %	0	46	46	0	0	0	54	0	54	
Passenger Vehicles	0	209	209	0	0	0	245	0	245	454
% Passenger Vehicles	0	97.7	97.7	0	0	0	97.6	0	97.6	97.6
Large 2 Axle Vehicles	0	5	5	0	0	0	4	0	4	9
% Large 2 Axle Vehicles	0	2.3	2.3	0	0	0	1.6	0	1.6	1.9
3 Axle Vehicles	0	0	0	0	0	0	2	0	2	2
% 3 Axle Vehicles	0	0	0	0	0	0	0.8	0	0.8	0.4
4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0
% 4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0

Start Time	Wilson Avenue Westbound			Driveway 4 Northbound			Wilson Avenue Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	0	29	29	0	0	0	32	0	32	61
04:45 PM	0	26	26	0	0	0	<b>38</b>	0	<b>38</b>	64
05:00 PM	0	27	27	0	0	0	27	0	27	54
05:15 PM	0	<b>36</b>	<b>36</b>	0	0	0	36	0	36	<b>72</b>
Total Volume	0	118	118	0	0	0	133	0	133	251
% App. Total	0	100		0	0		100	0		
PHF	.000	.819	.819	.000	.000	.000	.875	.000	.875	.872

City of Rancho Cucamonga  
 N/S: Driveway 4  
 E/W: Wilson Avenue  
 Weather: Clear

File Name : 11\_RNC\_DW4\_Wilson PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 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:

	04:30 PM			04:00 PM			04:30 PM		
+0 mins.	0	29	29	0	0	0	32	0	32
+15 mins.	0	26	26	0	0	0	<b>38</b>	0	<b>38</b>
+30 mins.	0	27	27	0	0	0	27	0	27
+45 mins.	0	<b>36</b>	<b>36</b>	0	0	0	36	0	36
Total Volume	0	118	118	0	0	0	133	0	133
% App. Total	0	100		0	0		100	0	
PHF	.000	.819	.819	.000	.000	.000	.875	.000	.875

City of Rancho Cucamonga  
 N/S: Driveway 4  
 E/W: Wilson Avenue  
 Weather: Clear

File Name : 11\_RNC\_DW4\_Wilson PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

Start Time	Wilson Avenue Westbound			Driveway 4 Northbound			Wilson Avenue Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	0	1	1	0	0	0	1	0	1	2
04:15 PM	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	1	1	0	0	0	1	0	1	2
04:45 PM	0	1	1	0	0	0	0	0	0	1
Total	0	3	3	0	0	0	2	0	2	5
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	1	1	0	0	0	0	0	0	1
05:30 PM	0	1	1	0	0	0	1	0	1	2
05:45 PM	0	0	0	0	0	0	1	0	1	1
Total	0	2	2	0	0	0	2	0	2	4
Grand Total	0	5	5	0	0	0	4	0	4	9
Apprch %	0	100		0	0		100	0		
Total %	0	55.6	55.6	0	0	0	44.4	0	44.4	

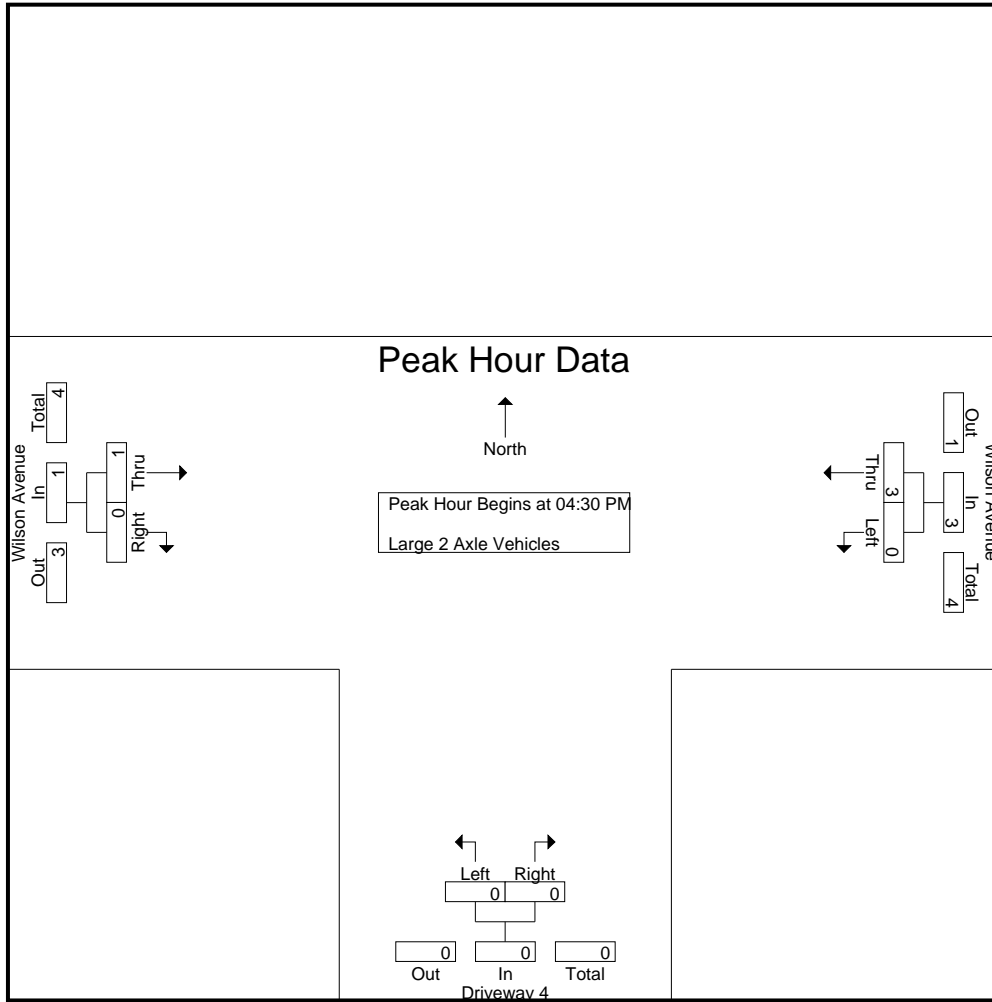
Start Time	Wilson Avenue Westbound			Driveway 4 Northbound			Wilson Avenue Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:30 PM	0	1	1	0	0	0	1	0	1	2
04:45 PM	0	1	1	0	0	0	0	0	0	1
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	1	1	0	0	0	0	0	0	1
Total Volume	0	3	3	0	0	0	1	0	1	4
% App. Total	0	100		0	0		100	0		
PHF	.000	.750	.750	.000	.000	.000	.250	.000	.250	.500

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

City of Rancho Cucamonga  
 N/S: Driveway 4  
 E/W: Wilson Avenue  
 Weather: Clear

File Name : 11\_RNC\_DW4\_Wilson PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 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:

	04:30 PM			04:30 PM			04:30 PM		
+0 mins.	0	1	1	0	0	0	1	0	1
+15 mins.	0	1	1	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	1	1	0	0	0	0	0	0
Total Volume	0	3	3	0	0	0	1	0	1
% App. Total	0	100		0	0		100	0	
PHF	.000	.750	.750	.000	.000	.000	.250	.000	.250

City of Rancho Cucamonga  
 N/S: Driveway 4  
 E/W: Wilson Avenue  
 Weather: Clear

File Name : 11\_RNC\_DW4\_Wilson PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 1

Groups Printed- 3 Axle Vehicles

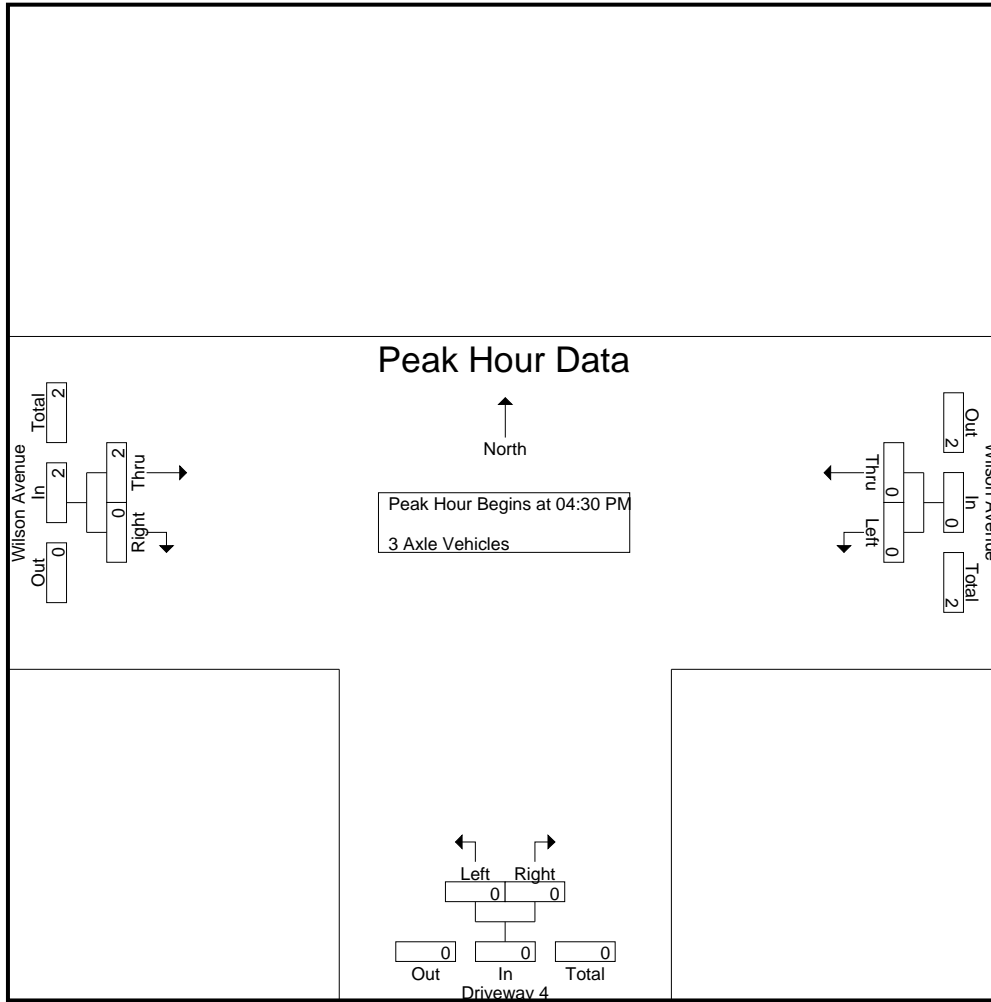
Start Time	Wilson Avenue Westbound			Driveway 4 Northbound			Wilson Avenue Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	2	0	2	2
04:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	2	0	2	2
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	2	0	2	2
Apprch %	0	0	0	0	0	0	100	0	100	100
Total %	0	0	0	0	0	0	100	0	100	100

Start Time	Wilson Avenue Westbound			Driveway 4 Northbound			Wilson Avenue Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:30 PM	0	0	0	0	0	0	2	0	2	2
04:45 PM	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	2	0	2	2
% App. Total	0	0	0	0	0	0	100	0	100	100
PHF	.000	.000	.000	.000	.000	.000	.250	.000	.250	.250

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

City of Rancho Cucamonga  
 N/S: Driveway 4  
 E/W: Wilson Avenue  
 Weather: Clear

File Name : 11\_RNC\_DW4\_Wilson PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 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:

	04:30 PM			04:30 PM			04:30 PM		
+0 mins.	0	0	0	0	0	0	<b>2</b>	0	<b>2</b>
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	2	0	2
% App. Total	0	0	0	0	0	0	100	0	0
PHF	.000	.000	.000	.000	.000	.000	.250	.000	.250



City of Rancho Cucamonga  
 N/S: Driveway 4  
 E/W: Wilson Avenue  
 Weather: Clear

File Name : 11\_RNC\_DW4\_Wilson PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 1

Groups Printed- 4+ Axle Trucks

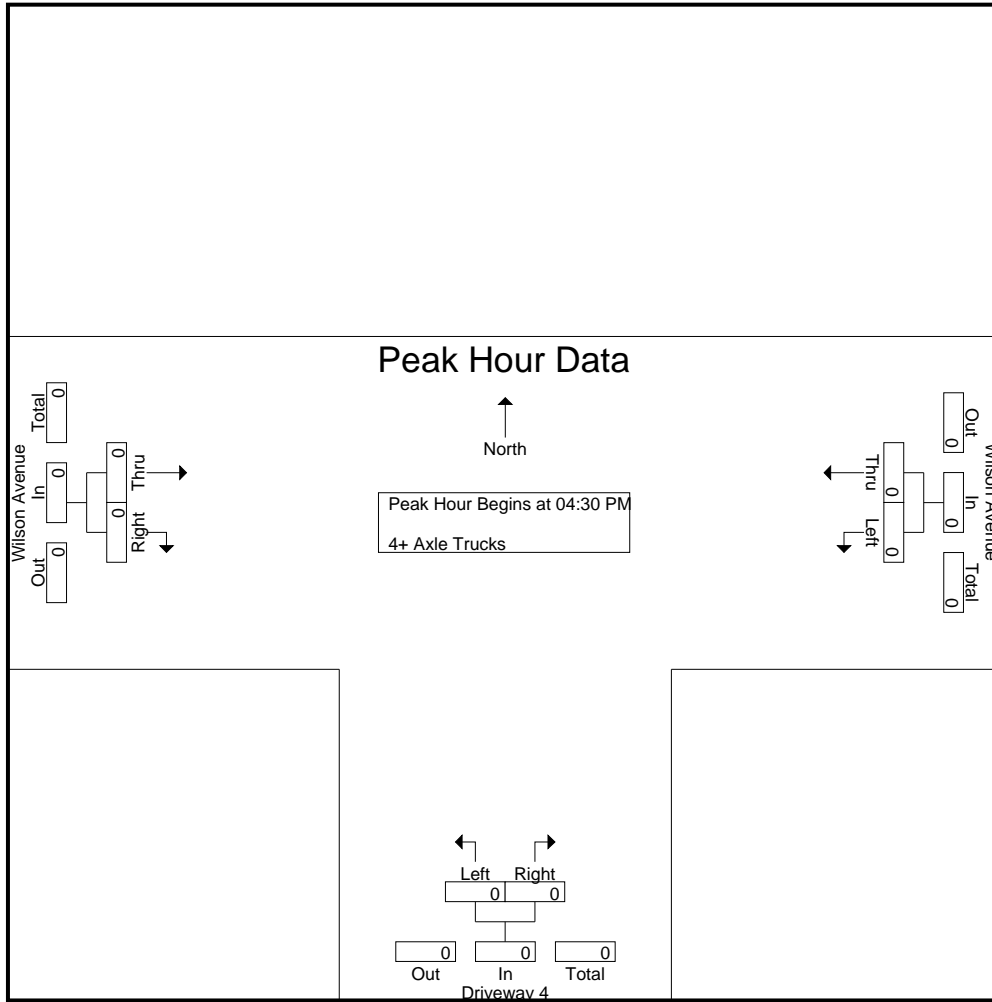
Start Time	Wilson Avenue Westbound			Driveway 4 Northbound			Wilson Avenue Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0		0	0		0	0		
Total %										

Start Time	Wilson Avenue Westbound			Driveway 4 Northbound			Wilson Avenue Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0		0	0		0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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

City of Rancho Cucamonga  
 N/S: Driveway 4  
 E/W: Wilson Avenue  
 Weather: Clear

File Name : 11\_RNC\_DW4\_Wilson PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 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:

	04:30 PM			04:30 PM			04:30 PM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000

Location: Rancho Cucamonga  
 N/S: Driveway 4  
 E/W: Wilson Avenue



Date: 6/2/2021  
 Day: Wednesday

PEDESTRIANS

	North Leg Dead End	East Leg Wilson Avenue	South Leg Driveway 4	West Leg Wilson Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	1	0	1
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	2	0	0	0	2
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:	2	0	2	0	4

	North Leg Dead End	East Leg Wilson Avenue	South Leg Driveway 4	West Leg Wilson Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
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	1	0	1
5:00 PM	1	0	0	0	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:	1	0	1	0	2

Location: Rancho Cucamonga  
 N/S: Driveway 4  
 E/W: Wilson Avenue



Date: 6/2/2021  
 Day: Wednesday

BICYCLES

	Southbound Dead End			Westbound Wilson Avenue			Northbound Driveway 4			Eastbound Wilson Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
7:15 AM	0	0	0	0	1	0	0	0	0	0	1	0	2
7:30 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
TOTAL VOLUMES:	0	0	0	0	3	0	0	0	0	0	3	0	6

	Southbound Dead End			Westbound Wilson Avenue			Northbound Driveway 4			Eastbound Wilson Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	2	0	2
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	1	0	0	0	0	0	1	0	2
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
TOTAL VOLUMES:	0	0	0	0	2	0	0	0	0	0	3	0	5

City of Rancho Cucamonga  
 N/S: College Drive  
 E/W: Wilson Avenue  
 Weather: Clear

File Name : 12\_RNC\_College\_Wilson AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 1

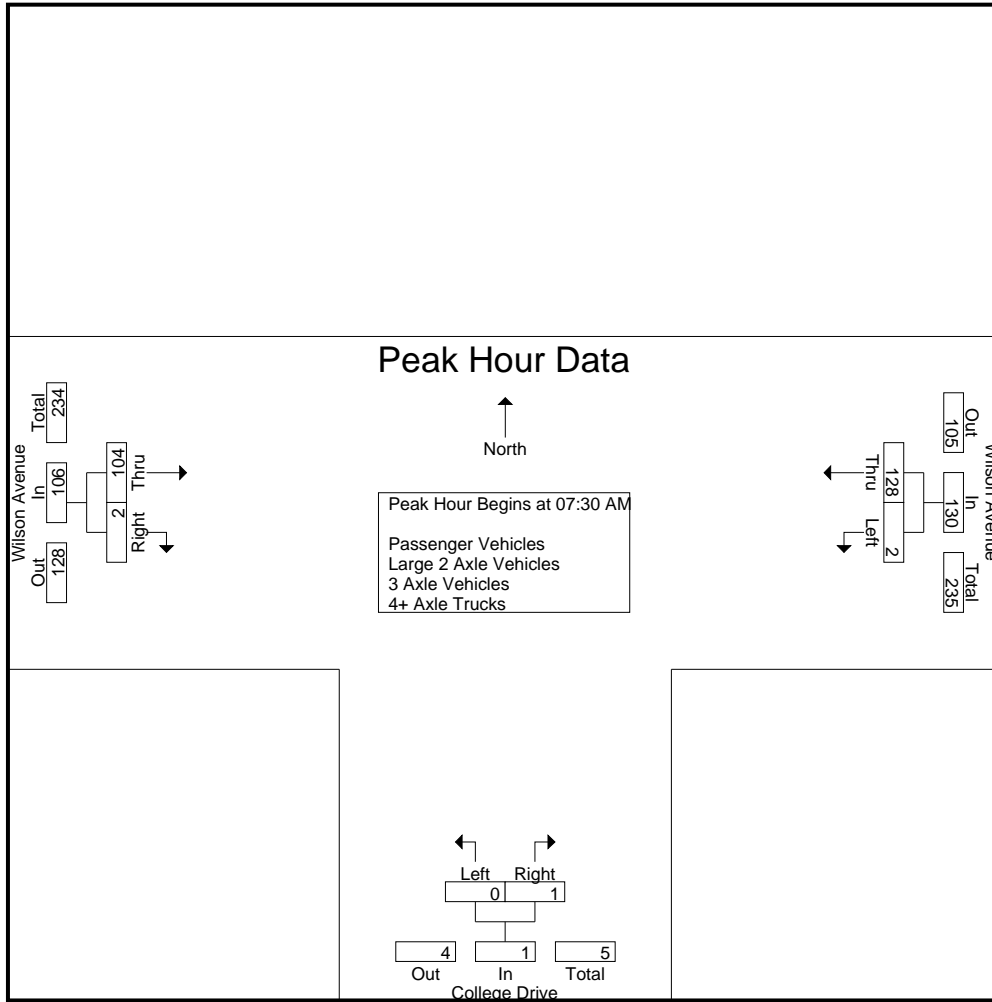
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Wilson Avenue Westbound			College Drive Northbound			Wilson Avenue Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	1	15	16	1	0	1	9	0	9	26
07:15 AM	2	19	21	0	0	0	7	1	8	29
07:30 AM	0	28	28	0	0	0	27	2	29	57
07:45 AM	1	41	42	0	0	0	45	0	45	87
Total	4	103	107	1	0	1	88	3	91	199
08:00 AM	1	33	34	0	0	0	18	0	18	52
08:15 AM	0	26	26	0	1	1	14	0	14	41
08:30 AM	0	22	22	0	0	0	15	0	15	37
08:45 AM	0	21	21	3	0	3	16	1	17	41
Total	1	102	103	3	1	4	63	1	64	171
Grand Total	5	205	210	4	1	5	151	4	155	370
Apprch %	2.4	97.6		80	20		97.4	2.6		
Total %	1.4	55.4	56.8	1.1	0.3	1.4	40.8	1.1	41.9	
Passenger Vehicles	5	201	206	4	1	5	145	3	148	359
% Passenger Vehicles	100	98	98.1	100	100	100	96	75	95.5	97
Large 2 Axle Vehicles	0	2	2	0	0	0	5	0	5	7
% Large 2 Axle Vehicles	0	1	1	0	0	0	3.3	0	3.2	1.9
3 Axle Vehicles	0	2	2	0	0	0	1	1	2	4
% 3 Axle Vehicles	0	1	1	0	0	0	0.7	25	1.3	1.1
4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0
% 4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0

Start Time	Wilson Avenue Westbound			College Drive Northbound			Wilson Avenue Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	0	28	28	0	0	0	27	2	29	57
07:45 AM	1	41	42	0	0	0	45	0	45	87
08:00 AM	1	33	34	0	0	0	18	0	18	52
08:15 AM	0	26	26	0	1	1	14	0	14	41
Total Volume	2	128	130	0	1	1	104	2	106	237
% App. Total	1.5	98.5		0	100		98.1	1.9		
PHF	.500	.780	.774	.000	.250	.250	.578	.250	.589	.681

City of Rancho Cucamonga  
 N/S: College Drive  
 E/W: Wilson Avenue  
 Weather: Clear

File Name : 12\_RNC\_College\_Wilson AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 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:

	07:30 AM			08:00 AM			07:30 AM		
+0 mins.	0	28	28	0	0	0	27	2	29
+15 mins.	1	41	42	0	1	1	45	0	45
+30 mins.	1	33	34	0	0	0	18	0	18
+45 mins.	0	26	26	3	0	3	14	0	14
Total Volume	2	128	130	3	1	4	104	2	106
% App. Total	1.5	98.5		75	25		98.1	1.9	
PHF	.500	.780	.774	.250	.250	.333	.578	.250	.589

City of Rancho Cucamonga  
 N/S: College Drive  
 E/W: Wilson Avenue  
 Weather: Clear

File Name : 12\_RNC\_College\_Wilson AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

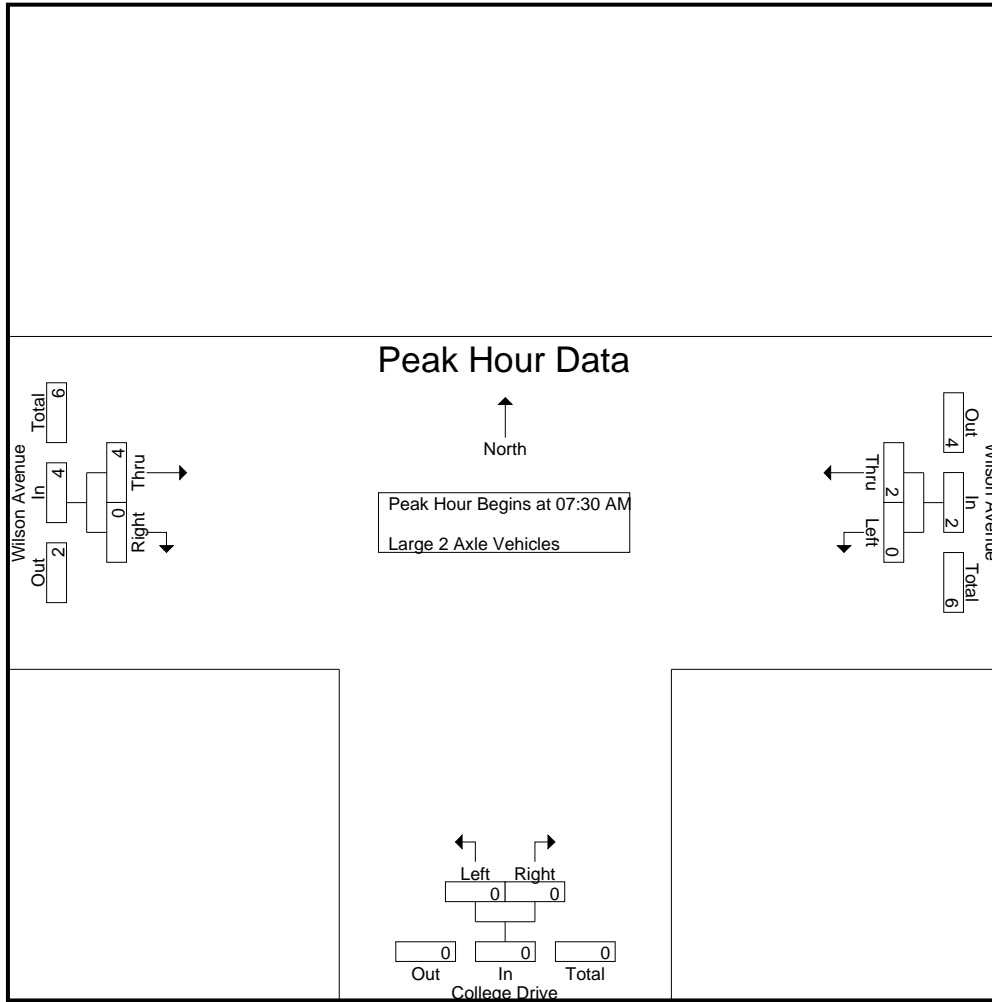
Start Time	Wilson Avenue Westbound			College Drive Northbound			Wilson Avenue Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	1	1	0	0	0	1	0	1	2
07:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	1	1	0	0	0	1	0	1	2
08:00 AM	0	0	0	0	0	0	1	0	1	1
08:15 AM	0	1	1	0	0	0	2	0	2	3
08:30 AM	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	1	0	1	1
Total	0	1	1	0	0	0	4	0	4	5
Grand Total	0	2	2	0	0	0	5	0	5	7
Apprch %	0	100		0	0		100	0		
Total %	0	28.6	28.6	0	0	0	71.4	0	71.4	

Start Time	Wilson Avenue Westbound			College Drive Northbound			Wilson Avenue Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:30 AM	0	1	1	0	0	0	1	0	1	2
07:45 AM	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	1	0	1	1
08:15 AM	0	1	1	0	0	0	2	0	2	3
Total Volume	0	2	2	0	0	0	4	0	4	6
% App. Total	0	100		0	0		100	0		
PHF	.000	.500	.500	.000	.000	.000	.500	.000	.500	.500

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:30 AM

City of Rancho Cucamonga  
 N/S: College Drive  
 E/W: Wilson Avenue  
 Weather: Clear

File Name : 12\_RNC\_College\_Wilson AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 2



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:30 AM			07:30 AM			07:30 AM		
+0 mins.	0	1	1	0	0	0	1	0	1
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	1	0	1
+45 mins.	0	1	1	0	0	0	2	0	2
Total Volume	0	2	2	0	0	0	4	0	4
% App. Total	0	100		0	0		100	0	
PHF	.000	.500	.500	.000	.000	.000	.500	.000	.500



City of Rancho Cucamonga  
 N/S: College Drive  
 E/W: Wilson Avenue  
 Weather: Clear

File Name : 12\_RNC\_College\_Wilson AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 1

Groups Printed- 3 Axle Vehicles

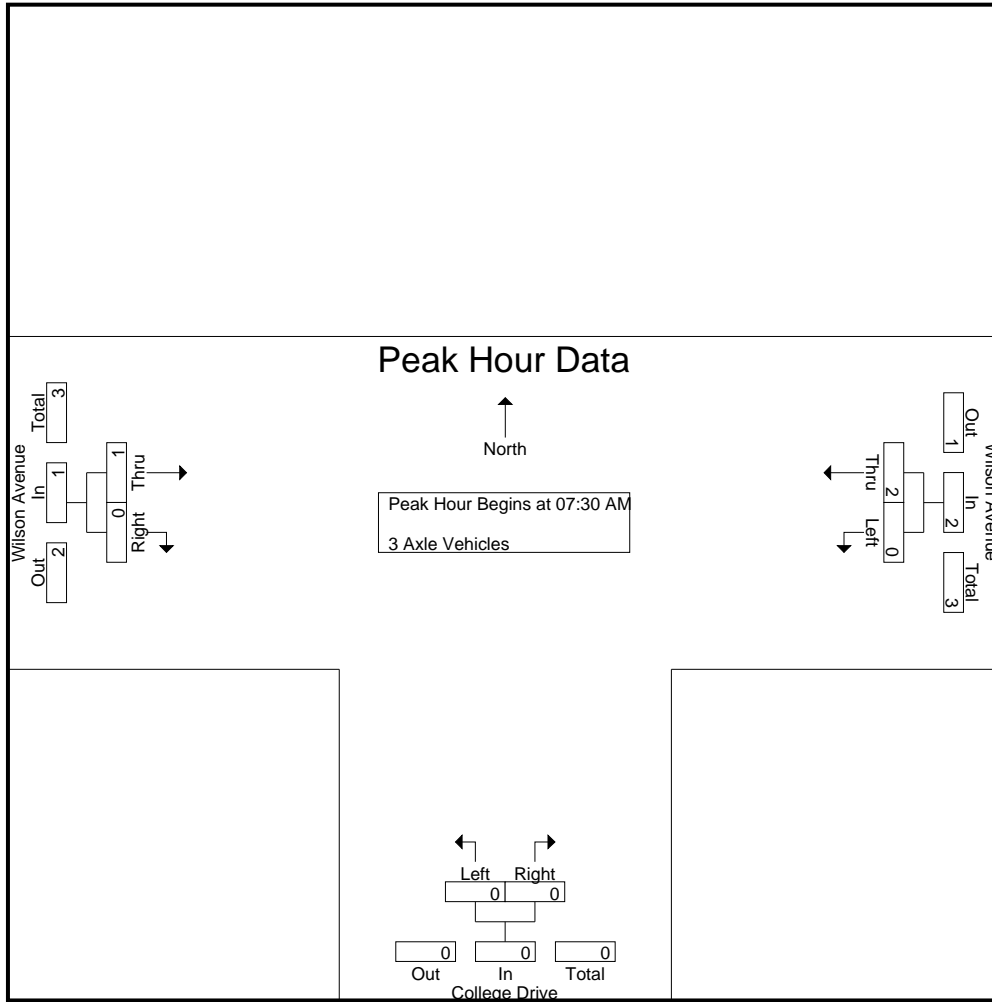
Start Time	Wilson Avenue Westbound			College Drive Northbound			Wilson Avenue Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	1	1	1
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	1	1	1
08:00 AM	0	2	2	0	0	0	0	0	0	2
08:15 AM	0	0	0	0	0	0	1	0	1	1
08:30 AM	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	2	2	0	0	0	1	0	1	3
Grand Total	0	2	2	0	0	0	1	1	2	4
Apprch %	0	100		0	0		50	50		
Total %	0	50	50	0	0	0	25	25	50	

Start Time	Wilson Avenue Westbound			College Drive Northbound			Wilson Avenue Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	2	2	0	0	0	0	0	0	2
08:15 AM	0	0	0	0	0	0	1	0	1	1
Total Volume	0	2	2	0	0	0	1	0	1	3
% App. Total	0	100		0	0		100	0		
PHF	.000	.250	.250	.000	.000	.000	.250	.000	.250	.375

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:30 AM

City of Rancho Cucamonga  
 N/S: College Drive  
 E/W: Wilson Avenue  
 Weather: Clear

File Name : 12\_RNC\_College\_Wilson AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 2



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:30 AM			07:30 AM			07:30 AM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	2	2	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	1	0	1
Total Volume	0	2	2	0	0	0	1	0	1
% App. Total	0	100		0	0		100	0	
PHF	.000	.250	.250	.000	.000	.000	.250	.000	.250

City of Rancho Cucamonga  
 N/S: College Drive  
 E/W: Wilson Avenue  
 Weather: Clear

File Name : 12\_RNC\_College\_Wilson AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 1

Groups Printed- 4+ Axle Trucks

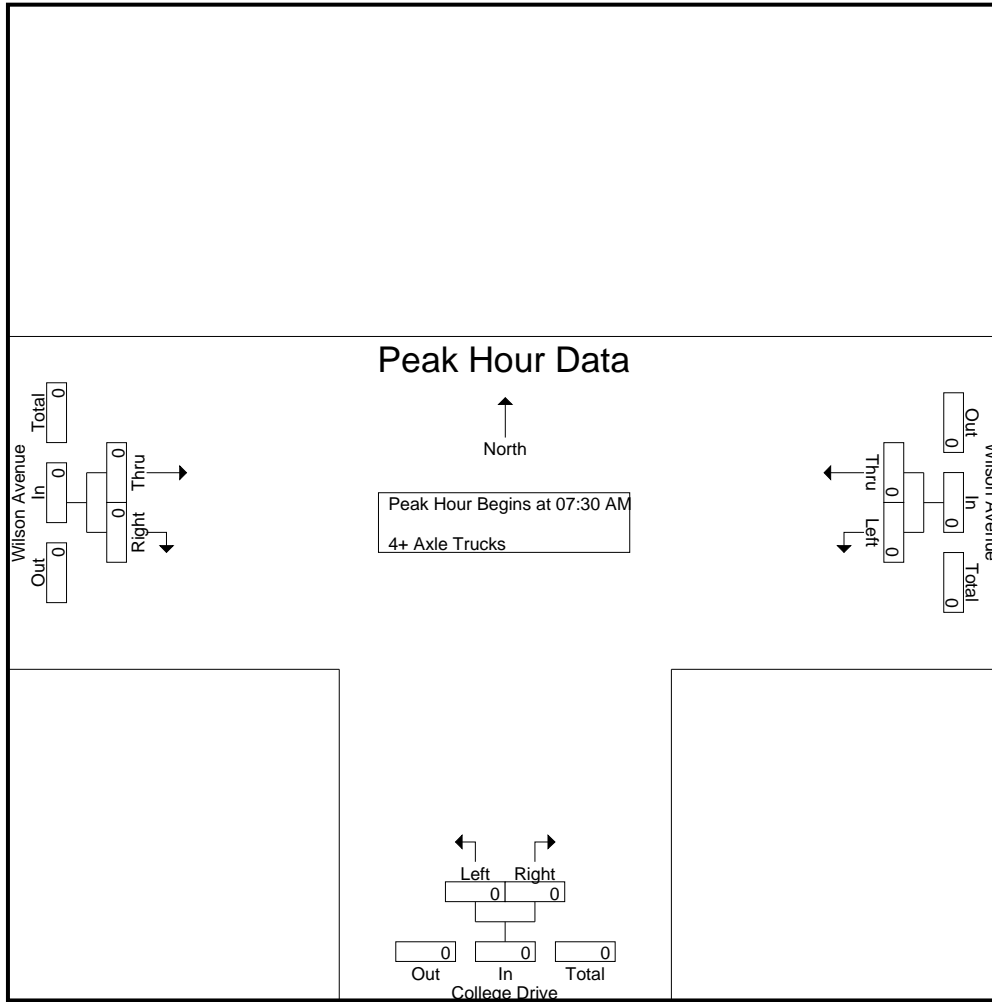
Start Time	Wilson Avenue Westbound			College Drive Northbound			Wilson Avenue Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0		0	0		0	0		
Total %										

Start Time	Wilson Avenue Westbound			College Drive Northbound			Wilson Avenue Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0		0	0		0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:30 AM

City of Rancho Cucamonga  
 N/S: College Drive  
 E/W: Wilson Avenue  
 Weather: Clear

File Name : 12\_RNC\_College\_Wilson AM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 2



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:30 AM			07:30 AM			07:30 AM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000

City of Rancho Cucamonga  
 N/S: College Drive  
 E/W: Wilson Avenue  
 Weather: Clear

File Name : 12\_RNC\_College\_Wilson PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 1

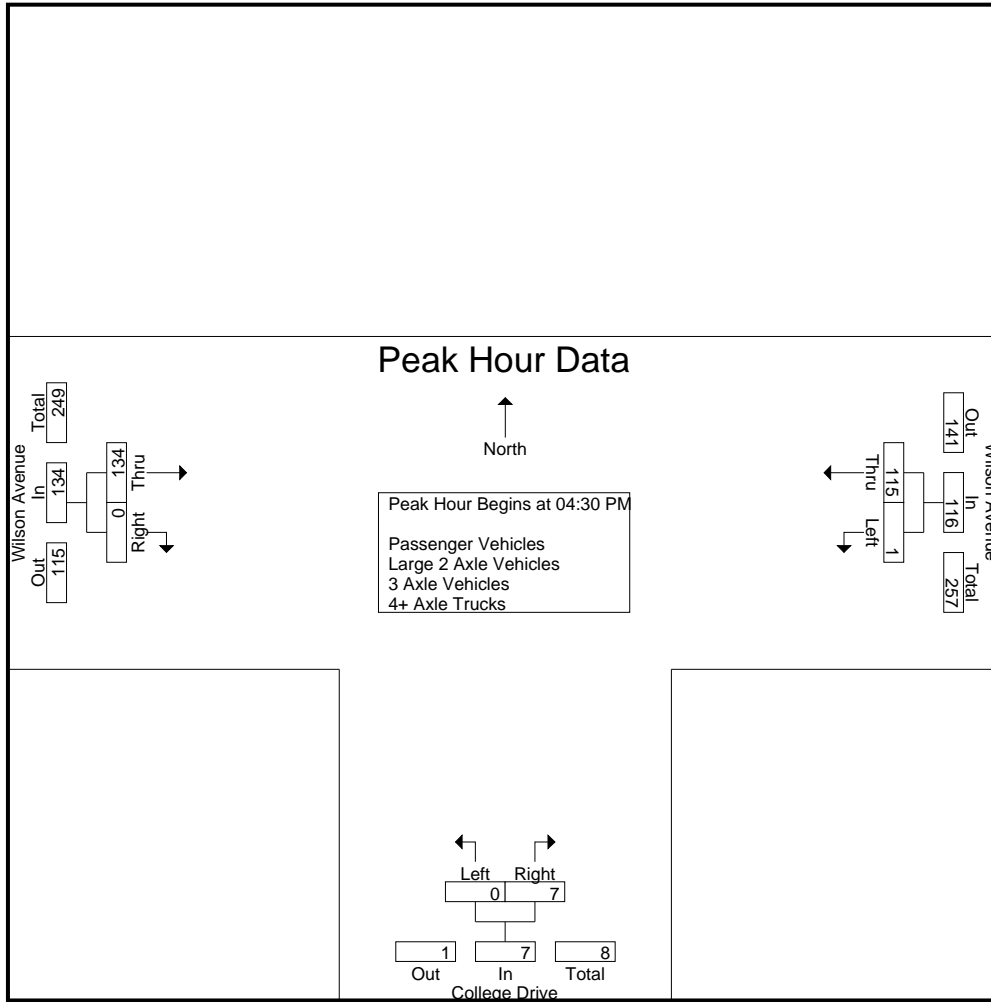
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Wilson Avenue Westbound			College Drive Northbound			Wilson Avenue Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	0	18	18	1	0	1	26	1	27	46
04:15 PM	1	25	26	1	0	1	25	0	25	52
04:30 PM	0	30	30	0	3	3	32	0	32	65
04:45 PM	1	24	25	0	1	1	39	0	39	65
<b>Total</b>	<b>2</b>	<b>97</b>	<b>99</b>	<b>2</b>	<b>4</b>	<b>6</b>	<b>122</b>	<b>1</b>	<b>123</b>	<b>228</b>
05:00 PM	0	26	26	0	3	3	28	0	28	57
05:15 PM	0	35	35	0	0	0	35	0	35	70
05:30 PM	0	23	23	0	0	0	24	0	24	47
05:45 PM	0	25	25	0	0	0	41	0	41	66
<b>Total</b>	<b>0</b>	<b>109</b>	<b>109</b>	<b>0</b>	<b>3</b>	<b>3</b>	<b>128</b>	<b>0</b>	<b>128</b>	<b>240</b>
<b>Grand Total</b>	<b>2</b>	<b>206</b>	<b>208</b>	<b>2</b>	<b>7</b>	<b>9</b>	<b>250</b>	<b>1</b>	<b>251</b>	<b>468</b>
Apprch %	1	99		22.2	77.8		99.6	0.4		
Total %	0.4	44	44.4	0.4	1.5	1.9	53.4	0.2	53.6	
Passenger Vehicles	2	201	203	2	7	9	243	0	243	455
% Passenger Vehicles	100	97.6	97.6	100	100	100	97.2	0	96.8	97.2
Large 2 Axle Vehicles	0	5	5	0	0	0	7	1	8	13
% Large 2 Axle Vehicles	0	2.4	2.4	0	0	0	2.8	100	3.2	2.8
3 Axle Vehicles	0	0	0	0	0	0	0	0	0	0
% 3 Axle Vehicles	0	0	0	0	0	0	0	0	0	0
4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0
% 4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0

Start Time	Wilson Avenue Westbound			College Drive Northbound			Wilson Avenue Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	0	30	30	0	<b>3</b>	<b>3</b>	32	0	32	65
04:45 PM	<b>1</b>	24	25	0	1	1	<b>39</b>	0	<b>39</b>	65
05:00 PM	0	26	26	0	3	3	28	0	28	57
05:15 PM	0	<b>35</b>	<b>35</b>	0	0	0	35	0	35	<b>70</b>
Total Volume	1	115	116	0	7	7	134	0	134	257
% App. Total	0.9	99.1		0	100		100	0		
PHF	.250	.821	.829	.000	.583	.583	.859	.000	.859	.918

City of Rancho Cucamonga  
 N/S: College Drive  
 E/W: Wilson Avenue  
 Weather: Clear

File Name : 12\_RNC\_College\_Wilson PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 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:

	04:30 PM			04:15 PM			04:30 PM		
+0 mins.	0	30	30	1	0	1	32	0	32
+15 mins.	1	24	25	0	3	3	39	0	39
+30 mins.	0	26	26	0	1	1	28	0	28
+45 mins.	0	35	35	0	3	3	35	0	35
Total Volume	1	115	116	1	7	8	134	0	134
% App. Total	0.9	99.1		12.5	87.5		100	0	
PHF	.250	.821	.829	.250	.583	.667	.859	.000	.859

City of Rancho Cucamonga  
 N/S: College Drive  
 E/W: Wilson Avenue  
 Weather: Clear

File Name : 12\_RNC\_College\_Wilson PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

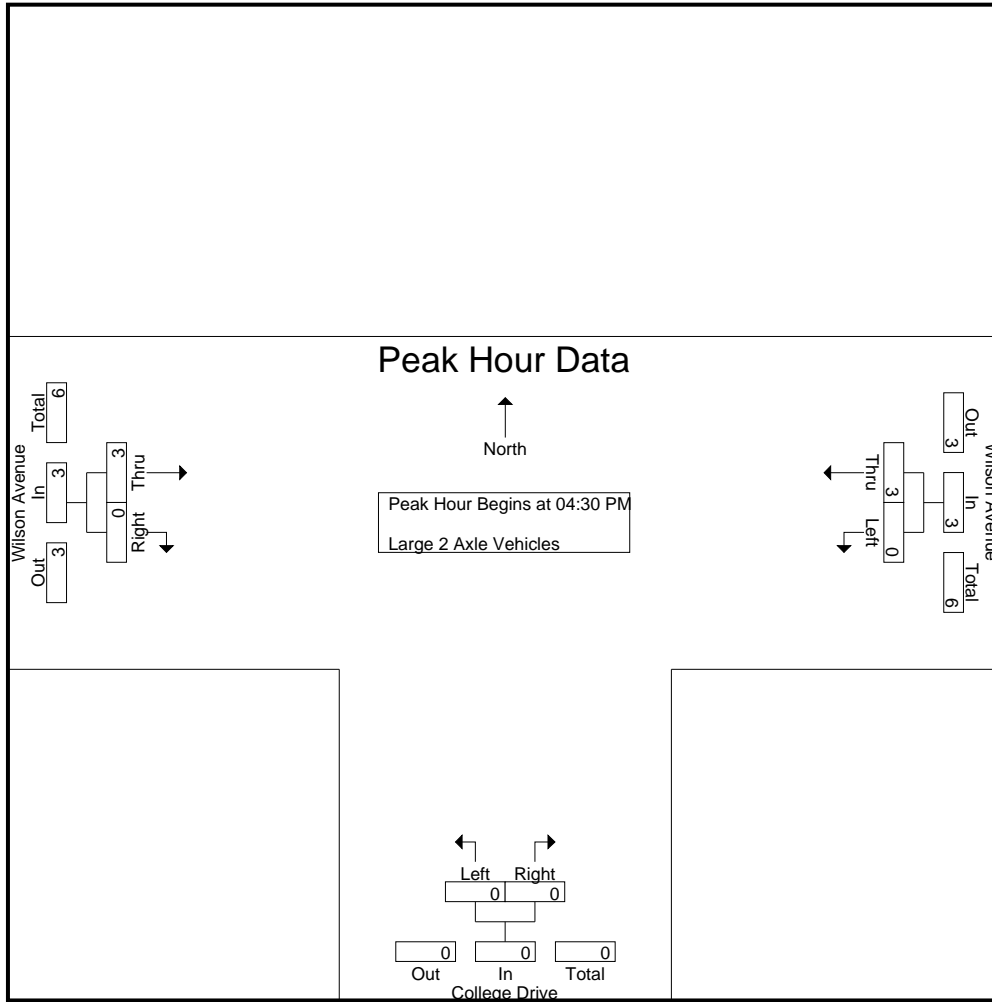
Start Time	Wilson Avenue Westbound			College Drive Northbound			Wilson Avenue Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	0	0	0	0	0	0	2	1	3	3
04:15 PM	0	1	1	0	0	0	0	0	0	1
04:30 PM	0	1	1	0	0	0	3	0	3	4
04:45 PM	0	1	1	0	0	0	0	0	0	1
Total	0	3	3	0	0	0	5	1	6	9
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	1	1	0	0	0	0	0	0	1
05:30 PM	0	1	1	0	0	0	1	0	1	2
05:45 PM	0	0	0	0	0	0	1	0	1	1
Total	0	2	2	0	0	0	2	0	2	4
Grand Total	0	5	5	0	0	0	7	1	8	13
Apprch %	0	100		0	0		87.5	12.5		
Total %	0	38.5	38.5	0	0	0	53.8	7.7	61.5	

Start Time	Wilson Avenue Westbound			College Drive Northbound			Wilson Avenue Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:30 PM	0	1	1	0	0	0	3	0	3	4
04:45 PM	0	1	1	0	0	0	0	0	0	1
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	1	1	0	0	0	0	0	0	1
Total Volume	0	3	3	0	0	0	3	0	3	6
% App. Total	0	100		0	0		100	0		
PHF	.000	.750	.750	.000	.000	.000	.250	.000	.250	.375

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

City of Rancho Cucamonga  
 N/S: College Drive  
 E/W: Wilson Avenue  
 Weather: Clear

File Name : 12\_RNC\_College\_Wilson PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 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:

	04:30 PM			04:30 PM			04:30 PM		
+0 mins.	0	1	1	0	0	0	3	0	3
+15 mins.	0	1	1	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	1	1	0	0	0	0	0	0
Total Volume	0	3	3	0	0	0	3	0	3
% App. Total	0	100		0	0		100	0	
PHF	.000	.750	.750	.000	.000	.000	.250	.000	.250



City of Rancho Cucamonga  
 N/S: College Drive  
 E/W: Wilson Avenue  
 Weather: Clear

File Name : 12\_RNC\_College\_Wilson PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 1

Groups Printed- 3 Axle Vehicles

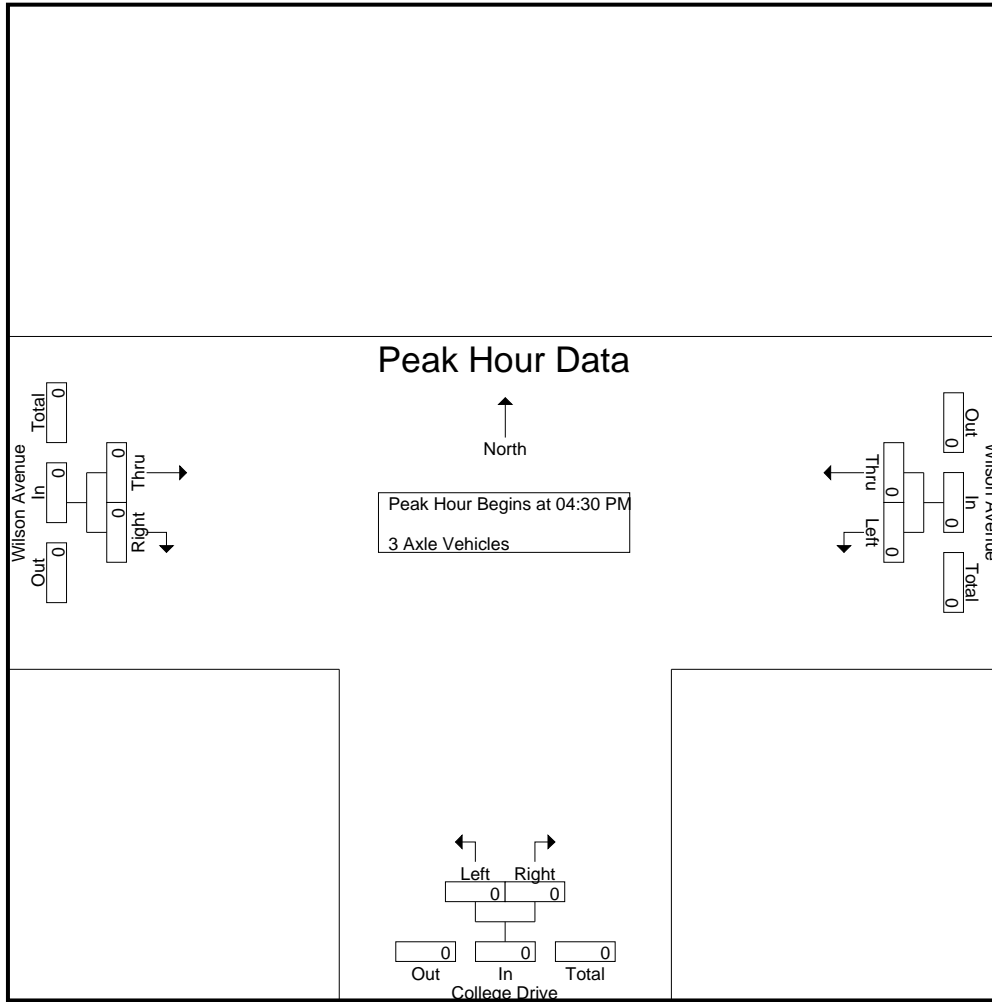
Start Time	Wilson Avenue Westbound			College Drive Northbound			Wilson Avenue Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0		0	0		0	0		
Total %										

Start Time	Wilson Avenue Westbound			College Drive Northbound			Wilson Avenue Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0		0	0		0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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

City of Rancho Cucamonga  
 N/S: College Drive  
 E/W: Wilson Avenue  
 Weather: Clear

File Name : 12\_RNC\_College\_Wilson PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 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:

	04:30 PM			04:30 PM			04:30 PM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000

City of Rancho Cucamonga  
 N/S: College Drive  
 E/W: Wilson Avenue  
 Weather: Clear

File Name : 12\_RNC\_College\_Wilson PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 Page No : 1

Groups Printed- 4+ Axle Trucks

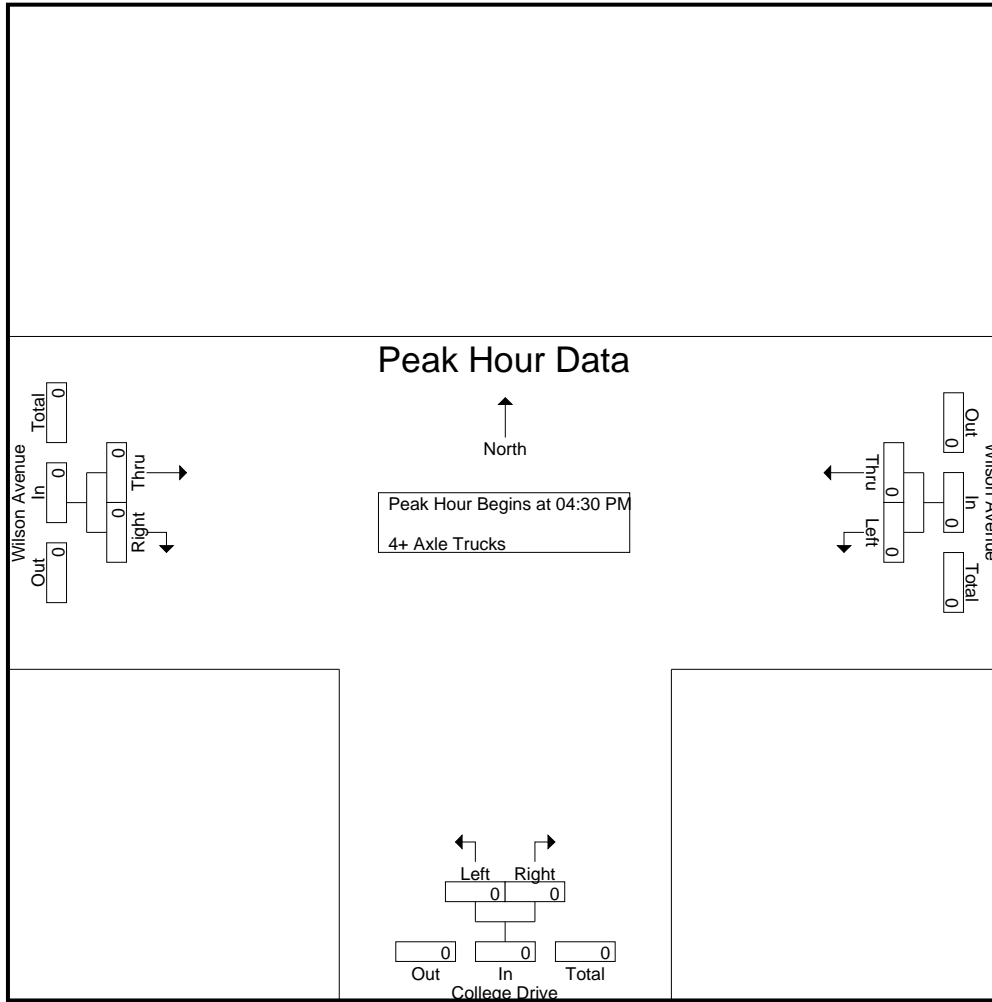
Start Time	Wilson Avenue Westbound			College Drive Northbound			Wilson Avenue Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0		0	0		0	0		
Total %										

Start Time	Wilson Avenue Westbound			College Drive Northbound			Wilson Avenue Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0		0	0		0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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

City of Rancho Cucamonga  
 N/S: College Drive  
 E/W: Wilson Avenue  
 Weather: Clear

File Name : 12\_RNC\_College\_Wilson PM  
 Site Code : 05121260  
 Start Date : 6/2/2021  
 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:

	04:30 PM			04:30 PM			04:30 PM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000

Location: Rancho Cucamonga  
 N/S: College Drive  
 E/W: Wilson Avenue



Date: 6/2/2021  
 Day: Wednesday

PEDESTRIANS

	North Leg Dead End	East Leg Wilson Avenue	South Leg College Drive	West Leg Wilson Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	1	0	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	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	2	0	2

	North Leg Dead End	East Leg Wilson Avenue	South Leg College Drive	West Leg Wilson Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
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

Location: Rancho Cucamonga  
 N/S: College Drive  
 E/W: Wilson Avenue



Date: 6/2/2021  
 Day: Wednesday

BICYCLES

	Southbound Dead End			Westbound Wilson Avenue			Northbound College Drive			Eastbound Wilson Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
7:15 AM	0	0	0	0	1	0	0	0	0	0	1	0	2
7:30 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
TOTAL VOLUMES:	0	0	0	0	3	0	0	0	0	0	3	0	6

	Southbound Dead End			Westbound Wilson Avenue			Northbound College Drive			Eastbound Wilson Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	2	0	2
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	1	0	0	0	0	0	1	0	2
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
TOTAL VOLUMES:	0	0	0	0	2	0	0	0	0	0	3	0	5

1: Haven & Wilson

	<u>NBL</u>	<u>NBT</u>	<u>NBR</u>	<u>SBL</u>	<u>SBT</u>	<u>SBR</u>	<u>EBL</u>	<u>EBT</u>	<u>EBR</u>	<u>WBL</u>	<u>WBT</u>	<u>WBR</u>	<u>TOTAL</u>
2019 historic	35	64	227	12	151	23	7	120	39	71	53	30	832
2021 adjusted	36	67	236	12	157	24	7	125	41	74	55	31	866
2021 collected growth	26	84	26	16	141	16	9	63	24	31	73	29	538
<b>New 2021 Adj.</b>	<b>36</b>	<b>84</b>	<b>236</b>	<b>16</b>	<b>157</b>	<b>24</b>	<b>9</b>	<b>125</b>	<b>41</b>	<b>74</b>	<b>73</b>	<b>31</b>	<b>906</b>

161%

6: Haven & Lemon

	<u>NBL</u>	<u>NBT</u>	<u>NBR</u>	<u>SBL</u>	<u>SBT</u>	<u>SBR</u>	<u>EBL</u>	<u>EBT</u>	<u>EBR</u>	<u>WBL</u>	<u>WBT</u>	<u>WBR</u>	<u>TOTAL</u>
2019 historic	80	894	58	6	450	45	36	16	62	281	45	11	1984
2021 adjusted	83	930	60	6	468	47	37	17	65	292	47	11	2064
2021 collected growth	69	249	94	6	343	40	46	24	63	194	51	5	1184
<b>New 2021 Adj.</b>	<b>83</b>	<b>930</b>	<b>94</b>	<b>6</b>	<b>468</b>	<b>47</b>	<b>46</b>	<b>24</b>	<b>65</b>	<b>292</b>	<b>51</b>	<b>11</b>	<b>2118</b>

1: Haven & Wilson

	<u>NBL</u>	<u>NBT</u>	<u>NBR</u>	<u>SBL</u>	<u>SBT</u>	<u>SBR</u>	<u>EBL</u>	<u>EBT</u>	<u>EBR</u>	<u>WBL</u>	<u>WBT</u>	<u>WBR</u>	<u>TOTAL</u>
2019 historic	61	143	137	32	114	16	52	110	55	194	80	58	1052
2021 adjusted	63	149	143	33	119	17	54	114	57	202	83	60	1095
2021 collected growth	33	161	24	26	120	10	25	85	36	16	46	51	633
<b>New 2021 Adj.</b>	<b>63</b>	<b>161</b>	<b>143</b>	<b>33</b>	<b>120</b>	<b>17</b>	<b>54</b>	<b>114</b>	<b>57</b>	<b>202</b>	<b>83</b>	<b>60</b>	<b>1108</b>

173%

6: Haven & Lemon

	<u>NBL</u>	<u>NBT</u>	<u>NBR</u>	<u>SBL</u>	<u>SBT</u>	<u>SBR</u>	<u>EBL</u>	<u>EBT</u>	<u>EBR</u>	<u>WBL</u>	<u>WBT</u>	<u>WBR</u>	<u>TOTAL</u>
2019 historic	166	653	219	13	783	40	115	80	103	176	30	16	2394
2021 adjusted	173	679	228	14	815	42	120	83	107	183	31	17	2491
2021 collected growth	165	362	196	7	318	18	84	103	111	161	40	8	1573
<b>New 2021 Adj.</b>	<b>173</b>	<b>679</b>	<b>228</b>	<b>14</b>	<b>815</b>	<b>42</b>	<b>120</b>	<b>103</b>	<b>111</b>	<b>183</b>	<b>40</b>	<b>17</b>	<b>2523</b>



<b>DATE:</b> Tue, Mar 26, 19	<b>LOCATION:</b> NORTH & SOUTH: EAST & WEST:	Rancho Cucamonga Haven Wilson	<b>PROJECT #:</b> SC2042 <b>LOCATION #:</b> 8 <b>CONTROL:</b> SIGNAL
---------------------------------	--	-------------------------------------	--

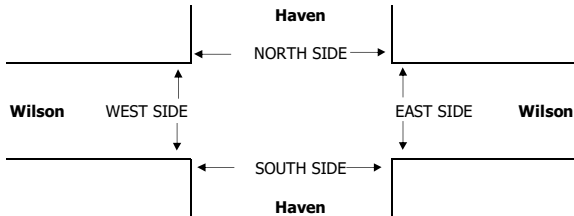
**NOTES:**

AM  
PM  
MD  
OTHER  
OTHER

▲  
N  
← W  
E →  
S  
▼

Add U-Turns to Left Turns

	NORTHBOUND Haven			SOUTHBOUND Haven			EASTBOUND Wilson			WESTBOUND Wilson			TOTAL	U-TURNS						
	LN	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR		NB	SB	EB	WB	TTL		
<b>AM</b>	7:30 AM	10	8	55	1	41	10	1	35	15	17	14	5	212	4	0	0	0	4	
	7:45 AM	8	17	99	3	46	6	2	53	12	31	22	12	311	5	0	0	0	5	
	8:00 AM	7	19	46	5	26	2	1	17	5	16	7	3	154	2	0	0	0	2	
	8:15 AM	10	20	27	3	38	5	3	15	7	7	10	10	155	2	0	0	0	2	
	8:30 AM	9	24	54	10	41	3	1	11	5	10	10	6	184	1	0	0	0	1	
	8:45 AM	8	15	51	5	39	10	1	25	10	22	13	5	204	2	0	0	0	2	
	9:00 AM	9	16	50	6	34	8	2	23	6	18	9	4	185	2	0	0	0	2	
	9:15 AM	8	14	48	5	31	7	1	20	5	19	12	4	174	2	0	0	0	2	
	VOLUMES	69	133	430	38	296	51	12	199	65	140	97	49	1,579	20	0	0	0	20	
	APPROACH %	11%	21%	68%	10%	77%	13%	4%	72%	24%	49%	34%	17%							
	APP/DEPART	632	/	194	385	/	521	276	/	667	286	/	197	0						
	BEGIN PEAK HR	7:30 AM																		
	VOLUMES	35	64	227	12	151	23	7	120	39	71	53	30	832						
	APPROACH %	11%	20%	70%	6%	81%	12%	4%	72%	23%	46%	34%	19%							
	PEAK HR FACTOR	0.657			0.845			0.619			0.592			0.669						
	APP/DEPART	326	/	101	186	/	274	166	/	359	154	/	98	0						
<b>MIDDAY</b>	12:00 PM	19	20	71	5	29	8	3	24	8	61	21	9	278	5	0	0	0	5	
	12:15 PM	28	27	72	4	33	2	1	34	14	90	37	6	348	13	0	0	0	13	
	12:30 PM	13	24	54	5	26	2	5	20	10	59	15	4	237	3	0	0	0	3	
	12:45 PM	11	35	30	4	33	0	2	11	9	32	16	5	188	4	0	0	0	4	
	1:00 PM	13	32	29	4	33	2	5	9	12	23	14	14	190	3	0	0	0	3	
	1:15 PM	10	18	32	4	38	3	2	12	11	25	12	12	179	3	0	0	1	4	
	1:30 PM	7	31	69	2	35	4	2	22	11	59	20	8	270	3	0	0	0	3	
	1:45 PM	15	38	73	4	24	5	4	27	7	112	35	9	353	4	0	0	0	4	
	VOLUMES	116	225	430	32	251	26	24	159	82	461	170	67	2,043	38	0	0	1	39	
	APPROACH %	15%	29%	56%	10%	81%	8%	9%	60%	31%	66%	24%	10%							
	APP/DEPART	771	/	316	309	/	831	265	/	622	698	/	274	0						
	BEGIN PEAK HR	12:00 PM																		
	VOLUMES	71	106	227	18	121	12	11	89	41	242	89	24	1,051						
	APPROACH %	18%	26%	56%	12%	80%	8%	8%	63%	29%	68%	25%	7%							
	PEAK HR FACTOR	0.795			0.899			0.719			0.667			0.755						
	APP/DEPART	404	/	141	151	/	429	141	/	334	355	/	147	0						
<b>PM</b>	3:30 PM	10	37	44	3	33	2	7	25	12	36	15	5	229	3	0	0	0	3	
	3:45 PM	9	23	40	7	24	2	8	20	7	43	25	6	214	1	0	0	0	1	
	4:00 PM	11	38	22	6	30	8	5	21	14	23	10	16	204	3	0	0	0	3	
	4:15 PM	8	25	22	7	24	1	2	21	9	25	13	10	167	1	0	0	0	1	
	4:30 PM	18	43	33	8	20	7	9	23	15	51	20	12	259	3	0	0	0	3	
	4:45 PM	10	46	40	4	33	3	17	31	12	69	34	13	312	0	0	0	0	0	
	5:00 PM	20	23	32	12	36	4	12	31	14	35	12	18	249	3	0	0	0	3	
	5:15 PM	13	31	32	8	25	2	14	25	14	39	14	15	232	4	0	0	0	4	
	VOLUMES	99	266	265	55	225	29	74	197	97	321	143	95	1,866	18	0	0	0	18	
	APPROACH %	16%	42%	42%	18%	73%	9%	20%	54%	26%	57%	26%	17%							
	APP/DEPART	630	/	435	309	/	661	368	/	517	559	/	253	0						
	BEGIN PEAK HR	4:30 PM																		
	VOLUMES	61	143	137	32	114	16	52	110	55	194	80	58	1,052						
	APPROACH %	18%	42%	40%	20%	70%	10%	24%	51%	25%	58%	24%	17%							
	PEAK HR FACTOR	0.888			0.779			0.904			0.716			0.843						
	APP/DEPART	341	/	253	162	/	373	217	/	279	332	/	147	0						



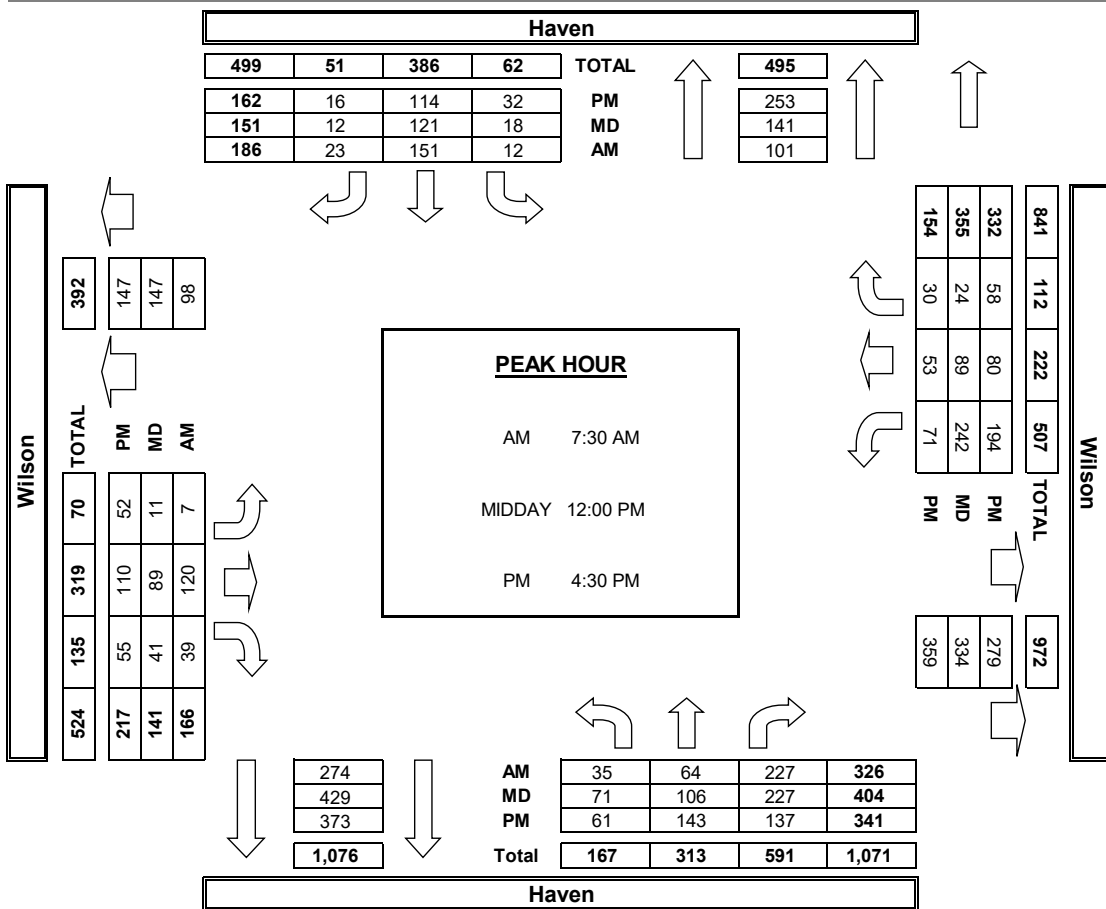
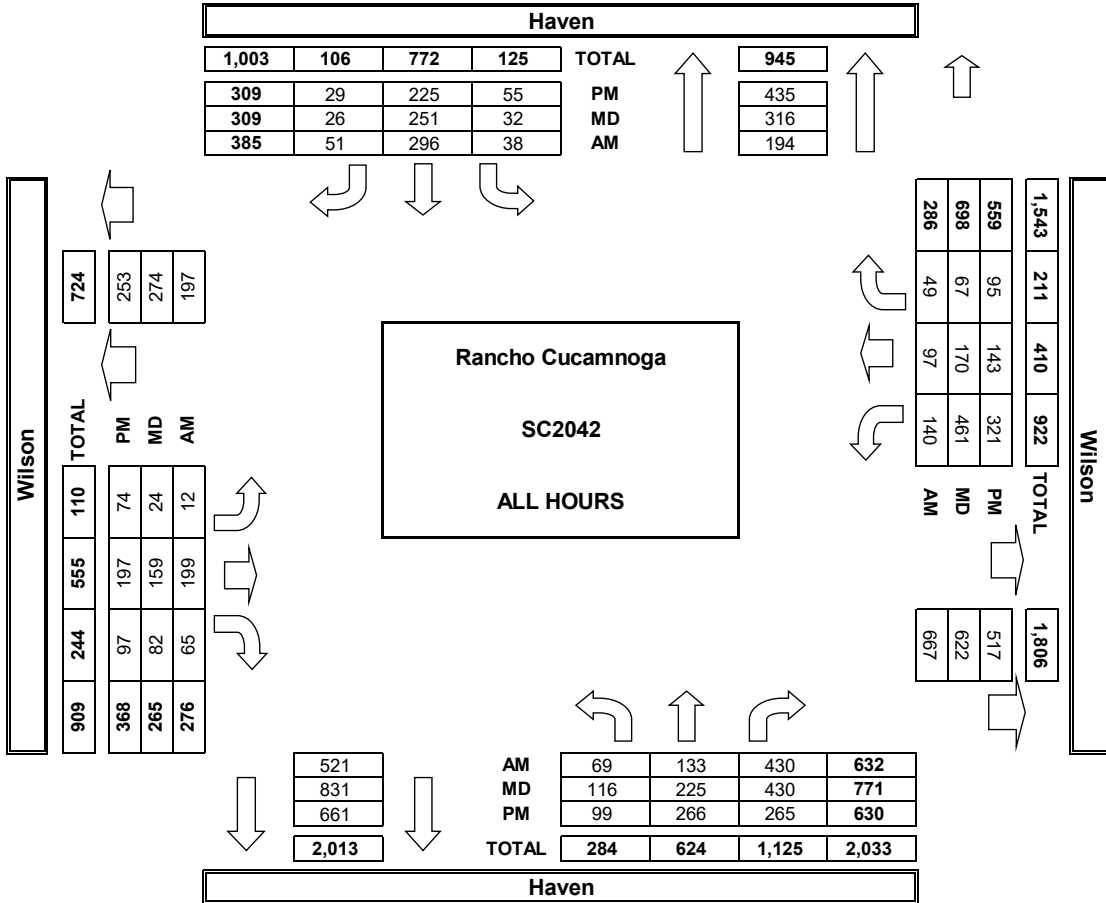
Time	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
7:30 AM	0	0	0	0	0
7:45 AM	1	0	0	0	1
8:00 AM	0	1	0	0	1
8:15 AM	3	0	0	0	3
8:30 AM	1	0	0	0	1
8:45 AM	0	0	0	0	0
9:00 AM	0	0	0	0	0
9:15 AM	0	0	0	0	0
TOTAL	5	1	0	0	6
12:00 PM	1	0	0	0	1
12:15 PM	1	2	0	0	3
12:30 PM	1	0	3	1	5
12:45 PM	0	1	0	2	3
1:00 PM	0	0	0	0	0
1:15 PM	0	2	0	1	3
1:30 PM	0	0	0	0	0
1:45 PM	0	0	0	1	1
TOTAL	3	5	3	5	16
3:30 PM	0	0	0	0	0
3:45 PM	0	0	0	0	0
4:00 PM	0	0	0	0	0
4:15 PM	0	1	0	0	1
4:30 PM	0	1	0	0	1
4:45 PM	0	1	0	0	1
5:00 PM	0	0	0	0	0
5:15 PM	1	1	0	1	3
TOTAL	1	4	0	1	6

Time	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
7:30 AM	0	0	0	0	0
7:45 AM	1	0	0	0	1
8:00 AM	0	1	0	0	1
8:15 AM	3	0	0	0	3
8:30 AM	1	0	0	0	1
8:45 AM	0	0	0	0	0
9:00 AM	0	0	0	0	0
9:15 AM	0	0	0	0	0
TOTAL	5	1	0	0	6
12:00 PM	1	0	0	0	1
12:15 PM	1	2	0	0	3
12:30 PM	1	0	3	1	5
12:45 PM	0	1	0	2	3
1:00 PM	0	0	0	0	0
1:15 PM	0	2	0	1	3
1:30 PM	0	0	0	0	0
1:45 PM	0	0	0	1	1
TOTAL	3	5	3	5	16
3:30 PM	0	0	0	0	0
3:45 PM	0	0	0	0	0
4:00 PM	0	0	0	0	0
4:15 PM	0	1	0	0	1
4:30 PM	0	1	0	0	1
4:45 PM	0	1	0	0	1
5:00 PM	0	0	0	0	0
5:15 PM	1	1	0	1	3
TOTAL	1	4	0	1	6

Time	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
7:30 AM	0	0	0	0	0
7:45 AM	1	0	0	0	1
8:00 AM	0	1	0	0	1
8:15 AM	1	0	0	0	1
8:30 AM	1	0	0	0	1
8:45 AM	0	0	0	0	0
9:00 AM	0	0	0	0	0
9:15 AM	0	0	0	0	0
TOTAL	3	1	0	0	4
12:00 PM	1	0	0	0	1
12:15 PM	1	1	0	0	2
12:30 PM	1	0	3	1	5
12:45 PM	0	1	0	2	3
1:00 PM	0	0	0	0	0
1:15 PM	0	0	0	0	0
1:30 PM	0	0	0	0	0
1:45 PM	0	0	0	0	0
TOTAL	3	2	3	3	11
3:30 PM	0	0	0	0	0
3:45 PM	0	0	0	0	0
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	0	0	0	0
5:15 PM	1	1	0	1	3
TOTAL	1	1	0	1	3

Time	NS	SS	ES	WS	TOTAL
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	2	0	0	0	2
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
9:00 AM	0	0	0	0	0
9:15 AM	0	0	0	0	0
TOTAL	2	0	0	0	2
12:00 PM	0	0	0	0	0
12:15 PM	0	1	0	0	1
12:30 PM	0	0	0	0	0
12:45 PM	0	0	0	0	0
1:00 PM	0	0	0	0	0
1:15 PM	0	2	0	1	3
1:30 PM	0	0	0	0	0
1:45 PM	0	0	0	1	1
TOTAL	0	3	0	2	5
3:30 PM	0	0	0	0	0
3:45 PM	0	0	0	0	0
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:					

**AimTD LLC**  
TURNING MOVEMENT COUNTS



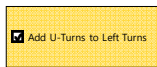
3.1-260

**INTERSECTION TURNING MOVEMENT COUNTS**

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

<b>DATE:</b> Tue, Mar 26, 19	LOCATION: NORTH & SOUTH: EAST & WEST:	Rancho Cucamonga Haven Lemon	PROJECT #: LOCATION #: CONTROL:	SC2042 5 SIGNAL
---------------------------------	---	------------------------------------	---------------------------------------	-----------------------

<p><b>NOTES:</b></p> <p style="color:blue;">Queue SB MD</p>	AM PM MD OTHER OTHER	
---	----------------------------------	--

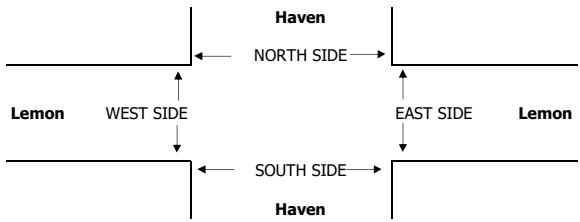


	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL	
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR		
LANES:	1	3	0	1	3	0	1	1	0	1	1	0		
<b>AM</b>	7:00 AM	11	127	24	0	90	8	6	4	14	67	8	1	360
	7:15 AM	16	247	11	1	93	11	5	3	12	68	14	4	485
	7:30 AM	28	241	10	3	138	8	16	5	18	84	14	1	566
	7:45 AM	25	279	13	2	129	18	9	4	18	62	9	5	573
	8:00 AM	21	127	11	2	81	10	13	8	18	45	9	3	348
	8:15 AM	18	126	24	1	78	13	5	8	26	58	6	1	364
	8:30 AM	24	124	18	1	100	13	14	3	21	47	12	5	382
	8:45 AM	20	149	11	3	107	2	7	2	22	44	5	3	375
	VOLUMES	163	1,420	122	13	816	83	75	37	149	475	77	23	3,453
	APPROACH %	10%	83%	7%	1%	89%	9%	29%	14%	57%	83%	13%	4%	
	APP/DEPART	1,705	/	1,520	912	/	1,468	261	/	170	575	/	295	0
	BEGIN PEAK HR	7:00 AM												
	VOLUMES	80	894	58	6	450	45	36	16	62	281	45	11	1,984
	APPROACH %	8%	87%	6%	1%	90%	9%	32%	14%	54%	83%	13%	3%	
	PEAK HR FACTOR	0.814		0.841		0.731		0.851		0.866				
	APP/DEPART	1,032	/	942	501	/	801	114	/	79	337	/	162	0
<b>MIDDAY</b>	12:00 PM	25	189	29	4	220	11	11	3	21	37	4	4	558
	12:15 PM	31	222	40	4	348	17	21	9	22	39	8	7	768
	12:30 PM	49	151	27	2	240	15	13	7	31	50	5	2	592
	12:45 PM	39	147	44	1	147	8	18	7	27	34	6	1	479
	1:00 PM	34	140	28	3	174	5	13	6	16	36	3	3	461
	1:15 PM	35	127	39	4	151	4	9	7	17	39	8	2	442
	1:30 PM	25	191	42	1	216	5	17	5	13	42	6	3	566
	1:45 PM	27	196	32	4	329	14	20	9	13	35	4	2	685
	VOLUMES	265	1,363	281	23	1,825	79	122	53	160	312	44	24	4,551
	APPROACH %	14%	71%	15%	1%	95%	4%	36%	16%	48%	82%	12%	6%	
	APP/DEPART	1,909	/	1,512	1,927	/	2,384	335	/	354	380	/	301	0
	BEGIN PEAK HR	12:00 PM												
	VOLUMES	144	709	140	11	955	51	63	26	101	160	23	14	2,397
	APPROACH %	15%	71%	14%	1%	94%	5%	33%	14%	53%	81%	12%	7%	
	PEAK HR FACTOR	0.847		0.689		0.913		0.864		0.780				
	APP/DEPART	993	/	788	1,017	/	1,263	190	/	175	197	/	171	0
<b>PM</b>	3:30 PM	36	148	46	3	185	12	15	13	18	39	5	5	525
	3:45 PM	39	137	50	1	161	11	15	11	20	35	5	2	487
	4:00 PM	37	145	53	2	160	11	18	18	34	35	6	3	522
	4:15 PM	36	110	49	1	142	4	16	23	23	34	4	3	445
	4:30 PM	49	148	55	4	238	7	29	16	28	47	5	5	631
	4:45 PM	46	187	42	5	201	7	27	11	22	35	7	2	592
	5:00 PM	33	159	56	2	183	15	25	28	27	62	6	2	598
	5:15 PM	38	159	66	2	161	11	34	24	26	32	12	7	573
	VOLUMES	314	1,193	417	20	1,431	78	179	145	198	319	50	29	4,373
	APPROACH %	16%	62%	22%	1%	94%	5%	34%	28%	38%	80%	13%	7%	
	APP/DEPART	1,924	/	1,403	1,529	/	2,039	522	/	580	398	/	351	0
	BEGIN PEAK HR	4:30 PM												
	VOLUMES	166	653	219	13	783	40	115	80	103	176	30	16	2,394
	APPROACH %	16%	63%	21%	2%	94%	5%	39%	27%	35%	79%	14%	7%	
	PEAK HR FACTOR	0.944		0.839		0.876		0.793		0.948				
	APP/DEPART	1,038	/	786	836	/	1,114	298	/	310	222	/	184	0

U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0
1	0	0	0	1
1	0	0	0	1
3	0	0	0	3
3	1	0	0	4
5	0	0	0	5
5	0	0	0	5
5	1	0	0	6
5	0	0	0	5
28	2	0	0	30

5	0	0	0	5
7	2	0	0	9
22	0	0	0	22
13	0	0	0	13
13	1	0	0	14
11	0	0	0	11
6	0	0	0	6
10	0	0	0	10
87	3	0	0	90

9	0	0	0	9
12	0	0	0	12
8	0	0	0	8
10	0	0	0	10
17	0	0	0	17
11	1	0	0	12
14	0	0	0	14
10	1	0	0	11
91	2	0	0	93



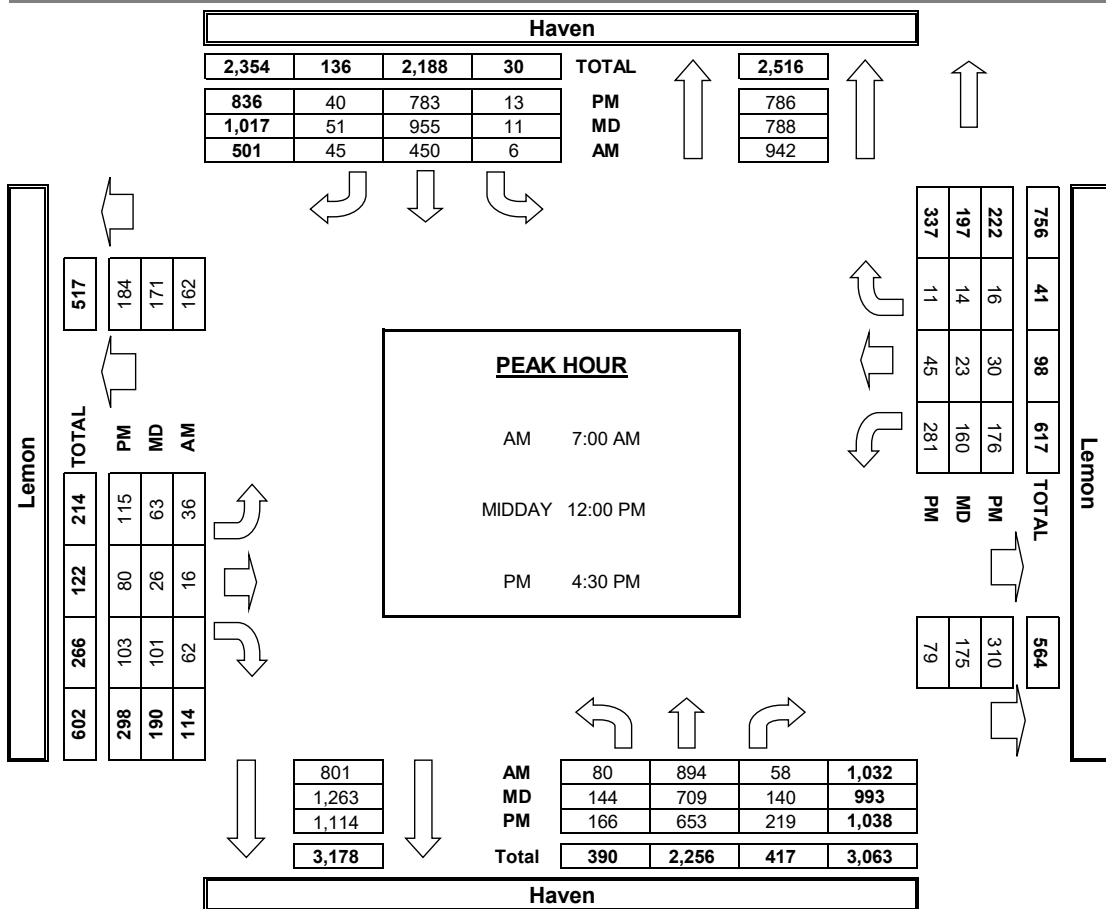
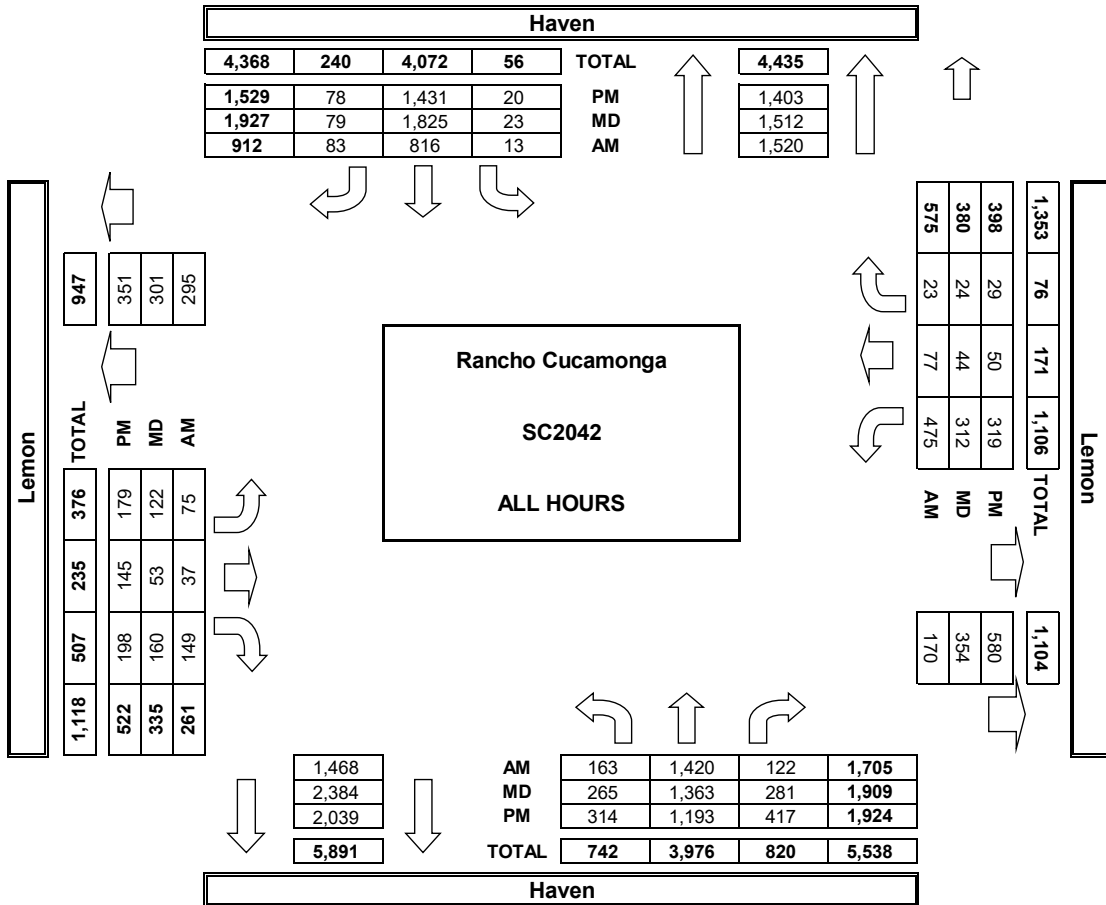
<b>AM</b>	7:00 AM	0	0	0	0	0
	7:15 AM	0	0	1	0	1
	7:30 AM	1	2	0	2	5
	7:45 AM	1	1	1	0	3
	8:00 AM	0	0	0	0	0
	8:15 AM	0	1	0	1	2
	8:30 AM	0	0	0	1	1
	8:45 AM	0	0	0	0	0
	<b>TOTAL</b>	2	4	2	4	12

PEDESTRIAN + BIKE CROSSINGS					
N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	
0	0	0	0	0	0
0	0	1	0	1	1
1	2	0	2	5	5
1	1	1	0	3	3
0	0	0	0	0	0
0	1	0	1	2	2
0	0	0	1	1	1
0	0	0	0	0	0
2	4	2	4	12	12
2	0	3	2	7	7
0	0	1	1	2	2
2	0	1	0	3	3
0	3	1	1	5	5
0	1	1	1	3	3
0	0	1	0	1	1
3	5	0	0	8	8
0	5	0	2	7	7
7	14	8	7	36	36

PEDESTRIAN CROSSINGS				
N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
0	0	0	0	0
0	0	1	0	1
1	2	0	2	5
0	1	1	0	2
0	0	0	0	0
0	1	0	1	2
0	0	0	1	1
0	0	0	0	0
1	4	2	4	11
2	0	3	1	6
0	0	1	1	2
2	0	1	0	3
0	3	1	1	5
0	1	1	1	3
0	0	1	0	1
3	5	0	0	8
0	5	0	2	7
7	14	8	6	35

BICYCLE CROSSINGS				
NS	SS	ES	WS	TOTAL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
1	0	0	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
1	0	0	0	1
0	0	0	1	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	1	0	0	1
0	1	0	1	2
1	0	0	1	2
0	0	0	0	0
0	0	0	1	1
0	1	0	0	1
0	0	0	0	0
1	4	0	3	8

**AimTD LLC**  
TURNING MOVEMENT COUNTS



3.1-262

**APPENDIX 3.2:**

**EXISTING (2021) CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS**

This Page Intentionally Left Blank

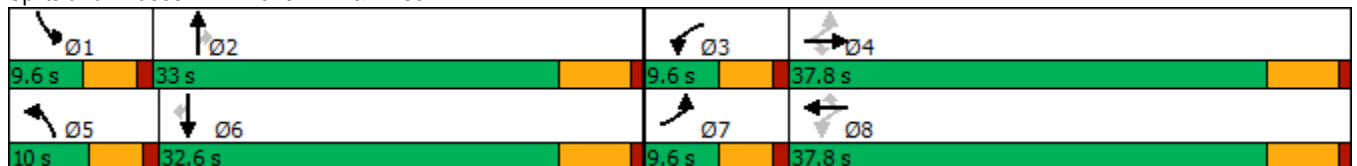
Timings  
1: Haven Av. & Wilson Av.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	184	56	74	130	31	39	94	236	16	323	24
Future Volume (vph)	9	184	56	74	130	31	39	94	236	16	323	24
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	37.8	37.8	9.6	37.8	37.8	9.6	32.8	32.8	9.6	31.8	31.8
Total Split (s)	9.6	37.8	37.8	9.6	37.8	37.8	10.0	33.0	33.0	9.6	32.6	32.6
Total Split (%)	10.7%	42.0%	42.0%	10.7%	42.0%	42.0%	11.1%	36.7%	36.7%	10.7%	36.2%	36.2%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
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	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	22.0	16.8	16.8	24.9	22.9	22.9	6.0	17.9	17.9	5.7	15.8	15.8
Actuated g/C Ratio	0.38	0.29	0.29	0.43	0.39	0.39	0.10	0.31	0.31	0.10	0.27	0.27
v/c Ratio	0.03	0.52	0.16	0.24	0.14	0.07	0.33	0.16	0.48	0.14	0.51	0.07
Control Delay	11.8	23.7	1.2	12.8	13.9	0.2	38.6	18.7	5.3	35.6	22.4	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.8	23.7	1.2	12.8	13.9	0.2	38.6	18.7	5.3	35.6	22.4	0.2
LOS	B	C	A	B	B	A	D	B	A	D	C	A
Approach Delay		18.2			11.8			12.2			21.5	
Approach LOS		B			B			B			C	

Intersection Summary

Cycle Length: 90  
 Actuated Cycle Length: 58.1  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.52  
 Intersection Signal Delay: 16.2  
 Intersection LOS: B  
 Intersection Capacity Utilization 48.0%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 1: Haven Av. & Wilson Av.



























HCM 6th Signalized Intersection Summary

Chaffey College (JN 13236)

1: Haven Av. & Wilson Av.

07/29/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	184	56	74	130	31	39	94	236	16	323	24
Future Volume (veh/h)	9	184	56	74	130	31	39	94	236	16	323	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1826	1796	1900	1856	1737	1841	1515	1885	1900	1841	1900
Adj Flow Rate, veh/h	13	275	47	110	194	0	58	140	333	24	482	17
Peak Hour Factor	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67
Percent Heavy Veh, %	0	5	7	0	3	11	4	26	1	0	4	0
Cap, veh/h	443	420	345	376	1022	427	95	773	429	51	848	389
Arrive On Green	0.02	0.23	0.23	0.08	0.29	0.00	0.05	0.27	0.27	0.03	0.24	0.24
Sat Flow, veh/h	1810	1826	1497	1810	3526	1472	1753	2878	1598	1810	3497	1604
Grp Volume(v), veh/h	13	275	47	110	194	0	58	140	333	24	482	17
Grp Sat Flow(s),veh/h/ln	1810	1826	1497	1810	1763	1472	1753	1439	1598	1810	1749	1604
Q Serve(g_s), s	0.3	7.2	1.3	2.3	2.2	0.0	1.7	2.0	10.1	0.7	6.3	0.4
Cycle Q Clear(g_c), s	0.3	7.2	1.3	2.3	2.2	0.0	1.7	2.0	10.1	0.7	6.3	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	443	420	345	376	1022	427	95	773	429	51	848	389
V/C Ratio(X)	0.03	0.65	0.14	0.29	0.19	0.00	0.61	0.18	0.78	0.47	0.57	0.04
Avail Cap(c_a), veh/h	586	1115	914	411	2152	899	181	1493	829	173	1788	820
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.0	18.3	16.0	13.7	14.0	0.0	24.2	14.7	17.7	25.1	17.4	15.2
Incr Delay (d2), s/veh	0.0	1.7	0.2	0.2	0.1	0.0	2.3	0.1	3.0	2.5	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	2.7	0.4	0.8	0.7	0.0	0.7	0.5	3.3	0.3	2.2	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.0	20.0	16.2	13.8	14.1	0.0	26.6	14.8	20.8	27.6	18.0	15.2
LnGrp LOS	B	C	B	B	B	A	C	B	C	C	B	B
Approach Vol, veh/h		335			304			531			523	
Approach Delay, s/veh		19.3			14.0			19.8			18.4	
Approach LOS		B			B			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.1	19.9	8.6	17.9	7.5	18.5	5.5	21.0				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	5.0	27.2	5.0	32.0	5.4	26.8	5.0	32.0				
Max Q Clear Time (g_c+I1), s	2.7	12.1	4.3	9.2	3.7	8.3	2.3	4.2				
Green Ext Time (p_c), s	0.0	1.7	0.0	1.5	0.0	2.8	0.0	1.1				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				18.2								
HCM 6th LOS				B								



Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗ ↑↑↑	↗ ↑↑↑			↑↑↑
Traffic Vol, veh/h	0	3	366	73	0	453
Future Vol, veh/h	0	3	366	73	0	453
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	0	8	0	0	4
Mvmt Flow	0	3	389	78	0	482

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	-	234	0	0	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	7.1	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	3.9	-	-	-
Pot Cap-1 Maneuver	0	659	-	-	0
Stage 1	0	-	-	-	0
Stage 2	0	-	-	-	0
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	-	659	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.5	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	659
HCM Lane V/C Ratio	-	-	0.005
HCM Control Delay (s)	-	-	10.5
HCM Lane LOS	-	-	B
HCM 95th %tile Q(veh)	-	-	0

Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↑↑↑↑			↑↑↑↑
Traffic Vol, veh/h	17	4	436	0	0	453
Future Vol, veh/h	17	4	436	0	0	453
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	0	7	0	0	4
Mvmt Flow	19	4	490	0	0	509

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	694	245	0	-	-	-
Stage 1	490	-	-	-	-	-
Stage 2	204	-	-	-	-	-
Critical Hdwy	5.7	7.1	-	-	-	-
Critical Hdwy Stg 1	6.6	-	-	-	-	-
Critical Hdwy Stg 2	6	-	-	-	-	-
Follow-up Hdwy	3.8	3.9	-	-	-	-
Pot Cap-1 Maneuver	445	648	-	0	0	-
Stage 1	494	-	-	0	0	-
Stage 2	750	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	445	648	-	-	-	-
Mov Cap-2 Maneuver	445	-	-	-	-	-
Stage 1	494	-	-	-	-	-
Stage 2	750	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.9	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBTWBLn1	WBLn2	SBT
Capacity (veh/h)	-	445	648
HCM Lane V/C Ratio	-	0.043	0.007
HCM Control Delay (s)	-	13.5	10.6
HCM Lane LOS	-	B	B
HCM 95th %tile Q(veh)	-	0.1	0

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗ ↑↑↑	↗ ↑↑↑			↑↑↑
Traffic Vol, veh/h	0	5	357	302	0	482
Future Vol, veh/h	0	5	357	302	0	482
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	0	0	8	0	0	4
Mvmt Flow	0	5	392	332	0	530

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	-	362	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.1	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.9	-	-	-	-
Pot Cap-1 Maneuver	0	546	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	-	546	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.7	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	546
HCM Lane V/C Ratio	-	-	0.01
HCM Control Delay (s)	-	-	11.7
HCM Lane LOS	-	-	B
HCM 95th %tile Q(veh)	-	-	0

Timings  
5: Haven Av. & Amber Ln.

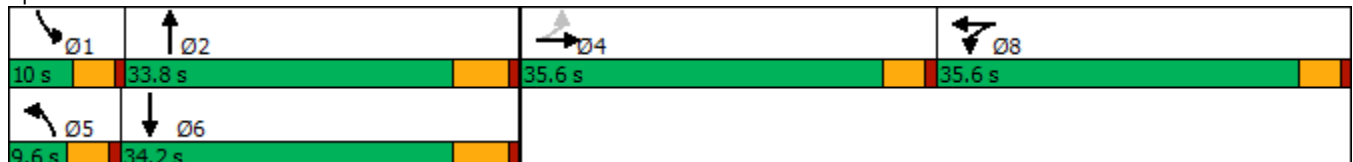


Lane Group	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↔	↵	↔	↵	↑↑↑	↵	↑↑↑
Traffic Volume (vph)	0	320	0	12	650	82	396
Future Volume (vph)	0	320	0	12	650	82	396
Turn Type	NA	Split	NA	Prot	NA	Prot	NA
Protected Phases	4	8	8	5	2	1	6
Permitted Phases							
Detector Phase	4	8	8	5	2	1	6
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	35.6	35.6	35.6	9.6	23.8	9.6	23.8
Total Split (s)	35.6	35.6	35.6	9.6	33.8	10.0	34.2
Total Split (%)	31.0%	31.0%	31.0%	8.3%	29.4%	8.7%	29.7%
Yellow Time (s)	3.6	3.6	3.6	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	5.8	4.6	5.8
Lead/Lag				Lead	Lag	Lead	Lag
Lead-Lag Optimize?				Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	Min	None	Min
Act Effct Green (s)	13.4	15.1	15.1	5.4	30.0	5.8	39.5
Actuated g/C Ratio	0.18	0.20	0.20	0.07	0.40	0.08	0.53
v/c Ratio	0.05	0.54	0.41	0.11	1.35dr	0.64	0.17
Control Delay	0.2	34.4	14.8	45.1	27.6	61.4	15.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	0.2	34.4	14.8	45.1	27.6	61.4	15.3
LOS	A	C	B	D	C	E	B
Approach Delay	0.2		24.7		27.7		23.1
Approach LOS	A		C		C		C

Intersection Summary

Cycle Length: 115  
 Actuated Cycle Length: 74.3  
 Natural Cycle: 115  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.90  
 Intersection Signal Delay: 26.2  
 Intersection LOS: C  
 Intersection Capacity Utilization 69.8%  
 ICU Level of Service C  
 Analysis Period (min) 15  
 dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 5: Haven Av. & Amber Ln.



HCM 6th Signalized Intersection Summary  
5: Haven Av. & Amber Ln.

Chaffey College (JN 13236)  
07/29/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔		↗	↔		↗	↑↑↑		↗	↑↑↑	
Traffic Volume (veh/h)	0	0	20	320	0	9	12	650	1039	82	396	3
Future Volume (veh/h)	0	0	20	320	0	9	12	650	1039	82	396	3
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		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1870	1900	1900	1693	1841	1885	1900	1826	1900
Adj Flow Rate, veh/h	0	0	2	358	0	0	13	714	0	90	435	3
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, %	0	0	0	2	0	0	14	4	1	0	5	0
Cap, veh/h	0	0	23	792	423	0	27	1341		134	1656	11
Arrive On Green	0.00	0.00	0.01	0.22	0.00	0.00	0.02	0.27	0.00	0.07	0.32	0.32
Sat Flow, veh/h	0	0	1606	3563	1900	0	1612	5191	0	1810	5107	35
Grp Volume(v), veh/h	0	0	2	358	0	0	13	714	0	90	283	155
Grp Sat Flow(s),veh/h/ln	0	0	1606	1781	1900	0	1612	1675	0	1810	1662	1819
Q Serve(g_s), s	0.0	0.0	0.1	4.0	0.0	0.0	0.4	5.6	0.0	2.2	2.9	2.9
Cycle Q Clear(g_c), s	0.0	0.0	0.1	4.0	0.0	0.0	0.4	5.6	0.0	2.2	2.9	2.9
Prop In Lane	0.00		1.00	1.00		0.00	1.00		0.00	1.00		0.02
Lane Grp Cap(c), veh/h	0	0	23	792	423	0	27	1341		134	1077	590
V/C Ratio(X)	0.00	0.00	0.09	0.45	0.00	0.00	0.49	0.53		0.67	0.26	0.26
Avail Cap(c_a), veh/h	0	0	1073	2382	1270	0	174	3034		211	2035	1114
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	22.6	15.6	0.0	0.0	22.6	14.5	0.0	20.9	11.6	11.6
Incr Delay (d2), s/veh	0.0	0.0	1.6	0.4	0.0	0.0	5.0	0.3	0.0	2.2	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	1.5	0.0	0.0	0.2	1.7	0.0	0.9	0.8	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	24.2	16.0	0.0	0.0	27.6	14.9	0.0	23.1	11.7	11.8
LnGrp LOS	A	A	C	B	A	A	C	B		C	B	B
Approach Vol, veh/h		2			358			727	A		528	
Approach Delay, s/veh		24.2			16.0			15.1			13.7	
Approach LOS		C			B			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.0	18.2		5.3	5.4	20.8		14.9				
Change Period (Y+Rc), s	4.6	5.8		4.6	4.6	5.8		4.6				
Max Green Setting (Gmax), s	5.4	28.0		31.0	5.0	28.4		31.0				
Max Q Clear Time (g_c+I1), s	4.2	7.6		2.1	2.4	4.9		6.0				
Green Ext Time (p_c), s	0.0	4.4		0.0	0.0	2.4		1.3				

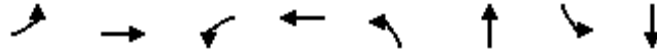
Intersection Summary

HCM 6th Ctrl Delay	14.8
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.  
Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Timings  
6: Haven Av. & Lemon Av.

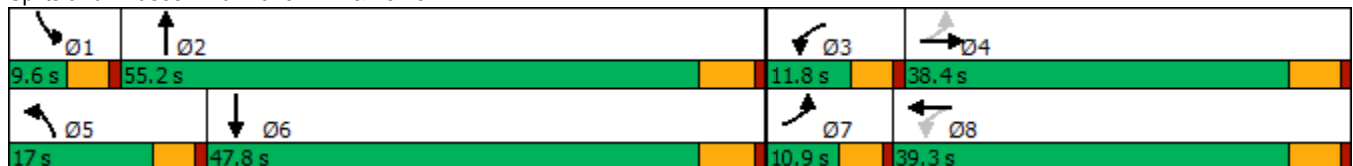


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↘	↗	↘	↗	↘	↑↑↑	↘	↑↑↑
Traffic Volume (vph)	120	24	292	51	83	2032	9	727
Future Volume (vph)	120	24	292	51	83	2032	9	727
Turn Type	pm+pt	NA	pm+pt	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases	4		8					
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	38.4	9.6	36.4	9.6	24.8	9.6	23.8
Total Split (s)	10.9	38.4	11.8	39.3	17.0	55.2	9.6	47.8
Total Split (%)	9.5%	33.4%	10.3%	34.2%	14.8%	48.0%	8.3%	41.6%
Yellow Time (s)	3.6	4.4	3.6	4.4	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4	4.6	5.4	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	18.5	13.7	19.9	14.4	8.6	50.9	5.2	41.5
Actuated g/C Ratio	0.22	0.16	0.23	0.17	0.10	0.59	0.06	0.48
v/c Ratio	0.42	0.31	0.99	0.31	0.53	0.80	0.09	0.36
Control Delay	28.6	15.0	79.7	27.7	51.7	19.4	47.1	17.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.6	15.0	79.7	27.7	51.7	19.4	47.1	17.6
LOS	C	B	E	C	D	B	D	B
Approach Delay		22.8		68.9		20.6		18.0
Approach LOS		C		E		C		B

Intersection Summary























Cycle Length: 115	
Actuated Cycle Length: 85.8	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.99	
Intersection Signal Delay: 25.1	Intersection LOS: C
Intersection Capacity Utilization 81.7%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 6: Haven Av. & Lemon Av.



HCM 6th Signalized Intersection Summary  
6: Haven Av. & Lemon Av.

Chaffey College (JN 13236)  
07/29/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	24	65	292	51	26	83	2032	94	9	727	64
Future Volume (veh/h)	120	24	65	292	51	26	83	2032	94	9	727	64
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1796	1900	1870	1559	1900	1841	1870	1796	1900	1870	1900
Adj Flow Rate, veh/h	135	27	0	328	57	26	93	2283	95	10	817	69
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	1	7	0	2	23	0	4	2	7	0	2	0
Cap, veh/h	328	229	0	389	139	63	119	2724	113	22	2333	196
Arrive On Green	0.07	0.13	0.00	0.08	0.14	0.14	0.07	0.54	0.54	0.01	0.49	0.49
Sat Flow, veh/h	1795	1796	0	1781	1007	459	1753	5029	208	1810	4797	403
Grp Volume(v), veh/h	135	27	0	328	0	83	93	1541	837	10	579	307
Grp Sat Flow(s),veh/h/ln	1795	1796	0	1781	0	1467	1753	1702	1833	1810	1702	1797
Q Serve(g_s), s	5.6	1.2	0.0	7.2	0.0	4.5	4.5	32.9	33.4	0.5	9.1	9.2
Cycle Q Clear(g_c), s	5.6	1.2	0.0	7.2	0.0	4.5	4.5	32.9	33.4	0.5	9.1	9.2
Prop In Lane	1.00		0.00	1.00		0.31	1.00		0.11	1.00		0.22
Lane Grp Cap(c), veh/h	328	229	0	389	0	203	119	1844	993	22	1655	874
V/C Ratio(X)	0.41	0.12	0.00	0.84	0.00	0.41	0.78	0.84	0.84	0.45	0.35	0.35
Avail Cap(c_a), veh/h	328	684	0	389	0	573	251	1939	1044	104	1655	874
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.1	33.5	0.0	34.4	0.0	34.1	39.8	16.6	16.8	42.5	13.8	13.8
Incr Delay (d2), s/veh	0.3	0.2	0.0	14.8	0.0	1.3	4.2	3.2	6.2	5.1	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	0.5	0.0	4.7	0.0	1.6	2.0	11.4	13.2	0.2	3.1	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.4	33.7	0.0	49.1	0.0	35.5	44.0	19.9	22.9	47.7	13.9	14.0
LnGrp LOS	C	C	A	D	A	D	D	B	C	D	B	B
Approach Vol, veh/h		162			411			2471			896	
Approach Delay, s/veh		30.9			46.4			21.8			14.3	
Approach LOS		C			D			C			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.7	52.8	11.8	16.5	10.5	48.0	10.9	17.4				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.4	4.6	5.8	4.6	5.4				
Max Green Setting (Gmax), s	5.0	49.4	7.2	33.0	12.4	42.0	6.3	33.9				
Max Q Clear Time (g_c+1), s	2.5	35.4	9.2	3.2	6.5	11.2	7.6	6.5				
Green Ext Time (p_c), s	0.0	11.6	0.0	0.1	0.0	5.9	0.0	0.4				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				23.1								
HCM 6th LOS				C								

Timings  
7: Haven Av. & I-210 WB Ramps

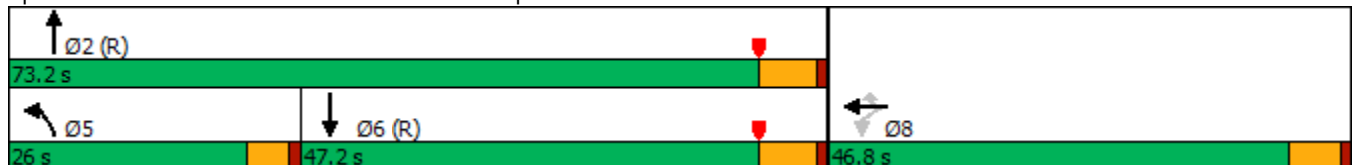


Lane Group	WBL	WBT	WBR	NBL	NBT	SBT
Lane Configurations	↶	↷	↷	↶↷	↑↑↑	↑↑↑
Traffic Volume (vph)	476	8	865	537	1641	1066
Future Volume (vph)	476	8	865	537	1641	1066
Turn Type	Perm	NA	Perm	Prot	NA	NA
Protected Phases		8		5	2	6
Permitted Phases	8		8			
Detector Phase	8	8	8	5	2	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.8	10.8	10.8	9.7	31.2	31.2
Total Split (s)	46.8	46.8	46.8	26.0	73.2	47.2
Total Split (%)	39.0%	39.0%	39.0%	21.7%	61.0%	39.3%
Yellow Time (s)	4.8	4.8	4.8	3.7	5.2	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	4.7	6.2	6.2
Lead/Lag				Lead		Lag
Lead-Lag Optimize?				Yes		Yes
Recall Mode	None	None	None	None	C-Max	C-Max
Act Effect Green (s)	41.0	41.0	41.0	21.3	67.0	41.0
Actuated g/C Ratio	0.34	0.34	0.34	0.18	0.56	0.34
v/c Ratio	0.83	1.03	0.92	1.00	0.65	1.03
Control Delay	50.1	85.3	55.7	86.2	19.7	67.1
Queue Delay	0.0	0.0	0.0	0.0	3.1	0.0
Total Delay	50.1	85.3	55.7	86.2	22.8	67.1
LOS	D	F	E	F	C	E
Approach Delay		64.0			38.4	67.1
Approach LOS		E			D	E

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 67 (56%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow  
 Natural Cycle: 110  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.03  
 Intersection Signal Delay: 54.1  
 Intersection LOS: D  
 Intersection Capacity Utilization 144.9%  
 ICU Level of Service H  
 Analysis Period (min) 15





















Splits and Phases: 7: Haven Av. & I-210 WB Ramps





HCM 6th Signalized Intersection Summary  
7: Haven Av. & I-210 WB Ramps

Chaffey College (JN 13236)  
07/29/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	476	8	865	537	1641	0	0	1066	529
Future Volume (veh/h)	0	0	0	476	8	865	537	1641	0	0	1066	529
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
Work Zone On Approach				No		No		No		No		No
Adj Sat Flow, veh/h/ln				1885	1604	1870	1856	1870	0	0	1870	1900
Adj Flow Rate, veh/h				758	0	416	603	1844	0	0	1198	466
Peak Hour Factor				0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %				1	20	2	3	2	0	0	2	0
Cap, veh/h				1056	0	466	609	3095	0	0	1409	547
Arrive On Green				0.29	0.00	0.29	0.18	0.61	0.00	0.00	0.39	0.39
Sat Flow, veh/h				3591	0	1585	3428	5274	0	0	3786	1404
Grp Volume(v), veh/h				758	0	416	603	1844	0	0	1127	537
Grp Sat Flow(s),veh/h/ln				1795	0	1585	1714	1702	0	0	1702	1618
Q Serve(g_s), s				22.7	0.0	30.1	21.1	26.7	0.0	0.0	36.3	36.4
Cycle Q Clear(g_c), s				22.7	0.0	30.1	21.1	26.7	0.0	0.0	36.3	36.4
Prop In Lane				1.00		1.00	1.00		0.00	0.00		0.87
Lane Grp Cap(c), veh/h				1056	0	466	609	3095	0	0	1325	630
V/C Ratio(X)				0.72	0.00	0.89	0.99	0.60	0.00	0.00	0.85	0.85
Avail Cap(c_a), veh/h				1227	0	542	609	3095	0	0	1325	630
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.09	0.09	0.00	0.00	0.83	0.83
Uniform Delay (d), s/veh				37.9	0.0	40.6	49.3	14.6	0.0	0.0	33.4	33.5
Incr Delay (d2), s/veh				1.7	0.0	15.5	9.0	0.1	0.0	0.0	5.9	11.7
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				9.8	0.0	13.3	9.5	9.2	0.0	0.0	15.2	15.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				39.6	0.0	56.1	58.2	14.7	0.0	0.0	39.3	45.1
LnGrp LOS				D	A	E	E	B	A	A	D	D
Approach Vol, veh/h					1174			2447			1664	
Approach Delay, s/veh					45.5			25.4			41.2	
Approach LOS					D			C			D	
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		78.9			26.0	52.9		41.1				
Change Period (Y+Rc), s		6.2			* 4.7	6.2		5.8				
Max Green Setting (Gmax), s		67.0			* 21	41.0		41.0				
Max Q Clear Time (g_c+I1), s		28.7			23.1	38.4		32.1				
Green Ext Time (p_c), s		15.0			0.0	2.0		3.1				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				34.8								
HCM 6th LOS				C								
<b>Notes</b>												
User approved volume balancing among the lanes for turning movement.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Timings  
8: Haven Av. & I-210 EB Ramps

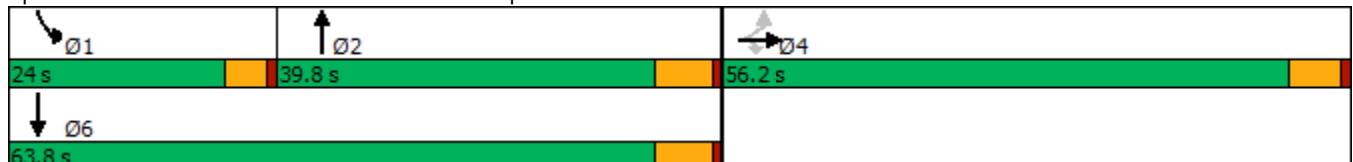


Lane Group	EBL	EBT	EBR	NBT	SBL	SBT
Lane Configurations	↶	↷	↷	↑↑↑	↶↷	↑↑↑
Traffic Volume (vph)	1344	5	335	835	540	1001
Future Volume (vph)	1344	5	335	835	540	1001
Turn Type	Perm	NA	Perm	NA	Prot	NA
Protected Phases		4		2	1	6
Permitted Phases	4		4			
Detector Phase	4	4	4	2	1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.8	10.8	10.8	30.2	9.7	31.2
Total Split (s)	56.2	56.2	56.2	39.8	24.0	63.8
Total Split (%)	46.8%	46.8%	46.8%	33.2%	20.0%	53.2%
Yellow Time (s)	4.8	4.8	4.8	5.2	3.7	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	6.2	4.7	6.2
Lead/Lag				Lag	Lead	
Lead-Lag Optimize?				Yes	Yes	
Recall Mode	None	None	None	None	None	None
Act Effct Green (s)	50.4	50.4	50.4	33.6	19.3	57.6
Actuated g/C Ratio	0.42	0.42	0.42	0.28	0.16	0.48
v/c Ratio	1.04	1.07	0.50	1.05dr	1.03	0.44
Control Delay	80.3	88.7	22.5	69.1	95.5	21.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	80.3	88.7	22.5	69.1	95.5	21.3
LOS	F	F	C	E	F	C
Approach Delay		73.4		69.1		47.3
Approach LOS		E		E		D

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.07  
 Intersection Signal Delay: 63.3  
 Intersection LOS: E  
 Intersection Capacity Utilization 144.9%  
 ICU Level of Service H  
 Analysis Period (min) 15  
 dr Defacto Right Lane. Recode with 1 though lane as a right lane.





















Splits and Phases: 8: Haven Av. & I-210 EB Ramps



HCM 6th Signalized Intersection Summary  
8: Haven Av. & I-210 EB Ramps

Chaffey College (JN 13236)

07/29/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1344	5	335	0	0	0	0	835	536	540	1001	0
Future Volume (veh/h)	1344	5	335	0	0	0	0	835	536	540	1001	0
Initial Q (Qb), veh	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
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1885	1411	1796				0	1856	1856	1885	1856	0
Adj Flow Rate, veh/h	1443	0	26				0	888	488	574	1065	0
Peak Hour Factor	0.94	0.94	0.94				0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	1	33	7				0	3	3	1	3	0
Cap, veh/h	1498	0	635				0	950	442	563	2443	0
Arrive On Green	0.42	0.00	0.42				0.00	0.28	0.28	0.16	0.48	0.00
Sat Flow, veh/h	3591	0	1522				0	3544	1572	3483	5233	0
Grp Volume(v), veh/h	1443	0	26				0	888	488	574	1065	0
Grp Sat Flow(s),veh/h/ln	1795	0	1522				0	1689	1572	1742	1689	0
Q Serve(g_s), s	46.8	0.0	1.2				0.0	30.6	33.6	19.3	16.5	0.0
Cycle Q Clear(g_c), s	46.8	0.0	1.2				0.0	30.6	33.6	19.3	16.5	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	1498	0	635				0	950	442	563	2443	0
V/C Ratio(X)	0.96	0.00	0.04				0.00	0.93	1.10	1.02	0.44	0.00
Avail Cap(c_a), veh/h	1515	0	642				0	950	442	563	2443	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	33.9	0.0	20.6				0.0	41.8	42.9	50.1	20.3	0.0
Incr Delay (d2), s/veh	15.2	0.0	0.0				0.0	15.7	73.8	43.0	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	22.2	0.0	0.4				0.0	14.3	21.6	11.5	6.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.1	0.0	20.7				0.0	57.6	116.7	93.1	20.4	0.0
LnGrp LOS	D	A	C				A	E	F	F	C	A
Approach Vol, veh/h		1469						1376			1639	
Approach Delay, s/veh		48.6						78.5			45.8	
Approach LOS		D						E			D	
Timer - Assigned Phs	1	2	4	6								
Phs Duration (G+Y+Rc), s	24.0	39.8	55.6	63.8								
Change Period (Y+Rc), s	* 4.7	6.2	5.8	6.2								
Max Green Setting (Gmax), s	* 19	33.6	50.4	57.6								
Max Q Clear Time (g_c+I1), s	21.3	35.6	48.8	18.5								
Green Ext Time (p_c), s	0.0	0.0	1.1	6.6								

Intersection Summary

HCM 6th Ctrl Delay	56.8
HCM 6th LOS	E

Notes

User approved volume balancing among the lanes for turning movement.  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection						
Int Delay, s/veh	0.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↶		↷	↶	↷	↷
Traffic Vol, veh/h	421	15	15	231	3	3
Future Vol, veh/h	421	15	15	231	3	3
Conflicting Peds, #/hr	0	3	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	0
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	74	74	74	74	74	74
Heavy Vehicles, %	2	0	0	3	0	0
Mvmt Flow	569	20	20	312	4	4

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	592	0	934
Stage 1	-	-	-	-	582
Stage 2	-	-	-	-	352
Critical Hdwy	-	-	4.1	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	-	-	2.2	-	3.5
Pot Cap-1 Maneuver	-	-	994	-	297
Stage 1	-	-	-	-	563
Stage 2	-	-	-	-	716
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	991	-	290
Mov Cap-2 Maneuver	-	-	-	-	479
Stage 1	-	-	-	-	561
Stage 2	-	-	-	-	702

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	12.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	479	516	-	-	991	-
HCM Lane V/C Ratio	0.008	0.008	-	-	0.02	-
HCM Control Delay (s)	12.6	12	-	-	8.7	-
HCM Lane LOS	B	B	-	-	A	-
HCM 95th %tile Q(veh)	0	0	-	-	0.1	-

Intersection						
Int Delay, s/veh	0.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	410	15	15	244	3	3
Future Vol, veh/h	410	15	15	244	3	3
Conflicting Peds, #/hr	0	3	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	60	-	0	-
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	75	75	75	75	75	75
Heavy Vehicles, %	2	0	0	3	0	0
Mvmt Flow	547	20	20	325	4	4

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	570	0	925
Stage 1	-	-	-	-	560
Stage 2	-	-	-	-	365
Critical Hdwy	-	-	4.1	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	-	-	2.2	-	3.5
Pot Cap-1 Maneuver	-	-	1013	-	301
Stage 1	-	-	-	-	576
Stage 2	-	-	-	-	707
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1010	-	294
Mov Cap-2 Maneuver	-	-	-	-	485
Stage 1	-	-	-	-	574
Stage 2	-	-	-	-	693

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	12.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	507	-	-	1010	-
HCM Lane V/C Ratio	0.016	-	-	0.02	-
HCM Control Delay (s)	12.2	-	-	8.6	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	-

Intersection						
Int Delay, s/veh	0.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	399	15	15	254	3	3
Future Vol, veh/h	399	15	15	254	3	3
Conflicting Peds, #/hr	0	2	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	68	68	68	68	68	68
Heavy Vehicles, %	3	0	0	3	0	0
Mvmt Flow	587	22	22	374	4	4

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	611	0	1018
Stage 1	-	-	-	-	600
Stage 2	-	-	-	-	418
Critical Hdwy	-	-	4.1	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	-	-	2.2	-	3.5
Pot Cap-1 Maneuver	-	-	978	-	265
Stage 1	-	-	-	-	552
Stage 2	-	-	-	-	669
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	976	-	258
Mov Cap-2 Maneuver	-	-	-	-	456
Stage 1	-	-	-	-	551
Stage 2	-	-	-	-	654

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	12.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	479	-	-	976	-
HCM Lane V/C Ratio	0.018	-	-	0.023	-
HCM Control Delay (s)	12.7	-	-	8.8	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-

Intersection						
Int Delay, s/veh	0.6					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↶		↷	↶	↷	↷
Traffic Vol, veh/h	384	18	33	266	3	9
Future Vol, veh/h	384	18	33	266	3	9
Conflicting Peds, #/hr	0	2	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	170	-	0	50
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	68	68	68	68	68	68
Heavy Vehicles, %	3	0	0	3	0	0
Mvmt Flow	565	26	49	391	4	13

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	593	0	1069 580
Stage 1	-	-	-	-	580 -
Stage 2	-	-	-	-	489 -
Critical Hdwy	-	-	4.1	-	6.4 6.2
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	-	-	2.2	-	3.5 3.3
Pot Cap-1 Maneuver	-	-	993	-	247 518
Stage 1	-	-	-	-	564 -
Stage 2	-	-	-	-	621 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	991	-	234 517
Mov Cap-2 Maneuver	-	-	-	-	439 -
Stage 1	-	-	-	-	563 -
Stage 2	-	-	-	-	591 -

Approach	EB	WB	NB
HCM Control Delay, s	0	1	12.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	439	517	-	-	991	-
HCM Lane V/C Ratio	0.01	0.026	-	-	0.049	-
HCM Control Delay (s)	13.3	12.1	-	-	8.8	-
HCM Lane LOS	B	B	-	-	A	-
HCM 95th %tile Q(veh)	0	0.1	-	-	0.2	-

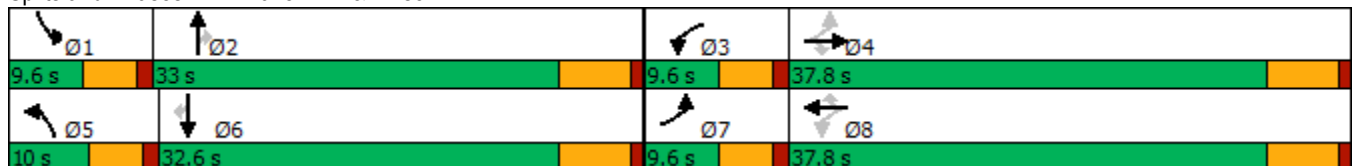
Timings  
1: Haven Av. & Wilson Av.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	155	67	202	115	60	71	185	143	33	151	17
Future Volume (vph)	54	155	67	202	115	60	71	185	143	33	151	17
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	37.8	37.8	9.6	37.8	37.8	9.6	32.8	32.8	9.6	31.8	31.8
Total Split (s)	9.6	37.8	37.8	9.6	37.8	37.8	10.0	33.0	33.0	9.6	32.6	32.6
Total Split (%)	10.7%	42.0%	42.0%	10.7%	42.0%	42.0%	11.1%	36.7%	36.7%	10.7%	36.2%	36.2%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
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	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	20.6	14.0	14.0	22.9	18.8	18.8	5.8	17.4	17.4	5.3	12.8	12.8
Actuated g/C Ratio	0.36	0.24	0.24	0.40	0.33	0.33	0.10	0.30	0.30	0.09	0.22	0.22
v/c Ratio	0.13	0.42	0.16	0.49	0.12	0.11	0.47	0.20	0.28	0.23	0.23	0.04
Control Delay	11.5	22.3	1.1	16.8	17.3	0.4	40.7	17.6	5.5	34.0	20.7	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.5	22.3	1.1	16.8	17.3	0.4	40.7	17.6	5.5	34.0	20.7	0.2
LOS	B	C	A	B	B	A	D	B	A	C	C	A
Approach Delay		15.1			14.3			17.4			21.2	
Approach LOS		B			B			B			C	

Intersection Summary

Cycle Length: 90  
 Actuated Cycle Length: 57.4  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.49  
 Intersection Signal Delay: 16.6  
 Intersection LOS: B  
 Intersection Capacity Utilization 49.4%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 1: Haven Av. & Wilson Av.





























HCM 6th Signalized Intersection Summary

Chaffey College (JN 13236)

1: Haven Av. & Wilson Av.

07/29/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	155	67	202	115	60	71	185	143	33	151	17
Future Volume (veh/h)	54	155	67	202	115	60	71	185	143	33	151	17
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1826	1841	1885	1856	1900	1900	1870	1900	1900	1841	1900
Adj Flow Rate, veh/h	64	185	35	240	137	17	85	220	150	39	180	14
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	0	5	4	1	3	0	0	2	0	0	4	0
Cap, veh/h	507	370	316	461	864	395	126	821	372	76	711	327
Arrive On Green	0.06	0.20	0.20	0.10	0.25	0.25	0.07	0.23	0.23	0.04	0.20	0.20
Sat Flow, veh/h	1810	1826	1560	1795	3526	1610	1810	3554	1610	1810	3497	1610
Grp Volume(v), veh/h	64	185	35	240	137	17	85	220	150	39	180	14
Grp Sat Flow(s),veh/h/ln	1810	1826	1560	1795	1763	1610	1810	1777	1610	1810	1749	1610
Q Serve(g_s), s	1.3	4.4	0.9	5.0	1.5	0.4	2.3	2.5	3.9	1.0	2.1	0.3
Cycle Q Clear(g_c), s	1.3	4.4	0.9	5.0	1.5	0.4	2.3	2.5	3.9	1.0	2.1	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	507	370	316	461	864	395	126	821	372	76	711	327
V/C Ratio(X)	0.13	0.50	0.11	0.52	0.16	0.04	0.67	0.27	0.40	0.51	0.25	0.04
Avail Cap(c_a), veh/h	584	1187	1014	461	2293	1047	199	1964	890	184	1905	877
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.9	17.4	16.0	14.2	14.6	14.2	22.3	15.5	16.0	23.1	16.5	15.8
Incr Delay (d2), s/veh	0.0	1.0	0.2	0.5	0.1	0.0	2.3	0.2	0.7	2.0	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	1.6	0.3	1.7	0.5	0.1	0.9	0.8	1.2	0.4	0.7	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.9	18.5	16.2	14.7	14.7	14.2	24.7	15.7	16.7	25.1	16.7	15.8
LnGrp LOS	B	B	B	B	B	B	C	B	B	C	B	B
Approach Vol, veh/h		284			394			455			233	
Approach Delay, s/veh		17.1			14.7			17.7			18.0	
Approach LOS		B			B			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.7	17.2	9.6	15.8	8.0	15.8	7.5	17.9				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	5.0	27.2	5.0	32.0	5.4	26.8	5.0	32.0				
Max Q Clear Time (g_c+I1), s	3.0	5.9	7.0	6.4	4.3	4.1	3.3	3.5				
Green Ext Time (p_c), s	0.0	1.6	0.0	1.0	0.0	1.0	0.0	0.8				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				16.8								
HCM 6th LOS				B								

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗ ↑↑↑	↗ ↑↑↑			↗ ↑↑↑
Traffic Vol, veh/h	0	8	391	51	0	420
Future Vol, veh/h	0	8	391	51	0	420
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	0	0	1	0	0	2
Mvmt Flow	0	8	399	52	0	429

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	-	226	0	0	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	7.1	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	3.9	-	-	-
Pot Cap-1 Maneuver	0	666	-	-	0
Stage 1	0	-	-	-	0
Stage 2	0	-	-	-	0
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	-	666	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.5	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	666
HCM Lane V/C Ratio	-	-	0.012
HCM Control Delay (s)	-	-	10.5
HCM Lane LOS	-	-	B
HCM 95th %tile Q(veh)	-	-	0

Intersection						
Int Delay, s/veh	0.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↑↑↑			↑↑↑
Traffic Vol, veh/h	40	8	435	0	0	419
Future Vol, veh/h	40	8	435	0	0	419
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	0	0	1	0	0	2
Mvmt Flow	41	8	444	0	0	428

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	615	222	0	-	-	-
Stage 1	444	-	-	-	-	-
Stage 2	171	-	-	-	-	-
Critical Hdwy	5.7	7.1	-	-	-	-
Critical Hdwy Stg 1	6.6	-	-	-	-	-
Critical Hdwy Stg 2	6	-	-	-	-	-
Follow-up Hdwy	3.8	3.9	-	-	-	-
Pot Cap-1 Maneuver	486	670	-	0	0	-
Stage 1	526	-	-	0	0	-
Stage 2	779	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	486	670	-	-	-	-
Mov Cap-2 Maneuver	476	-	-	-	-	-
Stage 1	526	-	-	-	-	-
Stage 2	779	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.8	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBTWBLn1	WBLn2	SBT
Capacity (veh/h)	-	476	670
HCM Lane V/C Ratio	-	0.086	0.012
HCM Control Delay (s)	-	13.3	10.4
HCM Lane LOS	-	B	B
HCM 95th %tile Q(veh)	-	0.3	0

Intersection						
Int Delay, s/veh	0.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↑ ↑ ↑	↑ ↑ ↑			↑ ↑ ↑
Traffic Vol, veh/h	0	23	466	210	0	500
Future Vol, veh/h	0	23	466	210	0	500
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	0	1	0	0	2
Mvmt Flow	0	24	496	223	0	532

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	-	360	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.1	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.9	-	-	-	-
Pot Cap-1 Maneuver	0	548	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	-	548	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.9	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	548
HCM Lane V/C Ratio	-	-	0.045
HCM Control Delay (s)	-	-	11.9
HCM Lane LOS	-	-	B
HCM 95th %tile Q(veh)	-	-	0.1

Timings  
5: Haven Av. & Amber Ln./College Dr.

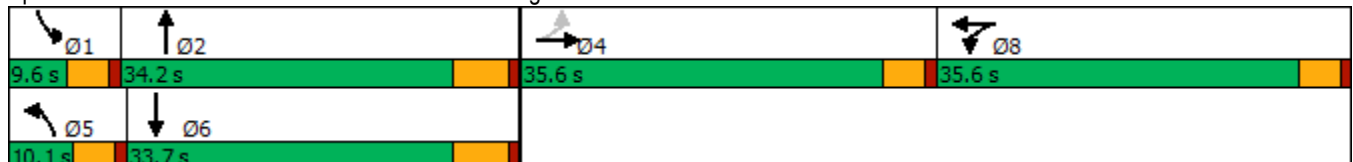


Lane Group	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↔	↵	↔	↵	↑↑↑	↵	↑↑↑
Traffic Volume (vph)	0	728	0	18	667	41	457
Future Volume (vph)	0	728	0	18	667	41	457
Turn Type	NA	Split	NA	Prot	NA	Prot	NA
Protected Phases	4	8	8	5	2	1	6
Permitted Phases							
Detector Phase	4	8	8	5	2	1	6
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	35.6	35.6	35.6	9.6	23.8	9.6	23.8
Total Split (s)	35.6	35.6	35.6	10.1	34.2	9.6	33.7
Total Split (%)	31.0%	31.0%	31.0%	8.8%	29.7%	8.3%	29.3%
Yellow Time (s)	3.6	3.6	3.6	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	5.8	4.6	5.8
Lead/Lag				Lead	Lag	Lead	Lag
Lead-Lag Optimize?				Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	Min	None	Min
Act Effct Green (s)	13.8	28.0	28.0	5.6	30.0	5.3	33.9
Actuated g/C Ratio	0.16	0.32	0.32	0.06	0.34	0.06	0.39
v/c Ratio	0.11	0.77	0.67	0.17	1.08dr	0.43	0.26
Control Delay	0.6	40.8	26.8	50.6	31.7	59.5	23.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	0.6	40.8	26.8	50.6	31.7	59.5	23.3
LOS	A	D	C	D	C	E	C
Approach Delay	0.6		33.8		31.9		26.3
Approach LOS	A		C		C		C

Intersection Summary

Cycle Length: 115  
 Actuated Cycle Length: 87.1  
 Natural Cycle: 115  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.84  
 Intersection Signal Delay: 31.0  
 Intersection LOS: C  
 Intersection Capacity Utilization 69.9%  
 ICU Level of Service C  
 Analysis Period (min) 15  
 dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 5: Haven Av. & Amber Ln./College Dr.



HCM 6th Signalized Intersection Summary  
 5: Haven Av. & Amber Ln./College Dr.

Chaffey College (JN 13236)  
 07/29/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↗	↕		↗	↑↑↑		↗	↑↑↑	
Traffic Volume (veh/h)	0	0	33	728	0	10	18	667	652	41	457	2
Future Volume (veh/h)	0	0	33	728	0	10	18	667	652	41	457	2
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		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1885	1900	1900	1900	1885	1885	1900	1870	1900
Adj Flow Rate, veh/h	0	0	6	837	0	0	20	758	0	47	519	2
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	0	0	0	1	0	0	0	1	1	0	2	0
Cap, veh/h	0	0	26	1109	587	0	44	1325		85	1473	6
Arrive On Green	0.00	0.00	0.02	0.31	0.00	0.00	0.02	0.26	0.00	0.05	0.28	0.28
Sat Flow, veh/h	0	0	1610	3591	1900	0	1810	5316	0	1810	5250	20
Grp Volume(v), veh/h	0	0	6	837	0	0	20	758	0	47	336	185
Grp Sat Flow(s),veh/h/ln	0	0	1610	1795	1900	0	1810	1716	0	1810	1702	1866
Q Serve(g_s), s	0.0	0.0	0.2	11.1	0.0	0.0	0.6	6.8	0.0	1.3	4.2	4.2
Cycle Q Clear(g_c), s	0.0	0.0	0.2	11.1	0.0	0.0	0.6	6.8	0.0	1.3	4.2	4.2
Prop In Lane	0.00		1.00	1.00		0.00	1.00		0.00	1.00		0.01
Lane Grp Cap(c), veh/h	0	0	26	1109	587	0	44	1325		85	955	524
V/C Ratio(X)	0.00	0.00	0.23	0.75	0.00	0.00	0.46	0.57		0.55	0.35	0.35
Avail Cap(c_a), veh/h	0	0	943	2104	1113	0	188	2763		171	1795	984
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	25.7	16.5	0.0	0.0	25.5	17.1	0.0	24.7	15.2	15.2
Incr Delay (d2), s/veh	0.0	0.0	4.6	1.1	0.0	0.0	2.8	0.4	0.0	2.1	0.2	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.1	4.3	0.0	0.0	0.3	2.2	0.0	0.6	1.3	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	30.3	17.5	0.0	0.0	28.3	17.5	0.0	26.7	15.4	15.6
LnGrp LOS	A	A	C	B	A	A	C	B		C	B	B
Approach Vol, veh/h		6			837			778	A		568	
Approach Delay, s/veh		30.3			17.5			17.8			16.4	
Approach LOS		C			B			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.1	19.4		5.4	5.9	20.6		20.9				
Change Period (Y+Rc), s	4.6	5.8		4.6	4.6	5.8		4.6				
Max Green Setting (Gmax), s	5.0	28.4		31.0	5.5	27.9		31.0				
Max Q Clear Time (g_c+I1), s	3.3	8.8		2.2	2.6	6.2		13.1				
Green Ext Time (p_c), s	0.0	4.7		0.0	0.0	2.9		3.2				

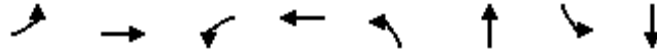
Intersection Summary

HCM 6th Ctrl Delay	17.4
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.  
 Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Timings  
6: Haven Av. & Lemon Av.

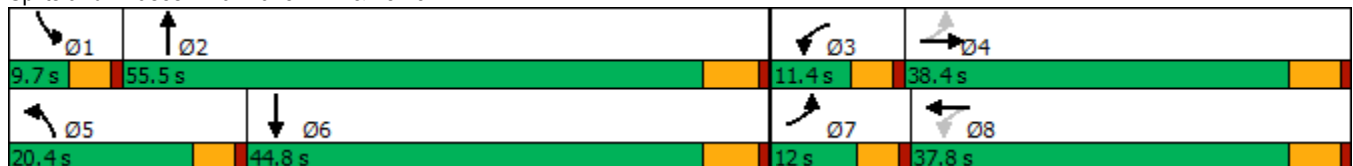


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↶	↷	↶	↷	↶	↑↑↑	↶	↑↑↑
Traffic Volume (vph)	171	103	183	40	173	1441	22	1414
Future Volume (vph)	171	103	183	40	173	1441	22	1414
Turn Type	pm+pt	NA	pm+pt	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases	4		8					
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	38.4	9.6	36.4	9.6	24.8	9.6	23.8
Total Split (s)	12.0	38.4	11.4	37.8	20.4	55.5	9.7	44.8
Total Split (%)	10.4%	33.4%	9.9%	32.9%	17.7%	48.3%	8.4%	39.0%
Yellow Time (s)	3.6	4.4	3.6	4.4	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4	4.6	5.4	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	26.6	17.2	21.8	16.8	13.3	50.9	5.2	36.2
Actuated g/C Ratio	0.28	0.18	0.23	0.18	0.14	0.54	0.05	0.38
v/c Ratio	0.48	0.64	0.65	0.21	0.72	0.64	0.25	0.80
Control Delay	31.2	37.1	39.0	23.8	58.4	18.3	55.7	30.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.2	37.1	39.0	23.8	58.4	18.3	55.7	30.7
LOS	C	D	D	C	E	B	E	C
Approach Delay		34.5		34.9		22.1		31.1
Approach LOS		C		C		C		C

Intersection Summary

Cycle Length: 115	
Actuated Cycle Length: 94.6	
Natural Cycle: 95	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.80	
Intersection Signal Delay: 27.5	Intersection LOS: C
Intersection Capacity Utilization 84.6%	ICU Level of Service E
Analysis Period (min) 15	























Splits and Phases: 6: Haven Av. & Lemon Av.



HCM 6th Signalized Intersection Summary  
6: Haven Av. & Lemon Av.

Chaffey College (JN 13236)

07/29/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	171	103	111	183	40	27	173	1441	228	22	1414	82
Future Volume (veh/h)	171	103	111	183	40	27	173	1441	228	22	1414	82
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	0.98		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1900	1841	1885	1841	1900	1870	1900	1885	1781	1885	1900
Adj Flow Rate, veh/h	178	107	54	191	42	25	180	1501	201	23	1473	85
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, %	3	0	4	1	4	0	2	0	1	8	1	0
Cap, veh/h	410	197	100	334	173	103	217	2230	298	42	1918	111
Arrive On Green	0.09	0.17	0.17	0.08	0.16	0.16	0.12	0.48	0.48	0.02	0.39	0.39
Sat Flow, veh/h	1767	1179	595	1795	1081	644	1781	4619	618	1697	4975	287
Grp Volume(v), veh/h	178	0	161	191	0	67	180	1123	579	23	1016	542
Grp Sat Flow(s),veh/h/ln	1767	0	1774	1795	0	1725	1781	1729	1779	1697	1716	1831
Q Serve(g_s), s	7.0	0.0	7.0	6.8	0.0	2.8	8.3	20.8	20.9	1.1	21.6	21.6
Cycle Q Clear(g_c), s	7.0	0.0	7.0	6.8	0.0	2.8	8.3	20.8	20.9	1.1	21.6	21.6
Prop In Lane	1.00		0.34	1.00		0.37	1.00		0.35	1.00		0.16
Lane Grp Cap(c), veh/h	410	0	297	334	0	277	217	1670	859	42	1323	706
V/C Ratio(X)	0.43	0.00	0.54	0.57	0.00	0.24	0.83	0.67	0.67	0.55	0.77	0.77
Avail Cap(c_a), veh/h	410	0	699	334	0	668	336	2053	1056	103	1599	853
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.3	0.0	31.9	27.8	0.0	30.7	35.9	16.6	16.6	40.4	22.4	22.4
Incr Delay (d2), s/veh	0.3	0.0	1.5	1.5	0.0	0.4	5.4	0.6	1.3	4.1	1.9	3.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	0.0	3.0	3.2	0.0	1.2	3.7	7.2	7.5	0.5	8.1	8.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.6	0.0	33.4	29.3	0.0	31.1	41.3	17.2	17.8	44.4	24.3	25.9
LnGrp LOS	C	A	C	C	A	C	D	B	B	D	C	C
Approach Vol, veh/h		339			258			1882			1581	
Approach Delay, s/veh		29.8			29.8			19.7			25.2	
Approach LOS		C			C			B			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.7	46.2	11.4	19.4	14.8	38.1	12.0	18.8				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.4	4.6	5.8	4.6	5.4				
Max Green Setting (Gmax), s	5.1	49.7	6.8	33.0	15.8	39.0	7.4	32.4				
Max Q Clear Time (g_c+I1), s	3.1	22.9	8.8	9.0	10.3	23.6	9.0	4.8				
Green Ext Time (p_c), s	0.0	13.3	0.0	0.8	0.1	8.6	0.0	0.3				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				23.3								
HCM 6th LOS				C								



Timings  
7: Haven Av. & I-210 WB Ramps

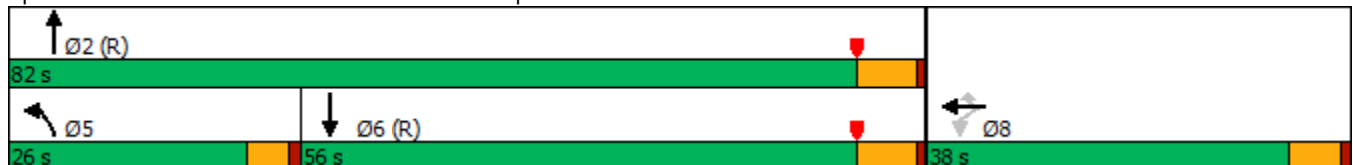


Lane Group	WBL	WBT	WBR	NBL	NBT	SBT
Lane Configurations	↶	↷	↷	↶↷	↶↶↶	↶↶↶
Traffic Volume (vph)	553	5	797	646	1548	1390
Future Volume (vph)	553	5	797	646	1548	1390
Turn Type	Perm	NA	Perm	Prot	NA	NA
Protected Phases		8		5	2	6
Permitted Phases	8		8			
Detector Phase	8	8	8	5	2	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.8	10.8	10.8	9.7	31.2	31.2
Total Split (s)	38.0	38.0	38.0	26.0	82.0	56.0
Total Split (%)	31.7%	31.7%	31.7%	21.7%	68.3%	46.7%
Yellow Time (s)	4.8	4.8	4.8	3.7	5.2	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	4.7	6.2	6.2
Lead/Lag				Lead		Lag
Lead-Lag Optimize?				Yes		Yes
Recall Mode	None	None	None	None	C-Max	C-Max
Act Effct Green (s)	32.2	32.2	32.2	21.3	75.8	49.8
Actuated g/C Ratio	0.27	0.27	0.27	0.18	0.63	0.42
v/c Ratio	1.10	1.13	1.01	1.12	0.51	1.08
Control Delay	113.2	121.8	82.6	118.1	12.7	77.3
Queue Delay	0.0	0.0	0.0	0.0	0.9	0.0
Total Delay	113.2	121.8	82.6	118.1	13.6	77.3
LOS	F	F	F	F	B	E
Approach Delay		106.2			44.3	77.3
Approach LOS		F			D	E

Intersection Summary





















Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 67 (56%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow  
 Natural Cycle: 120  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.13  
 Intersection Signal Delay: 71.4  
 Intersection Capacity Utilization 107.9%  
 Analysis Period (min) 15  
 Intersection LOS: E  
 ICU Level of Service G

Splits and Phases: 7: Haven Av. & I-210 WB Ramps



HCM 6th Signalized Intersection Summary  
7: Haven Av. & I-210 WB Ramps

Chaffey College (JN 13236)  
07/29/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	553	5	797	646	1548	0	0	1390	729
Future Volume (veh/h)	0	0	0	553	5	797	646	1548	0	0	1390	729
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
Work Zone On Approach				No			No			No		
Adj Sat Flow, veh/h/ln				1885	1411	1885	1885	1885	0	0	1885	1885
Adj Flow Rate, veh/h				764	0	376	687	1647	0	0	1479	617
Peak Hour Factor				0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %				1	33	1	1	1	0	0	1	1
Cap, veh/h				921	0	410	618	3312	0	0	1533	623
Arrive On Green				0.26	0.00	0.26	0.18	0.64	0.00	0.00	0.43	0.43
Sat Flow, veh/h				3591	0	1598	3483	5316	0	0	3761	1460
Grp Volume(v), veh/h				764	0	376	687	1647	0	0	1411	685
Grp Sat Flow(s),veh/h/ln				1795	0	1598	1742	1716	0	0	1716	1620
Q Serve(g_s), s				24.1	0.0	27.5	21.3	20.1	0.0	0.0	48.1	50.3
Cycle Q Clear(g_c), s				24.1	0.0	27.5	21.3	20.1	0.0	0.0	48.1	50.3
Prop In Lane				1.00		1.00	1.00		0.00	0.00		0.90
Lane Grp Cap(c), veh/h				921	0	410	618	3312	0	0	1465	692
V/C Ratio(X)				0.83	0.00	0.92	1.11	0.50	0.00	0.00	0.96	0.99
Avail Cap(c_a), veh/h				964	0	429	618	3312	0	0	1465	692
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.09	0.09	0.00	0.00	0.53	0.53
Uniform Delay (d), s/veh				42.1	0.0	43.4	49.4	11.2	0.0	0.0	33.5	34.1
Incr Delay (d2), s/veh				6.0	0.0	24.0	52.5	0.0	0.0	0.0	10.5	22.6
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				11.1	0.0	13.2	13.5	6.7	0.0	0.0	20.8	22.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				48.1	0.0	67.4	101.9	11.3	0.0	0.0	43.9	56.7
LnGrp LOS				D	A	E	F	B	A	A	D	E
Approach Vol, veh/h					1140			2334			2096	
Approach Delay, s/veh					54.5			37.9			48.1	
Approach LOS					D			D			D	
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		83.4			26.0	57.4		36.6				
Change Period (Y+Rc), s		6.2			* 4.7	6.2		5.8				
Max Green Setting (Gmax), s		75.8			* 21	49.8		32.2				
Max Q Clear Time (g_c+I1), s		22.1			23.3	52.3		29.5				
Green Ext Time (p_c), s		13.3			0.0	0.0		1.3				

Intersection Summary

HCM 6th Ctrl Delay	45.2
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
8: Haven Av. & I-210 EB Ramps

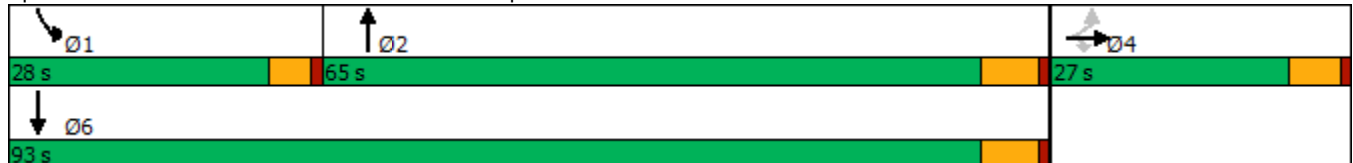


Lane Group	EBL	EBT	EBR	NBT	SBL	SBT
Lane Configurations	↶	↔	↷	↑↑↑	↶↷	↑↑↑
Traffic Volume (vph)	611	8	313	1583	746	1199
Future Volume (vph)	611	8	313	1583	746	1199
Turn Type	Perm	NA	Perm	NA	Prot	NA
Protected Phases		4		2	1	6
Permitted Phases	4		4			
Detector Phase	4	4	4	2	1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.8	10.8	10.8	30.2	9.7	31.2
Total Split (s)	27.0	27.0	27.0	65.0	28.0	93.0
Total Split (%)	22.5%	22.5%	22.5%	54.2%	23.3%	77.5%
Yellow Time (s)	4.8	4.8	4.8	5.2	3.7	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	6.2	4.7	6.2
Lead/Lag				Lag	Lead	
Lead-Lag Optimize?				Yes	Yes	
Recall Mode	None	None	None	None	None	None
Act Effct Green (s)	21.2	21.2	21.2	58.8	23.3	86.8
Actuated g/C Ratio	0.18	0.18	0.18	0.49	0.19	0.72
v/c Ratio	1.16	1.18	0.86	1.17dr	1.18	0.34
Control Delay	147.1	152.2	54.8	83.8	138.2	6.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.4
Total Delay	147.1	152.2	54.8	83.8	138.2	6.8
LOS	F	F	D	F	F	A
Approach Delay		120.9		83.8		57.2
Approach LOS		F		F		E

Intersection Summary





















Cycle Length: 120  
 Actuated Cycle Length: 120  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.18  
 Intersection Signal Delay: 80.6  
 Intersection LOS: F  
 Intersection Capacity Utilization 107.9%  
 ICU Level of Service G  
 Analysis Period (min) 15  
 dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 8: Haven Av. & I-210 EB Ramps



HCM 6th Signalized Intersection Summary  
8: Haven Av. & I-210 EB Ramps

Chaffey College (JN 13236)  
07/29/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	611	8	313	0	0	0	0	1583	971	746	1199	0
Future Volume (veh/h)	611	8	313	0	0	0	0	1583	971	746	1199	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1856				0	1885	1885	1885	1885	0
Adj Flow Rate, veh/h	679	0	57				0	1684	733	794	1276	0
Peak Hour Factor	0.94	0.94	0.94				0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	3				0	1	1	1	1	0
Cap, veh/h	639	0	278				0	1750	714	676	3723	0
Arrive On Green	0.18	0.00	0.18				0.00	0.49	0.49	0.19	0.72	0.00
Sat Flow, veh/h	3619	0	1572				0	3742	1457	3483	5316	0
Grp Volume(v), veh/h	679	0	57				0	1613	804	794	1276	0
Grp Sat Flow(s),veh/h/ln	1810	0	1572				0	1716	1598	1742	1716	0
Q Serve(g_s), s	21.2	0.0	3.7				0.0	54.3	58.8	23.3	10.9	0.0
Cycle Q Clear(g_c), s	21.2	0.0	3.7				0.0	54.3	58.8	23.3	10.9	0.0
Prop In Lane	1.00		1.00				0.00		0.91	1.00		0.00
Lane Grp Cap(c), veh/h	639	0	278				0	1681	783	676	3723	0
V/C Ratio(X)	1.06	0.00	0.21				0.00	0.96	1.03	1.17	0.34	0.00
Avail Cap(c_a), veh/h	639	0	278				0	1681	783	676	3723	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	49.4	0.0	42.2				0.0	29.5	30.6	48.3	6.1	0.0
Incr Delay (d2), s/veh	53.2	0.0	0.4				0.0	13.5	39.1	93.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.0	0.0	1.4				0.0	23.6	29.2	18.5	3.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	102.6	0.0	42.6				0.0	43.0	69.7	141.7	6.1	0.0
LnGrp LOS	F	A	D				A	D	F	F	A	A
Approach Vol, veh/h		736						2417			2070	
Approach Delay, s/veh		97.9						51.9			58.2	
Approach LOS		F						D			E	
Timer - Assigned Phs	1	2	4	6								
Phs Duration (G+Y+Rc), s	28.0	65.0	27.0	93.0								
Change Period (Y+Rc), s	* 4.7	6.2	5.8	6.2								
Max Green Setting (Gmax), s	* 23	58.8	21.2	86.8								
Max Q Clear Time (g_c+I1), s	25.3	60.8	23.2	12.9								
Green Ext Time (p_c), s	0.0	0.0	0.0	8.9								
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			60.9									
HCM 6th LOS			E									
<b>Notes</b>												
User approved volume balancing among the lanes for turning movement.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Intersection						
Int Delay, s/veh	0.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔		↔	↑	↔	↔
Traffic Vol, veh/h	320	10	10	370	8	8
Future Vol, veh/h	320	10	10	370	8	8
Conflicting Peds, #/hr	0	3	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	0
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	2	0	0	1	0	0
Mvmt Flow	390	12	12	451	10	10

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	405	0	874
Stage 1	-	-	-	-	399
Stage 2	-	-	-	-	475
Critical Hdwy	-	-	4.1	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	-	-	2.2	-	3.5
Pot Cap-1 Maneuver	-	-	1165	-	323
Stage 1	-	-	-	-	682
Stage 2	-	-	-	-	630
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1162	-	319
Mov Cap-2 Maneuver	-	-	-	-	511
Stage 1	-	-	-	-	680
Stage 2	-	-	-	-	624

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	11.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	511	653	-	-	1162	-
HCM Lane V/C Ratio	0.019	0.015	-	-	0.01	-
HCM Control Delay (s)	12.2	10.6	-	-	8.1	-
HCM Lane LOS	B	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-

Intersection						
Int Delay, s/veh	0.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	318	10	10	372	8	8
Future Vol, veh/h	318	10	10	372	8	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	60	-	0	-
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	3	0	0	1	0	0
Mvmt Flow	383	12	12	448	10	10

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	395	0	861
Stage 1	-	-	-	-	389
Stage 2	-	-	-	-	472
Critical Hdwy	-	-	4.1	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	-	-	2.2	-	3.5
Pot Cap-1 Maneuver	-	-	1175	-	329
Stage 1	-	-	-	-	689
Stage 2	-	-	-	-	632
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1175	-	326
Mov Cap-2 Maneuver	-	-	-	-	517
Stage 1	-	-	-	-	689
Stage 2	-	-	-	-	626

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	11.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	581	-	-	1175	-
HCM Lane V/C Ratio	0.033	-	-	0.01	-
HCM Control Delay (s)	11.4	-	-	8.1	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection						
Int Delay, s/veh	0.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↶		↷	↶	↷	
Traffic Vol, veh/h	316	10	10	373	8	8
Future Vol, veh/h	316	10	10	373	8	8
Conflicting Peds, #/hr	0	2	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	3	0	0	1	0	0
Mvmt Flow	363	11	11	429	9	9

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	376	0	822 371
Stage 1	-	-	-	-	371 -
Stage 2	-	-	-	-	451 -
Critical Hdwy	-	-	4.1	-	6.4 6.2
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	-	-	2.2	-	3.5 3.3
Pot Cap-1 Maneuver	-	-	1194	-	346 679
Stage 1	-	-	-	-	702 -
Stage 2	-	-	-	-	646 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1192	-	342 678
Mov Cap-2 Maneuver	-	-	-	-	530 -
Stage 1	-	-	-	-	701 -
Stage 2	-	-	-	-	640 -

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	11.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	595	-	-	1192	-
HCM Lane V/C Ratio	0.031	-	-	0.01	-
HCM Control Delay (s)	11.2	-	-	8.1	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection						
Int Delay, s/veh	0.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔		↔	↑	↔	↔
Traffic Vol, veh/h	314	10	22	375	8	28
Future Vol, veh/h	314	10	22	375	8	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	-	-	170	-	0	50
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	0	0	1	0	0
Mvmt Flow	341	11	24	408	9	30

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	352	0	803 347
Stage 1	-	-	-	-	347 -
Stage 2	-	-	-	-	456 -
Critical Hdwy	-	-	4.1	-	6.4 6.2
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	-	-	2.2	-	3.5 3.3
Pot Cap-1 Maneuver	-	-	1218	-	355 701
Stage 1	-	-	-	-	720 -
Stage 2	-	-	-	-	643 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1218	-	348 701
Mov Cap-2 Maneuver	-	-	-	-	532 -
Stage 1	-	-	-	-	720 -
Stage 2	-	-	-	-	630 -

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	10.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	532	701	-	-	1218	-
HCM Lane V/C Ratio	0.016	0.043	-	-	0.02	-
HCM Control Delay (s)	11.9	10.4	-	-	8	-
HCM Lane LOS	B	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0.1	-



**APPENDIX 3.3:**

**EXISTING (2021) CONDITIONS TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS**

This Page Intentionally Left Blank

### Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **Existing Conditions - Weekday PM Peak Hour**

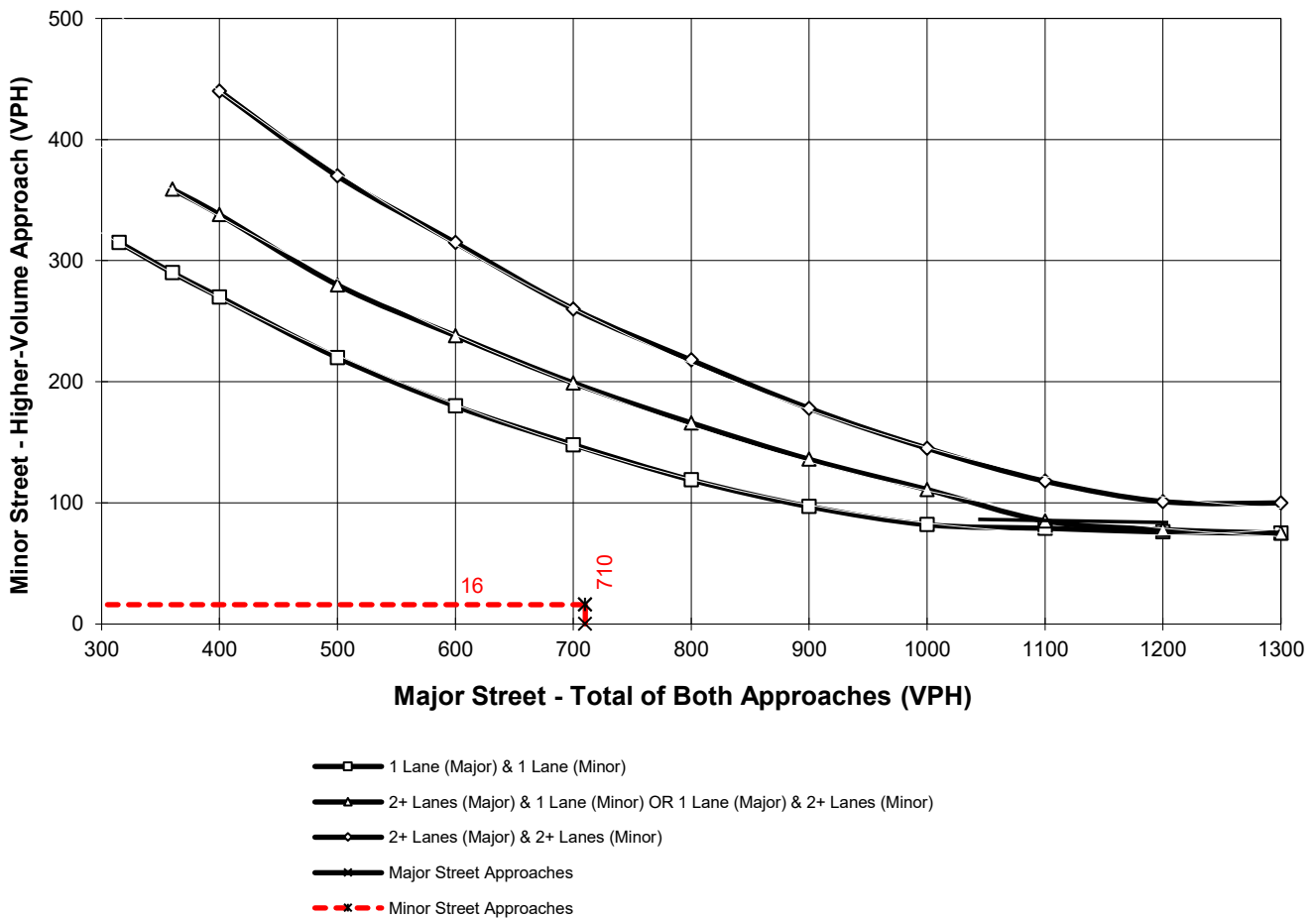
Major Street Name = **Wilson Av.**

Total of Both Approaches (VPH) = **710**  
 Number of Approach Lanes Major Street = **1**

Minor Street Name = **Driveway 2**

High Volume Approach (VPH) = **16**  
 Number of Approach Lanes Minor Street = **1**

**SIGNAL WARRANT NOT SATISFIED**



\*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

### Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **Existing Conditions - Weekday PM Peak Hour**

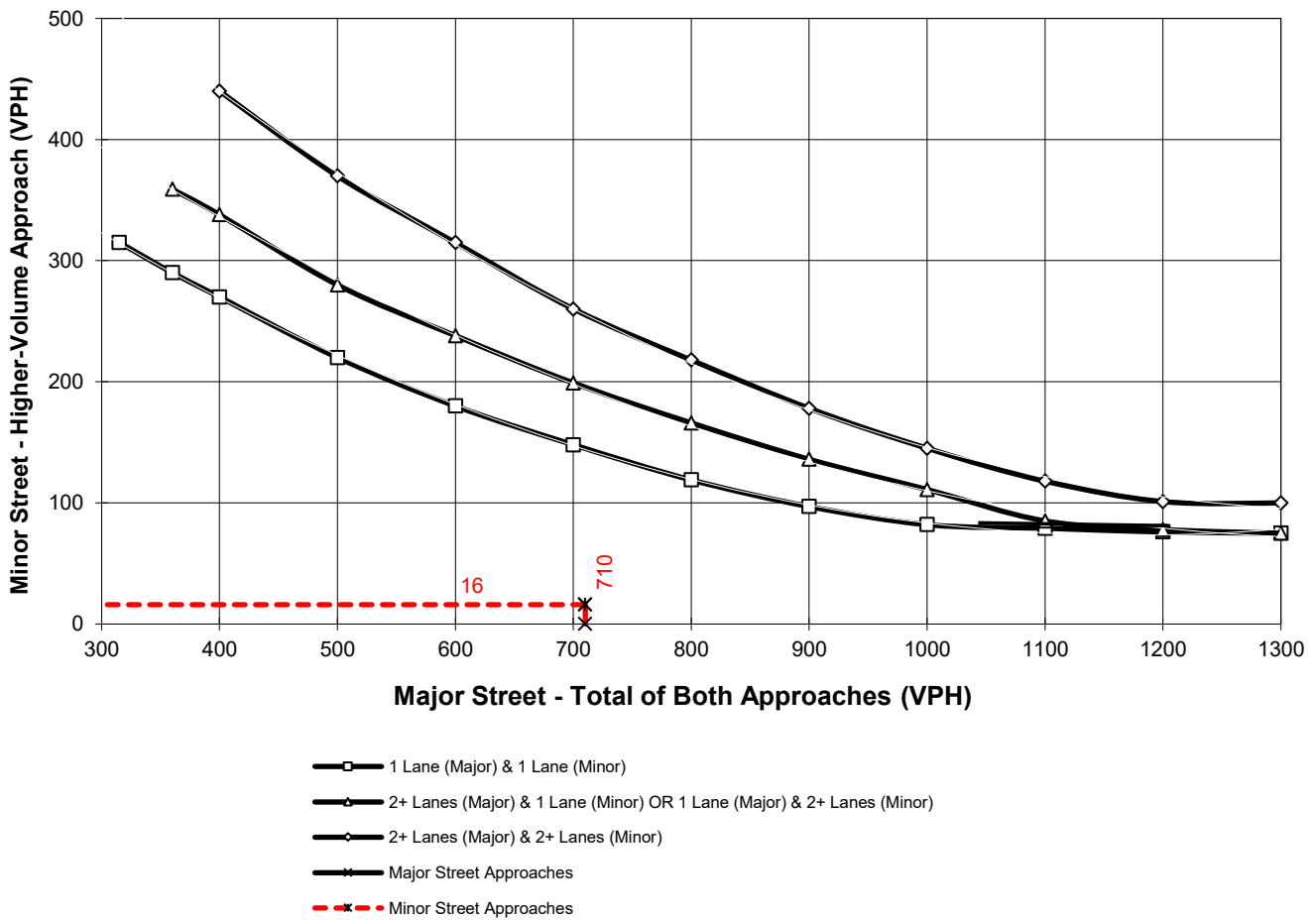
Major Street Name = **Wilson Av.**

Total of Both Approaches (VPH) = **710**  
 Number of Approach Lanes Major Street = **1**

Minor Street Name = **Driveway 3**

High Volume Approach (VPH) = **16**  
 Number of Approach Lanes Minor Street = **1**

**SIGNAL WARRANT NOT SATISFIED**



\*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

**Figure 4C-4. Warrant 3, Peak Hour (70% Factor)**

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **Existing Conditions - Weekday PM Peak Hour**

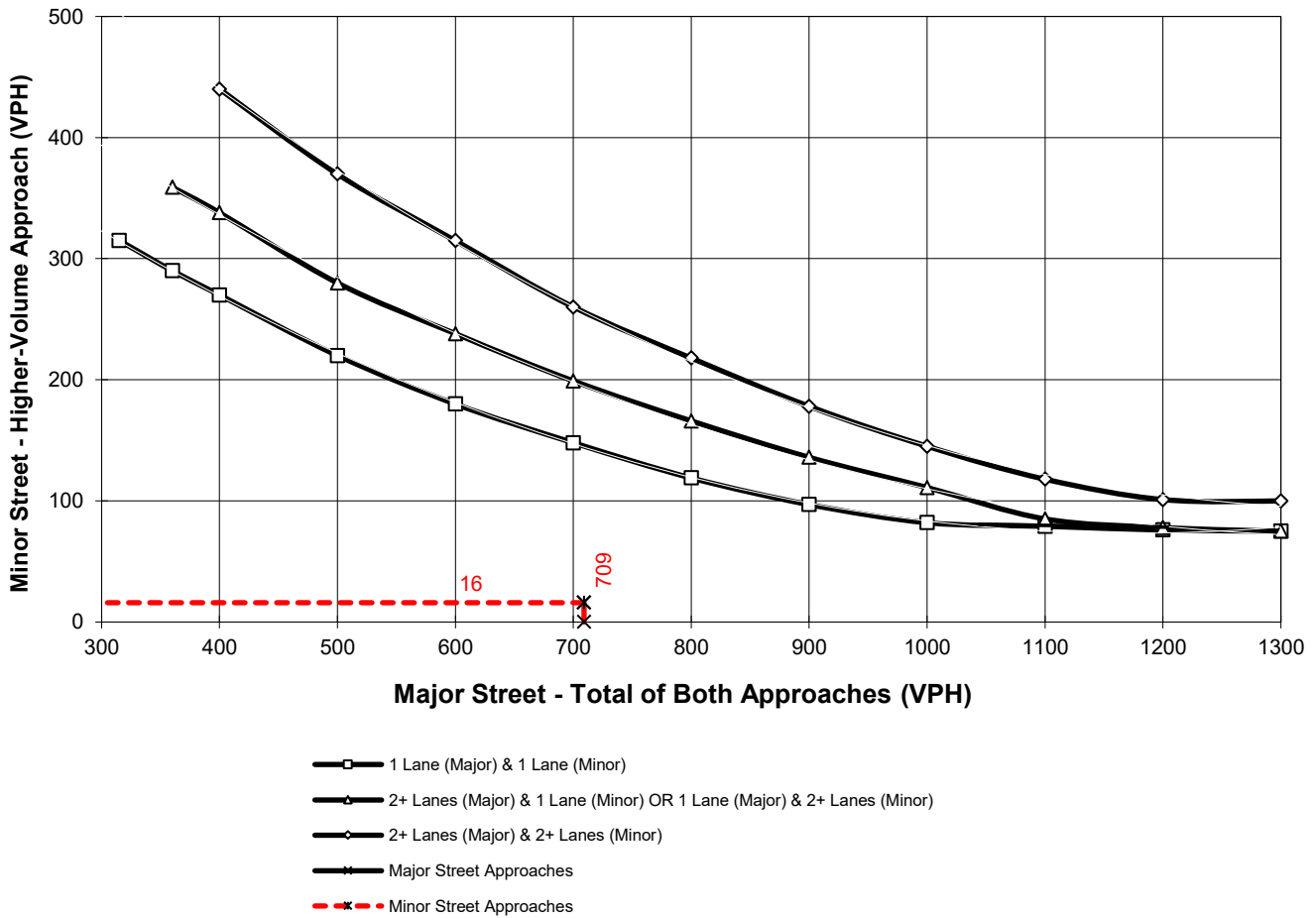
Major Street Name = **Wilson Av.**

Total of Both Approaches (VPH) = **709**  
 Number of Approach Lanes Major Street = **1**

Minor Street Name = **Driveway 4**

High Volume Approach (VPH) = **16**  
 Number of Approach Lanes Minor Street = **1**

**SIGNAL WARRANT NOT SATISFIED**



\*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

### Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **Existing Conditions - Weekday PM Peak Hour**

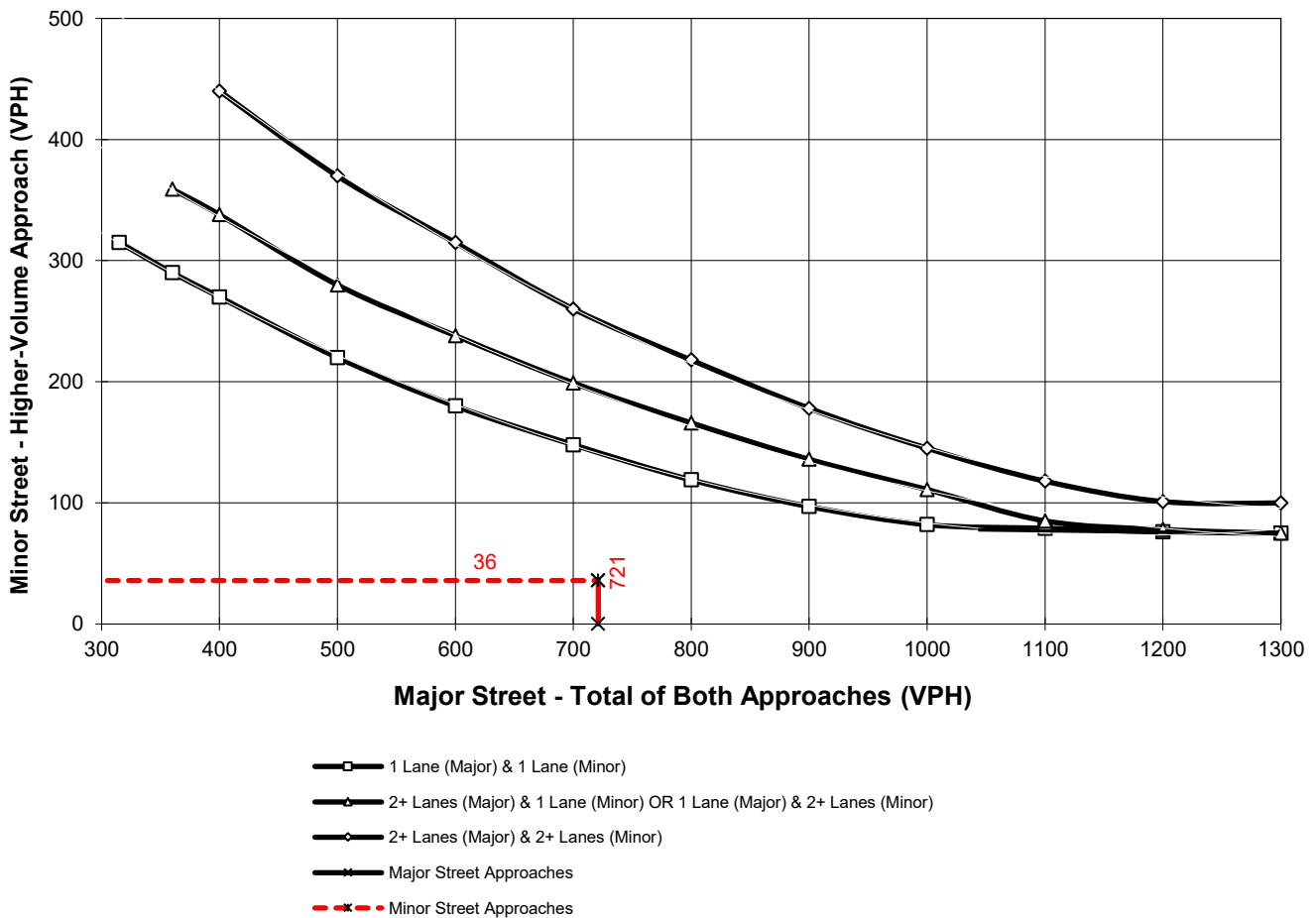
Major Street Name = **Wilson Av.**

Total of Both Approaches (VPH) = **721**  
 Number of Approach Lanes Major Street = **1**

Minor Street Name = **College Dr.**

High Volume Approach (VPH) = **36**  
 Number of Approach Lanes Minor Street = **1**

**SIGNAL WARRANT NOT SATISFIED**



\*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

**APPENDIX 4.1:**  
**POST PROCESSING WORKSHEETS**

This Page Intentionally Left Blank



Project: Chaffey College (Rancho Cucamonga)  
 Scenario: Horizon Year (2040) Without Project

Job #: 13236  
 Analyst: CS  
 Date: 7/22/21

LOCATION: Haven Av. & Wilson Av.  
 FORECAST YEAR: 2040

INDIVIDUAL TURN VOLUME GROWTH REVIEW									
APPROACH	TURNING MOVEMENT	AM PEAK HOUR INPUT DATA				PM PEAK HOUR INPUT DATA			
		EXISTING COUNT	FUTURE VOLUME	DIFFERENCE	% CHANGE	EXISTING COUNT	FUTURE VOLUME	DIFFERENCE	% CHANGE
NORTH BOUND	Left	39	54	15	37%	71	74	3	4%
	Through	94	88	-6	-6%	185	179	-6	-3%
	Right	236	250	14	6%	143	203	60	42%
	<b>NB Total</b>	<b>370</b>	<b>392</b>	<b>22</b>	<b>6%</b>	<b>399</b>	<b>456</b>	<b>57</b>	<b>14%</b>
SOUTH BOUND	Left	16	13	-3	-19%	33	49	16	47%
	Through	323	344	21	6%	151	140	-11	-7%
	Right	24	26	2	9%	17	18	1	8%
	<b>SB Total</b>	<b>363</b>	<b>383</b>	<b>20</b>	<b>6%</b>	<b>201</b>	<b>207</b>	<b>6</b>	<b>3%</b>
EAST BOUND	Left	9	8	-1	-11%	54	63	9	16%
	Through	184	176	-8	-4%	155	268	113	72%
	Right	56	68	12	22%	67	72	5	7%
	<b>EB Total</b>	<b>248</b>	<b>252</b>	<b>4</b>	<b>1%</b>	<b>277</b>	<b>403</b>	<b>126</b>	<b>46%</b>
WEST BOUND	Left	74	118	44	60%	202	208	6	3%
	Through	130	210	80	62%	115	138	23	20%
	Right	31	35	4	12%	60	68	8	13%
	<b>WB Total</b>	<b>235</b>	<b>363</b>	<b>128</b>	<b>54%</b>	<b>377</b>	<b>414</b>	<b>37</b>	<b>10%</b>
<b>TOTAL ENTERING VOLUME</b>		<b>1,216</b>	<b>1,390</b>	<b>173.8816</b>	<b>14%</b>	<b>1,254</b>	<b>1,480</b>	<b>226</b>	<b>18%</b>

FORECAST PEAK HOUR TO ADT COMPARISON						
		VOLUMES		PERCENT OF ADT		ADT
		AM	PM	AM	PM	
North Leg	Inbound	383	207			
North Leg	Outbound	131	310			
<b>North Leg</b>	<b>TOTAL</b>	<b>514</b>	<b>517</b>	<b>8%</b>	<b>9%</b>	<b>6,077</b>
South Leg	Inbound	392	456			
South Leg	Outbound	530	420			
<b>South Leg</b>	<b>TOTAL</b>	<b>922</b>	<b>876</b>	<b>9%</b>	<b>8%</b>	<b>10,720</b>
East Leg	Inbound	363	414			
East Leg	Outbound	439	520			
<b>East Leg</b>	<b>TOTAL</b>	<b>802</b>	<b>934</b>	<b>7%</b>	<b>8%</b>	<b>12,032</b>
West Leg	Inbound	252	403			
West Leg	Outbound	290	230			
<b>West Leg</b>	<b>TOTAL</b>	<b>542</b>	<b>633</b>	<b>8%</b>	<b>10%</b>	<b>6,628</b>
<b>OVERALL TOTAL</b>		<b>2,780</b>	<b>2,960</b>	<b>8%</b>	<b>8%</b>	<b>35,458</b>

Z:\Shared\UcJobs\13100-13500\13200\13236\Post Processing\01 Haven\_Wilson.xls]Output (3)

Project: Chaffey College (Rancho Cucamonga)  
 Scenario: Horizon Year (2040) Without Project

Job #: 13236  
 Analyst: CS  
 Date: 7/22/21

LOCATION: Haven Av. & Amber Ln.  
 FORECAST YEAR: 2040

INDIVIDUAL TURN VOLUME GROWTH REVIEW									
APPROACH	TURNING MOVEMENT	AM PEAK HOUR INPUT DATA				PM PEAK HOUR INPUT DATA			
		EXISTING COUNT	FUTURE VOLUME	DIFFERENCE	% CHANGE	EXISTING COUNT	FUTURE VOLUME	DIFFERENCE	% CHANGE
NORTH BOUND	Left	12	15	3	28%	18	18	0	-1%
	Through	650	672	22	3%	667	720	53	8%
	Right	1,039	1,006	-33	-3%	652	659	7	1%
	<b>NB Total</b>	<b>1,701</b>	<b>1,693</b>	<b>-8</b>	<b>0%</b>	<b>1,336</b>	<b>1,397</b>	<b>61</b>	<b>5%</b>
SOUTH BOUND	Left	82	84	2	2%	41	41	0	0%
	Through	398	485	87	22%	457	459	2	0%
	Right	3	5	2	49%	2	2	0	21%
	<b>SB Total</b>	<b>484</b>	<b>574</b>	<b>90</b>	<b>19%</b>	<b>500</b>	<b>502</b>	<b>2</b>	<b>0%</b>
EAST BOUND	Left	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Through	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Right	20	20	0	-1%	33	30	-3	-9%
	<b>EB Total</b>	<b>20</b>	<b>20</b>	<b>0</b>	<b>-1%</b>	<b>33</b>	<b>30</b>	<b>-3</b>	<b>-9%</b>
WEST BOUND	Left	320	325	5	2%	728	731	3	0%
	Through	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Right	9	8	-1	-11%	10	10	0	4%
	<b>WB Total</b>	<b>329</b>	<b>333</b>	<b>4</b>	<b>1%</b>	<b>738</b>	<b>741</b>	<b>3</b>	<b>0%</b>
<b>TOTAL ENTERING VOLUME</b>		<b>2,534</b>	<b>2,620</b>	<b>86.0806117</b>	<b>3%</b>	<b>2,607</b>	<b>2,670</b>	<b>63</b>	<b>2%</b>

FORECAST PEAK HOUR TO ADT COMPARISON						
		VOLUMES		PERCENT OF ADT		ADT
		AM	PM	AM	PM	
North Leg	Inbound	574	502			
North Leg	Outbound	680	730			
<b>North Leg</b>	<b>TOTAL</b>	<b>1,254</b>	<b>1,232</b>	<b>8%</b>	<b>8%</b>	<b>15,348</b>
South Leg	Inbound	1,693	1,397			
South Leg	Outbound	830	1,220			
<b>South Leg</b>	<b>TOTAL</b>	<b>2,523</b>	<b>2,617</b>	<b>8%</b>	<b>8%</b>	<b>31,572</b>
East Leg	Inbound	333	741			
East Leg	Outbound	1,090	700			
<b>East Leg</b>	<b>TOTAL</b>	<b>1,423</b>	<b>1,441</b>	<b>14%</b>	<b>14%</b>	<b>10,386</b>
West Leg	Inbound	20	30			
West Leg	Outbound	20	20			
<b>West Leg</b>	<b>TOTAL</b>	<b>40</b>	<b>50</b>	<b>#DIV/0!</b>	<b>#DIV/0!</b>	<b>#DIV/0!</b>
<b>OVERALL TOTAL</b>		<b>5,240</b>	<b>5,340</b>	<b>#DIV/0!</b>	<b>#DIV/0!</b>	<b>#DIV/0!</b>

Z:\Shared\UcJobs\13100-13500\13200\13236\Post Processing\05 Haven\_Amber.xls\Output (3)

Project: Chaffey College (Rancho Cucamonga)  
 Scenario: Horizon Year (2040) Without Project

Job #: 13236  
 Analyst: CS  
 Date: 7/22/21

LOCATION: Haven Av. & Lemon Av.  
 FORECAST YEAR: 2040

INDIVIDUAL TURN VOLUME GROWTH REVIEW									
APPROACH	TURNING MOVEMENT	AM PEAK HOUR INPUT DATA				PM PEAK HOUR INPUT DATA			
		EXISTING COUNT	FUTURE VOLUME	DIFFERENCE	% CHANGE	EXISTING COUNT	FUTURE VOLUME	DIFFERENCE	% CHANGE
NORTH BOUND	Left	83	86	3	3%	173	175	2	1%
	Through	2,032	2,034	2	0%	1,441	1,533	92	6%
	Right	94	88	-6	-6%	228	223	-5	-2%
	<b>NB Total</b>	<b>2,209</b>	<b>2,208</b>	<b>-1</b>	<b>0%</b>	<b>1,842</b>	<b>1,931</b>	<b>89</b>	<b>5%</b>
SOUTH BOUND	Left	9	10	1	8%	22	21	-1	-2%
	Through	727	828	101	14%	1,414	1,418	4	0%
	Right	64	73	9	14%	82	81	-1	-1%
	<b>SB Total</b>	<b>800</b>	<b>911</b>	<b>111</b>	<b>14%</b>	<b>1,517</b>	<b>1,520</b>	<b>3</b>	<b>0%</b>
EAST BOUND	Left	120	121	1	1%	171	220	49	29%
	Through	24	23	-1	-4%	103	122	19	18%
	Right	65	67	2	4%	111	138	27	24%
	<b>EB Total</b>	<b>209</b>	<b>211</b>	<b>2</b>	<b>1%</b>	<b>385</b>	<b>480</b>	<b>95</b>	<b>25%</b>
WEST BOUND	Left	292	285	-7	-3%	183	183	0	0%
	Through	51	50	-1	-2%	40	39	-1	-3%
	Right	26	25	-1	-5%	27	28	1	5%
	<b>WB Total</b>	<b>370</b>	<b>360</b>	<b>-10</b>	<b>-3%</b>	<b>250</b>	<b>250</b>	<b>0</b>	<b>0%</b>
<b>TOTAL ENTERING VOLUME</b>		<b>3,588</b>	<b>3,690</b>	<b>102.1084</b>	<b>3%</b>	<b>3,993</b>	<b>4,181</b>	<b>188</b>	<b>5%</b>

FORECAST PEAK HOUR TO ADT COMPARISON						
		VOLUMES		PERCENT OF ADT		ADT
		AM	PM	AM	PM	
North Leg	Inbound	911	1,520			
North Leg	Outbound	2,180	1,781			
<b>North Leg</b>	<b>TOTAL</b>	<b>3,091</b>	<b>3,301</b>	<b>8%</b>	<b>9%</b>	<b>37,230</b>
South Leg	Inbound	2,208	1,931			
South Leg	Outbound	1,180	1,739			
<b>South Leg</b>	<b>TOTAL</b>	<b>3,388</b>	<b>3,670</b>	<b>8%</b>	<b>9%</b>	<b>41,554</b>
East Leg	Inbound	360	250			
East Leg	Outbound	121	366			
<b>East Leg</b>	<b>TOTAL</b>	<b>481</b>	<b>616</b>	<b>7%</b>	<b>9%</b>	<b>6,884</b>
West Leg	Inbound	211	480			
West Leg	Outbound	209	295			
<b>West Leg</b>	<b>TOTAL</b>	<b>420</b>	<b>775</b>	<b>5%</b>	<b>8%</b>	<b>9,189</b>
<b>OVERALL TOTAL</b>		<b>7,380</b>	<b>8,362</b>	<b>8%</b>	<b>9%</b>	<b>94,858</b>

Z:\Shared\UcJobs\13100-13500\13200\13236\Post Processing\06 Haven\_Lemon.xls\Output (3)

Project: Chaffey College (Rancho Cucamonga)  
 Scenario: Horizon Year (2040) Without Project

Job #: 13236  
 Analyst: CS  
 Date: 7/22/21

LOCATION: Haven Av. & I-210 Westbound Ramps  
 FORECAST YEAR: 2040

INDIVIDUAL TURN VOLUME GROWTH REVIEW									
APPROACH	TURNING MOVEMENT	AM PEAK HOUR INPUT DATA				PM PEAK HOUR INPUT DATA			
		EXISTING COUNT	FUTURE VOLUME	DIFFERENCE	% CHANGE	EXISTING COUNT	FUTURE VOLUME	DIFFERENCE	% CHANGE
NORTH BOUND	Left	537	517	-20	-4%	646	602	-44	-7%
	Through	1,641	1,633	-8	0%	1,548	1,558	10	1%
	Right	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	<b>NB Total</b>	<b>2,177</b>	<b>2,150</b>	<b>-27</b>	<b>-1%</b>	<b>2,194</b>	<b>2,160</b>	<b>-34</b>	<b>-2%</b>
SOUTH BOUND	Left	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Through	1,066	1,096	30	3%	1,390	1,400	10	1%
	Right	529	524	-5	-1%	729	720	-9	-1%
	<b>SB Total</b>	<b>1,595</b>	<b>1,620</b>	<b>25</b>	<b>2%</b>	<b>2,119</b>	<b>2,120</b>	<b>1</b>	<b>0%</b>
EAST BOUND	Left	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Through	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Right	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	<b>EB Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>#DIV/0!</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>#DIV/0!</b>
WEST BOUND	Left	476	484	8	2%	553	521	-32	-6%
	Through	8	8	0	-5%	5	5	0	1%
	Right	865	877	12	1%	797	795	-2	0%
	<b>WB Total</b>	<b>1,349</b>	<b>1,369</b>	<b>20</b>	<b>1%</b>	<b>1,355</b>	<b>1,321</b>	<b>-34</b>	<b>-3%</b>
<b>TOTAL ENTERING VOLUME</b>		<b>5,122</b>	<b>5,139</b>	<b>17.1369509</b>	<b>0%</b>	<b>5,669</b>	<b>5,601</b>	<b>-68</b>	<b>-1%</b>

FORECAST PEAK HOUR TO ADT COMPARISON						
		VOLUMES		PERCENT OF ADT		ADT
		AM	PM	AM	PM	
North Leg	Inbound	1,620	2,120			
North Leg	Outbound	2,510	2,353			
<b>North Leg</b>	<b>TOTAL</b>	<b>4,130</b>	<b>4,473</b>	<b>8%</b>	<b>9%</b>	<b>51,386</b>
South Leg	Inbound	2,150	2,160			
South Leg	Outbound	1,580	1,921			
<b>South Leg</b>	<b>TOTAL</b>	<b>3,730</b>	<b>4,081</b>	<b>8%</b>	<b>9%</b>	<b>47,607</b>
East Leg	Inbound	1,369	1,321			
East Leg	Outbound	0	0			
<b>East Leg</b>	<b>TOTAL</b>	<b>1,369</b>	<b>1,321</b>	<b>10%</b>	<b>9%</b>	<b>14,150</b>
West Leg	Inbound	0	0			
West Leg	Outbound	1,049	1,327			
<b>West Leg</b>	<b>TOTAL</b>	<b>1,049</b>	<b>1,327</b>	<b>7%</b>	<b>8%</b>	<b>15,632</b>
<b>OVERALL TOTAL</b>		<b>10,278</b>	<b>11,202</b>	<b>8%</b>	<b>9%</b>	<b>128,775</b>

Z:\Shared\UcJobs\13100-13500\13200\13236\Post Processing\07 Haven\_I210 WB.xls]Output (3)

Project: Chaffey College (Rancho Cucamonga)  
 Scenario: Horizon Year (2040) Without Project

Job #: 13236  
 Analyst: CS  
 Date: 7/22/21

LOCATION: Haven Av. & I-210 Eastbound Ramps  
 FORECAST YEAR: 2040

INDIVIDUAL TURN VOLUME GROWTH REVIEW									
APPROACH	TURNING MOVEMENT	AM PEAK HOUR INPUT DATA				PM PEAK HOUR INPUT DATA			
		EXISTING COUNT	FUTURE VOLUME	DIFFERENCE	% CHANGE	EXISTING COUNT	FUTURE VOLUME	DIFFERENCE	% CHANGE
NORTH BOUND	Left	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Through	835	853	18	2%	1,583	1,633	50	3%
	Right	536	527	-9	-2%	971	1,051	80	8%
	<b>NB Total</b>	<b>1,371</b>	<b>1,380</b>	<b>9</b>	<b>1%</b>	<b>2,554</b>	<b>2,684</b>	<b>130</b>	<b>5%</b>
SOUTH BOUND	Left	540	549	9	2%	746	722	-24	-3%
	Through	1,001	1,041	40	4%	1,199	1,214	15	1%
	Right	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	<b>SB Total</b>	<b>1,541</b>	<b>1,590</b>	<b>49</b>	<b>3%</b>	<b>1,945</b>	<b>1,936</b>	<b>-9</b>	<b>0%</b>
EAST BOUND	Left	1,344	1,297	-47	-3%	611	527	-84	-14%
	Through	5	5	0	-1%	8	7	-1	-15%
	Right	335	319	-16	-5%	313	296	-17	-5%
	<b>EB Total</b>	<b>1,684</b>	<b>1,621</b>	<b>-63</b>	<b>-4%</b>	<b>933</b>	<b>830</b>	<b>-103</b>	<b>-11%</b>
WEST BOUND	Left	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Through	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Right	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	<b>WB Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>#DIV/0!</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>#DIV/0!</b>
<b>TOTAL ENTERING VOLUME</b>		<b>4,597</b>	<b>4,591</b>	<b>-5.749914</b>	<b>0%</b>	<b>5,431</b>	<b>5,450</b>	<b>19</b>	<b>0%</b>

FORECAST PEAK HOUR TO ADT COMPARISON						
		VOLUMES		PERCENT OF ADT		ADT
		AM	PM	AM	PM	
North Leg	Inbound	1,590	1,936			
North Leg	Outbound	2,150	2,160			
<b>North Leg</b>	<b>TOTAL</b>	<b>3,740</b>	<b>4,096</b>	<b>8%</b>	<b>9%</b>	<b>47,610</b>
South Leg	Inbound	1,380	2,684			
South Leg	Outbound	1,360	1,510			
<b>South Leg</b>	<b>TOTAL</b>	<b>2,740</b>	<b>4,194</b>	<b>6%</b>	<b>9%</b>	<b>49,009</b>
East Leg	Inbound	0	0			
East Leg	Outbound	1,081	1,780			
<b>East Leg</b>	<b>TOTAL</b>	<b>1,081</b>	<b>1,780</b>	<b>5%</b>	<b>9%</b>	<b>20,871</b>
West Leg	Inbound	1,621	830			
West Leg	Outbound	0	0			
<b>West Leg</b>	<b>TOTAL</b>	<b>1,621</b>	<b>830</b>	<b>19%</b>	<b>10%</b>	<b>8,433</b>
<b>OVERALL TOTAL</b>		<b>9,182</b>	<b>10,900</b>	<b>7%</b>	<b>9%</b>	<b>125,924</b>

Z:\Shared\UcJobs\13100-13500\13200\13236\Post Processing\08 Haven\_I210 EB.xls]Output (3)

Project: Chaffey College (Rancho Cucamonga)  
 Scenario: Horizon Year (2040) Without Project

Job #: 13236  
 Analyst: CS  
 Date: 7/22/21

LOCATION: Magnolia Wy. & Wilson Av.  
 FORECAST YEAR: 2040

INDIVIDUAL TURN VOLUME GROWTH REVIEW									
APPROACH	TURNING MOVEMENT	AM PEAK HOUR INPUT DATA				PM PEAK HOUR INPUT DATA			
		EXISTING COUNT	FUTURE VOLUME	DIFFERENCE	% CHANGE	EXISTING COUNT	FUTURE VOLUME	DIFFERENCE	% CHANGE
NORTH BOUND	Left	3	3	0	0%	8	3	-5	-63%
	Through	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Right	9	7	-2	-19%	28	28	0	1%
	<b>NB Total</b>	<b>12</b>	<b>10</b>	<b>-2</b>	<b>-14%</b>	<b>36</b>	<b>31</b>	<b>-5</b>	<b>-13%</b>
SOUTH BOUND	Left	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Through	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Right	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	<b>SB Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>#DIV/0!</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>#DIV/0!</b>
EAST BOUND	Left	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Through	384	392	8	2%	314	533	219	70%
	Right	18	8	-10	-56%	10	5	-5	-50%
	<b>EB Total</b>	<b>403</b>	<b>400</b>	<b>-3</b>	<b>-1%</b>	<b>324</b>	<b>538</b>	<b>214</b>	<b>66%</b>
WEST BOUND	Left	33	22	-11	-34%	22	16	-6	-26%
	Through	266	397	131	50%	375	405	30	8%
	Right	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	<b>WB Total</b>	<b>299</b>	<b>419</b>	<b>120</b>	<b>40%</b>	<b>397</b>	<b>421</b>	<b>24</b>	<b>6%</b>
<b>TOTAL ENTERING VOLUME</b>		<b>713</b>	<b>829</b>	<b>115.750234</b>	<b>16%</b>	<b>757</b>	<b>990</b>	<b>233</b>	<b>31%</b>

FORECAST PEAK HOUR TO ADT COMPARISON						
		VOLUMES		PERCENT OF ADT		ADT
		AM	PM	AM	PM	
North Leg	Inbound	0	0			
North Leg	Outbound	0	0			
<b>North Leg</b>	<b>TOTAL</b>	<b>0</b>	<b>0</b>	<b>#DIV/0!</b>	<b>#DIV/0!</b>	<b>#DIV/0!</b>
South Leg	Inbound	10	31			
South Leg	Outbound	30	21			
<b>South Leg</b>	<b>TOTAL</b>	<b>40</b>	<b>52</b>	<b>13%</b>	<b>16%</b>	<b>317</b>
East Leg	Inbound	419	421			
East Leg	Outbound	399	561			
<b>East Leg</b>	<b>TOTAL</b>	<b>818</b>	<b>982</b>	<b>4%</b>	<b>5%</b>	<b>18,475</b>
West Leg	Inbound	400	538			
West Leg	Outbound	400	408			
<b>West Leg</b>	<b>TOTAL</b>	<b>800</b>	<b>946</b>	<b>7%</b>	<b>8%</b>	<b>12,027</b>
<b>OVERALL TOTAL</b>		<b>1,658</b>	<b>1,980</b>	<b>#DIV/0!</b>	<b>#DIV/0!</b>	<b>#DIV/0!</b>

Z:\Shared\UcJobs\_13100-13500\_13200\13236\Post Processing\[12 Magnolia\_Wilson.xls]Output (3)

**APPENDIX 5.1:**

**E+P CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS**

This Page Intentionally Left Blank



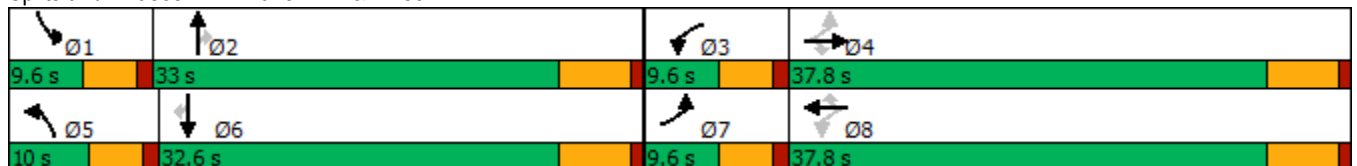
Timings  
1: Haven Av. & Wilson Av.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	187	57	74	131	31	39	95	236	16	325	24
Future Volume (vph)	9	187	57	74	131	31	39	95	236	16	325	24
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	37.8	37.8	9.6	37.8	37.8	9.6	32.8	32.8	9.6	31.8	31.8
Total Split (s)	9.6	37.8	37.8	9.6	37.8	37.8	10.0	33.0	33.0	9.6	32.6	32.6
Total Split (%)	10.7%	42.0%	42.0%	10.7%	42.0%	42.0%	11.1%	36.7%	36.7%	10.7%	36.2%	36.2%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
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	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	22.1	16.9	16.9	25.0	23.0	23.0	6.0	17.9	17.9	5.6	15.8	15.8
Actuated g/C Ratio	0.38	0.29	0.29	0.43	0.40	0.40	0.10	0.31	0.31	0.10	0.27	0.27
v/c Ratio	0.03	0.53	0.16	0.24	0.14	0.07	0.33	0.16	0.48	0.14	0.51	0.07
Control Delay	11.8	23.8	1.3	12.9	13.9	0.2	38.7	18.7	5.3	35.8	22.5	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.8	23.8	1.3	12.9	13.9	0.2	38.7	18.7	5.3	35.8	22.5	0.2
LOS	B	C	A	B	B	A	D	B	A	D	C	A
Approach Delay		18.3			11.8			12.3			21.6	
Approach LOS		B			B			B			C	

Intersection Summary

Cycle Length: 90  
 Actuated Cycle Length: 58.2  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.53  
 Intersection Signal Delay: 16.2  
 Intersection LOS: B  
 Intersection Capacity Utilization 48.0%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 1: Haven Av. & Wilson Av.



HCM 6th Signalized Intersection Summary

Chaffey College (JN 13236)

1: Haven Av. & Wilson Av.

07/29/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	187	57	74	131	31	39	95	236	16	325	24
Future Volume (veh/h)	9	187	57	74	131	31	39	95	236	16	325	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1826	1796	1900	1856	1737	1841	1515	1885	1900	1841	1900
Adj Flow Rate, veh/h	13	279	48	110	196	0	58	142	333	24	485	17
Peak Hour Factor	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67
Percent Heavy Veh, %	0	5	7	0	3	11	4	26	1	0	4	0
Cap, veh/h	445	424	348	374	1028	429	95	773	429	51	848	389
Arrive On Green	0.02	0.23	0.23	0.08	0.29	0.00	0.05	0.27	0.27	0.03	0.24	0.24
Sat Flow, veh/h	1810	1826	1497	1810	3526	1472	1753	2878	1598	1810	3497	1604
Grp Volume(v), veh/h	13	279	48	110	196	0	58	142	333	24	485	17
Grp Sat Flow(s),veh/h/ln	1810	1826	1497	1810	1763	1472	1753	1439	1598	1810	1749	1604
Q Serve(g_s), s	0.3	7.3	1.3	2.3	2.2	0.0	1.7	2.0	10.1	0.7	6.4	0.4
Cycle Q Clear(g_c), s	0.3	7.3	1.3	2.3	2.2	0.0	1.7	2.0	10.1	0.7	6.4	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	445	424	348	374	1028	429	95	773	429	51	848	389
V/C Ratio(X)	0.03	0.66	0.14	0.29	0.19	0.00	0.61	0.18	0.78	0.47	0.57	0.04
Avail Cap(c_a), veh/h	587	1110	910	409	2143	895	180	1487	826	172	1781	817
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.0	18.3	16.0	13.7	14.0	0.0	24.3	14.8	17.8	25.2	17.5	15.3
Incr Delay (d2), s/veh	0.0	1.7	0.2	0.2	0.1	0.0	2.3	0.1	3.0	2.5	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	2.7	0.4	0.8	0.7	0.0	0.7	0.5	3.4	0.3	2.2	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.0	20.1	16.2	13.8	14.1	0.0	26.7	14.9	20.8	27.7	18.2	15.3
LnGrp LOS	B	C	B	B	B	A	C	B	C	C	B	B
Approach Vol, veh/h		340			306			533			526	
Approach Delay, s/veh		19.3			14.0			19.9			18.5	
Approach LOS		B			B			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.1	19.9	8.6	18.0	7.5	18.6	5.5	21.2				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	5.0	27.2	5.0	32.0	5.4	26.8	5.0	32.0				
Max Q Clear Time (g_c+1), s	2.7	12.1	4.3	9.3	3.7	8.4	2.3	4.2				
Green Ext Time (p_c), s	0.0	1.7	0.0	1.6	0.0	2.8	0.0	1.1				

Intersection Summary

HCM 6th Ctrl Delay	18.3
HCM 6th LOS	B

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↑ ↑ ↑	↑ ↑ ↑			↑ ↑ ↑
Traffic Vol, veh/h	0	3	367	77	0	456
Future Vol, veh/h	0	3	367	77	0	456
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	0	8	0	0	4
Mvmt Flow	0	3	390	82	0	485

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	-	236	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.1	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.9	-	-	-	-
Pot Cap-1 Maneuver	0	657	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	-	657	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.5	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	657
HCM Lane V/C Ratio	-	-	0.005
HCM Control Delay (s)	-	-	10.5
HCM Lane LOS	-	-	B
HCM 95th %tile Q(veh)	-	-	0

Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↑↑↑↑			↑↑↑↑
Traffic Vol, veh/h	18	4	441	0	0	456
Future Vol, veh/h	18	4	441	0	0	456
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	0	7	0	0	4
Mvmt Flow	20	4	496	0	0	512

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	701	248	0	-	-	-
Stage 1	496	-	-	-	-	-
Stage 2	205	-	-	-	-	-
Critical Hdwy	5.7	7.1	-	-	-	-
Critical Hdwy Stg 1	6.6	-	-	-	-	-
Critical Hdwy Stg 2	6	-	-	-	-	-
Follow-up Hdwy	3.8	3.9	-	-	-	-
Pot Cap-1 Maneuver	442	645	-	0	0	-
Stage 1	490	-	-	0	0	-
Stage 2	749	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	442	645	-	-	-	-
Mov Cap-2 Maneuver	441	-	-	-	-	-
Stage 1	490	-	-	-	-	-
Stage 2	749	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.1	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBTWBLn1	WBLn2	SBT
Capacity (veh/h)	-	441	645
HCM Lane V/C Ratio	-	0.046	0.007
HCM Control Delay (s)	-	13.6	10.6
HCM Lane LOS	-	B	B
HCM 95th %tile Q(veh)	-	0.1	0

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗ ↑↑↑	↑↑↑			↑↑↑
Traffic Vol, veh/h	0	5	361	319	0	486
Future Vol, veh/h	0	5	361	319	0	486
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	0	0	8	0	0	4
Mvmt Flow	0	5	397	351	0	534

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	-	374	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.1	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.9	-	-	-	-
Pot Cap-1 Maneuver	0	537	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	-	537	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.8	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	537
HCM Lane V/C Ratio	-	-	0.01
HCM Control Delay (s)	-	-	11.8
HCM Lane LOS	-	-	B
HCM 95th %tile Q(veh)	-	-	0

Timings  
5: Haven Av. & Amber Ln./College Dr.

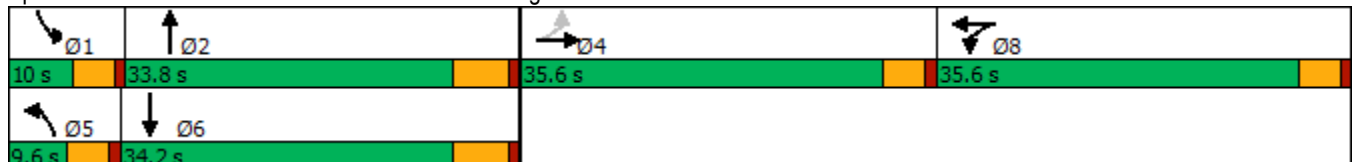


Lane Group	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↔	↵	↔	↵	↑↑↑	↵	↑↑↑
Traffic Volume (vph)	0	336	0	12	671	85	397
Future Volume (vph)	0	336	0	12	671	85	397
Turn Type	NA	Split	NA	Prot	NA	Prot	NA
Protected Phases	4	8	8	5	2	1	6
Permitted Phases							
Detector Phase	4	8	8	5	2	1	6
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	35.6	35.6	35.6	9.6	23.8	9.6	23.8
Total Split (s)	35.6	35.6	35.6	9.6	33.8	10.0	34.2
Total Split (%)	31.0%	31.0%	31.0%	8.3%	29.4%	8.7%	29.7%
Yellow Time (s)	3.6	3.6	3.6	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	5.8	4.6	5.8
Lead/Lag				Lead	Lag	Lead	Lag
Lead-Lag Optimize?				Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	Min	None	Min
Act Effect Green (s)	13.4	15.4	15.4	5.4	30.0	5.8	39.4
Actuated g/C Ratio	0.18	0.21	0.21	0.07	0.40	0.08	0.53
v/c Ratio	0.05	0.55	0.43	0.12	1.42dr	0.67	0.17
Control Delay	0.2	34.8	15.4	45.2	31.6	63.7	15.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	0.2	34.8	15.4	45.2	31.6	63.7	15.4
LOS	A	C	B	D	C	E	B
Approach Delay	0.2		25.2		31.7		23.8
Approach LOS	A		C		C		C

Intersection Summary

Cycle Length: 115  
 Actuated Cycle Length: 74.5  
 Natural Cycle: 115  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.94  
 Intersection Signal Delay: 29.2  
 Intersection LOS: C  
 Intersection Capacity Utilization 71.9%  
 ICU Level of Service C  
 Analysis Period (min) 15  
 dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 5: Haven Av. & Amber Ln./College Dr.



HCM 6th Signalized Intersection Summary  
5: Haven Av. & Amber Ln./College Dr.

Chaffey College (JN 13236)  
07/29/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↗	↕		↗	↕↕↕		↗	↕↕↕	
Traffic Volume (veh/h)	0	0	20	336	0	9	12	671	1090	85	397	3
Future Volume (veh/h)	0	0	20	336	0	9	12	671	1090	85	397	3
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		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1870	1900	1900	1693	1841	1885	1900	1826	1900
Adj Flow Rate, veh/h	0	0	2	375	0	0	13	737	0	93	436	3
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, %	0	0	0	2	0	0	14	4	1	0	5	0
Cap, veh/h	0	0	23	786	419	0	27	1365		136	1685	12
Arrive On Green	0.00	0.00	0.01	0.22	0.00	0.00	0.02	0.27	0.00	0.07	0.33	0.33
Sat Flow, veh/h	0	0	1606	3563	1900	0	1612	5191	0	1810	5107	35
Grp Volume(v), veh/h	0	0	2	375	0	0	13	737	0	93	284	155
Grp Sat Flow(s),veh/h/ln	0	0	1606	1781	1900	0	1612	1675	0	1810	1662	1819
Q Serve(g_s), s	0.0	0.0	0.1	4.3	0.0	0.0	0.4	5.9	0.0	2.3	2.9	2.9
Cycle Q Clear(g_c), s	0.0	0.0	0.1	4.3	0.0	0.0	0.4	5.9	0.0	2.3	2.9	2.9
Prop In Lane	0.00		1.00	1.00		0.00	1.00		0.00	1.00		0.02
Lane Grp Cap(c), veh/h	0	0	23	786	419	0	27	1365		136	1097	600
V/C Ratio(X)	0.00	0.00	0.09	0.48	0.00	0.00	0.49	0.54		0.69	0.26	0.26
Avail Cap(c_a), veh/h	0	0	1063	2358	1258	0	172	3004		209	2015	1103
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	22.8	15.9	0.0	0.0	22.8	14.6	0.0	21.1	11.5	11.5
Incr Delay (d2), s/veh	0.0	0.0	1.6	0.4	0.0	0.0	5.0	0.3	0.0	2.3	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	1.6	0.0	0.0	0.2	1.7	0.0	0.9	0.8	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	24.4	16.3	0.0	0.0	27.8	14.9	0.0	23.4	11.6	11.7
LnGrp LOS	A	A	C	B	A	A	C	B		C	B	B
Approach Vol, veh/h		2			375			750	A		532	
Approach Delay, s/veh		24.4			16.3			15.1			13.7	
Approach LOS		C			B			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.1	18.5		5.3	5.4	21.3		14.9				
Change Period (Y+Rc), s	4.6	5.8		4.6	4.6	5.8		4.6				
Max Green Setting (Gmax), s	5.4	28.0		31.0	5.0	28.4		31.0				
Max Q Clear Time (g_c+I1), s	4.3	7.9		2.1	2.4	4.9		6.3				
Green Ext Time (p_c), s	0.0	4.6		0.0	0.0	2.4		1.4				

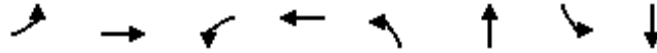
Intersection Summary

HCM 6th Ctrl Delay	15.0
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.  
Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Timings  
6: Haven Av. & Lemon Av.

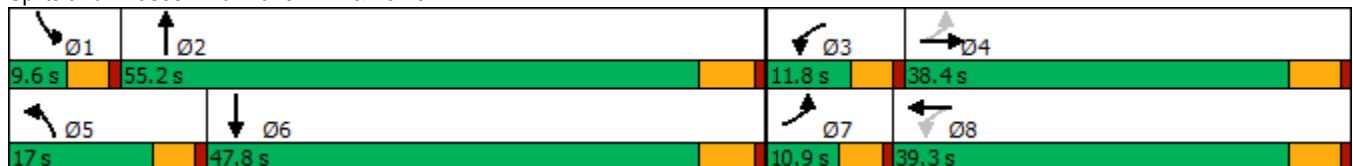


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↘	↗	↘	↗	↘	↑↑↑	↘	↑↑↑
Traffic Volume (vph)	124	24	292	51	83	2094	9	741
Future Volume (vph)	124	24	292	51	83	2094	9	741
Turn Type	pm+pt	NA	pm+pt	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases	4		8					
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	38.4	9.6	36.4	9.6	24.8	9.6	23.8
Total Split (s)	10.9	38.4	11.8	39.3	17.0	55.2	9.6	47.8
Total Split (%)	9.5%	33.4%	10.3%	34.2%	14.8%	48.0%	8.3%	41.6%
Yellow Time (s)	3.6	4.4	3.6	4.4	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4	4.6	5.4	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	18.5	13.7	19.9	14.4	8.6	50.9	5.2	41.5
Actuated g/C Ratio	0.22	0.16	0.23	0.17	0.10	0.59	0.06	0.48
v/c Ratio	0.43	0.31	0.99	0.31	0.53	0.82	0.09	0.37
Control Delay	28.9	15.0	79.7	27.8	51.7	20.1	47.1	17.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.9	15.0	79.7	27.8	51.7	20.1	47.1	17.7
LOS	C	B	E	C	D	C	D	B
Approach Delay		23.1		68.8		21.3		18.0
Approach LOS		C		E		C		B

Intersection Summary

Cycle Length: 115	
Actuated Cycle Length: 85.8	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.99	
Intersection Signal Delay: 25.4	Intersection LOS: C
Intersection Capacity Utilization 82.9%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 6: Haven Av. & Lemon Av.





HCM 6th Signalized Intersection Summary  
6: Haven Av. & Lemon Av.

Chaffey College (JN 13236)  
07/29/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↑↑↑		↖	↑↑↑	
Traffic Volume (veh/h)	124	24	65	292	51	27	83	2094	94	9	741	65
Future Volume (veh/h)	124	24	65	292	51	27	83	2094	94	9	741	65
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1796	1900	1870	1559	1900	1841	1870	1796	1900	1870	1900
Adj Flow Rate, veh/h	139	27	0	328	57	27	93	2353	95	10	833	70
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	1	7	0	2	23	0	4	2	7	0	2	0
Cap, veh/h	323	228	0	385	136	65	119	2745	110	22	2351	197
Arrive On Green	0.07	0.13	0.00	0.08	0.14	0.14	0.07	0.55	0.55	0.01	0.49	0.49
Sat Flow, veh/h	1795	1796	0	1781	994	471	1753	5036	202	1810	4799	402
Grp Volume(v), veh/h	139	27	0	328	0	84	93	1586	862	10	590	313
Grp Sat Flow(s),veh/h/ln	1795	1796	0	1781	0	1464	1753	1702	1834	1810	1702	1797
Q Serve(g_s), s	5.9	1.2	0.0	7.2	0.0	4.6	4.6	34.7	35.3	0.5	9.3	9.4
Cycle Q Clear(g_c), s	5.9	1.2	0.0	7.2	0.0	4.6	4.6	34.7	35.3	0.5	9.3	9.4
Prop In Lane	1.00		0.00	1.00		0.32	1.00		0.11	1.00		0.22
Lane Grp Cap(c), veh/h	323	228	0	385	0	201	119	1856	1000	22	1667	880
V/C Ratio(X)	0.43	0.12	0.00	0.85	0.00	0.42	0.78	0.85	0.86	0.45	0.35	0.36
Avail Cap(c_a), veh/h	323	678	0	385	0	568	249	1923	1036	103	1667	880
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.5	33.8	0.0	34.8	0.0	34.5	40.1	16.9	17.1	42.9	13.8	13.8
Incr Delay (d2), s/veh	0.3	0.2	0.0	15.7	0.0	1.4	4.2	3.9	7.4	5.1	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.5	0.0	4.8	0.0	1.6	2.0	12.1	14.2	0.2	3.2	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.8	34.1	0.0	50.5	0.0	35.9	44.4	20.8	24.5	48.0	13.9	14.0
LnGrp LOS	C	C	A	D	A	D	D	C	C	D	B	B
Approach Vol, veh/h		166			412			2541				913
Approach Delay, s/veh		31.4			47.5			22.9				14.3
Approach LOS		C			D			C				B
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.7	53.5	11.8	16.5	10.5	48.6	10.9	17.4				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.4	4.6	5.8	4.6	5.4				
Max Green Setting (Gmax), s	5.0	49.4	7.2	33.0	12.4	42.0	6.3	33.9				
Max Q Clear Time (g_c+1), s	2.5	37.3	9.2	3.2	6.6	11.4	7.9	6.6				
Green Ext Time (p_c), s	0.0	10.4	0.0	0.1	0.0	6.0	0.0	0.4				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				23.8								
HCM 6th LOS				C								

Timings  
7: Haven Av. & I-210 WB Ramps

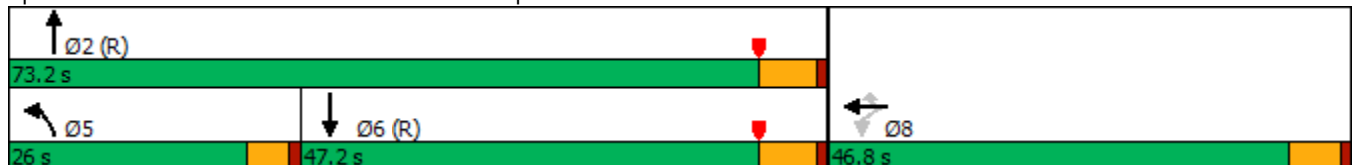


Lane Group	WBL	WBT	WBR	NBL	NBT	SBT
Lane Configurations	↶	↷	↷	↶↷	↶↶↶	↶↶↶
Traffic Volume (vph)	476	8	890	537	1678	1073
Future Volume (vph)	476	8	890	537	1678	1073
Turn Type	Perm	NA	Perm	Prot	NA	NA
Protected Phases		8		5	2	6
Permitted Phases	8		8			
Detector Phase	8	8	8	5	2	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.8	10.8	10.8	9.7	31.2	31.2
Total Split (s)	46.8	46.8	46.8	26.0	73.2	47.2
Total Split (%)	39.0%	39.0%	39.0%	21.7%	61.0%	39.3%
Yellow Time (s)	4.8	4.8	4.8	3.7	5.2	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	4.7	6.2	6.2
Lead/Lag				Lead		Lag
Lead-Lag Optimize?				Yes		Yes
Recall Mode	None	None	None	None	C-Max	C-Max
Act Effct Green (s)	41.0	41.0	41.0	21.3	67.0	41.0
Actuated g/C Ratio	0.34	0.34	0.34	0.18	0.56	0.34
v/c Ratio	0.83	1.05	0.94	1.00	0.66	1.04
Control Delay	50.1	92.9	60.4	86.2	20.0	69.8
Queue Delay	0.0	0.0	0.0	0.0	3.9	0.0
Total Delay	50.1	92.9	60.4	86.2	23.9	69.8
LOS	D	F	E	F	C	E
Approach Delay		68.4			39.0	69.8
Approach LOS		E			D	E

Intersection Summary





















Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 67 (56%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow  
 Natural Cycle: 120  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.05  
 Intersection Signal Delay: 56.3  
 Intersection LOS: E  
 Intersection Capacity Utilization 147.2%  
 ICU Level of Service H  
 Analysis Period (min) 15

Splits and Phases: 7: Haven Av. & I-210 WB Ramps



HCM 6th Signalized Intersection Summary  
7: Haven Av. & I-210 WB Ramps

Chaffey College (JN 13236)  
07/29/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	476	8	890	537	1678	0	0	1073	537
Future Volume (veh/h)	0	0	0	476	8	890	537	1678	0	0	1073	537
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
Work Zone On Approach				No		No		No		No		No
Adj Sat Flow, veh/h/ln				1885	1604	1870	1856	1870	0	0	1870	1900
Adj Flow Rate, veh/h				771	0	430	603	1885	0	0	1206	475
Peak Hour Factor				0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %				1	20	2	3	2	0	0	2	0
Cap, veh/h				1083	0	478	609	3056	0	0	1376	540
Arrive On Green				0.30	0.00	0.30	0.18	0.60	0.00	0.00	0.38	0.38
Sat Flow, veh/h				3591	0	1585	3428	5274	0	0	3773	1415
Grp Volume(v), veh/h				771	0	430	603	1885	0	0	1139	542
Grp Sat Flow(s),veh/h/ln				1795	0	1585	1714	1702	0	0	1702	1616
Q Serve(g_s), s				22.9	0.0	31.2	21.1	28.2	0.0	0.0	37.3	37.5
Cycle Q Clear(g_c), s				22.9	0.0	31.2	21.1	28.2	0.0	0.0	37.3	37.5
Prop In Lane				1.00		1.00	1.00		0.00	0.00		0.88
Lane Grp Cap(c), veh/h				1083	0	478	609	3056	0	0	1300	617
V/C Ratio(X)				0.71	0.00	0.90	0.99	0.62	0.00	0.00	0.88	0.88
Avail Cap(c_a), veh/h				1227	0	542	609	3056	0	0	1300	617
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.09	0.09	0.00	0.00	0.83	0.83
Uniform Delay (d), s/veh				37.3	0.0	40.2	49.3	15.3	0.0	0.0	34.5	34.5
Incr Delay (d2), s/veh				1.7	0.0	16.7	9.0	0.1	0.0	0.0	7.2	14.0
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				9.9	0.0	13.9	9.5	9.8	0.0	0.0	15.9	16.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				39.0	0.0	56.9	58.2	15.4	0.0	0.0	41.7	48.5
LnGrp LOS				D	A	E	E	B	A	A	D	D
Approach Vol, veh/h					1201			2488			1681	
Approach Delay, s/veh					45.4			25.8			43.9	
Approach LOS					D			C			D	
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		78.0			26.0	52.0		42.0				
Change Period (Y+Rc), s		6.2			* 4.7	6.2		5.8				
Max Green Setting (Gmax), s		67.0			* 21	41.0		41.0				
Max Q Clear Time (g_c+I1), s		30.2			23.1	39.5		33.2				
Green Ext Time (p_c), s		15.3			0.0	1.2		3.0				

Intersection Summary

HCM 6th Ctrl Delay	35.8
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
8: Haven Av. & I-210 EB Ramps

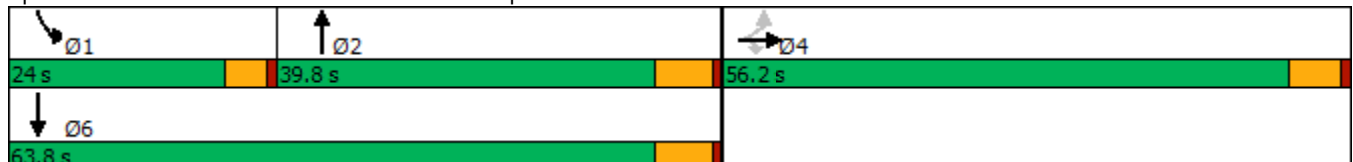


Lane Group	EBL	EBT	EBR	NBT	SBL	SBT
Lane Configurations	↶	↷	↷	↑↑↑	↶↷	↑↑↑
Traffic Volume (vph)	1377	5	335	839	546	1002
Future Volume (vph)	1377	5	335	839	546	1002
Turn Type	Perm	NA	Perm	NA	Prot	NA
Protected Phases		4		2	1	6
Permitted Phases	4		4			
Detector Phase	4	4	4	2	1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.8	10.8	10.8	30.2	9.7	31.2
Total Split (s)	56.2	56.2	56.2	39.8	24.0	63.8
Total Split (%)	46.8%	46.8%	46.8%	33.2%	20.0%	53.2%
Yellow Time (s)	4.8	4.8	4.8	5.2	3.7	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	6.2	4.7	6.2
Lead/Lag				Lag	Lead	
Lead-Lag Optimize?				Yes	Yes	
Recall Mode	None	None	None	None	None	None
Act Effct Green (s)	50.4	50.4	50.4	33.6	19.3	57.6
Actuated g/C Ratio	0.42	0.42	0.42	0.28	0.16	0.48
v/c Ratio	1.07	1.09	0.50	1.05dr	1.04	0.44
Control Delay	87.9	96.9	22.5	69.9	98.6	21.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	87.9	96.9	22.5	69.9	98.6	21.3
LOS	F	F	C	E	F	C
Approach Delay		80.1		69.9		48.6
Approach LOS		F		E		D

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.09  
 Intersection Signal Delay: 66.6  
 Intersection LOS: E  
 Intersection Capacity Utilization 147.2%  
 ICU Level of Service H  
 Analysis Period (min) 15  
 dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 8: Haven Av. & I-210 EB Ramps



HCM 6th Signalized Intersection Summary  
8: Haven Av. & I-210 EB Ramps

Chaffey College (JN 13236)  
07/29/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1377	5	335	0	0	0	0	839	536	546	1002	0
Future Volume (veh/h)	1377	5	335	0	0	0	0	839	536	546	1002	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1885	1411	1796				0	1856	1856	1885	1856	0
Adj Flow Rate, veh/h	1478	0	26				0	893	488	581	1066	0
Peak Hour Factor	0.94	0.94	0.94				0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	1	33	7				0	3	3	1	3	0
Cap, veh/h	1508	0	639				0	946	440	560	2431	0
Arrive On Green	0.42	0.00	0.42				0.00	0.28	0.28	0.16	0.48	0.00
Sat Flow, veh/h	3591	0	1522				0	3544	1572	3483	5233	0
Grp Volume(v), veh/h	1478	0	26				0	893	488	581	1066	0
Grp Sat Flow(s),veh/h/ln	1795	0	1522				0	1689	1572	1742	1689	0
Q Serve(g_s), s	48.7	0.0	1.2				0.0	31.1	33.6	19.3	16.6	0.0
Cycle Q Clear(g_c), s	48.7	0.0	1.2				0.0	31.1	33.6	19.3	16.6	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	1508	0	639				0	946	440	560	2431	0
V/C Ratio(X)	0.98	0.00	0.04				0.00	0.94	1.11	1.04	0.44	0.00
Avail Cap(c_a), veh/h	1508	0	639				0	946	440	560	2431	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	34.3	0.0	20.5				0.0	42.3	43.2	50.3	20.5	0.0
Incr Delay (d2), s/veh	18.5	0.0	0.0				0.0	17.3	75.7	48.0	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	23.7	0.0	0.4				0.0	14.7	21.8	11.9	6.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.8	0.0	20.6				0.0	59.6	118.9	98.3	20.6	0.0
LnGrp LOS	D	A	C				A	E	F	F	C	A
Approach Vol, veh/h		1504						1381			1647	
Approach Delay, s/veh		52.3						80.6			48.0	
Approach LOS		D						F			D	
Timer - Assigned Phs	1	2	4	6								
Phs Duration (G+Y+Rc), s	24.0	39.8	56.2	63.8								
Change Period (Y+Rc), s	* 4.7	6.2	5.8	6.2								
Max Green Setting (Gmax), s	* 19	33.6	50.4	57.6								
Max Q Clear Time (g_c+I1), s	21.3	35.6	50.7	18.6								
Green Ext Time (p_c), s	0.0	0.0	0.0	6.6								

Intersection Summary

HCM 6th Ctrl Delay	59.4
HCM 6th LOS	E

Notes

User approved volume balancing among the lanes for turning movement.  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection						
Int Delay, s/veh	0.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔		↔	↑	↔	↔
Traffic Vol, veh/h	423	16	16	232	3	3
Future Vol, veh/h	423	16	16	232	3	3
Conflicting Peds, #/hr	0	3	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	0
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	74	74	74	74	74	74
Heavy Vehicles, %	2	0	0	3	0	0
Mvmt Flow	572	22	22	314	4	4

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	597	0	944 586
Stage 1	-	-	-	-	586 -
Stage 2	-	-	-	-	358 -
Critical Hdwy	-	-	4.1	-	6.4 6.2
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	-	-	2.2	-	3.5 3.3
Pot Cap-1 Maneuver	-	-	989	-	293 514
Stage 1	-	-	-	-	560 -
Stage 2	-	-	-	-	712 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	986	-	286 513
Mov Cap-2 Maneuver	-	-	-	-	476 -
Stage 1	-	-	-	-	558 -
Stage 2	-	-	-	-	696 -

Approach	EB	WB	NB
HCM Control Delay, s	0	0.6	12.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	476	513	-	-	986	-
HCM Lane V/C Ratio	0.009	0.008	-	-	0.022	-
HCM Control Delay (s)	12.6	12.1	-	-	8.7	-
HCM Lane LOS	B	B	-	-	A	-
HCM 95th %tile Q(veh)	0	0	-	-	0.1	-

Intersection						
Int Delay, s/veh	0.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	412	16	16	245	3	3
Future Vol, veh/h	412	16	16	245	3	3
Conflicting Peds, #/hr	0	3	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	60	-	0	-
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	75	75	75	75	75	75
Heavy Vehicles, %	2	0	0	3	0	0
Mvmt Flow	549	21	21	327	4	4

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	573	0	932
Stage 1	-	-	-	-	563
Stage 2	-	-	-	-	369
Critical Hdwy	-	-	4.1	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	-	-	2.2	-	3.5
Pot Cap-1 Maneuver	-	-	1010	-	298
Stage 1	-	-	-	-	574
Stage 2	-	-	-	-	704
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1007	-	291
Mov Cap-2 Maneuver	-	-	-	-	483
Stage 1	-	-	-	-	572
Stage 2	-	-	-	-	689

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	12.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	504	-	-	1007	-
HCM Lane V/C Ratio	0.016	-	-	0.021	-
HCM Control Delay (s)	12.3	-	-	8.7	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	-

Intersection						
Int Delay, s/veh	0.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	400	16	16	256	3	3
Future Vol, veh/h	400	16	16	256	3	3
Conflicting Peds, #/hr	0	2	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	68	68	68	68	68	68
Heavy Vehicles, %	3	0	0	3	0	0
Mvmt Flow	588	24	24	376	4	4

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	614	0	1026 602
Stage 1	-	-	-	-	602 -
Stage 2	-	-	-	-	424 -
Critical Hdwy	-	-	4.1	-	6.4 6.2
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	-	-	2.2	-	3.5 3.3
Pot Cap-1 Maneuver	-	-	975	-	262 503
Stage 1	-	-	-	-	551 -
Stage 2	-	-	-	-	664 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	973	-	255 502
Mov Cap-2 Maneuver	-	-	-	-	454 -
Stage 1	-	-	-	-	550 -
Stage 2	-	-	-	-	647 -

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	12.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	477	-	-	973	-
HCM Lane V/C Ratio	0.018	-	-	0.024	-
HCM Control Delay (s)	12.7	-	-	8.8	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-



Intersection						
Int Delay, s/veh	0.6					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔		↔	↑	↔	↔
Traffic Vol, veh/h	385	19	35	268	3	9
Future Vol, veh/h	385	19	35	268	3	9
Conflicting Peds, #/hr	0	2	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	170	-	0	50
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	68	68	68	68	68	68
Heavy Vehicles, %	3	0	0	3	0	0
Mvmt Flow	566	28	51	394	4	13

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	596	0	1078
Stage 1	-	-	-	-	582
Stage 2	-	-	-	-	496
Critical Hdwy	-	-	4.1	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	-	-	2.2	-	3.5
Pot Cap-1 Maneuver	-	-	990	-	244
Stage 1	-	-	-	-	563
Stage 2	-	-	-	-	616
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	988	-	231
Mov Cap-2 Maneuver	-	-	-	-	435
Stage 1	-	-	-	-	562
Stage 2	-	-	-	-	584

Approach	EB	WB	NB
HCM Control Delay, s	0	1	12.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	435	516	-	-	988	-
HCM Lane V/C Ratio	0.01	0.026	-	-	0.052	-
HCM Control Delay (s)	13.4	12.2	-	-	8.8	-
HCM Lane LOS	B	B	-	-	A	-
HCM 95th %tile Q(veh)	0	0.1	-	-	0.2	-

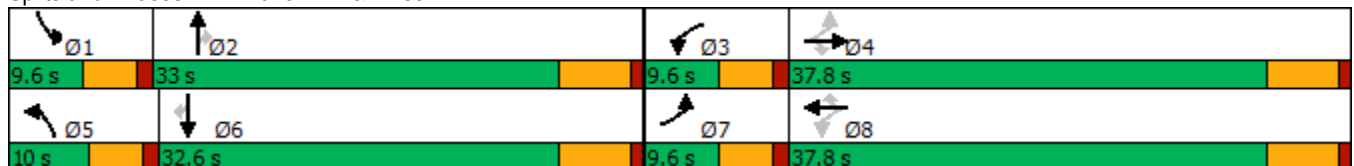
Timings  
1: Haven Av. & Wilson Av.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	157	68	202	117	60	71	186	143	33	153	17
Future Volume (vph)	54	157	68	202	117	60	71	186	143	33	153	17
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	37.8	37.8	9.6	37.8	37.8	9.6	32.8	32.8	9.6	31.8	31.8
Total Split (s)	9.6	37.8	37.8	9.6	37.8	37.8	10.0	33.0	33.0	9.6	32.6	32.6
Total Split (%)	10.7%	42.0%	42.0%	10.7%	42.0%	42.0%	11.1%	36.7%	36.7%	10.7%	36.2%	36.2%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
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	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	20.7	14.0	14.0	23.0	18.9	18.9	5.8	17.4	17.4	5.3	12.8	12.8
Actuated g/C Ratio	0.36	0.24	0.24	0.40	0.33	0.33	0.10	0.30	0.30	0.09	0.22	0.22
v/c Ratio	0.13	0.42	0.17	0.49	0.12	0.11	0.47	0.21	0.28	0.23	0.24	0.04
Control Delay	11.5	22.4	1.2	16.8	17.3	0.4	40.7	17.6	5.5	34.0	20.8	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.5	22.4	1.2	16.8	17.3	0.4	40.7	17.6	5.5	34.0	20.8	0.2
LOS	B	C	A	B	B	A	D	B	A	C	C	A
Approach Delay		15.1			14.4			17.4			21.2	
Approach LOS		B			B			B			C	

Intersection Summary

Cycle Length: 90  
 Actuated Cycle Length: 57.4  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.49  
 Intersection Signal Delay: 16.6  
 Intersection LOS: B  
 Intersection Capacity Utilization 49.4%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 1: Haven Av. & Wilson Av.

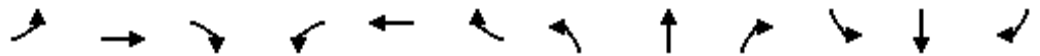


HCM 6th Signalized Intersection Summary

Chaffey College (JN 13236)

1: Haven Av. & Wilson Av.

07/29/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑	↗	↖	↑↑	↗	↖	↑↑	↗	↖	↑↑	↗
Traffic Volume (veh/h)	54	157	68	202	117	60	71	186	143	33	153	17
Future Volume (veh/h)	54	157	68	202	117	60	71	186	143	33	153	17
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1826	1841	1885	1856	1900	1900	1870	1900	1900	1841	1900
Adj Flow Rate, veh/h	64	187	36	240	139	17	85	221	150	39	182	14
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	0	5	4	1	3	0	0	2	0	0	4	0
Cap, veh/h	507	370	316	459	864	395	126	821	372	76	711	327
Arrive On Green	0.06	0.20	0.20	0.10	0.25	0.25	0.07	0.23	0.23	0.04	0.20	0.20
Sat Flow, veh/h	1810	1826	1560	1795	3526	1610	1810	3554	1610	1810	3497	1610
Grp Volume(v), veh/h	64	187	36	240	139	17	85	221	150	39	182	14
Grp Sat Flow(s),veh/h/ln	1810	1826	1560	1795	1763	1610	1810	1777	1610	1810	1749	1610
Q Serve(g_s), s	1.3	4.5	0.9	5.0	1.5	0.4	2.3	2.5	3.9	1.0	2.2	0.3
Cycle Q Clear(g_c), s	1.3	4.5	0.9	5.0	1.5	0.4	2.3	2.5	3.9	1.0	2.2	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	507	370	316	459	864	395	126	821	372	76	711	327
V/C Ratio(X)	0.13	0.51	0.11	0.52	0.16	0.04	0.67	0.27	0.40	0.51	0.26	0.04
Avail Cap(c_a), veh/h	584	1187	1014	459	2292	1047	199	1964	890	184	1905	877
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.9	17.4	16.0	14.2	14.6	14.2	22.3	15.5	16.0	23.1	16.5	15.8
Incr Delay (d2), s/veh	0.0	1.1	0.2	0.5	0.1	0.0	2.3	0.2	0.7	2.0	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	1.6	0.3	1.7	0.5	0.1	0.9	0.8	1.2	0.4	0.7	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.9	18.5	16.2	14.7	14.7	14.2	24.7	15.7	16.7	25.1	16.7	15.8
LnGrp LOS	B	B	B	B	B	B	C	B	B	C	B	B
Approach Vol, veh/h		287			396			456			235	
Approach Delay, s/veh		17.2			14.7			17.7			18.0	
Approach LOS		B			B			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.7	17.2	9.6	15.8	8.0	15.8	7.5	17.9				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	5.0	27.2	5.0	32.0	5.4	26.8	5.0	32.0				
Max Q Clear Time (g_c+I1), s	3.0	5.9	7.0	6.5	4.3	4.2	3.3	3.5				
Green Ext Time (p_c), s	0.0	1.7	0.0	1.0	0.0	1.0	0.0	0.8				

Intersection Summary

HCM 6th Ctrl Delay	16.8
HCM 6th LOS	B

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗ ↑↑↑	↗ ↑↑↑			↑↑↑
Traffic Vol, veh/h	0	8	392	54	0	422
Future Vol, veh/h	0	8	392	54	0	422
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	0	0	1	0	0	2
Mvmt Flow	0	8	400	55	0	431

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	-	228	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.1	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.9	-	-	-	-
Pot Cap-1 Maneuver	0	664	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	-	664	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.5	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	664
HCM Lane V/C Ratio	-	-	0.012
HCM Control Delay (s)	-	-	10.5
HCM Lane LOS	-	-	B
HCM 95th %tile Q(veh)	-	-	0

Intersection						
Int Delay, s/veh	0.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↑↑↑↑			↑↑↑↑
Traffic Vol, veh/h	42	8	439	0	0	421
Future Vol, veh/h	42	8	439	0	0	421
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	0	0	1	0	0	2
Mvmt Flow	43	8	448	0	0	430

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	620	224	0	-	-	-
Stage 1	448	-	-	-	-	-
Stage 2	172	-	-	-	-	-
Critical Hdwy	5.7	7.1	-	-	-	-
Critical Hdwy Stg 1	6.6	-	-	-	-	-
Critical Hdwy Stg 2	6	-	-	-	-	-
Follow-up Hdwy	3.8	3.9	-	-	-	-
Pot Cap-1 Maneuver	484	668	-	0	0	-
Stage 1	523	-	-	0	0	-
Stage 2	778	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	484	668	-	-	-	-
Mov Cap-2 Maneuver	473	-	-	-	-	-
Stage 1	523	-	-	-	-	-
Stage 2	778	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.9	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBTWBLn1	WBLn2	SBT
Capacity (veh/h)	-	473	668
HCM Lane V/C Ratio	-	0.091	0.012
HCM Control Delay (s)	-	13.4	10.5
HCM Lane LOS	-	B	B
HCM 95th %tile Q(veh)	-	0.3	0

Intersection						
Int Delay, s/veh	0.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↑ ↑ ↑	↑ ↑ ↑			↑ ↑ ↑
Traffic Vol, veh/h	0	23	469	221	0	505
Future Vol, veh/h	0	23	469	221	0	505
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	0	1	0	0	2
Mvmt Flow	0	24	499	235	0	537

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	-	367	0	0	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	7.1	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	3.9	-	-	-
Pot Cap-1 Maneuver	0	542	-	-	0
Stage 1	0	-	-	-	0
Stage 2	0	-	-	-	0
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	-	542	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	542
HCM Lane V/C Ratio	-	-	0.045
HCM Control Delay (s)	-	-	12
HCM Lane LOS	-	-	B
HCM 95th %tile Q(veh)	-	-	0.1

Timings  
5: Haven Av. & Amber Ln./College Dr.

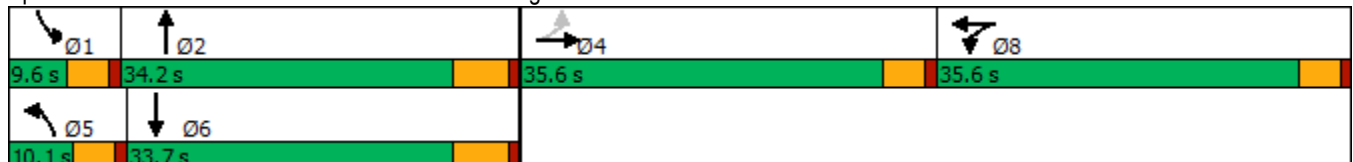


Lane Group	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↔	↗	↔	↖	↑↑↑	↖	↑↑↑
Traffic Volume (vph)	0	765	0	18	681	43	459
Future Volume (vph)	0	765	0	18	681	43	459
Turn Type	NA	Split	NA	Prot	NA	Prot	NA
Protected Phases	4	8	8	5	2	1	6
Permitted Phases							
Detector Phase	4	8	8	5	2	1	6
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	35.6	35.6	35.6	9.6	23.8	9.6	23.8
Total Split (s)	35.6	35.6	35.6	10.1	34.2	9.6	33.7
Total Split (%)	31.0%	31.0%	31.0%	8.8%	29.7%	8.3%	29.3%
Yellow Time (s)	3.6	3.6	3.6	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	5.8	4.6	5.8
Lead/Lag				Lead	Lag	Lead	Lag
Lead-Lag Optimize?				Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	Min	None	Min
Act Effct Green (s)	13.7	29.9	29.9	5.5	29.7	5.2	33.5
Actuated g/C Ratio	0.15	0.34	0.34	0.06	0.33	0.06	0.38
v/c Ratio	0.11	0.77	0.67	0.18	1.16dr	0.46	0.27
Control Delay	0.6	40.4	27.3	50.9	35.5	61.6	23.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	0.6	40.4	27.3	50.9	35.5	61.6	23.8
LOS	A	D	C	D	D	E	C
Approach Delay	0.6		33.9		35.7		27.0
Approach LOS	A		C		D		C

Intersection Summary

Cycle Length: 115  
 Actuated Cycle Length: 88.7  
 Natural Cycle: 115  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.90  
 Intersection Signal Delay: 33.1  
 Intersection LOS: C  
 Intersection Capacity Utilization 72.6%  
 ICU Level of Service C  
 Analysis Period (min) 15  
 dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 5: Haven Av. & Amber Ln./College Dr.



HCM 6th Signalized Intersection Summary  
5: Haven Av. & Amber Ln./College Dr.

Chaffey College (JN 13236)  
07/29/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↗	↕		↗	↕↕↕		↗	↕↕↕	
Traffic Volume (veh/h)	0	0	33	765	0	10	18	681	687	43	459	2
Future Volume (veh/h)	0	0	33	765	0	10	18	681	687	43	459	2
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		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1885	1900	1900	1900	1885	1885	1900	1870	1900
Adj Flow Rate, veh/h	0	0	6	879	0	0	20	774	0	49	522	2
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	0	0	0	1	0	0	0	1	1	0	2	0
Cap, veh/h	0	0	26	1146	606	0	43	1327		87	1480	6
Arrive On Green	0.00	0.00	0.02	0.32	0.00	0.00	0.02	0.26	0.00	0.05	0.28	0.28
Sat Flow, veh/h	0	0	1610	3591	1900	0	1810	5316	0	1810	5250	20
Grp Volume(v), veh/h	0	0	6	879	0	0	20	774	0	49	338	186
Grp Sat Flow(s),veh/h/ln	0	0	1610	1795	1900	0	1810	1716	0	1810	1702	1866
Q Serve(g_s), s	0.0	0.0	0.2	12.0	0.0	0.0	0.6	7.2	0.0	1.4	4.3	4.3
Cycle Q Clear(g_c), s	0.0	0.0	0.2	12.0	0.0	0.0	0.6	7.2	0.0	1.4	4.3	4.3
Prop In Lane	0.00		1.00	1.00		0.00	1.00		0.00	1.00		0.01
Lane Grp Cap(c), veh/h	0	0	26	1146	606	0	43	1327		87	959	526
V/C Ratio(X)	0.00	0.00	0.23	0.77	0.00	0.00	0.46	0.58		0.56	0.35	0.35
Avail Cap(c_a), veh/h	0	0	915	2040	1079	0	182	2678		166	1740	954
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	26.5	16.7	0.0	0.0	26.3	17.7	0.0	25.4	15.6	15.6
Incr Delay (d2), s/veh	0.0	0.0	4.6	1.1	0.0	0.0	2.8	0.4	0.0	2.1	0.2	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.1	4.6	0.0	0.0	0.3	2.4	0.0	0.6	1.4	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	31.1	17.9	0.0	0.0	29.1	18.1	0.0	27.5	15.8	16.0
LnGrp LOS	A	A	C	B	A	A	C	B		C	B	B
Approach Vol, veh/h		6			879			794	A		573	
Approach Delay, s/veh		31.1			17.9			18.4			16.9	
Approach LOS		C			B			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.2	19.9		5.5	5.9	21.2		22.0				
Change Period (Y+Rc), s	4.6	5.8		4.6	4.6	5.8		4.6				
Max Green Setting (Gmax), s	5.0	28.4		31.0	5.5	27.9		31.0				
Max Q Clear Time (g_c+I1), s	3.4	9.2		2.2	2.6	6.3		14.0				
Green Ext Time (p_c), s	0.0	4.7		0.0	0.0	2.9		3.4				

Intersection Summary

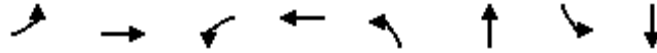
HCM 6th Ctrl Delay	17.8
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.  
Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.



Timings  
6: Haven Av. & Lemon Av.

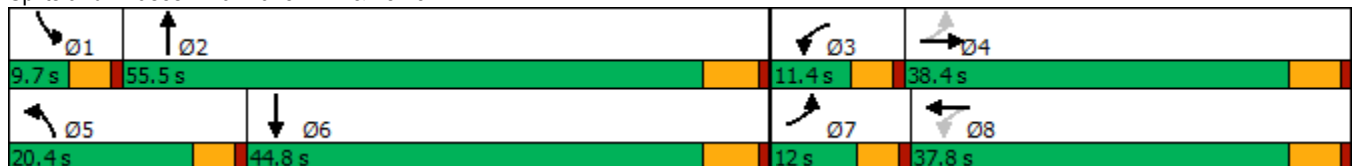


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↗	↖	↗	↖	↑↑↑	↖	↑↑↑
Traffic Volume (vph)	174	103	183	40	173	1484	22	1448
Future Volume (vph)	174	103	183	40	173	1484	22	1448
Turn Type	pm+pt	NA	pm+pt	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases	4		8					
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	38.4	9.6	36.4	9.6	24.8	9.6	23.8
Total Split (s)	12.0	38.4	11.4	37.8	20.4	55.5	9.7	44.8
Total Split (%)	10.4%	33.4%	9.9%	32.9%	17.7%	48.3%	8.4%	39.0%
Yellow Time (s)	3.6	4.4	3.6	4.4	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4	4.6	5.4	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	26.6	17.2	21.8	16.8	13.3	51.6	5.1	37.0
Actuated g/C Ratio	0.28	0.18	0.23	0.18	0.14	0.54	0.05	0.39
v/c Ratio	0.49	0.65	0.66	0.22	0.73	0.65	0.26	0.81
Control Delay	31.6	37.4	40.0	23.6	59.1	18.6	55.9	31.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.6	37.4	40.0	23.6	59.1	18.6	55.9	31.0
LOS	C	D	D	C	E	B	E	C
Approach Delay		34.8		35.6		22.3		31.3
Approach LOS		C		D		C		C

Intersection Summary

Cycle Length: 115	
Actuated Cycle Length: 95.3	
Natural Cycle: 95	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.81	
Intersection Signal Delay: 27.7	Intersection LOS: C
Intersection Capacity Utilization 85.3%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 6: Haven Av. & Lemon Av.



HCM 6th Signalized Intersection Summary  
6: Haven Av. & Lemon Av.

Chaffey College (JN 13236)  
07/29/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	174	103	111	183	40	28	173	1484	228	22	1448	84
Future Volume (veh/h)	174	103	111	183	40	28	173	1484	228	22	1448	84
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	0.98		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1900	1841	1885	1841	1900	1870	1900	1885	1781	1885	1900
Adj Flow Rate, veh/h	181	107	54	191	42	26	180	1546	201	23	1508	88
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, %	3	0	4	1	4	0	2	0	1	8	1	0
Cap, veh/h	405	196	99	330	169	105	217	2260	293	42	1940	113
Arrive On Green	0.09	0.17	0.17	0.08	0.16	0.16	0.12	0.49	0.49	0.02	0.39	0.39
Sat Flow, veh/h	1767	1179	595	1795	1064	658	1781	4638	602	1697	4972	290
Grp Volume(v), veh/h	181	0	161	191	0	68	180	1152	595	23	1041	555
Grp Sat Flow(s),veh/h/ln	1767	0	1773	1795	0	1722	1781	1729	1782	1697	1716	1831
Q Serve(g_s), s	7.3	0.0	7.0	6.8	0.0	2.9	8.3	21.6	21.7	1.1	22.4	22.4
Cycle Q Clear(g_c), s	7.3	0.0	7.0	6.8	0.0	2.9	8.3	21.6	21.7	1.1	22.4	22.4
Prop In Lane	1.00		0.34	1.00		0.38	1.00		0.34	1.00		0.16
Lane Grp Cap(c), veh/h	405	0	295	330	0	274	217	1685	868	42	1339	714
V/C Ratio(X)	0.45	0.00	0.55	0.58	0.00	0.25	0.83	0.68	0.69	0.55	0.78	0.78
Avail Cap(c_a), veh/h	405	0	692	330	0	660	333	2033	1048	102	1583	845
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.8	0.0	32.3	28.3	0.0	31.1	36.3	16.7	16.7	40.8	22.6	22.6
Incr Delay (d2), s/veh	0.3	0.0	1.6	1.7	0.0	0.5	5.8	0.7	1.4	4.1	2.1	3.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	0.0	3.0	3.3	0.0	1.2	3.8	7.5	7.9	0.5	8.4	9.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.1	0.0	33.9	30.0	0.0	31.6	42.1	17.4	18.1	44.9	24.7	26.5
LnGrp LOS	C	A	C	C	A	C	D	B	B	D	C	C
Approach Vol, veh/h		342			259			1927			1619	
Approach Delay, s/veh		30.3			30.4			19.9			25.6	
Approach LOS		C			C			B			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.7	47.0	11.4	19.5	14.9	38.8	12.0	18.9				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.4	4.6	5.8	4.6	5.4				
Max Green Setting (Gmax), s	5.1	49.7	6.8	33.0	15.8	39.0	7.4	32.4				
Max Q Clear Time (g_c+I1), s	3.1	23.7	8.8	9.0	10.3	24.4	9.3	4.9				
Green Ext Time (p_c), s	0.0	13.5	0.0	0.8	0.1	8.5	0.0	0.3				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			23.6									
HCM 6th LOS			C									

Timings  
7: Haven Av. & I-210 WB Ramps



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT
Lane Configurations	↶	↷	↷	↶↷	↶↷↶	↶↷↶
Traffic Volume (vph)	553	5	814	646	1574	1406
Future Volume (vph)	553	5	814	646	1574	1406
Turn Type	Perm	NA	Perm	Prot	NA	NA
Protected Phases		8		5	2	6
Permitted Phases	8		8			
Detector Phase	8	8	8	5	2	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.8	10.8	10.8	9.7	31.2	31.2
Total Split (s)	38.0	38.0	38.0	26.0	82.0	56.0
Total Split (%)	31.7%	31.7%	31.7%	21.7%	68.3%	46.7%
Yellow Time (s)	4.8	4.8	4.8	3.7	5.2	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	4.7	6.2	6.2
Lead/Lag				Lead		Lag
Lead-Lag Optimize?				Yes		Yes
Recall Mode	None	None	None	None	C-Max	C-Max
Act Effct Green (s)	32.2	32.2	32.2	21.3	75.8	49.8
Actuated g/C Ratio	0.27	0.27	0.27	0.18	0.63	0.42
v/c Ratio	1.11	1.15	1.02	1.12	0.52	1.10
Control Delay	117.5	131.1	83.7	118.1	12.8	83.9
Queue Delay	0.0	0.0	0.0	0.0	0.9	0.0
Total Delay	117.5	131.1	83.7	118.1	13.7	83.9
LOS	F	F	F	F	B	F
Approach Delay		111.2			44.1	83.9
Approach LOS		F			D	F

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 67 (56%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow  
 Natural Cycle: 120  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.15  
 Intersection Signal Delay: 75.0  
 Intersection LOS: E  
 Intersection Capacity Utilization 109.0%  
 ICU Level of Service H  
 Analysis Period (min) 15

Splits and Phases: 7: Haven Av. & I-210 WB Ramps



HCM 6th Signalized Intersection Summary  
7: Haven Av. & I-210 WB Ramps

Chaffey College (JN 13236)  
07/29/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↖	↔	↗	↖↗	↑↑↑			↑↑↑	↖
Traffic Volume (veh/h)	0	0	0	553	5	814	646	1574	0	0	1406	747
Future Volume (veh/h)	0	0	0	553	5	814	646	1574	0	0	1406	747
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
Work Zone On Approach				No			No			No		
Adj Sat Flow, veh/h/ln				1885	1411	1885	1885	1885	0	0	1885	1885
Adj Flow Rate, veh/h				770	0	388	687	1674	0	0	1496	636
Peak Hour Factor				0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %				1	33	1	1	1	0	0	1	1
Cap, veh/h				938	0	417	618	3288	0	0	1509	623
Arrive On Green				0.26	0.00	0.26	0.18	0.64	0.00	0.00	0.42	0.42
Sat Flow, veh/h				3591	0	1598	3483	5316	0	0	3743	1475
Grp Volume(v), veh/h				770	0	388	687	1674	0	0	1435	697
Grp Sat Flow(s),veh/h/ln				1795	0	1598	1742	1716	0	0	1716	1617
Q Serve(g_s), s				24.2	0.0	28.4	21.3	20.9	0.0	0.0	49.8	50.7
Cycle Q Clear(g_c), s				24.2	0.0	28.4	21.3	20.9	0.0	0.0	49.8	50.7
Prop In Lane				1.00		1.00	1.00		0.00	0.00		0.91
Lane Grp Cap(c), veh/h				938	0	417	618	3288	0	0	1449	683
V/C Ratio(X)				0.82	0.00	0.93	1.11	0.51	0.00	0.00	0.99	1.02
Avail Cap(c_a), veh/h				964	0	429	618	3288	0	0	1449	683
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.09	0.09	0.00	0.00	0.52	0.52
Uniform Delay (d), s/veh				41.7	0.0	43.3	49.4	11.6	0.0	0.0	34.4	34.7
Incr Delay (d2), s/veh				5.6	0.0	26.5	52.5	0.1	0.0	0.0	15.0	30.3
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				11.1	0.0	13.9	13.5	7.0	0.0	0.0	22.4	24.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				47.3	0.0	69.8	101.9	11.6	0.0	0.0	49.4	65.0
LnGrp LOS				D	A	E	F	B	A	A	D	F
Approach Vol, veh/h					1158			2361			2132	
Approach Delay, s/veh					54.8			37.9			54.5	
Approach LOS					D			D			D	
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		82.9			26.0	56.9		37.1				
Change Period (Y+Rc), s		6.2			* 4.7	6.2		5.8				
Max Green Setting (Gmax), s		75.8			* 21	49.8		32.2				
Max Q Clear Time (g_c+I1), s		22.9			23.3	52.7		30.4				
Green Ext Time (p_c), s		13.7			0.0	0.0		0.9				

Intersection Summary

HCM 6th Ctrl Delay	47.6
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
8: Haven Av. & I-210 EB Ramps



Lane Group	EBL	EBT	EBR	NBT	SBL	SBT
Lane Configurations	↶	↷	↷	↑↑↑	↶↷	↑↑↑
Traffic Volume (vph)	634	8	313	1586	760	1201
Future Volume (vph)	634	8	313	1586	760	1201
Turn Type	Perm	NA	Perm	NA	Prot	NA
Protected Phases		4		2	1	6
Permitted Phases	4		4			
Detector Phase	4	4	4	2	1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.8	10.8	10.8	30.2	9.7	31.2
Total Split (s)	27.0	27.0	27.0	65.0	28.0	93.0
Total Split (%)	22.5%	22.5%	22.5%	54.2%	23.3%	77.5%
Yellow Time (s)	4.8	4.8	4.8	5.2	3.7	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	6.2	4.7	6.2
Lead/Lag				Lag	Lead	
Lead-Lag Optimize?				Yes	Yes	
Recall Mode	None	None	None	None	None	None
Act Effect Green (s)	21.2	21.2	21.2	58.8	23.3	86.8
Actuated g/C Ratio	0.18	0.18	0.18	0.49	0.19	0.72
v/c Ratio	1.18	1.23	0.86	1.17dr	1.20	0.34
Control Delay	153.9	172.6	55.3	84.5	146.6	6.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.4
Total Delay	153.9	172.6	55.3	84.5	146.6	6.8
LOS	F	F	E	F	F	A
Approach Delay		131.4		84.5		61.0
Approach LOS		F		F		E

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.23  
 Intersection Signal Delay: 84.2  
 Intersection LOS: F  
 Intersection Capacity Utilization 109.0%  
 ICU Level of Service H  
 Analysis Period (min) 15  
 dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 8: Haven Av. & I-210 EB Ramps



HCM 6th Signalized Intersection Summary  
 8: Haven Av. & I-210 EB Ramps

Chaffey College (JN 13236)  
 07/29/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	634	8	313	0	0	0	0	1586	971	760	1201	0
Future Volume (veh/h)	634	8	313	0	0	0	0	1586	971	760	1201	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1856				0	1885	1885	1885	1885	0
Adj Flow Rate, veh/h	703	0	57				0	1687	733	809	1278	0
Peak Hour Factor	0.94	0.94	0.94				0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	3				0	1	1	1	1	0
Cap, veh/h	639	0	278				0	1752	713	676	3723	0
Arrive On Green	0.18	0.00	0.18				0.00	0.49	0.49	0.19	0.72	0.00
Sat Flow, veh/h	3619	0	1572				0	3744	1455	3483	5316	0
Grp Volume(v), veh/h	703	0	57				0	1615	805	809	1278	0
Grp Sat Flow(s),veh/h/ln	1810	0	1572				0	1716	1599	1742	1716	0
Q Serve(g_s), s	21.2	0.0	3.7				0.0	54.4	58.8	23.3	11.0	0.0
Cycle Q Clear(g_c), s	21.2	0.0	3.7				0.0	54.4	58.8	23.3	11.0	0.0
Prop In Lane	1.00		1.00				0.00		0.91	1.00		0.00
Lane Grp Cap(c), veh/h	639	0	278				0	1681	783	676	3723	0
V/C Ratio(X)	1.10	0.00	0.21				0.00	0.96	1.03	1.20	0.34	0.00
Avail Cap(c_a), veh/h	639	0	278				0	1681	783	676	3723	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	49.4	0.0	42.2				0.0	29.5	30.6	48.3	6.1	0.0
Incr Delay (d2), s/veh	65.9	0.0	0.4				0.0	13.7	39.5	102.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.1	0.0	1.4				0.0	23.7	29.3	19.4	3.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	115.3	0.0	42.6				0.0	43.2	70.1	150.7	6.2	0.0
LnGrp LOS	F	A	D				A	D	F	F	A	A
Approach Vol, veh/h		760						2420			2087	
Approach Delay, s/veh		109.9						52.1			62.2	
Approach LOS		F						D			E	
Timer - Assigned Phs	1	2	4	6								
Phs Duration (G+Y+Rc), s	28.0	65.0	27.0	93.0								
Change Period (Y+Rc), s	* 4.7	6.2	5.8	6.2								
Max Green Setting (Gmax), s	* 23	58.8	21.2	86.8								
Max Q Clear Time (g_c+I1), s	25.3	60.8	23.2	13.0								
Green Ext Time (p_c), s	0.0	0.0	0.0	8.9								

Intersection Summary

HCM 6th Ctrl Delay	64.4
HCM 6th LOS	E

Notes

User approved volume balancing among the lanes for turning movement.  
 \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection						
Int Delay, s/veh	0.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔		↔	↑	↔	↔
Traffic Vol, veh/h	322	11	11	371	8	8
Future Vol, veh/h	322	11	11	371	8	8
Conflicting Peds, #/hr	0	3	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	0
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	2	0	0	1	0	0
Mvmt Flow	393	13	13	452	10	10

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	409	0	881
Stage 1	-	-	-	-	403
Stage 2	-	-	-	-	478
Critical Hdwy	-	-	4.1	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	-	-	2.2	-	3.5
Pot Cap-1 Maneuver	-	-	1161	-	320
Stage 1	-	-	-	-	679
Stage 2	-	-	-	-	628
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1158	-	316
Mov Cap-2 Maneuver	-	-	-	-	509
Stage 1	-	-	-	-	677
Stage 2	-	-	-	-	621

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	11.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	509	650	-	-	1158	-
HCM Lane V/C Ratio	0.019	0.015	-	-	0.012	-
HCM Control Delay (s)	12.2	10.6	-	-	8.1	-
HCM Lane LOS	B	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-

Intersection						
Int Delay, s/veh	0.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	320	11	11	373	8	8
Future Vol, veh/h	320	11	11	373	8	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	60	-	0	-
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	3	0	0	1	0	0
Mvmt Flow	386	13	13	449	10	10

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	399	0	868 393
Stage 1	-	-	-	-	393 -
Stage 2	-	-	-	-	475 -
Critical Hdwy	-	-	4.1	-	6.4 6.2
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	-	-	2.2	-	3.5 3.3
Pot Cap-1 Maneuver	-	-	1171	-	325 660
Stage 1	-	-	-	-	686 -
Stage 2	-	-	-	-	630 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1171	-	321 660
Mov Cap-2 Maneuver	-	-	-	-	513 -
Stage 1	-	-	-	-	686 -
Stage 2	-	-	-	-	623 -

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	11.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	577	-	-	1171	-
HCM Lane V/C Ratio	0.033	-	-	0.011	-
HCM Control Delay (s)	11.5	-	-	8.1	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-



Intersection						
Int Delay, s/veh	0.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	317	11	11	375	8	8
Future Vol, veh/h	317	11	11	375	8	8
Conflicting Peds, #/hr	0	2	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	3	0	0	1	0	0
Mvmt Flow	364	13	13	431	9	9

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	379	0	830 373
Stage 1	-	-	-	-	373 -
Stage 2	-	-	-	-	457 -
Critical Hdwy	-	-	4.1	-	6.4 6.2
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	-	-	2.2	-	3.5 3.3
Pot Cap-1 Maneuver	-	-	1191	-	343 678
Stage 1	-	-	-	-	701 -
Stage 2	-	-	-	-	642 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1189	-	339 677
Mov Cap-2 Maneuver	-	-	-	-	527 -
Stage 1	-	-	-	-	700 -
Stage 2	-	-	-	-	635 -

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	11.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	593	-	-	1189	-
HCM Lane V/C Ratio	0.031	-	-	0.011	-
HCM Control Delay (s)	11.3	-	-	8.1	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection						
Int Delay, s/veh	0.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	315	11	23	377	8	29
Future Vol, veh/h	315	11	23	377	8	29
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	170	-	0	50
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	0	0	1	0	0
Mvmt Flow	342	12	25	410	9	32

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	354	0	808 348
Stage 1	-	-	-	-	348 -
Stage 2	-	-	-	-	460 -
Critical Hdwy	-	-	4.1	-	6.4 6.2
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	-	-	2.2	-	3.5 3.3
Pot Cap-1 Maneuver	-	-	1216	-	353 700
Stage 1	-	-	-	-	719 -
Stage 2	-	-	-	-	640 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1216	-	346 700
Mov Cap-2 Maneuver	-	-	-	-	530 -
Stage 1	-	-	-	-	719 -
Stage 2	-	-	-	-	627 -

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	10.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	530	700	-	-	1216	-
HCM Lane V/C Ratio	0.016	0.045	-	-	0.021	-
HCM Control Delay (s)	11.9	10.4	-	-	8	-
HCM Lane LOS	B	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0.1	-

**APPENDIX 5.2:**

**E+P CONDITIONS TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS**

This Page Intentionally Left Blank

**Figure 4C-4. Warrant 3, Peak Hour (70% Factor)**

**(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)**

Traffic Conditions = **E+P Conditions - Weekday PM Peak Hour**

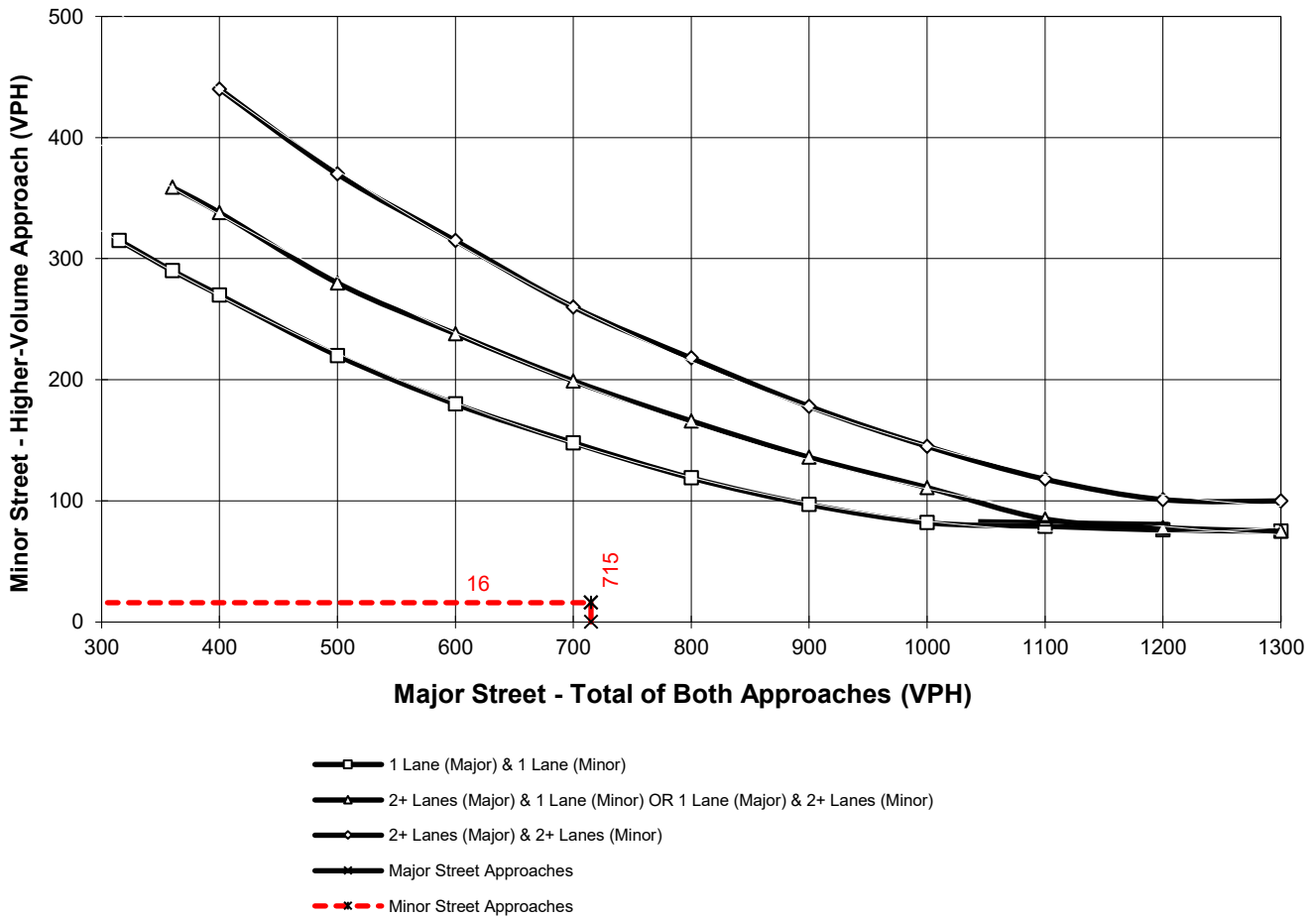
Major Street Name = **Wilson Av.**

Total of Both Approaches (VPH) = **715**  
 Number of Approach Lanes Major Street = **1**

Minor Street Name = **Driveway 2**

High Volume Approach (VPH) = **16**  
 Number of Approach Lanes Minor Street = **1**

**SIGNAL WARRANT NOT SATISFIED**



\*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane



### Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **E+P Conditions - Weekday PM Peak Hour**

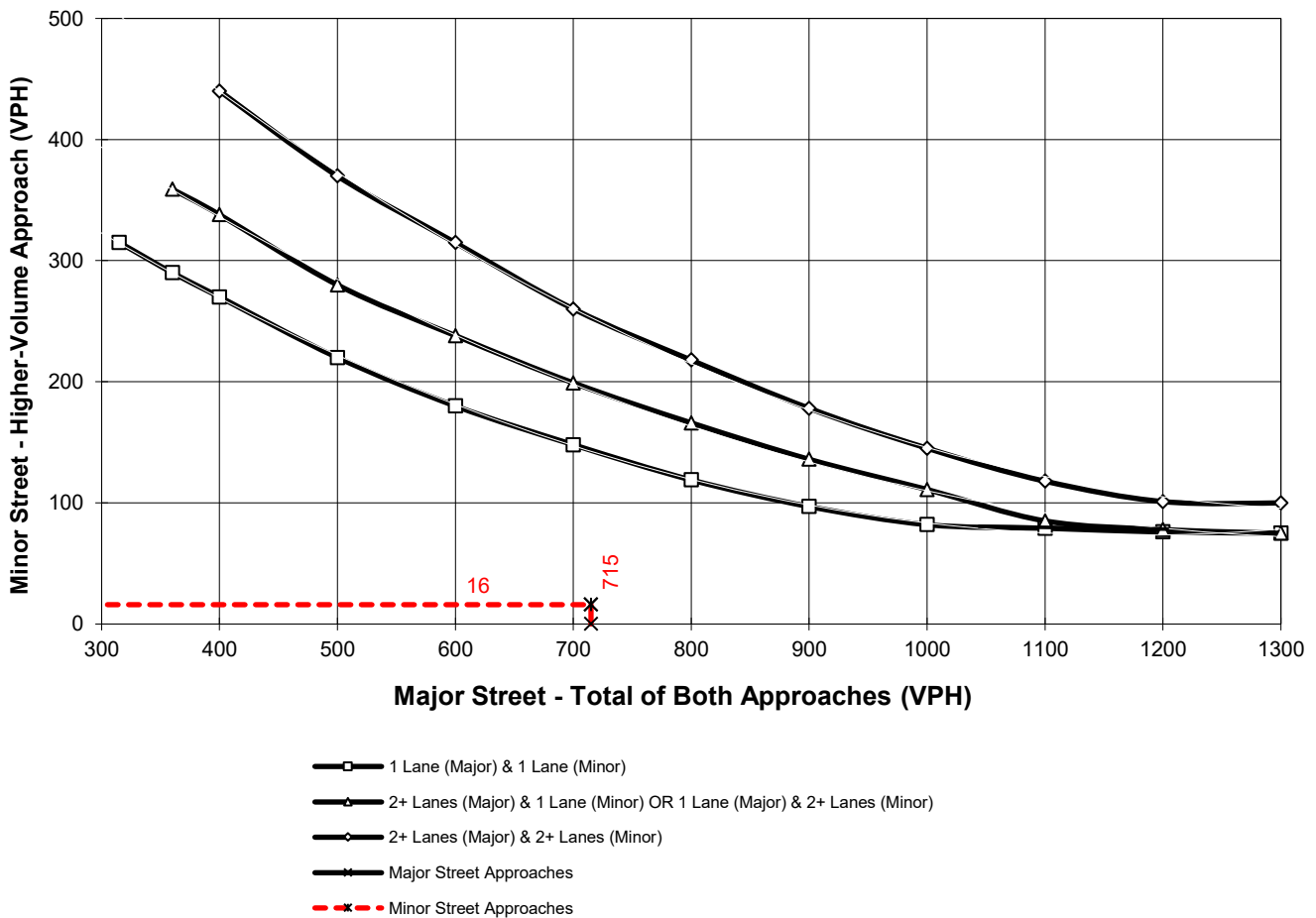
Major Street Name = **Wilson Av.**

Total of Both Approaches (VPH) = **715**  
 Number of Approach Lanes Major Street = **1**

Minor Street Name = **Driveway 3**

High Volume Approach (VPH) = **16**  
 Number of Approach Lanes Minor Street = **1**

**SIGNAL WARRANT NOT SATISFIED**



\*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

**Figure 4C-4. Warrant 3, Peak Hour (70% Factor)**

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **E+P Conditions - Weekday PM Peak Hour**

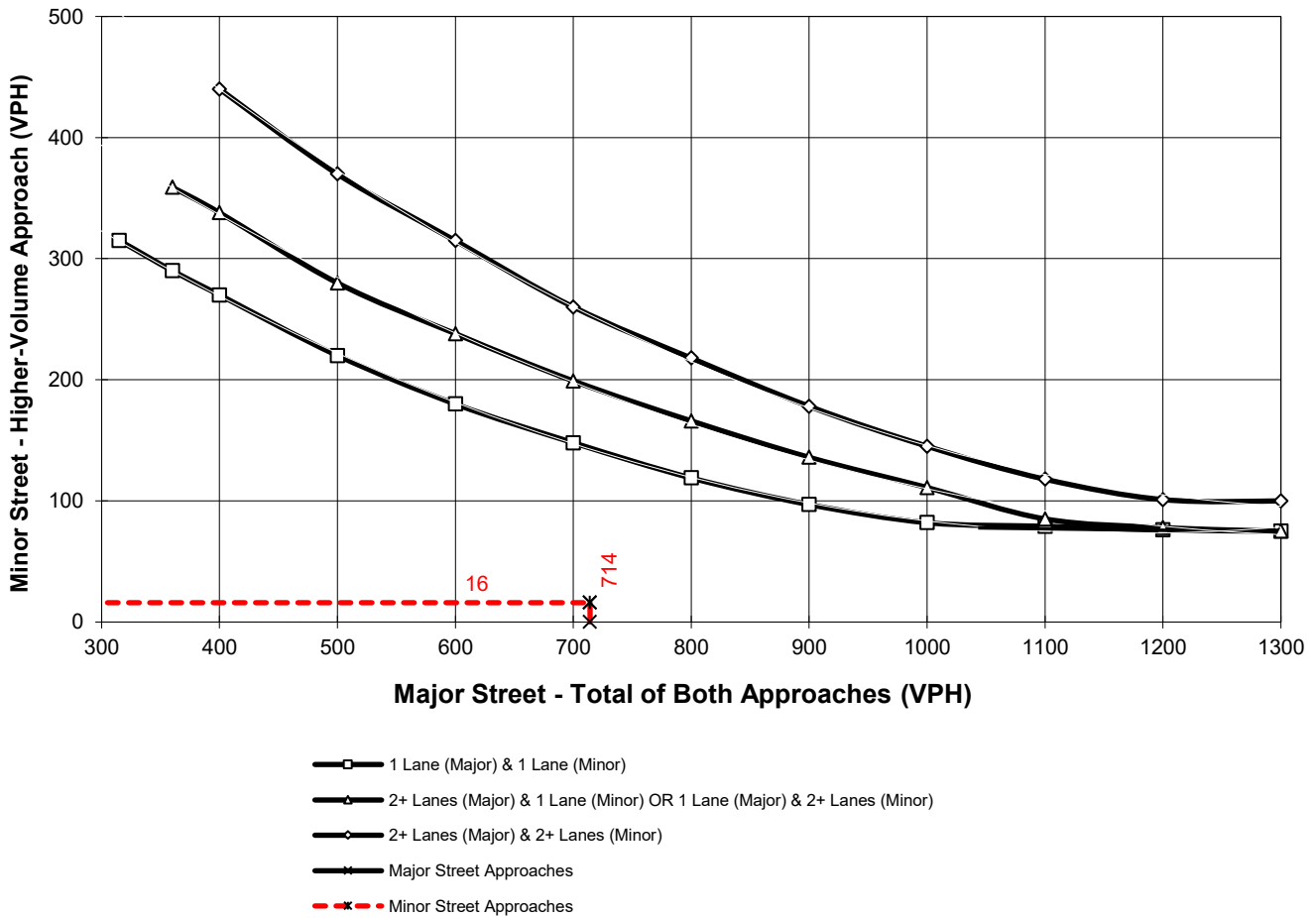
Major Street Name = **Wilson Av.**

Total of Both Approaches (VPH) = **714**  
 Number of Approach Lanes Major Street = **1**

Minor Street Name = **Driveway 4**

High Volume Approach (VPH) = **16**  
 Number of Approach Lanes Minor Street = **1**

**SIGNAL WARRANT NOT SATISFIED**



\*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

### Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **E+P Conditions - Weekday PM Peak Hour**

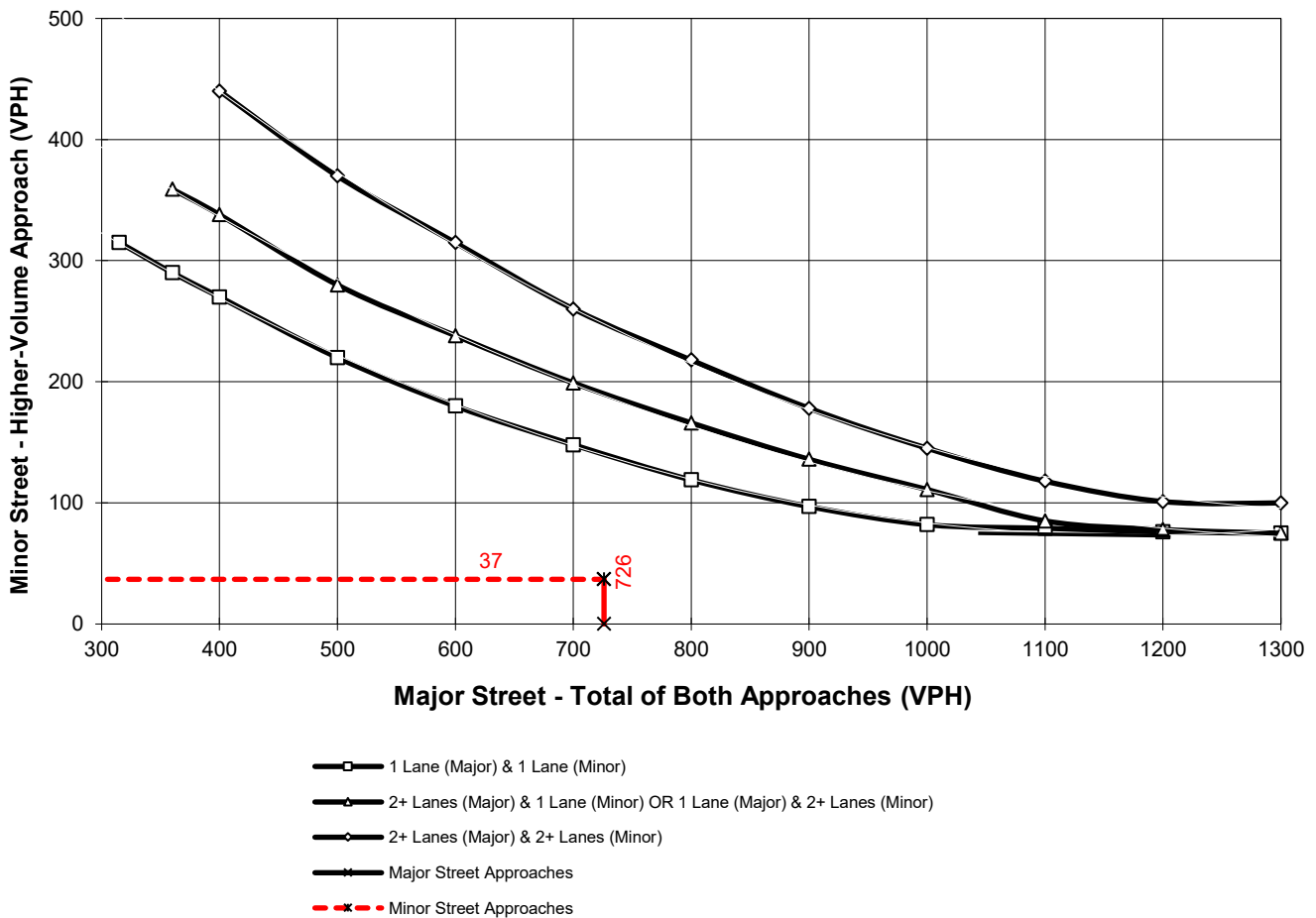
Major Street Name = **Wilson Av.**

Total of Both Approaches (VPH) = **726**  
 Number of Approach Lanes Major Street = **1**

Minor Street Name = **College Dr.**

High Volume Approach (VPH) = **37**  
 Number of Approach Lanes Minor Street = **1**

**SIGNAL WARRANT NOT SATISFIED**



\*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane



## **APPENDIX 5.3:**

### **E+P INTERSECTION OPERATIONS ANALYSIS WORKSHEETS WITH IMPROVEMENTS**

This Page Intentionally Left Blank

Timings  
8: Haven Av. & I-210 EB Ramps

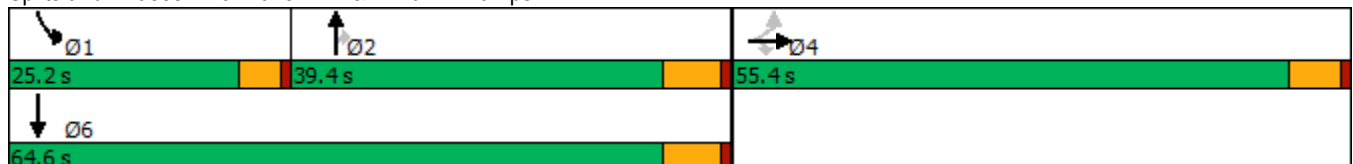


Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Configurations	↙	↔	↘	↑↑	↘	↙↘	↑↑↑
Traffic Volume (vph)	1377	5	335	839	536	546	1002
Future Volume (vph)	1377	5	335	839	536	546	1002
Turn Type	Perm	NA	Perm	NA	Perm	Prot	NA
Protected Phases		4		2		1	6
Permitted Phases	4		4		2		
Detector Phase	4	4	4	2	2	1	6
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.8	10.8	10.8	30.2	30.2	9.7	31.2
Total Split (s)	55.4	55.4	55.4	39.4	39.4	25.2	64.6
Total Split (%)	46.2%	46.2%	46.2%	32.8%	32.8%	21.0%	53.8%
Yellow Time (s)	4.8	4.8	4.8	5.2	5.2	3.7	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	6.2	6.2	4.7	6.2
Lead/Lag				Lag	Lag	Lead	
Lead-Lag Optimize?				Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None
Act Effct Green (s)	49.6	49.6	49.6	33.1	33.1	20.5	58.3
Actuated g/C Ratio	0.41	0.41	0.41	0.28	0.28	0.17	0.49
v/c Ratio	0.98	0.96	0.41	0.94	0.62	0.95	0.40
Control Delay	63.0	58.5	20.8	60.7	6.0	75.7	20.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.0	58.5	20.8	60.7	6.0	75.7	20.1
LOS	E	E	C	E	A	E	C
Approach Delay		53.7		39.4			39.8
Approach LOS		D		D			D

Intersection Summary





















Cycle Length: 120	
Actuated Cycle Length: 119.9	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.98	
Intersection Signal Delay: 44.8	Intersection LOS: D
Intersection Capacity Utilization 152.2%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 8: Haven Av. & I-210 EB Ramps



HCM 6th Signalized Intersection Summary  
8: Haven Av. & I-210 EB Ramps

Chaffey College (JN 13236)  
07/29/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1377	5	335	0	0	0	0	839	536	546	1002	0
Future Volume (veh/h)	1377	5	335	0	0	0	0	839	536	546	1002	0
Initial Q (Qb), veh	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
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1885	1411	1796				0	1856	1856	1885	1856	0
Adj Flow Rate, veh/h	1478	0	26				0	893	275	581	1066	0
Peak Hour Factor	0.94	0.94	0.94				0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	1	33	7				0	3	3	1	3	0
Cap, veh/h	1506	0	639				0	987	418	623	2667	0
Arrive On Green	0.42	0.00	0.42				0.00	0.27	0.27	0.17	0.48	0.00
Sat Flow, veh/h	3591	0	1522				0	3711	1572	3591	5567	0
Grp Volume(v), veh/h	1478	0	26				0	893	275	581	1066	0
Grp Sat Flow(s),veh/h/ln	1795	0	1522				0	1856	1572	1795	1856	0
Q Serve(g_s), s	48.0	0.0	1.2				0.0	27.5	18.4	18.9	14.6	0.0
Cycle Q Clear(g_c), s	48.0	0.0	1.2				0.0	27.5	18.4	18.9	14.6	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	1506	0	639				0	987	418	623	2667	0
V/C Ratio(X)	0.98	0.00	0.04				0.00	0.90	0.66	0.93	0.40	0.00
Avail Cap(c_a), veh/h	1506	0	639				0	1042	442	623	2749	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	33.9	0.0	20.3				0.0	42.0	38.6	48.2	19.8	0.0
Incr Delay (d2), s/veh	18.8	0.0	0.0				0.0	10.6	3.0	20.9	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	23.4	0.0	0.4				0.0	13.5	7.2	10.0	6.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.7	0.0	20.3				0.0	52.5	41.6	69.1	19.9	0.0
LnGrp LOS	D	A	C				A	D	D	E	B	A
Approach Vol, veh/h		1504						1168			1647	
Approach Delay, s/veh		52.1						50.0			37.3	
Approach LOS		D						D			D	
Timer - Assigned Phs	1	2	4	6								
Phs Duration (G+Y+Rc), s	25.2	37.6	55.4	62.8								
Change Period (Y+Rc), s	* 4.7	6.2	5.8	6.2								
Max Green Setting (Gmax), s	* 21	33.2	49.6	58.4								
Max Q Clear Time (g_c+I1), s	20.9	29.5	50.0	16.6								
Green Ext Time (p_c), s	0.0	1.9	0.0	6.7								

Intersection Summary

HCM 6th Ctrl Delay	45.9
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
8: Haven Av. & I-210 EB Ramps



Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	634	8	313	1586	971	760	1201
Future Volume (vph)	634	8	313	1586	971	760	1201
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)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.8	10.8	10.8	30.2	30.2	9.7	31.2
Total Split (s)	27.1	27.1	27.1	61.9	61.9	31.0	92.9
Total Split (%)	22.6%	22.6%	22.6%	51.6%	51.6%	25.8%	77.4%
Yellow Time (s)	4.8	4.8	4.8	5.2	5.2	3.7	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	6.2	6.2	4.7	6.2
Lead/Lag				Lag	Lag	Lead	
Lead-Lag Optimize?				Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None
Act Effct Green (s)	21.3	21.3	21.3	55.7	55.7	26.3	86.7
Actuated g/C Ratio	0.18	0.18	0.18	0.46	0.46	0.22	0.72
v/c Ratio	1.06	1.06	0.73	1.03	0.93	1.03	0.31
Control Delay	112.9	112.2	41.3	64.0	32.5	86.9	6.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.4
Total Delay	112.9	112.2	41.3	64.0	32.5	86.9	6.6
LOS	F	F	D	E	C	F	A
Approach Delay		91.5		52.0			37.7
Approach LOS		F		D			D

Intersection Summary





















Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.06	
Intersection Signal Delay: 53.8	Intersection LOS: D
Intersection Capacity Utilization 116.9%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 8: Haven Av. & I-210 EB Ramps



HCM 6th Signalized Intersection Summary  
8: Haven Av. & I-210 EB Ramps

Chaffey College (JN 13236)  
07/29/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	634	8	313	0	0	0	0	1586	971	760	1201	0
Future Volume (veh/h)	634	8	313	0	0	0	0	1586	971	760	1201	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1856				0	1885	1885	1885	1885	0
Adj Flow Rate, veh/h	703	0	57				0	1687	520	809	1278	0
Peak Hour Factor	0.94	0.94	0.94				0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	3				0	1	1	1	1	0
Cap, veh/h	644	0	280				0	1746	729	788	4083	0
Arrive On Green	0.18	0.00	0.18				0.00	0.46	0.46	0.22	0.72	0.00
Sat Flow, veh/h	3619	0	1572				0	3770	1575	3591	5656	0
Grp Volume(v), veh/h	703	0	57				0	1687	520	809	1278	0
Grp Sat Flow(s),veh/h/ln	1810	0	1572				0	1885	1575	1795	1885	0
Q Serve(g_s), s	21.3	0.0	3.7				0.0	52.1	31.7	26.3	9.7	0.0
Cycle Q Clear(g_c), s	21.3	0.0	3.7				0.0	52.1	31.7	26.3	9.7	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	644	0	280				0	1746	729	788	4083	0
V/C Ratio(X)	1.09	0.00	0.20				0.00	0.97	0.71	1.03	0.31	0.00
Avail Cap(c_a), veh/h	644	0	280				0	1753	732	788	4093	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	49.2	0.0	42.0				0.0	31.2	25.8	46.7	6.0	0.0
Incr Delay (d2), s/veh	63.3	0.0	0.4				0.0	14.2	3.1	38.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.0	0.0	1.4				0.0	25.3	11.7	15.6	3.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	112.5	0.0	42.4				0.0	45.4	28.8	85.6	6.0	0.0
LnGrp LOS	F	A	D				A	D	C	F	A	A
Approach Vol, veh/h		760						2207			2087	
Approach Delay, s/veh		107.3						41.5			36.9	
Approach LOS		F						D			D	
Timer - Assigned Phs	1	2	4	6								
Phs Duration (G+Y+Rc), s	31.0	61.7	27.1	92.7								
Change Period (Y+Rc), s	* 4.7	6.2	5.8	6.2								
Max Green Setting (Gmax), s	* 26	55.7	21.3	86.7								
Max Q Clear Time (g_c+I1), s	28.3	54.1	23.3	11.7								
Green Ext Time (p_c), s	0.0	1.4	0.0	8.9								

Intersection Summary

HCM 6th Ctrl Delay	49.5
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

**APPENDIX 6.1:**

**HORIZON YEAR (2051) WITHOUT PROJECT CONDITIONS INTERSECTION OPERATIONS  
ANALYSIS WORKSHEETS**

This Page Intentionally Left Blank



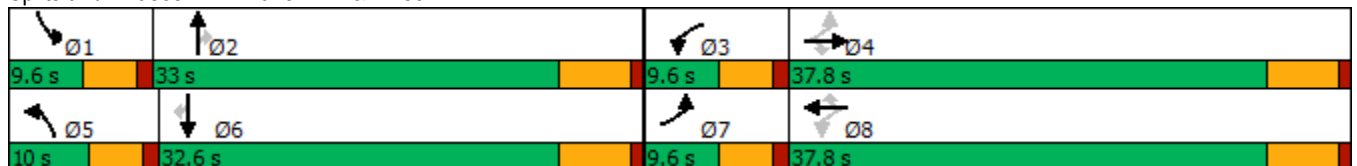
Timings  
1: Haven Av. & Wilson Av.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	230	72	125	225	37	57	111	265	14	365	28
Future Volume (vph)	8	230	72	125	225	37	57	111	265	14	365	28
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	37.8	37.8	9.6	37.8	37.8	9.6	32.8	32.8	9.6	31.8	31.8
Total Split (s)	9.6	37.8	37.8	9.6	37.8	37.8	10.0	33.0	33.0	9.6	32.6	32.6
Total Split (%)	10.7%	42.0%	42.0%	10.7%	42.0%	42.0%	11.1%	36.7%	36.7%	10.7%	36.2%	36.2%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
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	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	25.0	18.6	18.6	29.0	27.0	27.0	5.6	23.9	23.9	5.2	16.8	16.8
Actuated g/C Ratio	0.37	0.28	0.28	0.43	0.40	0.40	0.08	0.35	0.35	0.08	0.25	0.25
v/c Ratio	0.03	0.68	0.21	0.52	0.24	0.08	0.59	0.16	0.48	0.15	0.64	0.08
Control Delay	12.0	29.7	2.7	19.2	15.2	0.2	53.6	18.6	4.9	37.9	26.9	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.0	29.7	2.7	19.2	15.2	0.2	53.6	18.6	4.9	37.9	26.9	0.3
LOS	B	C	A	B	B	A	D	B	A	D	C	A
Approach Delay		23.0			15.1			14.8			25.5	
Approach LOS		C			B			B			C	

Intersection Summary

Cycle Length: 90  
 Actuated Cycle Length: 67.6  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.68  
 Intersection Signal Delay: 19.4  
 Intersection LOS: B  
 Intersection Capacity Utilization 52.7%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 1: Haven Av. & Wilson Av.



























HCM 6th Signalized Intersection Summary

Chaffey College (JN 13236)

1: Haven Av. & Wilson Av.

07/29/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	230	72	125	225	37	57	111	265	14	365	28
Future Volume (veh/h)	8	230	72	125	225	37	57	111	265	14	365	28
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1841	1796	1900	1870	1737	1856	1515	1885	1900	1826	1900
Adj Flow Rate, veh/h	12	343	70	187	336	9	85	166	377	21	545	23
Peak Hour Factor	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67
Percent Heavy Veh, %	0	4	7	0	2	11	3	26	1	0	5	0
Cap, veh/h	415	475	386	357	1158	470	112	829	460	45	865	400
Arrive On Green	0.02	0.26	0.26	0.08	0.33	0.33	0.06	0.29	0.29	0.02	0.25	0.25
Sat Flow, veh/h	1810	1841	1498	1810	3554	1442	1767	2878	1598	1810	3469	1604
Grp Volume(v), veh/h	12	343	70	187	336	9	85	166	377	21	545	23
Grp Sat Flow(s),veh/h/ln	1810	1841	1498	1810	1777	1442	1767	1439	1598	1810	1735	1604
Q Serve(g_s), s	0.3	10.2	2.2	4.4	4.2	0.3	2.8	2.6	13.2	0.7	8.4	0.7
Cycle Q Clear(g_c), s	0.3	10.2	2.2	4.4	4.2	0.3	2.8	2.6	13.2	0.7	8.4	0.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	415	475	386	357	1158	470	112	829	460	45	865	400
V/C Ratio(X)	0.03	0.72	0.18	0.52	0.29	0.02	0.76	0.20	0.82	0.47	0.63	0.06
Avail Cap(c_a), veh/h	538	981	798	357	1894	769	159	1304	724	151	1548	716
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.0	20.3	17.3	14.9	15.1	13.7	27.7	16.2	19.9	28.9	20.1	17.2
Incr Delay (d2), s/veh	0.0	2.1	0.2	0.7	0.1	0.0	7.0	0.1	4.2	2.9	0.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	4.0	0.7	1.5	1.4	0.1	1.3	0.7	4.6	0.3	3.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.0	22.4	17.6	15.5	15.2	13.7	34.7	16.3	24.1	31.8	20.8	17.2
LnGrp LOS	B	C	B	B	B	B	C	B	C	C	C	B
Approach Vol, veh/h		425			532			628			589	
Approach Delay, s/veh		21.4			15.3			23.5			21.1	
Approach LOS		C			B			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.1	23.1	9.6	21.3	8.4	20.8	5.5	25.4				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	5.0	27.2	5.0	32.0	5.4	26.8	5.0	32.0				
Max Q Clear Time (g_c+I1), s	2.7	15.2	6.4	12.2	4.8	10.4	2.3	6.2				
Green Ext Time (p_c), s	0.0	1.8	0.0	2.0	0.0	3.1	0.0	2.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				20.4								
HCM 6th LOS				C								

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↑ ↑ ↑	↑ ↑ ↑			↑ ↑ ↑
Traffic Vol, veh/h	0	3	430	73	0	562
Future Vol, veh/h	0	3	430	73	0	562
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	0	8	0	0	4
Mvmt Flow	0	3	457	78	0	598

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	-	268	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.1	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.9	-	-	-	-
Pot Cap-1 Maneuver	0	627	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	-	627	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.8	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	627
HCM Lane V/C Ratio	-	-	0.005
HCM Control Delay (s)	-	-	10.8
HCM Lane LOS	-	-	B
HCM 95th %tile Q(veh)	-	-	0

Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↵	↶	↑↑↑			↑↑↑
Traffic Vol, veh/h	17	4	500	0	0	562
Future Vol, veh/h	17	4	500	0	0	562
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	0	7	0	0	3
Mvmt Flow	19	4	562	0	0	631

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	814	281	0	-	-	-
Stage 1	562	-	-	-	-	-
Stage 2	252	-	-	-	-	-
Critical Hdwy	5.7	7.1	-	-	-	-
Critical Hdwy Stg 1	6.6	-	-	-	-	-
Critical Hdwy Stg 2	6	-	-	-	-	-
Follow-up Hdwy	3.8	3.9	-	-	-	-
Pot Cap-1 Maneuver	389	615	-	0	0	-
Stage 1	448	-	-	0	0	-
Stage 2	709	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	389	615	-	-	-	-
Mov Cap-2 Maneuver	401	-	-	-	-	-
Stage 1	448	-	-	-	-	-
Stage 2	709	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.7	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBTWBLn1	WBLn2	SBT
Capacity (veh/h)	-	401	615
HCM Lane V/C Ratio	-	0.048	0.007
HCM Control Delay (s)	-	14.4	10.9
HCM Lane LOS	-	B	B
HCM 95th %tile Q(veh)	-	0.1	0

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↑ ↑ ↑	↑ ↑ ↑			↑ ↑ ↑
Traffic Vol, veh/h	0	5	419	302	0	565
Future Vol, veh/h	0	5	419	302	0	565
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	0	0	8	0	0	4
Mvmt Flow	0	5	460	332	0	621

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	-	396	0	0	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	7.1	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	3.9	-	-	-
Pot Cap-1 Maneuver	0	520	-	-	0
Stage 1	0	-	-	-	0
Stage 2	0	-	-	-	0
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	-	520	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	520
HCM Lane V/C Ratio	-	-	0.011
HCM Control Delay (s)	-	-	12
HCM Lane LOS	-	-	B
HCM 95th %tile Q(veh)	-	-	0

Timings  
5: Haven Av. & Amber Ln./College Dr.

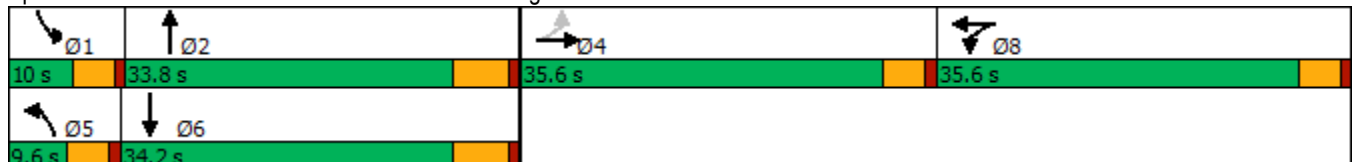


Lane Group	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↕	↗	↕	↗	↑↑↑	↗	↑↑↑
Traffic Volume (vph)	0	320	0	16	711	82	477
Future Volume (vph)	0	320	0	16	711	82	477
Turn Type	NA	Split	NA	Prot	NA	Prot	NA
Protected Phases	4	8	8	5	2	1	6
Permitted Phases							
Detector Phase	4	8	8	5	2	1	6
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	35.6	35.6	35.6	9.6	23.8	9.6	23.8
Total Split (s)	35.6	35.6	35.6	9.6	33.8	10.0	34.2
Total Split (%)	31.0%	31.0%	31.0%	8.3%	29.4%	8.7%	29.7%
Yellow Time (s)	3.6	3.6	3.6	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	5.8	4.6	5.8
Lead/Lag				Lead	Lag	Lead	Lag
Lead-Lag Optimize?				Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	Min	None	Min
Act Effct Green (s)	13.4	15.1	15.1	5.4	30.0	5.8	39.5
Actuated g/C Ratio	0.18	0.20	0.20	0.07	0.40	0.08	0.53
v/c Ratio	0.05	0.54	0.42	0.16	1.38dr	0.64	0.20
Control Delay	0.2	34.5	14.8	45.4	32.1	61.4	15.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	0.2	34.5	14.8	45.4	32.1	61.4	15.4
LOS	A	C	B	D	C	E	B
Approach Delay	0.2		24.8		32.3		22.1
Approach LOS	A		C		C		C

Intersection Summary

Cycle Length: 115  
 Actuated Cycle Length: 74.3  
 Natural Cycle: 115  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.94  
 Intersection Signal Delay: 29.0  
 Intersection LOS: C  
 Intersection Capacity Utilization 70.9%  
 ICU Level of Service C  
 Analysis Period (min) 15  
 dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 5: Haven Av. & Amber Ln./College Dr.



HCM 6th Signalized Intersection Summary  
5: Haven Av. & Amber Ln./College Dr.

Chaffey College (JN 13236)  
07/29/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	21	320	0	9	16	711	1039	82	477	5
Future Volume (veh/h)	0	0	21	320	0	9	16	711	1039	82	477	5
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		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1856	1900	1900	1722	1826	1885	1900	1826	1900
Adj Flow Rate, veh/h	0	0	3	358	0	0	18	781	0	90	524	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
Percent Heavy Veh, %	0	0	0	3	0	0	12	5	1	0	5	0
Cap, veh/h	0	0	27	766	412	0	36	1406		132	1695	16
Arrive On Green	0.00	0.00	0.02	0.22	0.00	0.00	0.02	0.28	0.00	0.07	0.33	0.33
Sat Flow, veh/h	0	0	1606	3534	1900	0	1640	5149	0	1810	5091	49
Grp Volume(v), veh/h	0	0	3	358	0	0	18	781	0	90	342	187
Grp Sat Flow(s),veh/h/ln	0	0	1606	1767	1900	0	1640	1662	0	1810	1662	1816
Q Serve(g_s), s	0.0	0.0	0.1	4.2	0.0	0.0	0.5	6.4	0.0	2.3	3.6	3.7
Cycle Q Clear(g_c), s	0.0	0.0	0.1	4.2	0.0	0.0	0.5	6.4	0.0	2.3	3.6	3.7
Prop In Lane	0.00		1.00	1.00		0.00	1.00		0.00	1.00		0.03
Lane Grp Cap(c), veh/h	0	0	27	766	412	0	36	1406		132	1106	605
V/C Ratio(X)	0.00	0.00	0.11	0.47	0.00	0.00	0.49	0.56		0.68	0.31	0.31
Avail Cap(c_a), veh/h	0	0	1044	2299	1236	0	172	2928		205	1980	1082
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	23.1	16.3	0.0	0.0	23.0	14.6	0.0	21.5	11.8	11.8
Incr Delay (d2), s/veh	0.0	0.0	1.8	0.4	0.0	0.0	3.8	0.3	0.0	2.3	0.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	1.6	0.0	0.0	0.2	1.9	0.0	0.9	1.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	24.9	16.7	0.0	0.0	26.8	14.9	0.0	23.8	12.0	12.1
LnGrp LOS	A	A	C	B	A	A	C	B		C	B	B
Approach Vol, veh/h		3			358			799	A		619	
Approach Delay, s/veh		24.9			16.7			15.2			13.7	
Approach LOS		C			B			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.1	19.2		5.4	5.7	21.7		14.9				
Change Period (Y+Rc), s	4.6	5.8		4.6	4.6	5.8		4.6				
Max Green Setting (Gmax), s	5.4	28.0		31.0	5.0	28.4		31.0				
Max Q Clear Time (g_c+I1), s	4.3	8.4		2.1	2.5	5.7		6.2				
Green Ext Time (p_c), s	0.0	4.8		0.0	0.0	3.0		1.3				

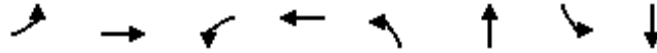
Intersection Summary

HCM 6th Ctrl Delay	15.0
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.  
Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Timings  
6: Haven Av. & Lemon Av.

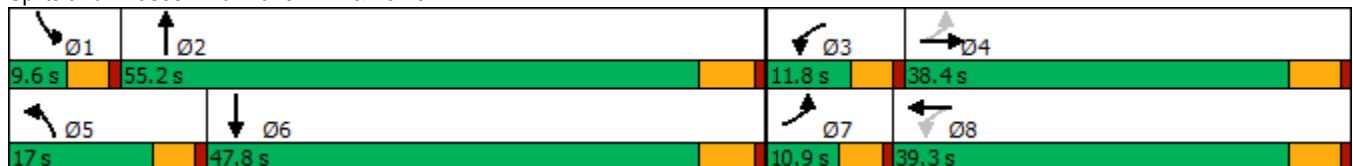


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↘	↘	↘	↘	↘	↑↑↑	↘	↑↑↑
Traffic Volume (vph)	128	24	302	53	91	2156	11	878
Future Volume (vph)	128	24	302	53	91	2156	11	878
Turn Type	pm+pt	NA	pm+pt	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases	4		8					
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	38.4	9.6	36.4	9.6	24.8	9.6	23.8
Total Split (s)	10.9	38.4	11.8	39.3	17.0	55.2	9.6	47.8
Total Split (%)	9.5%	33.4%	10.3%	34.2%	14.8%	48.0%	8.3%	41.6%
Yellow Time (s)	3.6	4.4	3.6	4.4	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4	4.6	5.4	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	18.5	13.7	19.9	14.4	9.0	50.9	5.2	41.2
Actuated g/C Ratio	0.22	0.16	0.23	0.17	0.10	0.59	0.06	0.48
v/c Ratio	0.45	0.33	1.03	0.33	0.56	0.84	0.11	0.44
Control Delay	29.5	14.6	89.8	28.7	52.2	20.9	47.5	18.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.5	14.6	89.8	28.7	52.2	20.9	47.5	18.8
LOS	C	B	F	C	D	C	D	B
Approach Delay		23.2		76.9		22.1		19.1
Approach LOS		C		E		C		B

Intersection Summary

Cycle Length: 115	
Actuated Cycle Length: 85.8	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.03	
Intersection Signal Delay: 26.8	Intersection LOS: C
Intersection Capacity Utilization 84.6%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 6: Haven Av. & Lemon Av.





HCM 6th Signalized Intersection Summary  
6: Haven Av. & Lemon Av.

Chaffey College (JN 13236)  
07/29/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	128	24	71	302	53	27	91	2156	93	11	878	77
Future Volume (veh/h)	128	24	71	302	53	27	91	2156	93	11	878	77
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1781	1900	1870	1515	1900	1841	1870	1781	1900	1870	1900
Adj Flow Rate, veh/h	144	27	7	339	60	27	102	2422	93	12	987	84
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	8	0	2	26	0	4	2	8	0	2	0
Cap, veh/h	313	172	44	375	134	60	129	2760	105	26	2336	198
Arrive On Green	0.07	0.13	0.13	0.08	0.14	0.14	0.07	0.55	0.55	0.01	0.49	0.49
Sat Flow, veh/h	1781	1363	353	1781	983	442	1753	5047	193	1810	4793	407
Grp Volume(v), veh/h	144	0	34	339	0	87	102	1628	887	12	700	371
Grp Sat Flow(s),veh/h/ln	1781	0	1716	1781	0	1426	1753	1702	1836	1810	1702	1796
Q Serve(g_s), s	6.2	0.0	1.6	7.2	0.0	5.0	5.0	36.7	37.4	0.6	11.7	11.8
Cycle Q Clear(g_c), s	6.2	0.0	1.6	7.2	0.0	5.0	5.0	36.7	37.4	0.6	11.7	11.8
Prop In Lane	1.00		0.21	1.00		0.31	1.00		0.10	1.00		0.23
Lane Grp Cap(c), veh/h	313	0	216	375	0	194	129	1861	1004	26	1659	875
V/C Ratio(X)	0.46	0.00	0.16	0.90	0.00	0.45	0.79	0.87	0.88	0.46	0.42	0.42
Avail Cap(c_a), veh/h	313	0	642	375	0	548	246	1906	1028	103	1659	875
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.0	0.0	34.4	35.7	0.0	35.1	40.2	17.4	17.5	43.1	14.6	14.6
Incr Delay (d2), s/veh	0.4	0.0	0.3	23.9	0.0	1.6	4.0	4.8	9.1	4.6	0.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.0	0.6	6.1	0.0	1.7	2.2	13.0	15.5	0.3	4.0	4.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.4	0.0	34.7	59.6	0.0	36.7	44.2	22.2	26.6	47.7	14.8	14.9
LnGrp LOS	C	A	C	E	A	D	D	C	C	D	B	B
Approach Vol, veh/h		178			426			2617			1083	
Approach Delay, s/veh		32.0			54.9			24.5			15.2	
Approach LOS		C			D			C			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.9	54.0	11.8	16.5	11.1	48.8	10.9	17.4				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.4	4.6	5.8	4.6	5.4				
Max Green Setting (Gmax), s	5.0	49.4	7.2	33.0	12.4	42.0	6.3	33.9				
Max Q Clear Time (g_c+1), s	2.6	39.4	9.2	3.6	7.0	13.8	8.2	7.0				
Green Ext Time (p_c), s	0.0	8.9	0.0	0.1	0.0	7.3	0.0	0.4				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			25.5									
HCM 6th LOS			C									

Timings  
7: Haven Av. & I-210 WB Ramps

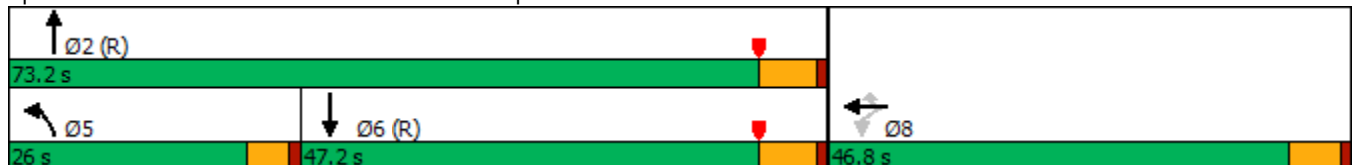


Lane Group	WBL	WBT	WBR	NBL	NBT	SBT
Lane Configurations	↶	↔	↷	↶↷	↑↑↑	↑↑↑
Traffic Volume (vph)	513	8	930	548	1731	1162
Future Volume (vph)	513	8	930	548	1731	1162
Turn Type	Perm	NA	Perm	Prot	NA	NA
Protected Phases		8		5	2	6
Permitted Phases	8		8			
Detector Phase	8	8	8	5	2	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.8	10.8	10.8	9.7	31.2	31.2
Total Split (s)	46.8	46.8	46.8	26.0	73.2	47.2
Total Split (%)	39.0%	39.0%	39.0%	21.7%	61.0%	39.3%
Yellow Time (s)	4.8	4.8	4.8	3.7	5.2	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	4.7	6.2	6.2
Lead/Lag				Lead		Lag
Lead-Lag Optimize?				Yes		Yes
Recall Mode	None	None	None	None	C-Max	C-Max
Act Effct Green (s)	41.0	41.0	41.0	21.3	67.0	41.0
Actuated g/C Ratio	0.34	0.34	0.34	0.18	0.56	0.34
v/c Ratio	0.90	1.11	0.99	1.02	0.69	1.11
Control Delay	58.4	109.8	69.8	90.9	20.5	95.2
Queue Delay	0.0	0.0	0.0	0.0	5.7	0.0
Total Delay	58.4	109.8	69.8	90.9	26.2	95.2
LOS	E	F	E	F	C	F
Approach Delay		79.9			41.8	95.2
Approach LOS		E			D	F

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 67 (56%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow  
 Natural Cycle: 120  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.11  
 Intersection Signal Delay: 68.8  
 Intersection LOS: E  
 Intersection Capacity Utilization 152.7%  
 ICU Level of Service H  
 Analysis Period (min) 15

Splits and Phases: 7: Haven Av. & I-210 WB Ramps



HCM 6th Signalized Intersection Summary  
7: Haven Av. & I-210 WB Ramps

Chaffey College (JN 13236)  
07/29/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↙	↔	↗	↙↗	↑↑↑			↑↑↑	
Traffic Volume (veh/h)	0	0	0	513	8	930	548	1731	0	0	1162	556
Future Volume (veh/h)	0	0	0	513	8	930	548	1731	0	0	1162	556
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
Work Zone On Approach				No			No			No		
Adj Sat Flow, veh/h/ln				1870	1559	1870	1856	1870	0	0	1870	1900
Adj Flow Rate, veh/h				827	0	460	616	1945	0	0	1306	497
Peak Hour Factor				0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %				2	23	2	3	2	0	0	2	0
Cap, veh/h				1129	0	502	609	2977	0	0	1336	505
Arrive On Green				0.32	0.00	0.32	0.18	0.58	0.00	0.00	0.37	0.37
Sat Flow, veh/h				3563	0	1585	3428	5274	0	0	3816	1379
Grp Volume(v), veh/h				827	0	460	616	1945	0	0	1218	585
Grp Sat Flow(s),veh/h/ln				1781	0	1585	1714	1702	0	0	1702	1622
Q Serve(g_s), s				24.8	0.0	33.5	21.3	30.8	0.0	0.0	42.4	42.9
Cycle Q Clear(g_c), s				24.8	0.0	33.5	21.3	30.8	0.0	0.0	42.4	42.9
Prop In Lane				1.00		1.00	1.00		0.00	0.00		0.85
Lane Grp Cap(c), veh/h				1129	0	502	609	2977	0	0	1247	594
V/C Ratio(X)				0.73	0.00	0.92	1.01	0.65	0.00	0.00	0.98	0.98
Avail Cap(c_a), veh/h				1217	0	542	609	2977	0	0	1247	594
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.09	0.09	0.00	0.00	0.78	0.78
Uniform Delay (d), s/veh				36.5	0.0	39.4	49.3	16.9	0.0	0.0	37.5	37.7
Incr Delay (d2), s/veh				2.1	0.0	19.6	14.1	0.1	0.0	0.0	17.6	29.0
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				10.7	0.0	15.2	10.0	10.9	0.0	0.0	19.7	20.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				38.6	0.0	59.0	63.5	17.0	0.0	0.0	55.1	66.6
LnGrp LOS				D	A	E	F	B	A	A	E	E
Approach Vol, veh/h					1287			2561			1803	
Approach Delay, s/veh					45.9			28.1			58.9	
Approach LOS					D			C			E	
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		76.2			26.0	50.2		43.8				
Change Period (Y+Rc), s		6.2			* 4.7	6.2		5.8				
Max Green Setting (Gmax), s		67.0			* 21	41.0		41.0				
Max Q Clear Time (g_c+11), s		32.8			23.3	44.9		35.5				
Green Ext Time (p_c), s		15.6			0.0	0.0		2.5				

Intersection Summary

HCM 6th Ctrl Delay	42.0
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
8: Haven Av. & I-210 EB Ramps

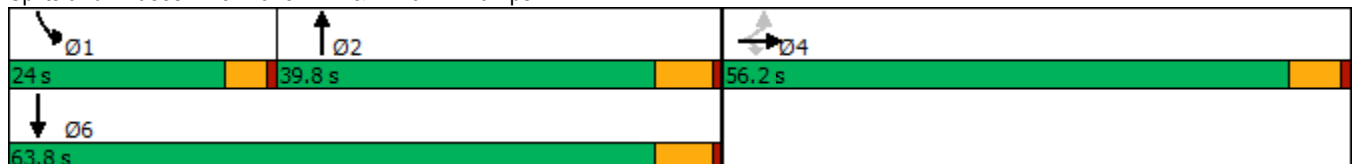


Lane Group	EBL	EBT	EBR	NBT	SBL	SBT
Lane Configurations	↶	↷	↷	↑↑↑	↶↷	↑↑↑
Traffic Volume (vph)	1375	5	338	904	582	1093
Future Volume (vph)	1375	5	338	904	582	1093
Turn Type	Perm	NA	Perm	NA	Prot	NA
Protected Phases		4		2	1	6
Permitted Phases	4		4			
Detector Phase	4	4	4	2	1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.8	10.8	10.8	30.2	9.7	31.2
Total Split (s)	56.2	56.2	56.2	39.8	24.0	63.8
Total Split (%)	46.8%	46.8%	46.8%	33.2%	20.0%	53.2%
Yellow Time (s)	4.8	4.8	4.8	5.2	3.7	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	6.2	4.7	6.2
Lead/Lag				Lag	Lead	
Lead-Lag Optimize?				Yes	Yes	
Recall Mode	None	None	None	None	None	None
Act Effct Green (s)	50.4	50.4	50.4	33.6	19.3	57.6
Actuated g/C Ratio	0.42	0.42	0.42	0.28	0.16	0.48
v/c Ratio	1.08	1.10	0.51	1.10	1.11	0.48
Control Delay	91.0	100.4	22.8	94.0	118.6	21.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.5
Total Delay	91.0	100.4	22.8	94.0	118.6	22.4
LOS	F	F	C	F	F	C
Approach Delay		82.8		94.0		55.9
Approach LOS		F		F		E





















Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.11	
Intersection Signal Delay: 76.9	Intersection LOS: E
Intersection Capacity Utilization 152.7%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 8: Haven Av. & I-210 EB Ramps



HCM 6th Signalized Intersection Summary  
 8: Haven Av. & I-210 EB Ramps

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1375	5	338	0	0	0	0	904	559	582	1093	0
Future Volume (veh/h)	1375	5	338	0	0	0	0	904	559	582	1093	0
Initial Q (Qb), veh	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
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1352	1781				0	1841	1856	1885	1856	0
Adj Flow Rate, veh/h	1477	0	28				0	962	513	619	1163	0
Peak Hour Factor	0.94	0.94	0.94				0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	37	8				0	4	3	1	3	0
Cap, veh/h	1496	0	634				0	938	437	560	2431	0
Arrive On Green	0.42	0.00	0.42				0.00	0.28	0.28	0.16	0.48	0.00
Sat Flow, veh/h	3563	0	1510				0	3516	1560	3483	5233	0
Grp Volume(v), veh/h	1477	0	28				0	962	513	619	1163	0
Grp Sat Flow(s),veh/h/ln	1781	0	1510				0	1675	1560	1742	1689	0
Q Serve(g_s), s	49.3	0.0	1.3				0.0	33.6	33.6	19.3	18.6	0.0
Cycle Q Clear(g_c), s	49.3	0.0	1.3				0.0	33.6	33.6	19.3	18.6	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	1496	0	634				0	938	437	560	2431	0
V/C Ratio(X)	0.99	0.00	0.04				0.00	1.03	1.17	1.10	0.48	0.00
Avail Cap(c_a), veh/h	1496	0	634				0	938	437	560	2431	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	34.5	0.0	20.6				0.0	43.2	43.2	50.3	21.1	0.0
Incr Delay (d2), s/veh	20.2	0.0	0.0				0.0	36.1	100.3	70.0	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	24.1	0.0	0.5				0.0	18.0	24.6	13.6	6.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.6	0.0	20.6				0.0	79.3	143.5	120.4	21.2	0.0
LnGrp LOS	D	A	C				A	F	F	F	C	A
Approach Vol, veh/h		1505						1475			1782	
Approach Delay, s/veh		54.0						101.6			55.6	
Approach LOS		D						F			E	
Timer - Assigned Phs	1	2	4	6								
Phs Duration (G+Y+Rc), s	24.0	39.8	56.2	63.8								
Change Period (Y+Rc), s	* 4.7	6.2	5.8	6.2								
Max Green Setting (Gmax), s	* 19	33.6	50.4	57.6								
Max Q Clear Time (g_c+I1), s	21.3	35.6	51.3	20.6								
Green Ext Time (p_c), s	0.0	0.0	0.0	7.4								

Intersection Summary

HCM 6th Ctrl Delay	69.4
HCM 6th LOS	E

Notes

User approved volume balancing among the lanes for turning movement.  
 \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection						
Int Delay, s/veh	0.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔		↔	↑	↔	↔
Traffic Vol, veh/h	493	15	15	384	3	3
Future Vol, veh/h	493	15	15	384	3	3
Conflicting Peds, #/hr	0	3	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	0
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	74	74	74	74	74	74
Heavy Vehicles, %	2	0	0	2	0	0
Mvmt Flow	666	20	20	519	4	4

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	689	0	1238 679
Stage 1	-	-	-	-	679 -
Stage 2	-	-	-	-	559 -
Critical Hdwy	-	-	4.1	-	6.4 6.2
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	-	-	2.2	-	3.5 3.3
Pot Cap-1 Maneuver	-	-	915	-	196 455
Stage 1	-	-	-	-	507 -
Stage 2	-	-	-	-	576 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	912	-	191 454
Mov Cap-2 Maneuver	-	-	-	-	396 -
Stage 1	-	-	-	-	505 -
Stage 2	-	-	-	-	563 -

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	13.6
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	396	454	-	-	912	-
HCM Lane V/C Ratio	0.01	0.009	-	-	0.022	-
HCM Control Delay (s)	14.2	13	-	-	9	-
HCM Lane LOS	B	B	-	-	A	-
HCM 95th %tile Q(veh)	0	0	-	-	0.1	-

Intersection						
Int Delay, s/veh	0.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	481	15	15	397	3	3
Future Vol, veh/h	481	15	15	397	3	3
Conflicting Peds, #/hr	0	3	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	60	-	0	-
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	75	75	75	75	75	75
Heavy Vehicles, %	2	0	0	2	0	0
Mvmt Flow	641	20	20	529	4	4

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	664	0	1223
Stage 1	-	-	-	-	654
Stage 2	-	-	-	-	569
Critical Hdwy	-	-	4.1	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	-	-	2.2	-	3.5
Pot Cap-1 Maneuver	-	-	935	-	200
Stage 1	-	-	-	-	521
Stage 2	-	-	-	-	570
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	932	-	195
Mov Cap-2 Maneuver	-	-	-	-	401
Stage 1	-	-	-	-	519
Stage 2	-	-	-	-	558

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	13.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	432	-	-	932	-
HCM Lane V/C Ratio	0.019	-	-	0.021	-
HCM Control Delay (s)	13.5	-	-	8.9	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-

Intersection						
Int Delay, s/veh	0.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	468	15	15	409	3	3
Future Vol, veh/h	468	15	15	409	3	3
Conflicting Peds, #/hr	0	2	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	68	68	68	68	68	68
Heavy Vehicles, %	3	0	0	2	0	0
Mvmt Flow	688	22	22	601	4	4

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	712	0	1346
Stage 1	-	-	-	-	701
Stage 2	-	-	-	-	645
Critical Hdwy	-	-	4.1	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	-	-	2.2	-	3.5
Pot Cap-1 Maneuver	-	-	897	-	169
Stage 1	-	-	-	-	496
Stage 2	-	-	-	-	526
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	895	-	164
Mov Cap-2 Maneuver	-	-	-	-	371
Stage 1	-	-	-	-	495
Stage 2	-	-	-	-	513

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	14.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	403	-	-	895	-
HCM Lane V/C Ratio	0.022	-	-	0.025	-
HCM Control Delay (s)	14.1	-	-	9.1	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-



Intersection						
Int Delay, s/veh	0.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔		↔	↑	↔	↔
Traffic Vol, veh/h	453	18	33	421	3	9
Future Vol, veh/h	453	18	33	421	3	9
Conflicting Peds, #/hr	0	2	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	170	-	0	50
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	68	68	68	68	68	68
Heavy Vehicles, %	3	0	0	2	0	0
Mvmt Flow	666	26	49	619	4	13

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	694	0	1398 681
Stage 1	-	-	-	-	681 -
Stage 2	-	-	-	-	717 -
Critical Hdwy	-	-	4.1	-	6.4 6.2
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	-	-	2.2	-	3.5 3.3
Pot Cap-1 Maneuver	-	-	911	-	157 454
Stage 1	-	-	-	-	506 -
Stage 2	-	-	-	-	487 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	909	-	148 453
Mov Cap-2 Maneuver	-	-	-	-	351 -
Stage 1	-	-	-	-	505 -
Stage 2	-	-	-	-	461 -

Approach	EB	WB	NB
HCM Control Delay, s	0	0.7	13.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	351	453	-	-	909	-
HCM Lane V/C Ratio	0.013	0.029	-	-	0.053	-
HCM Control Delay (s)	15.4	13.2	-	-	9.2	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	0	0.1	-	-	0.2	-

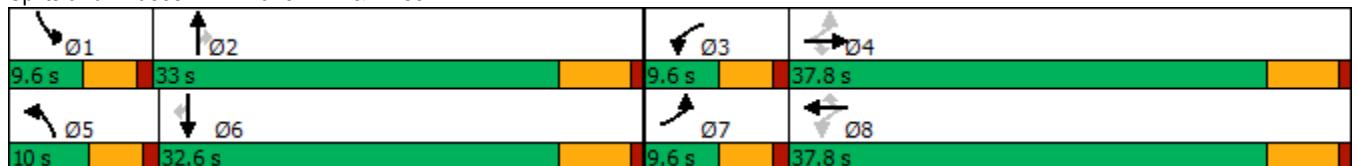
Timings  
1: Haven Av. & Wilson Av.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	67	313	76	221	149	72	78	190	215	52	195	19
Future Volume (vph)	67	313	76	221	149	72	78	190	215	52	195	19
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	37.8	37.8	9.6	37.8	37.8	9.6	32.8	32.8	9.6	31.8	31.8
Total Split (s)	9.6	37.8	37.8	9.6	37.8	37.8	10.0	33.0	33.0	9.6	32.6	32.6
Total Split (%)	10.7%	42.0%	42.0%	10.7%	42.0%	42.0%	11.1%	36.7%	36.7%	10.7%	36.2%	36.2%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
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	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	24.7	18.3	18.3	25.9	20.6	20.6	5.6	15.7	15.7	5.2	12.9	12.9
Actuated g/C Ratio	0.39	0.29	0.29	0.41	0.32	0.32	0.09	0.25	0.25	0.08	0.20	0.20
v/c Ratio	0.15	0.70	0.16	0.74	0.15	0.14	0.59	0.26	0.43	0.42	0.33	0.05
Control Delay	11.2	28.2	1.6	28.2	17.1	1.2	49.8	22.3	6.0	42.9	23.6	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.2	28.2	1.6	28.2	17.1	1.2	49.8	22.3	6.0	42.9	23.6	0.2
LOS	B	C	A	C	B	A	D	C	A	D	C	A
Approach Delay		21.3			20.0			19.5			25.7	
Approach LOS		C			C			B			C	

Intersection Summary

Cycle Length: 90  
 Actuated Cycle Length: 63.6  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.74  
 Intersection Signal Delay: 21.1  
 Intersection LOS: C  
 Intersection Capacity Utilization 58.7%  
 ICU Level of Service B  
 Analysis Period (min) 15

Splits and Phases: 1: Haven Av. & Wilson Av.

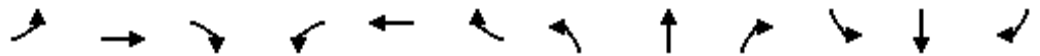


HCM 6th Signalized Intersection Summary

Chaffey College (JN 13236)

1: Haven Av. & Wilson Av.

07/29/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	67	313	76	221	149	72	78	190	215	52	195	19
Future Volume (veh/h)	67	313	76	221	149	72	78	190	215	52	195	19
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1856	1826	1885	1870	1900	1900	1870	1900	1900	1856	1900
Adj Flow Rate, veh/h	80	373	45	263	177	32	93	226	236	62	232	17
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	0	3	5	1	2	0	0	2	0	0	3	0
Cap, veh/h	549	484	403	371	1025	464	126	739	335	101	685	313
Arrive On Green	0.06	0.26	0.26	0.09	0.29	0.29	0.07	0.21	0.21	0.06	0.19	0.19
Sat Flow, veh/h	1810	1856	1547	1795	3554	1610	1810	3554	1610	1810	3526	1610
Grp Volume(v), veh/h	80	373	45	263	177	32	93	226	236	62	232	17
Grp Sat Flow(s),veh/h/ln	1810	1856	1547	1795	1777	1610	1810	1777	1610	1810	1763	1610
Q Serve(g_s), s	1.7	10.1	1.2	5.0	2.0	0.8	2.7	2.9	7.4	1.8	3.1	0.5
Cycle Q Clear(g_c), s	1.7	10.1	1.2	5.0	2.0	0.8	2.7	2.9	7.4	1.8	3.1	0.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	549	484	403	371	1025	464	126	739	335	101	685	313
V/C Ratio(X)	0.15	0.77	0.11	0.71	0.17	0.07	0.74	0.31	0.71	0.61	0.34	0.05
Avail Cap(c_a), veh/h	598	1094	912	371	2095	949	180	1781	807	167	1741	795
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.9	18.6	15.3	16.1	14.5	14.0	24.8	18.2	19.9	25.0	18.9	17.8
Incr Delay (d2), s/veh	0.0	2.6	0.1	5.3	0.1	0.1	4.3	0.2	2.7	2.2	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	3.9	0.4	2.4	0.7	0.2	1.2	1.0	2.6	0.7	1.1	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.0	21.2	15.4	21.4	14.5	14.1	29.1	18.4	22.7	27.3	19.1	17.9
LnGrp LOS	B	C	B	C	B	B	C	B	C	C	B	B
Approach Vol, veh/h		498			472			555			311	
Approach Delay, s/veh		19.4			18.3			22.0			20.7	
Approach LOS		B			B			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.6	17.1	9.6	20.0	8.4	16.3	8.1	21.4				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	5.0	27.2	5.0	32.0	5.4	26.8	5.0	32.0				
Max Q Clear Time (g_c+I1), s	3.8	9.4	7.0	12.1	4.7	5.1	3.7	4.0				
Green Ext Time (p_c), s	0.0	1.9	0.0	2.1	0.0	1.3	0.0	1.1				

Intersection Summary

HCM 6th Ctrl Delay	20.1
HCM 6th LOS	C

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↑ ↑ ↑	↑ ↑ ↑			↑ ↑ ↑
Traffic Vol, veh/h	0	8	475	51	0	492
Future Vol, veh/h	0	8	475	51	0	492
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	0	0	1	0	0	2
Mvmt Flow	0	8	485	52	0	502

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	-	269	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.1	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.9	-	-	-	-
Pot Cap-1 Maneuver	0	626	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	-	626	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.8	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	626
HCM Lane V/C Ratio	-	-	0.013
HCM Control Delay (s)	-	-	10.8
HCM Lane LOS	-	-	B
HCM 95th %tile Q(veh)	-	-	0

Intersection						
Int Delay, s/veh	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↑↑↑			↑↑↑
Traffic Vol, veh/h	40	8	518	0	0	492
Future Vol, veh/h	40	8	518	0	0	492
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	0	0	1	0	0	2
Mvmt Flow	41	8	529	0	0	502

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	730	265	0	-	-	-
Stage 1	529	-	-	-	-	-
Stage 2	201	-	-	-	-	-
Critical Hdwy	5.7	7.1	-	-	-	-
Critical Hdwy Stg 1	6.6	-	-	-	-	-
Critical Hdwy Stg 2	6	-	-	-	-	-
Follow-up Hdwy	3.8	3.9	-	-	-	-
Pot Cap-1 Maneuver	428	630	-	0	0	-
Stage 1	469	-	-	0	0	-
Stage 2	752	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	428	630	-	-	-	-
Mov Cap-2 Maneuver	424	-	-	-	-	-
Stage 1	469	-	-	-	-	-
Stage 2	752	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.8	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBTWBLn1	WBLn2	SBT
Capacity (veh/h)	-	424	630
HCM Lane V/C Ratio	-	0.096	0.013
HCM Control Delay (s)	-	14.4	10.8
HCM Lane LOS	-	B	B
HCM 95th %tile Q(veh)	-	0.3	0

Intersection						
Int Delay, s/veh	0.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↑ ↑↑	↑↑↑			↑↑↑
Traffic Vol, veh/h	0	23	547	210	0	587
Future Vol, veh/h	0	23	547	210	0	587
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	0	1	0	0	2
Mvmt Flow	0	24	582	223	0	624

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	-	403	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.1	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.9	-	-	-	-
Pot Cap-1 Maneuver	0	515	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	-	515	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.3	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	515
HCM Lane V/C Ratio	-	-	0.048
HCM Control Delay (s)	-	-	12.3
HCM Lane LOS	-	-	B
HCM 95th %tile Q(veh)	-	-	0.1

Timings  
5: Haven Av. & Amber Ln./College Dr.

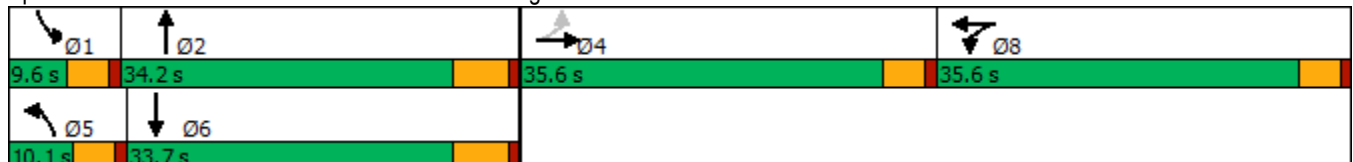


Lane Group	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↔	↗	↔	↖	↑↑↑	↖	↑↑↑
Traffic Volume (vph)	0	728	0	19	747	41	544
Future Volume (vph)	0	728	0	19	747	41	544
Turn Type	NA	Split	NA	Prot	NA	Prot	NA
Protected Phases	4	8	8	5	2	1	6
Permitted Phases							
Detector Phase	4	8	8	5	2	1	6
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	35.6	35.6	35.6	9.6	23.8	9.6	23.8
Total Split (s)	35.6	35.6	35.6	10.1	34.2	9.6	33.7
Total Split (%)	31.0%	31.0%	31.0%	8.8%	29.7%	8.3%	29.3%
Yellow Time (s)	3.6	3.6	3.6	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	5.8	4.6	5.8
Lead/Lag				Lead	Lag	Lead	Lag
Lead-Lag Optimize?				Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	Min	None	Min
Act Effct Green (s)	13.8	28.0	28.0	5.6	30.0	5.3	33.9
Actuated g/C Ratio	0.16	0.32	0.32	0.06	0.34	0.06	0.39
v/c Ratio	0.10	0.77	0.67	0.19	1.11dr	0.43	0.31
Control Delay	0.6	40.8	26.8	51.0	35.8	59.5	23.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	0.6	40.8	26.8	51.0	35.8	59.5	23.7
LOS	A	D	C	D	D	E	C
Approach Delay	0.6		33.8		36.0		26.2
Approach LOS	A		C		D		C

Intersection Summary

Cycle Length: 115  
 Actuated Cycle Length: 87.1  
 Natural Cycle: 115  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.90  
 Intersection Signal Delay: 32.9  
 Intersection LOS: C  
 Intersection Capacity Utilization 69.9%  
 ICU Level of Service C  
 Analysis Period (min) 15  
 dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 5: Haven Av. & Amber Ln./College Dr.



HCM 6th Signalized Intersection Summary  
5: Haven Av. & Amber Ln./College Dr.

Chaffey College (JN 13236)  
07/29/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔		↗	↔		↗	↑↑↑		↗	↑↑↑	
Traffic Volume (veh/h)	0	0	32	728	0	10	19	747	652	41	544	2
Future Volume (veh/h)	0	0	32	728	0	10	19	747	652	41	544	2
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		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1885	1900	1900	1900	1885	1885	1900	1870	1900
Adj Flow Rate, veh/h	0	0	4	837	0	0	22	849	0	47	618	2
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	0	0	0	1	0	0	0	1	1	0	2	0
Cap, veh/h	0	0	17	1100	582	0	47	1424		85	1562	5
Arrive On Green	0.00	0.00	0.01	0.31	0.00	0.00	0.03	0.28	0.00	0.05	0.30	0.30
Sat Flow, veh/h	0	0	1610	3591	1900	0	1810	5316	0	1810	5254	17
Grp Volume(v), veh/h	0	0	4	837	0	0	22	849	0	47	400	220
Grp Sat Flow(s),veh/h/ln	0	0	1610	1795	1900	0	1810	1716	0	1810	1702	1867
Q Serve(g_s), s	0.0	0.0	0.1	11.5	0.0	0.0	0.7	7.8	0.0	1.4	5.1	5.1
Cycle Q Clear(g_c), s	0.0	0.0	0.1	11.5	0.0	0.0	0.7	7.8	0.0	1.4	5.1	5.1
Prop In Lane	0.00		1.00	1.00		0.00	1.00		0.00	1.00		0.01
Lane Grp Cap(c), veh/h	0	0	17	1100	582	0	47	1424		85	1012	555
V/C Ratio(X)	0.00	0.00	0.23	0.76	0.00	0.00	0.47	0.60		0.56	0.40	0.40
Avail Cap(c_a), veh/h	0	0	915	2042	1080	0	183	2681		166	1742	955
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	26.7	17.1	0.0	0.0	26.2	17.1	0.0	25.4	15.3	15.3
Incr Delay (d2), s/veh	0.0	0.0	6.6	1.1	0.0	0.0	2.7	0.4	0.0	2.1	0.3	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.1	4.5	0.0	0.0	0.3	2.6	0.0	0.6	1.6	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	33.3	18.2	0.0	0.0	28.9	17.5	0.0	27.6	15.5	15.7
LnGrp LOS	A	A	C	B	A	A	C	B		C	B	B
Approach Vol, veh/h		4			837			871	A		667	
Approach Delay, s/veh		33.3			18.2			17.8			16.4	
Approach LOS		C			B			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.1	20.9		5.2	6.0	22.0		21.3				
Change Period (Y+Rc), s	4.6	5.8		4.6	4.6	5.8		4.6				
Max Green Setting (Gmax), s	5.0	28.4		31.0	5.5	27.9		31.0				
Max Q Clear Time (g_c+I1), s	3.4	9.8		2.1	2.7	7.1		13.5				
Green Ext Time (p_c), s	0.0	5.2		0.0	0.0	3.5		3.2				

Intersection Summary

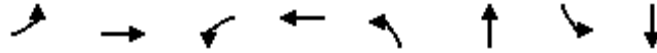
HCM 6th Ctrl Delay	17.6
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.  
Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.



Timings  
6: Haven Av. & Lemon Av.

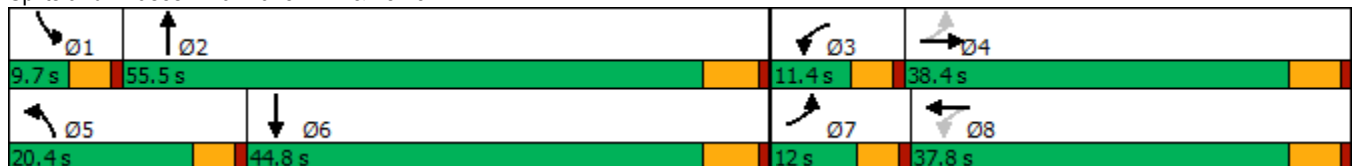


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↗	↖	↗	↖	↑↑↑	↖	↑↑↑
Traffic Volume (vph)	233	129	194	41	186	1625	22	1503
Future Volume (vph)	233	129	194	41	186	1625	22	1503
Turn Type	pm+pt	NA	pm+pt	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases	4		8					
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	38.4	9.6	36.4	9.6	24.8	9.6	23.8
Total Split (s)	12.0	38.4	11.4	37.8	20.4	55.5	9.7	44.8
Total Split (%)	10.4%	33.4%	9.9%	32.9%	17.7%	48.3%	8.4%	39.0%
Yellow Time (s)	3.6	4.4	3.6	4.4	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4	4.6	5.4	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	29.5	20.2	24.5	19.4	14.1	53.4	5.1	38.2
Actuated g/C Ratio	0.30	0.20	0.24	0.19	0.14	0.53	0.05	0.38
v/c Ratio	0.62	0.75	0.80	0.21	0.78	0.72	0.27	0.85
Control Delay	36.3	43.7	53.1	22.7	65.0	21.3	58.3	34.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.3	43.7	53.1	22.7	65.0	21.3	58.3	34.6
LOS	D	D	D	C	E	C	E	C
Approach Delay		40.3		44.9		25.3		34.9
Approach LOS		D		D		C		C

Intersection Summary

Cycle Length: 115  
 Actuated Cycle Length: 100  
 Natural Cycle: 105  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.85  
 Intersection Signal Delay: 31.7  
 Intersection LOS: C  
 Intersection Capacity Utilization 89.9%  
 ICU Level of Service E  
 Analysis Period (min) 15

Splits and Phases: 6: Haven Av. & Lemon Av.



HCM 6th Signalized Intersection Summary  
6: Haven Av. & Lemon Av.

Chaffey College (JN 13236)  
07/29/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↑↑↑		↖	↑↑↑	
Traffic Volume (veh/h)	233	129	146	194	41	30	186	1625	236	22	1503	86
Future Volume (veh/h)	233	129	146	194	41	30	186	1625	236	22	1503	86
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	0.99		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1900	1841	1885	1826	1900	1870	1900	1885	1767	1885	1900
Adj Flow Rate, veh/h	243	134	90	202	43	28	194	1693	209	23	1566	90
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	0	4	1	5	0	2	0	1	9	1	0
Cap, veh/h	419	199	134	294	189	123	229	2283	281	41	1913	110
Arrive On Green	0.08	0.19	0.19	0.07	0.18	0.18	0.13	0.49	0.49	0.02	0.38	0.38
Sat Flow, veh/h	1781	1049	704	1795	1033	672	1781	4671	574	1682	4977	286
Grp Volume(v), veh/h	243	0	224	202	0	71	194	1252	650	23	1079	577
Grp Sat Flow(s),veh/h/ln	1781	0	1753	1795	0	1705	1781	1729	1787	1682	1716	1832
Q Serve(g_s), s	7.4	0.0	10.9	6.8	0.0	3.2	9.7	26.5	26.8	1.2	25.8	25.9
Cycle Q Clear(g_c), s	7.4	0.0	10.9	6.8	0.0	3.2	9.7	26.5	26.8	1.2	25.8	25.9
Prop In Lane	1.00		0.40	1.00		0.39	1.00		0.32	1.00		0.16
Lane Grp Cap(c), veh/h	419	0	333	294	0	312	229	1690	874	41	1319	704
V/C Ratio(X)	0.58	0.00	0.67	0.69	0.00	0.23	0.85	0.74	0.74	0.57	0.82	0.82
Avail Cap(c_a), veh/h	419	0	632	294	0	604	308	1879	971	94	1463	781
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.8	0.0	34.4	31.1	0.0	31.8	39.0	18.7	18.8	44.2	25.3	25.3
Incr Delay (d2), s/veh	1.3	0.0	2.4	5.5	0.0	0.4	11.9	1.4	2.8	4.5	3.5	6.3
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	4.8	0.0	4.7	1.3	0.0	1.3	4.8	9.6	10.3	0.5	10.2	11.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.1	0.0	36.8	36.6	0.0	32.2	50.9	20.2	21.6	48.7	28.8	31.6
LnGrp LOS	C	A	D	D	A	C	D	C	C	D	C	C
Approach Vol, veh/h		467			273			2096			1679	
Approach Delay, s/veh		33.9			35.5			23.5			30.0	
Approach LOS		C			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.8	50.5	11.4	22.8	16.4	41.0	12.0	22.2				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.4	4.6	5.8	4.6	5.4				
Max Green Setting (Gmax), s	5.1	49.7	6.8	33.0	15.8	39.0	7.4	32.4				
Max Q Clear Time (g_c+I1), s	3.2	28.8	8.8	12.9	11.7	27.9	9.4	5.2				
Green Ext Time (p_c), s	0.0	13.1	0.0	1.1	0.1	7.3	0.0	0.3				

Intersection Summary

HCM 6th Ctrl Delay	27.7
HCM 6th LOS	C

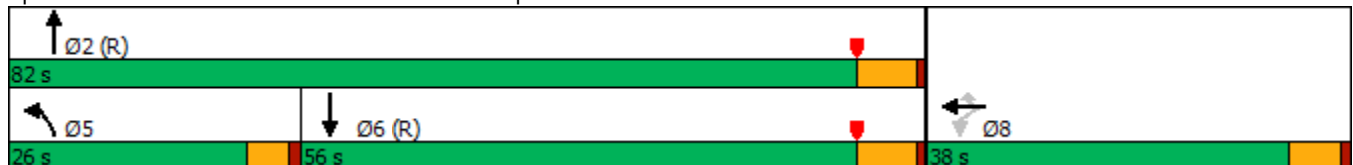
Timings  
7: Haven Av. & I-210 WB Ramps

	↙	←	↖	↗	↑	↓
Lane Group	WBL	WBT	WBR	NBL	NBT	SBT
Lane Configurations	↙	↕	↖	↗↖	↑↑↑	↑↑↑
Traffic Volume (vph)	552	5	843	638	1652	1484
Future Volume (vph)	552	5	843	638	1652	1484
Turn Type	Perm	NA	Perm	Prot	NA	NA
Protected Phases		8		5	2	6
Permitted Phases	8		8			
Detector Phase	8	8	8	5	2	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.8	10.8	10.8	9.7	31.2	31.2
Total Split (s)	38.0	38.0	38.0	26.0	82.0	56.0
Total Split (%)	31.7%	31.7%	31.7%	21.7%	68.3%	46.7%
Yellow Time (s)	4.8	4.8	4.8	3.7	5.2	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	4.7	6.2	6.2
Lead/Lag				Lead		Lag
Lead-Lag Optimize?				Yes		Yes
Recall Mode	None	None	None	None	C-Max	C-Max
Act Effct Green (s)	32.2	32.2	32.2	21.3	75.8	49.8
Actuated g/C Ratio	0.27	0.27	0.27	0.18	0.63	0.42
v/c Ratio	1.14	1.18	1.05	1.10	0.54	1.14
Control Delay	125.5	140.4	93.0	113.8	13.1	103.0
Queue Delay	0.0	0.0	0.0	0.0	1.1	0.0
Total Delay	125.5	140.4	93.0	113.8	14.3	103.0
LOS	F	F	F	F	B	F
Approach Delay		119.8			42.0	103.0
Approach LOS		F			D	F

Intersection Summary





















Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 67 (56%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow  
 Natural Cycle: 120  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.18  
 Intersection Signal Delay: 83.4  
 Intersection LOS: F  
 Intersection Capacity Utilization 113.1%  
 ICU Level of Service H  
 Analysis Period (min) 15

Splits and Phases: 7: Haven Av. & I-210 WB Ramps



HCM 6th Signalized Intersection Summary  
7: Haven Av. & I-210 WB Ramps

Chaffey College (JN 13236)  
07/29/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	552	5	843	638	1652	0	0	1484	763
Future Volume (veh/h)	0	0	0	552	5	843	638	1652	0	0	1484	763
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
Work Zone On Approach				No			No			No		
Adj Sat Flow, veh/h/ln				1885	1352	1885	1885	1885	0	0	1885	1885
Adj Flow Rate, veh/h				782	0	404	679	1757	0	0	1579	653
Peak Hour Factor				0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %				1	37	1	1	1	0	0	1	1
Cap, veh/h				958	0	426	618	3259	0	0	1506	600
Arrive On Green				0.27	0.00	0.27	0.18	0.63	0.00	0.00	0.42	0.42
Sat Flow, veh/h				3591	0	1598	3483	5316	0	0	3785	1440
Grp Volume(v), veh/h				782	0	404	679	1757	0	0	1496	736
Grp Sat Flow(s),veh/h/ln				1795	0	1598	1742	1716	0	0	1716	1624
Q Serve(g_s), s				24.5	0.0	29.8	21.3	22.8	0.0	0.0	50.0	50.0
Cycle Q Clear(g_c), s				24.5	0.0	29.8	21.3	22.8	0.0	0.0	50.0	50.0
Prop In Lane				1.00		1.00	1.00		0.00	0.00		0.89
Lane Grp Cap(c), veh/h				958	0	426	618	3259	0	0	1429	676
V/C Ratio(X)				0.82	0.00	0.95	1.10	0.54	0.00	0.00	1.05	1.09
Avail Cap(c_a), veh/h				964	0	429	618	3259	0	0	1429	676
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.09	0.09	0.00	0.00	0.42	0.42
Uniform Delay (d), s/veh				41.2	0.0	43.2	49.4	12.3	0.0	0.0	35.0	35.0
Incr Delay (d2), s/veh				5.5	0.0	30.4	47.0	0.1	0.0	0.0	29.4	50.8
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				11.2	0.0	14.9	13.0	7.7	0.0	0.0	25.3	28.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				46.7	0.0	73.6	96.3	12.3	0.0	0.0	64.4	85.8
LnGrp LOS				D	A	E	F	B	A	A	F	F
Approach Vol, veh/h					1186			2436			2232	
Approach Delay, s/veh					55.9			35.7			71.5	
Approach LOS					E			D			E	
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		82.2			26.0	56.2		37.8				
Change Period (Y+Rc), s		6.2			* 4.7	6.2		5.8				
Max Green Setting (Gmax), s		75.8			* 21	49.8		32.2				
Max Q Clear Time (g_c+1), s		24.8			23.3	52.0		31.8				
Green Ext Time (p_c), s		14.8			0.0	0.0		0.2				

Intersection Summary

HCM 6th Ctrl Delay	53.4
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
8: Haven Av. & I-210 EB Ramps

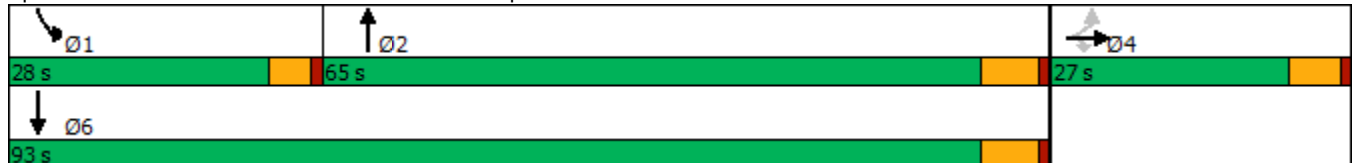


Lane Group	EBL	EBT	EBR	NBT	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	559	7	314	1731	765	1271
Future Volume (vph)	559	7	314	1731	765	1271
Turn Type	Perm	NA	Perm	NA	Prot	NA
Protected Phases		4		2	1	6
Permitted Phases	4		4			
Detector Phase	4	4	4	2	1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.8	10.8	10.8	30.2	9.7	31.2
Total Split (s)	27.0	27.0	27.0	65.0	28.0	93.0
Total Split (%)	22.5%	22.5%	22.5%	54.2%	23.3%	77.5%
Yellow Time (s)	4.8	4.8	4.8	5.2	3.7	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	6.2	4.7	6.2
Lead/Lag				Lag	Lead	
Lead-Lag Optimize?				Yes	Yes	
Recall Mode	None	None	None	None	None	None
Act Effct Green (s)	21.2	21.2	21.2	58.8	23.3	86.8
Actuated g/C Ratio	0.18	0.18	0.18	0.49	0.19	0.72
v/c Ratio	1.08	1.09	0.86	1.33dr	1.21	0.36
Control Delay	122.2	125.2	57.9	137.5	149.4	6.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.4
Total Delay	122.2	125.2	57.9	137.5	149.4	7.0
LOS	F	F	E	F	F	A
Approach Delay		103.3		137.5		60.5
Approach LOS		F		F		E

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.24  
 Intersection Signal Delay: 105.0  
 Intersection LOS: F  
 Intersection Capacity Utilization 113.1%  
 ICU Level of Service H  
 Analysis Period (min) 15  
 dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 8: Haven Av. & I-210 EB Ramps



HCM 6th Signalized Intersection Summary  
 8: Haven Av. & I-210 EB Ramps

Chaffey College (JN 13236)  
 07/29/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	559	7	314	0	0	0	0	1731	1114	765	1271	0
Future Volume (veh/h)	559	7	314	0	0	0	0	1731	1114	765	1271	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1856				0	1885	1885	1885	1885	0
Adj Flow Rate, veh/h	623	0	57				0	1841	885	814	1352	0
Peak Hour Factor	0.94	0.94	0.94				0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	3				0	1	1	1	1	0
Cap, veh/h	639	0	278				0	1726	734	676	3723	0
Arrive On Green	0.18	0.00	0.18				0.00	0.49	0.49	0.19	0.72	0.00
Sat Flow, veh/h	3619	0	1572				0	3692	1499	3483	5316	0
Grp Volume(v), veh/h	623	0	57				0	1787	939	814	1352	0
Grp Sat Flow(s),veh/h/ln	1810	0	1572				0	1716	1590	1742	1716	0
Q Serve(g_s), s	20.5	0.0	3.7				0.0	58.8	58.8	23.3	11.8	0.0
Cycle Q Clear(g_c), s	20.5	0.0	3.7				0.0	58.8	58.8	23.3	11.8	0.0
Prop In Lane	1.00		1.00				0.00		0.94	1.00		0.00
Lane Grp Cap(c), veh/h	639	0	278				0	1681	779	676	3723	0
V/C Ratio(X)	0.97	0.00	0.21				0.00	1.06	1.21	1.20	0.36	0.00
Avail Cap(c_a), veh/h	639	0	278				0	1681	779	676	3723	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	49.1	0.0	42.2				0.0	30.6	30.6	48.3	6.2	0.0
Incr Delay (d2), s/veh	29.1	0.0	0.4				0.0	40.9	104.3	105.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.6	0.0	1.4				0.0	31.7	43.1	19.7	3.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	78.3	0.0	42.6				0.0	71.5	134.9	153.7	6.3	0.0
LnGrp LOS	E	A	D				A	F	F	F	A	A
Approach Vol, veh/h		680						2726			2166	
Approach Delay, s/veh		75.3						93.3			61.7	
Approach LOS		E						F			E	
Timer - Assigned Phs	1	2	4	6								
Phs Duration (G+Y+Rc), s	28.0	65.0	27.0	93.0								
Change Period (Y+Rc), s	* 4.7	6.2	5.8	6.2								
Max Green Setting (Gmax), s	* 23	58.8	21.2	86.8								
Max Q Clear Time (g_c+I1), s	25.3	60.8	22.5	13.8								
Green Ext Time (p_c), s	0.0	0.0	0.0	9.7								

Intersection Summary

HCM 6th Ctrl Delay	78.8
HCM 6th LOS	E

Notes

User approved volume balancing among the lanes for turning movement.  
 \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection						
Int Delay, s/veh	0.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔		↔	↑	↔	↔
Traffic Vol, veh/h	571	10	10	434	8	8
Future Vol, veh/h	571	10	10	434	8	8
Conflicting Peds, #/hr	0	3	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	0
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	2	0	0	1	0	0
Mvmt Flow	696	12	12	529	10	10

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	711	0	1258
Stage 1	-	-	-	-	705
Stage 2	-	-	-	-	553
Critical Hdwy	-	-	4.1	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	-	-	2.2	-	3.5
Pot Cap-1 Maneuver	-	-	898	-	190
Stage 1	-	-	-	-	494
Stage 2	-	-	-	-	580
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	895	-	187
Mov Cap-2 Maneuver	-	-	-	-	392
Stage 1	-	-	-	-	493
Stage 2	-	-	-	-	572

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	13.9
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	392	439	-	-	895	-
HCM Lane V/C Ratio	0.025	0.022	-	-	0.014	-
HCM Control Delay (s)	14.4	13.4	-	-	9.1	-
HCM Lane LOS	B	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-

Intersection						
Int Delay, s/veh	0.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↶		↷	↶	↷	
Traffic Vol, veh/h	569	10	10	436	8	8
Future Vol, veh/h	569	10	10	436	8	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	60	-	0	-
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	2	0	0	1	0	0
Mvmt Flow	686	12	12	525	10	10

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	698	0	1241
Stage 1	-	-	-	-	692
Stage 2	-	-	-	-	549
Critical Hdwy	-	-	4.1	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	-	-	2.2	-	3.5
Pot Cap-1 Maneuver	-	-	908	-	195
Stage 1	-	-	-	-	500
Stage 2	-	-	-	-	583
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	908	-	192
Mov Cap-2 Maneuver	-	-	-	-	397
Stage 1	-	-	-	-	500
Stage 2	-	-	-	-	575

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	14
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	421	-	-	908	-
HCM Lane V/C Ratio	0.046	-	-	0.013	-
HCM Control Delay (s)	14	-	-	9	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-



Intersection						
Int Delay, s/veh	0.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑		↑	↑	↑	↑
Traffic Vol, veh/h	567	10	10	438	8	8
Future Vol, veh/h	567	10	10	438	8	8
Conflicting Peds, #/hr	0	2	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	0	0	1	0	0
Mvmt Flow	652	11	11	503	9	9

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	665	0	1185
Stage 1	-	-	-	-	660
Stage 2	-	-	-	-	525
Critical Hdwy	-	-	4.1	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	-	-	2.2	-	3.5
Pot Cap-1 Maneuver	-	-	934	-	211
Stage 1	-	-	-	-	518
Stage 2	-	-	-	-	598
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	932	-	208
Mov Cap-2 Maneuver	-	-	-	-	413
Stage 1	-	-	-	-	517
Stage 2	-	-	-	-	591

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	13.6
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	438	-	-	932	-
HCM Lane V/C Ratio	0.042	-	-	0.012	-
HCM Control Delay (s)	13.6	-	-	8.9	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection						
Int Delay, s/veh	0.6					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔		↔	↑	↔	↔
Traffic Vol, veh/h	565	10	22	440	8	28
Future Vol, veh/h	565	10	22	440	8	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	-	-	170	-	0	50
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	0	0	1	0	0
Mvmt Flow	614	11	24	478	9	30

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	625	0	1146	620
Stage 1	-	-	-	-	620	-
Stage 2	-	-	-	-	526	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	966	-	222	492
Stage 1	-	-	-	-	540	-
Stage 2	-	-	-	-	597	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	966	-	216	492
Mov Cap-2 Maneuver	-	-	-	-	422	-
Stage 1	-	-	-	-	540	-
Stage 2	-	-	-	-	582	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	13
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	422	492	-	-	966	-
HCM Lane V/C Ratio	0.021	0.062	-	-	0.025	-
HCM Control Delay (s)	13.7	12.8	-	-	8.8	-
HCM Lane LOS	B	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	0.2	-	-	0.1	-

**APPENDIX 6.2:**

**HORIZON YEAR (2051) WITH PROJECT CONDITIONS INTERSECTION OPERATIONS  
ANALYSIS WORKSHEETS**

This Page Intentionally Left Blank

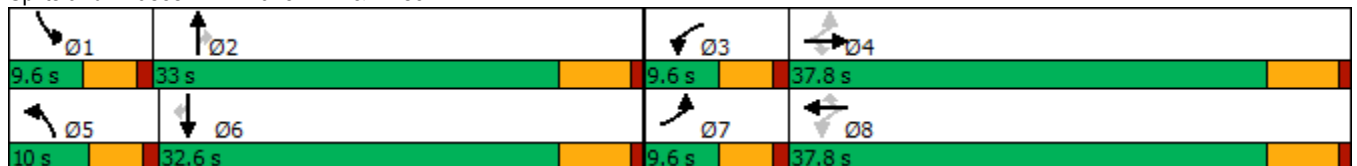
Timings  
1: Haven Av. & Wilson Av.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	233	73	125	226	37	57	112	265	14	367	28
Future Volume (vph)	8	233	73	125	226	37	57	112	265	14	367	28
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	37.8	37.8	9.6	37.8	37.8	9.6	32.8	32.8	9.6	31.8	31.8
Total Split (s)	9.6	37.8	37.8	9.6	37.8	37.8	10.0	33.0	33.0	9.6	32.6	32.6
Total Split (%)	10.7%	42.0%	42.0%	10.7%	42.0%	42.0%	11.1%	36.7%	36.7%	10.7%	36.2%	36.2%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
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	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	25.3	18.9	18.9	29.4	27.4	27.4	5.6	24.0	24.0	5.2	17.0	17.0
Actuated g/C Ratio	0.37	0.28	0.28	0.43	0.40	0.40	0.08	0.35	0.35	0.08	0.25	0.25
v/c Ratio	0.03	0.69	0.21	0.52	0.24	0.08	0.59	0.17	0.48	0.15	0.64	0.08
Control Delay	12.0	29.8	2.8	19.3	15.2	0.2	54.3	18.8	5.0	38.3	27.2	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.0	29.8	2.8	19.3	15.2	0.2	54.3	18.8	5.0	38.3	27.2	0.3
LOS	B	C	A	B	B	A	D	B	A	D	C	A
Approach Delay		23.1			15.1			15.0			25.7	
Approach LOS		C			B			B			C	

Intersection Summary

Cycle Length: 90  
 Actuated Cycle Length: 68.1  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.69  
 Intersection Signal Delay: 19.5  
 Intersection LOS: B  
 Intersection Capacity Utilization 52.9%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 1: Haven Av. & Wilson Av.



























HCM 6th Signalized Intersection Summary

Chaffey College (JN 13236)

1: Haven Av. & Wilson Av.

07/29/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	233	73	125	226	37	57	112	265	14	367	28
Future Volume (veh/h)	8	233	73	125	226	37	57	112	265	14	367	28
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1841	1796	1900	1870	1737	1856	1515	1885	1900	1826	1900
Adj Flow Rate, veh/h	12	348	72	187	337	9	85	167	377	21	548	23
Peak Hour Factor	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67
Percent Heavy Veh, %	0	4	7	0	2	11	3	26	1	0	5	0
Cap, veh/h	416	479	390	355	1165	473	111	828	460	44	865	400
Arrive On Green	0.02	0.26	0.26	0.08	0.33	0.33	0.06	0.29	0.29	0.02	0.25	0.25
Sat Flow, veh/h	1810	1841	1498	1810	3554	1442	1767	2878	1598	1810	3469	1604
Grp Volume(v), veh/h	12	348	72	187	337	9	85	167	377	21	548	23
Grp Sat Flow(s),veh/h/ln	1810	1841	1498	1810	1777	1442	1767	1439	1598	1810	1735	1604
Q Serve(g_s), s	0.3	10.4	2.3	4.4	4.2	0.3	2.9	2.6	13.3	0.7	8.5	0.7
Cycle Q Clear(g_c), s	0.3	10.4	2.3	4.4	4.2	0.3	2.9	2.6	13.3	0.7	8.5	0.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	416	479	390	355	1165	473	111	828	460	44	865	400
V/C Ratio(X)	0.03	0.73	0.18	0.53	0.29	0.02	0.76	0.20	0.82	0.47	0.63	0.06
Avail Cap(c_a), veh/h	539	976	794	355	1885	765	158	1297	720	150	1541	713
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.0	20.4	17.3	14.9	15.1	13.7	27.8	16.3	20.0	29.0	20.2	17.2
Incr Delay (d2), s/veh	0.0	2.1	0.2	0.7	0.1	0.0	7.3	0.1	4.3	2.9	0.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	4.1	0.7	1.5	1.5	0.1	1.3	0.8	4.7	0.3	3.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.0	22.5	17.6	15.6	15.2	13.7	35.2	16.4	24.3	31.9	21.0	17.3
LnGrp LOS	B	C	B	B	B	B	D	B	C	C	C	B
Approach Vol, veh/h		432			533			629			592	
Approach Delay, s/veh		21.5			15.3			23.7			21.2	
Approach LOS		C			B			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.1	23.2	9.6	21.5	8.4	20.8	5.5	25.6				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	5.0	27.2	5.0	32.0	5.4	26.8	5.0	32.0				
Max Q Clear Time (g_c+1), s	2.7	15.3	6.4	12.4	4.9	10.5	2.3	6.2				
Green Ext Time (p_c), s	0.0	1.8	0.0	2.0	0.0	3.1	0.0	2.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				20.5								
HCM 6th LOS				C								

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↑ ↑ ↑	↑ ↑ ↑			↑ ↑ ↑
Traffic Vol, veh/h	0	3	431	77	0	565
Future Vol, veh/h	0	3	431	77	0	565
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	0	8	0	0	4
Mvmt Flow	0	3	459	82	0	601

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	-	271	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.1	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.9	-	-	-	-
Pot Cap-1 Maneuver	0	624	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	-	624	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.8	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	624
HCM Lane V/C Ratio	-	-	0.005
HCM Control Delay (s)	-	-	10.8
HCM Lane LOS	-	-	B
HCM 95th %tile Q(veh)	-	-	0

Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↑↑↑			↑↑↑
Traffic Vol, veh/h	18	4	505	0	0	565
Future Vol, veh/h	18	4	505	0	0	565
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	0	7	0	0	3
Mvmt Flow	20	4	567	0	0	635

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	821	284	0	-	-	-
Stage 1	567	-	-	-	-	-
Stage 2	254	-	-	-	-	-
Critical Hdwy	5.7	7.1	-	-	-	-
Critical Hdwy Stg 1	6.6	-	-	-	-	-
Critical Hdwy Stg 2	6	-	-	-	-	-
Follow-up Hdwy	3.8	3.9	-	-	-	-
Pot Cap-1 Maneuver	386	612	-	0	0	-
Stage 1	445	-	-	0	0	-
Stage 2	707	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	386	612	-	-	-	-
Mov Cap-2 Maneuver	398	-	-	-	-	-
Stage 1	445	-	-	-	-	-
Stage 2	707	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.8	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBTWBLn1	WBLn2	SBT
Capacity (veh/h)	-	398	612
HCM Lane V/C Ratio	-	0.051	0.007
HCM Control Delay (s)	-	14.5	10.9
HCM Lane LOS	-	B	B
HCM 95th %tile Q(veh)	-	0.2	0



Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↑ ↑ ↑	↑ ↑ ↑			↑ ↑ ↑
Traffic Vol, veh/h	0	5	423	319	0	569
Future Vol, veh/h	0	5	423	319	0	569
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	0	0	8	0	0	4
Mvmt Flow	0	5	465	351	0	625

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	-	408	0	0	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	7.1	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	3.9	-	-	-
Pot Cap-1 Maneuver	0	511	-	-	0
Stage 1	0	-	-	-	0
Stage 2	0	-	-	-	0
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	-	511	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.1	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	511
HCM Lane V/C Ratio	-	-	0.011
HCM Control Delay (s)	-	-	12.1
HCM Lane LOS	-	-	B
HCM 95th %tile Q(veh)	-	-	0

Timings  
5: Haven Av. & Amber Ln./College Dr.

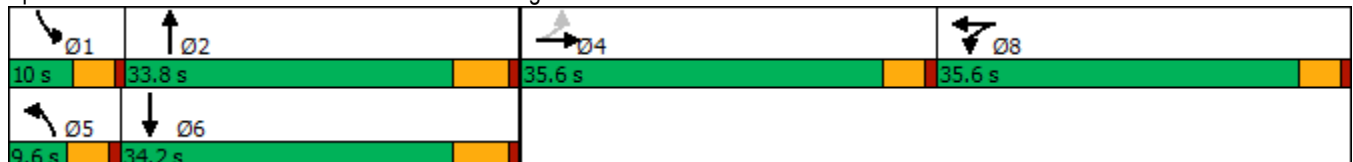


Lane Group	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↔	↗	↔	↖	↑↑↑	↖	↑↑↑
Traffic Volume (vph)	0	336	0	16	732	85	478
Future Volume (vph)	0	336	0	16	732	85	478
Turn Type	NA	Split	NA	Prot	NA	Prot	NA
Protected Phases	4	8	8	5	2	1	6
Permitted Phases							
Detector Phase	4	8	8	5	2	1	6
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	35.6	35.6	35.6	9.6	23.8	9.6	23.8
Total Split (s)	35.6	35.6	35.6	9.6	33.8	10.0	34.2
Total Split (%)	31.0%	31.0%	31.0%	8.3%	29.4%	8.7%	29.7%
Yellow Time (s)	3.6	3.6	3.6	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	5.8	4.6	5.8
Lead/Lag				Lead	Lag	Lead	Lag
Lead-Lag Optimize?				Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	Min	None	Min
Act Effect Green (s)	13.4	15.4	15.4	5.4	30.0	5.8	39.5
Actuated g/C Ratio	0.18	0.21	0.21	0.07	0.40	0.08	0.53
v/c Ratio	0.05	0.56	0.43	0.16	1.45dr	0.67	0.20
Control Delay	0.2	34.9	15.5	45.6	38.9	63.7	15.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	0.2	34.9	15.5	45.6	38.9	63.7	15.5
LOS	A	C	B	D	D	E	B
Approach Delay	0.2		25.3		39.0		22.7
Approach LOS	A		C		D		C

Intersection Summary

Cycle Length: 115  
 Actuated Cycle Length: 74.6  
 Natural Cycle: 115  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.98  
 Intersection Signal Delay: 33.6  
 Intersection LOS: C  
 Intersection Capacity Utilization 73.1%  
 ICU Level of Service D  
 Analysis Period (min) 15  
 dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 5: Haven Av. & Amber Ln./College Dr.



HCM 6th Signalized Intersection Summary  
5: Haven Av. & Amber Ln./College Dr.

Chaffey College (JN 13236)  
07/29/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↗	↕		↗	↕↕↕		↗	↕↕↕	
Traffic Volume (veh/h)	0	0	21	336	0	9	16	732	1090	85	478	5
Future Volume (veh/h)	0	0	21	336	0	9	16	732	1090	85	478	5
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		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1856	1900	1900	1722	1826	1885	1900	1826	1900
Adj Flow Rate, veh/h	0	0	3	375	0	0	18	804	0	93	525	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
Percent Heavy Veh, %	0	0	0	3	0	0	12	5	1	0	5	0
Cap, veh/h	0	0	27	761	409	0	36	1430		134	1724	16
Arrive On Green	0.00	0.00	0.02	0.22	0.00	0.00	0.02	0.29	0.00	0.07	0.34	0.34
Sat Flow, veh/h	0	0	1605	3534	1900	0	1640	5149	0	1810	5091	48
Grp Volume(v), veh/h	0	0	3	375	0	0	18	804	0	93	342	188
Grp Sat Flow(s),veh/h/ln	0	0	1606	1767	1900	0	1640	1662	0	1810	1662	1816
Q Serve(g_s), s	0.0	0.0	0.1	4.5	0.0	0.0	0.5	6.6	0.0	2.4	3.7	3.7
Cycle Q Clear(g_c), s	0.0	0.0	0.1	4.5	0.0	0.0	0.5	6.6	0.0	2.4	3.7	3.7
Prop In Lane	0.00		1.00	1.00		0.00	1.00		0.00	1.00		0.03
Lane Grp Cap(c), veh/h	0	0	27	761	409	0	36	1430		134	1125	615
V/C Ratio(X)	0.00	0.00	0.11	0.49	0.00	0.00	0.49	0.56		0.70	0.30	0.31
Avail Cap(c_a), veh/h	0	0	1034	2276	1224	0	170	2900		203	1961	1072
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	23.3	16.6	0.0	0.0	23.3	14.6	0.0	21.8	11.7	11.7
Incr Delay (d2), s/veh	0.0	0.0	1.8	0.5	0.0	0.0	3.8	0.3	0.0	2.4	0.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	1.7	0.0	0.0	0.2	2.0	0.0	1.0	1.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	25.1	17.1	0.0	0.0	27.1	14.9	0.0	24.2	11.9	12.0
LnGrp LOS	A	A	C	B	A	A	C	B		C	B	B
Approach Vol, veh/h		3			375			822	A		623	
Approach Delay, s/veh		25.1			17.1			15.2			13.8	
Approach LOS		C			B			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.2	19.6		5.4	5.7	22.1		15.0				
Change Period (Y+Rc), s	4.6	5.8		4.6	4.6	5.8		4.6				
Max Green Setting (Gmax), s	5.4	28.0		31.0	5.0	28.4		31.0				
Max Q Clear Time (g_c+I1), s	4.4	8.6		2.1	2.5	5.7		6.5				
Green Ext Time (p_c), s	0.0	5.0		0.0	0.0	3.0		1.4				

Intersection Summary

HCM 6th Ctrl Delay	15.1
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.  
Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Timings  
6: Haven Av. & Lemon Av.

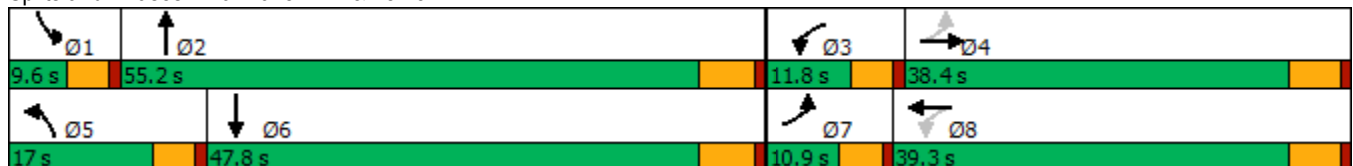


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↗	↖	↗	↖	↑↑↑	↖	↑↑↑
Traffic Volume (vph)	132	24	302	53	91	2218	11	892
Future Volume (vph)	132	24	302	53	91	2218	11	892
Turn Type	pm+pt	NA	pm+pt	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases	4		8					
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	38.4	9.6	36.4	9.6	24.8	9.6	23.8
Total Split (s)	10.9	38.4	11.8	39.3	17.0	55.2	9.6	47.8
Total Split (%)	9.5%	33.4%	10.3%	34.2%	14.8%	48.0%	8.3%	41.6%
Yellow Time (s)	3.6	4.4	3.6	4.4	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4	4.6	5.4	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	18.5	13.7	19.9	14.4	9.0	50.9	5.2	41.2
Actuated g/C Ratio	0.22	0.16	0.23	0.17	0.10	0.59	0.06	0.48
v/c Ratio	0.47	0.33	1.03	0.33	0.56	0.87	0.11	0.45
Control Delay	29.9	14.6	89.8	28.5	52.2	21.8	47.5	18.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.9	14.6	89.8	28.5	52.2	21.8	47.5	18.8
LOS	C	B	F	C	D	C	D	B
Approach Delay		23.5		76.8		23.0		19.1
Approach LOS		C		E		C		B

Intersection Summary























Cycle Length: 115	
Actuated Cycle Length: 85.8	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.03	
Intersection Signal Delay: 27.2	Intersection LOS: C
Intersection Capacity Utilization 85.8%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 6: Haven Av. & Lemon Av.



HCM 6th Signalized Intersection Summary  
6: Haven Av. & Lemon Av.

Chaffey College (JN 13236)  
07/29/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	132	24	71	302	53	28	91	2218	93	11	892	78
Future Volume (veh/h)	132	24	71	302	53	28	91	2218	93	11	892	78
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1781	1900	1870	1515	1900	1841	1870	1781	1900	1870	1900
Adj Flow Rate, veh/h	148	27	7	339	60	28	102	2492	93	12	1002	85
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	8	0	2	26	0	4	2	8	0	2	0
Cap, veh/h	310	171	44	373	131	61	129	2774	103	26	2348	199
Arrive On Green	0.07	0.13	0.13	0.08	0.14	0.14	0.07	0.55	0.55	0.01	0.49	0.49
Sat Flow, veh/h	1781	1363	353	1781	970	453	1753	5053	187	1810	4794	406
Grp Volume(v), veh/h	148	0	34	339	0	88	102	1673	912	12	711	376
Grp Sat Flow(s),veh/h/ln	1781	0	1716	1781	0	1423	1753	1702	1837	1810	1702	1796
Q Serve(g_s), s	6.3	0.0	1.6	7.2	0.0	5.1	5.1	38.6	39.5	0.6	11.9	12.0
Cycle Q Clear(g_c), s	6.3	0.0	1.6	7.2	0.0	5.1	5.1	38.6	39.5	0.6	11.9	12.0
Prop In Lane	1.00		0.21	1.00		0.32	1.00		0.10	1.00		0.23
Lane Grp Cap(c), veh/h	310	0	215	373	0	193	129	1869	1008	26	1667	880
V/C Ratio(X)	0.48	0.00	0.16	0.91	0.00	0.46	0.79	0.90	0.90	0.46	0.43	0.43
Avail Cap(c_a), veh/h	310	0	638	373	0	544	245	1896	1023	102	1667	880
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.4	0.0	34.6	36.0	0.0	35.3	40.4	17.7	17.9	43.4	14.6	14.6
Incr Delay (d2), s/veh	0.4	0.0	0.3	24.8	0.0	1.7	4.0	5.9	11.2	4.6	0.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	0.0	0.7	6.2	0.0	1.8	2.2	13.9	16.8	0.3	4.1	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.9	0.0	34.9	60.8	0.0	37.0	44.4	23.7	29.1	48.0	14.8	14.9
LnGrp LOS	C	A	C	E	A	D	D	C	C	D	B	B
Approach Vol, veh/h		182			427			2687			1099	
Approach Delay, s/veh		32.4			55.9			26.3			15.2	
Approach LOS		C			E			C			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.9	54.5	11.8	16.5	11.1	49.2	10.9	17.4				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.4	4.6	5.8	4.6	5.4				
Max Green Setting (Gmax), s	5.0	49.4	7.2	33.0	12.4	42.0	6.3	33.9				
Max Q Clear Time (g_c+I1), s	2.6	41.5	9.2	3.6	7.1	14.0	8.3	7.1				
Green Ext Time (p_c), s	0.0	7.2	0.0	0.1	0.0	7.4	0.0	0.4				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				26.7								
HCM 6th LOS				C								

Timings  
7: Haven Av. & I-210 WB Ramps

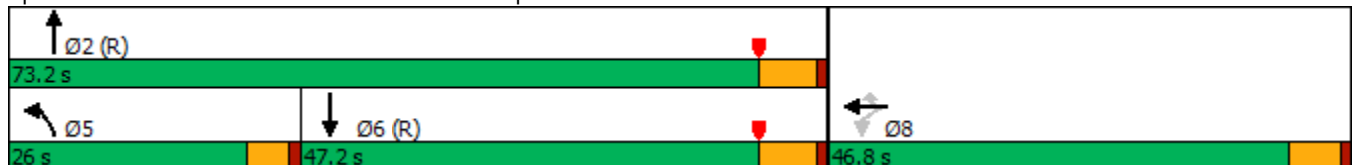


Lane Group	WBL	WBT	WBR	NBL	NBT	SBT
Lane Configurations	↰	↰↱	↱	↰↱	↱↱↱	↱↱↱
Traffic Volume (vph)	513	8	955	548	1768	1169
Future Volume (vph)	513	8	955	548	1768	1169
Turn Type	Perm	NA	Perm	Prot	NA	NA
Protected Phases		8		5	2	6
Permitted Phases	8		8			
Detector Phase	8	8	8	5	2	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.8	10.8	10.8	9.7	31.2	31.2
Total Split (s)	46.8	46.8	46.8	26.0	73.2	47.2
Total Split (%)	39.0%	39.0%	39.0%	21.7%	61.0%	39.3%
Yellow Time (s)	4.8	4.8	4.8	3.7	5.2	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	4.7	6.2	6.2
Lead/Lag				Lead		Lag
Lead-Lag Optimize?				Yes		Yes
Recall Mode	None	None	None	None	C-Max	C-Max
Act Effect Green (s)	41.0	41.0	41.0	21.3	67.0	41.0
Actuated g/C Ratio	0.34	0.34	0.34	0.18	0.56	0.34
v/c Ratio	0.90	1.14	1.01	1.02	0.70	1.12
Control Delay	58.4	119.5	76.4	90.9	20.9	98.5
Queue Delay	0.0	0.0	0.0	0.0	7.7	0.0
Total Delay	58.4	119.5	76.4	90.9	28.6	98.5
LOS	E	F	E	F	C	F
Approach Delay		85.6			43.3	98.5
Approach LOS		F			D	F

Intersection Summary





















Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 67 (56%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow  
 Natural Cycle: 120  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.14  
 Intersection Signal Delay: 71.9  
 Intersection LOS: E  
 Intersection Capacity Utilization 155.1%  
 ICU Level of Service H  
 Analysis Period (min) 15

Splits and Phases: 7: Haven Av. & I-210 WB Ramps



HCM 6th Signalized Intersection Summary  
7: Haven Av. & I-210 WB Ramps

Chaffey College (JN 13236)  
07/29/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	513	8	955	548	1768	0	0	1169	564
Future Volume (veh/h)	0	0	0	513	8	955	548	1768	0	0	1169	564
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
Work Zone On Approach				No			No			No		
Adj Sat Flow, veh/h/ln				1870	1559	1870	1856	1870	0	0	1870	1900
Adj Flow Rate, veh/h				840	0	474	616	1987	0	0	1313	506
Peak Hour Factor				0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %				2	23	2	3	2	0	0	2	0
Cap, veh/h				1152	0	513	609	2944	0	0	1308	500
Arrive On Green				0.32	0.00	0.32	0.18	0.58	0.00	0.00	0.36	0.36
Sat Flow, veh/h				3563	0	1585	3428	5274	0	0	3803	1390
Grp Volume(v), veh/h				840	0	474	616	1987	0	0	1229	590
Grp Sat Flow(s),veh/h/ln				1781	0	1585	1714	1702	0	0	1702	1620
Q Serve(g_s), s				25.1	0.0	34.6	21.3	32.4	0.0	0.0	43.2	43.2
Cycle Q Clear(g_c), s				25.1	0.0	34.6	21.3	32.4	0.0	0.0	43.2	43.2
Prop In Lane				1.00		1.00	1.00		0.00	0.00		0.86
Lane Grp Cap(c), veh/h				1152	0	513	609	2944	0	0	1225	583
V/C Ratio(X)				0.73	0.00	0.92	1.01	0.67	0.00	0.00	1.00	1.01
Avail Cap(c_a), veh/h				1217	0	542	609	2944	0	0	1225	583
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.09	0.09	0.00	0.00	0.78	0.78
Uniform Delay (d), s/veh				35.9	0.0	39.2	49.3	17.6	0.0	0.0	38.4	38.4
Incr Delay (d2), s/veh				2.1	0.0	21.3	14.1	0.1	0.0	0.0	23.5	35.8
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				10.8	0.0	15.9	10.0	11.5	0.0	0.0	21.0	22.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				38.1	0.0	60.5	63.5	17.7	0.0	0.0	61.9	74.2
LnGrp LOS				D	A	E	F	B	A	A	F	F
Approach Vol, veh/h					1314			2603			1819	
Approach Delay, s/veh					46.2			28.5			65.9	
Approach LOS					D			C			E	
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		75.4			26.0	49.4		44.6				
Change Period (Y+Rc), s		6.2			* 4.7	6.2		5.8				
Max Green Setting (Gmax), s		67.0			* 21	41.0		41.0				
Max Q Clear Time (g_c+I1), s		34.4			23.3	45.2		36.6				
Green Ext Time (p_c), s		15.8			0.0	0.0		2.2				

Intersection Summary

HCM 6th Ctrl Delay	44.4
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
8: Haven Av. & I-210 EB Ramps

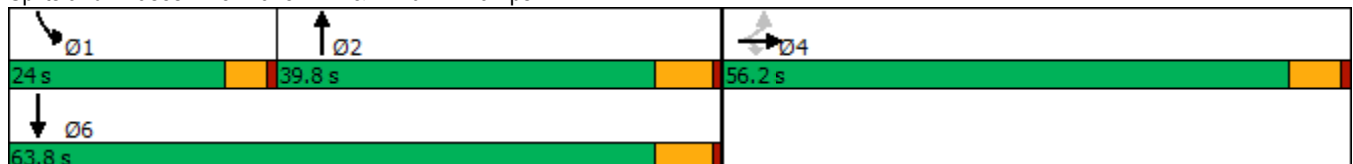


Lane Group	EBL	EBT	EBR	NBT	SBL	SBT
Lane Configurations	↶	↷	↷	↑↑↑	↶↷	↑↑↑
Traffic Volume (vph)	1408	5	338	908	588	1094
Future Volume (vph)	1408	5	338	908	588	1094
Turn Type	Perm	NA	Perm	NA	Prot	NA
Protected Phases		4		2	1	6
Permitted Phases	4		4			
Detector Phase	4	4	4	2	1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.8	10.8	10.8	30.2	9.7	31.2
Total Split (s)	56.2	56.2	56.2	39.8	24.0	63.8
Total Split (%)	46.8%	46.8%	46.8%	33.2%	20.0%	53.2%
Yellow Time (s)	4.8	4.8	4.8	5.2	3.7	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	6.2	4.7	6.2
Lead/Lag				Lag	Lead	
Lead-Lag Optimize?				Yes	Yes	
Recall Mode	None	None	None	None	None	None
Act Effct Green (s)	50.4	50.4	50.4	33.6	19.3	57.6
Actuated g/C Ratio	0.42	0.42	0.42	0.28	0.16	0.48
v/c Ratio	1.10	1.13	0.51	1.10	1.12	0.48
Control Delay	99.6	109.4	22.8	95.1	122.8	21.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.5
Total Delay	99.6	109.4	22.8	95.1	122.8	22.5
LOS	F	F	C	F	F	C
Approach Delay		90.3		95.1		57.5
Approach LOS		F		F		E

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.13  
 Intersection Signal Delay: 80.5  
 Intersection LOS: F  
 Intersection Capacity Utilization 155.1%  
 ICU Level of Service H  
 Analysis Period (min) 15





















Splits and Phases: 8: Haven Av. & I-210 EB Ramps





HCM 6th Signalized Intersection Summary  
 8: Haven Av. & I-210 EB Ramps

Chaffey College (JN 13236)  
 07/29/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1408	5	338	0	0	0	0	908	559	588	1094	0
Future Volume (veh/h)	1408	5	338	0	0	0	0	908	559	588	1094	0
Initial Q (Qb), veh	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
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1352	1781				0	1841	1856	1885	1856	0
Adj Flow Rate, veh/h	1512	0	28				0	966	513	626	1164	0
Peak Hour Factor	0.94	0.94	0.94				0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	37	8				0	4	3	1	3	0
Cap, veh/h	1496	0	634				0	938	437	560	2431	0
Arrive On Green	0.42	0.00	0.42				0.00	0.28	0.28	0.16	0.48	0.00
Sat Flow, veh/h	3563	0	1510				0	3516	1560	3483	5233	0
Grp Volume(v), veh/h	1512	0	28				0	966	513	626	1164	0
Grp Sat Flow(s),veh/h/ln	1781	0	1510				0	1675	1560	1742	1689	0
Q Serve(g_s), s	50.4	0.0	1.3				0.0	33.6	33.6	19.3	18.6	0.0
Cycle Q Clear(g_c), s	50.4	0.0	1.3				0.0	33.6	33.6	19.3	18.6	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	1496	0	634				0	938	437	560	2431	0
V/C Ratio(X)	1.01	0.00	0.04				0.00	1.03	1.17	1.12	0.48	0.00
Avail Cap(c_a), veh/h	1496	0	634				0	938	437	560	2431	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	34.8	0.0	20.6				0.0	43.2	43.2	50.3	21.1	0.0
Incr Delay (d2), s/veh	25.9	0.0	0.0				0.0	37.3	100.3	74.5	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	25.7	0.0	0.5				0.0	18.2	24.6	13.9	6.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.7	0.0	20.6				0.0	80.5	143.5	124.9	21.2	0.0
LnGrp LOS	F	A	C				A	F	F	F	C	A
Approach Vol, veh/h		1540						1479			1790	
Approach Delay, s/veh		59.9						102.3			57.4	
Approach LOS		E						F			E	
Timer - Assigned Phs	1	2	4	6								
Phs Duration (G+Y+Rc), s	24.0	39.8	56.2	63.8								
Change Period (Y+Rc), s	* 4.7	6.2	5.8	6.2								
Max Green Setting (Gmax), s	* 19	33.6	50.4	57.6								
Max Q Clear Time (g_c+I1), s	21.3	35.6	52.4	20.6								
Green Ext Time (p_c), s	0.0	0.0	0.0	7.4								
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			72.0									
HCM 6th LOS			E									
<b>Notes</b>												
User approved volume balancing among the lanes for turning movement.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Intersection						
Int Delay, s/veh	0.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔		↔	↑	↔	↔
Traffic Vol, veh/h	495	16	16	385	3	3
Future Vol, veh/h	495	16	16	385	3	3
Conflicting Peds, #/hr	0	3	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	0
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	74	74	74	74	74	74
Heavy Vehicles, %	2	0	0	2	0	0
Mvmt Flow	669	22	22	520	4	4

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	694	0	1247 683
Stage 1	-	-	-	-	683 -
Stage 2	-	-	-	-	564 -
Critical Hdwy	-	-	4.1	-	6.4 6.2
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	-	-	2.2	-	3.5 3.3
Pot Cap-1 Maneuver	-	-	911	-	193 453
Stage 1	-	-	-	-	505 -
Stage 2	-	-	-	-	573 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	908	-	188 452
Mov Cap-2 Maneuver	-	-	-	-	394 -
Stage 1	-	-	-	-	503 -
Stage 2	-	-	-	-	559 -

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	13.6
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	394	452	-	-	908	-
HCM Lane V/C Ratio	0.01	0.009	-	-	0.024	-
HCM Control Delay (s)	14.2	13	-	-	9.1	-
HCM Lane LOS	B	B	-	-	A	-
HCM 95th %tile Q(veh)	0	0	-	-	0.1	-

Intersection						
Int Delay, s/veh	0.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	483	16	16	398	3	3
Future Vol, veh/h	483	16	16	398	3	3
Conflicting Peds, #/hr	0	3	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	60	-	0	-
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	75	75	75	75	75	75
Heavy Vehicles, %	2	0	0	2	0	0
Mvmt Flow	644	21	21	531	4	4

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	668	0	1231
Stage 1	-	-	-	-	658
Stage 2	-	-	-	-	573
Critical Hdwy	-	-	4.1	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	-	-	2.2	-	3.5
Pot Cap-1 Maneuver	-	-	931	-	198
Stage 1	-	-	-	-	519
Stage 2	-	-	-	-	568
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	928	-	193
Mov Cap-2 Maneuver	-	-	-	-	399
Stage 1	-	-	-	-	517
Stage 2	-	-	-	-	555

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	13.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	430	-	-	928	-
HCM Lane V/C Ratio	0.019	-	-	0.023	-
HCM Control Delay (s)	13.5	-	-	9	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-

Intersection						
Int Delay, s/veh	0.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	469	16	16	411	3	3
Future Vol, veh/h	469	16	16	411	3	3
Conflicting Peds, #/hr	0	2	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	68	68	68	68	68	68
Heavy Vehicles, %	3	0	0	2	0	0
Mvmt Flow	690	24	24	604	4	4

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	716	0	1356
Stage 1	-	-	-	-	704
Stage 2	-	-	-	-	652
Critical Hdwy	-	-	4.1	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	-	-	2.2	-	3.5
Pot Cap-1 Maneuver	-	-	894	-	166
Stage 1	-	-	-	-	494
Stage 2	-	-	-	-	522
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	892	-	161
Mov Cap-2 Maneuver	-	-	-	-	367
Stage 1	-	-	-	-	493
Stage 2	-	-	-	-	508

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	14.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	400	-	-	892	-
HCM Lane V/C Ratio	0.022	-	-	0.026	-
HCM Control Delay (s)	14.2	-	-	9.1	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-

Intersection						
Int Delay, s/veh	0.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔		↔	↑	↔	↔
Traffic Vol, veh/h	454	19	35	423	3	9
Future Vol, veh/h	454	19	35	423	3	9
Conflicting Peds, #/hr	0	2	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	170	-	0	50
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	68	68	68	68	68	68
Heavy Vehicles, %	3	0	0	2	0	0
Mvmt Flow	668	28	51	622	4	13

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	698	0	1408 684
Stage 1	-	-	-	-	684 -
Stage 2	-	-	-	-	724 -
Critical Hdwy	-	-	4.1	-	6.4 6.2
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	-	-	2.2	-	3.5 3.3
Pot Cap-1 Maneuver	-	-	908	-	155 452
Stage 1	-	-	-	-	505 -
Stage 2	-	-	-	-	484 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	906	-	146 451
Mov Cap-2 Maneuver	-	-	-	-	349 -
Stage 1	-	-	-	-	504 -
Stage 2	-	-	-	-	457 -

Approach	EB	WB	NB
HCM Control Delay, s	0	0.7	13.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	349	451	-	-	906	-
HCM Lane V/C Ratio	0.013	0.029	-	-	0.057	-
HCM Control Delay (s)	15.4	13.2	-	-	9.2	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	0	0.1	-	-	0.2	-

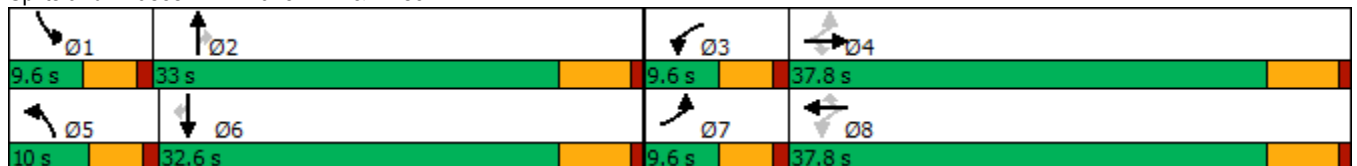
Timings  
1: Haven Av. & Wilson Av.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	67	315	77	221	151	72	78	191	215	52	197	19
Future Volume (vph)	67	315	77	221	151	72	78	191	215	52	197	19
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	37.8	37.8	9.6	37.8	37.8	9.6	32.8	32.8	9.6	31.8	31.8
Total Split (s)	9.6	37.8	37.8	9.6	37.8	37.8	10.0	33.0	33.0	9.6	32.6	32.6
Total Split (%)	10.7%	42.0%	42.0%	10.7%	42.0%	42.0%	11.1%	36.7%	36.7%	10.7%	36.2%	36.2%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
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	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	24.8	18.4	18.4	26.0	20.7	20.7	5.6	15.7	15.7	5.2	12.9	12.9
Actuated g/C Ratio	0.39	0.29	0.29	0.41	0.32	0.32	0.09	0.25	0.25	0.08	0.20	0.20
v/c Ratio	0.15	0.70	0.17	0.74	0.16	0.14	0.59	0.26	0.43	0.42	0.33	0.05
Control Delay	11.2	28.3	1.7	28.3	17.1	1.2	49.8	22.3	6.0	43.0	23.6	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.2	28.3	1.7	28.3	17.1	1.2	49.8	22.3	6.0	43.0	23.6	0.2
LOS	B	C	A	C	B	A	D	C	A	D	C	A
Approach Delay		21.3			20.1			19.5			25.7	
Approach LOS		C			C			B			C	

Intersection Summary

Cycle Length: 90  
 Actuated Cycle Length: 63.7  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.74  
 Intersection Signal Delay: 21.2  
 Intersection LOS: C  
 Intersection Capacity Utilization 58.8%  
 ICU Level of Service B  
 Analysis Period (min) 15

Splits and Phases: 1: Haven Av. & Wilson Av.



























HCM 6th Signalized Intersection Summary

Chaffey College (JN 13236)

1: Haven Av. & Wilson Av.

07/29/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	67	315	77	221	151	72	78	191	215	52	197	19
Future Volume (veh/h)	67	315	77	221	151	72	78	191	215	52	197	19
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1856	1826	1885	1870	1900	1900	1870	1900	1900	1856	1900
Adj Flow Rate, veh/h	80	375	47	263	180	32	93	227	236	62	235	17
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	0	3	5	1	2	0	0	2	0	0	3	0
Cap, veh/h	548	486	405	370	1028	466	126	739	335	101	685	313
Arrive On Green	0.06	0.26	0.26	0.09	0.29	0.29	0.07	0.21	0.21	0.06	0.19	0.19
Sat Flow, veh/h	1810	1856	1547	1795	3554	1610	1810	3554	1610	1810	3526	1610
Grp Volume(v), veh/h	80	375	47	263	180	32	93	227	236	62	235	17
Grp Sat Flow(s),veh/h/ln	1810	1856	1547	1795	1777	1610	1810	1777	1610	1810	1763	1610
Q Serve(g_s), s	1.7	10.2	1.3	5.0	2.1	0.8	2.7	2.9	7.4	1.8	3.1	0.5
Cycle Q Clear(g_c), s	1.7	10.2	1.3	5.0	2.1	0.8	2.7	2.9	7.4	1.8	3.1	0.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	548	486	405	370	1028	466	126	739	335	101	685	313
V/C Ratio(X)	0.15	0.77	0.12	0.71	0.18	0.07	0.74	0.31	0.71	0.61	0.34	0.05
Avail Cap(c_a), veh/h	597	1092	910	370	2091	947	180	1777	805	166	1737	793
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.9	18.6	15.3	16.1	14.5	14.0	24.8	18.2	20.0	25.1	18.9	17.8
Incr Delay (d2), s/veh	0.0	2.6	0.1	5.3	0.1	0.1	4.4	0.2	2.7	2.2	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	3.9	0.4	2.4	0.7	0.2	1.2	1.0	2.6	0.7	1.1	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.0	21.2	15.4	21.5	14.5	14.1	29.3	18.5	22.7	27.3	19.2	17.9
LnGrp LOS	B	C	B	C	B	B	C	B	C	C	B	B
Approach Vol, veh/h		502			475			556			314	
Approach Delay, s/veh		19.3			18.3			22.1			20.7	
Approach LOS		B			B			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.6	17.1	9.6	20.0	8.4	16.4	8.1	21.5				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	5.0	27.2	5.0	32.0	5.4	26.8	5.0	32.0				
Max Q Clear Time (g_c+I1), s	3.8	9.4	7.0	12.2	4.7	5.1	3.7	4.1				
Green Ext Time (p_c), s	0.0	1.9	0.0	2.1	0.0	1.3	0.0	1.1				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				20.1								
HCM 6th LOS				C								

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↑ ↑ ↑	↑ ↑ ↑			↑ ↑ ↑
Traffic Vol, veh/h	0	8	476	54	0	494
Future Vol, veh/h	0	8	476	54	0	494
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	0	0	1	0	0	2
Mvmt Flow	0	8	486	55	0	504

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	-	271	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.1	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.9	-	-	-	-
Pot Cap-1 Maneuver	0	624	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	-	624	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.8	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	624
HCM Lane V/C Ratio	-	-	0.013
HCM Control Delay (s)	-	-	10.8
HCM Lane LOS	-	-	B
HCM 95th %tile Q(veh)	-	-	0



Intersection						
Int Delay, s/veh	0.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↑↑↑			↑↑↑
Traffic Vol, veh/h	42	8	522	0	0	494
Future Vol, veh/h	42	8	522	0	0	494
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	0	0	1	0	0	2
Mvmt Flow	43	8	533	0	0	504

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	735	267	0	-	-	-
Stage 1	533	-	-	-	-	-
Stage 2	202	-	-	-	-	-
Critical Hdwy	5.7	7.1	-	-	-	-
Critical Hdwy Stg 1	6.6	-	-	-	-	-
Critical Hdwy Stg 2	6	-	-	-	-	-
Follow-up Hdwy	3.8	3.9	-	-	-	-
Pot Cap-1 Maneuver	425	628	-	0	0	-
Stage 1	466	-	-	0	0	-
Stage 2	751	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	425	628	-	-	-	-
Mov Cap-2 Maneuver	421	-	-	-	-	-
Stage 1	466	-	-	-	-	-
Stage 2	751	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.9	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBTWBLn1	WBLn2	SBT
Capacity (veh/h)	-	421	628
HCM Lane V/C Ratio	-	0.102	0.013
HCM Control Delay (s)	-	14.5	10.8
HCM Lane LOS	-	B	B
HCM 95th %tile Q(veh)	-	0.3	0

Intersection						
Int Delay, s/veh	0.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↑ ↑↑	↑↑↑			↑↑↑
Traffic Vol, veh/h	0	23	550	221	0	592
Future Vol, veh/h	0	23	550	221	0	592
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	0	1	0	0	2
Mvmt Flow	0	24	585	235	0	630

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	-	410	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.1	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.9	-	-	-	-
Pot Cap-1 Maneuver	0	509	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	-	509	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.4	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	509
HCM Lane V/C Ratio	-	-	0.048
HCM Control Delay (s)	-	-	12.4
HCM Lane LOS	-	-	B
HCM 95th %tile Q(veh)	-	-	0.2

Timings  
5: Haven Av. & Amber Ln./College Dr.

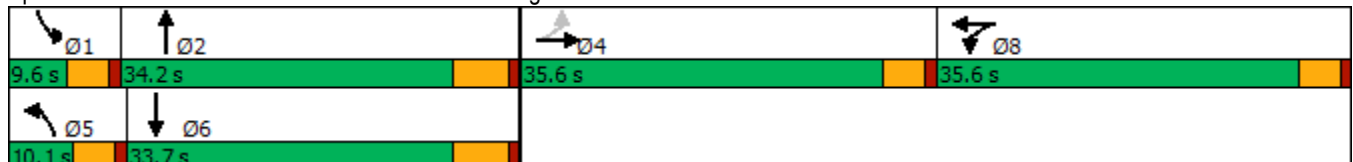


Lane Group	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↔	↗	↔	↖	↑↑↑	↖	↑↑↑
Traffic Volume (vph)	0	765	0	19	761	43	546
Future Volume (vph)	0	765	0	19	761	43	546
Turn Type	NA	Split	NA	Prot	NA	Prot	NA
Protected Phases	4	8	8	5	2	1	6
Permitted Phases							
Detector Phase	4	8	8	5	2	1	6
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	35.6	35.6	35.6	9.6	23.8	9.6	23.8
Total Split (s)	35.6	35.6	35.6	10.1	34.2	9.6	33.7
Total Split (%)	31.0%	31.0%	31.0%	8.8%	29.7%	8.3%	29.3%
Yellow Time (s)	3.6	3.6	3.6	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	5.8	4.6	5.8
Lead/Lag				Lead	Lag	Lead	Lag
Lead-Lag Optimize?				Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	Min	None	Min
Act Effct Green (s)	13.7	29.9	29.9	5.5	29.7	5.2	33.5
Actuated g/C Ratio	0.15	0.34	0.34	0.06	0.33	0.06	0.38
v/c Ratio	0.10	0.77	0.67	0.20	1.19dr	0.46	0.32
Control Delay	0.6	40.4	27.3	51.3	42.7	61.6	24.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	0.6	40.4	27.3	51.3	42.7	61.6	24.2
LOS	A	D	C	D	D	E	C
Approach Delay	0.6		33.9		42.9		26.9
Approach LOS	A		C		D		C

Intersection Summary

Cycle Length: 115  
 Actuated Cycle Length: 88.7  
 Natural Cycle: 115  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.96  
 Intersection Signal Delay: 36.7  
 Intersection LOS: D  
 Intersection Capacity Utilization 72.6%  
 ICU Level of Service C  
 Analysis Period (min) 15  
 dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 5: Haven Av. & Amber Ln./College Dr.



HCM 6th Signalized Intersection Summary  
5: Haven Av. & Amber Ln./College Dr.

Chaffey College (JN 13236)  
07/29/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↗	↕		↗	↕↕↕		↗	↕↕↕	
Traffic Volume (veh/h)	0	0	32	765	0	10	19	761	687	43	546	2
Future Volume (veh/h)	0	0	32	765	0	10	19	761	687	43	546	2
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		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1885	1900	1900	1900	1885	1885	1900	1870	1900
Adj Flow Rate, veh/h	0	0	4	879	0	0	22	865	0	49	620	2
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	0	0	0	1	0	0	0	1	1	0	2	0
Cap, veh/h	0	0	17	1137	602	0	47	1423		86	1567	5
Arrive On Green	0.00	0.00	0.01	0.32	0.00	0.00	0.03	0.28	0.00	0.05	0.30	0.30
Sat Flow, veh/h	0	0	1610	3591	1900	0	1810	5316	0	1810	5254	17
Grp Volume(v), veh/h	0	0	4	879	0	0	22	865	0	49	402	220
Grp Sat Flow(s),veh/h/ln	0	0	1610	1795	1900	0	1810	1716	0	1810	1702	1867
Q Serve(g_s), s	0.0	0.0	0.1	12.5	0.0	0.0	0.7	8.2	0.0	1.5	5.3	5.3
Cycle Q Clear(g_c), s	0.0	0.0	0.1	12.5	0.0	0.0	0.7	8.2	0.0	1.5	5.3	5.3
Prop In Lane	0.00		1.00	1.00		0.00	1.00		0.00	1.00		0.01
Lane Grp Cap(c), veh/h	0	0	17	1137	602	0	47	1423		86	1015	557
V/C Ratio(X)	0.00	0.00	0.23	0.77	0.00	0.00	0.47	0.61		0.57	0.40	0.40
Avail Cap(c_a), veh/h	0	0	888	1979	1047	0	177	2599		161	1689	926
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	27.6	17.4	0.0	0.0	27.0	17.7	0.0	26.2	15.7	15.7
Incr Delay (d2), s/veh	0.0	0.0	6.6	1.2	0.0	0.0	2.7	0.4	0.0	2.2	0.3	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.1	4.8	0.0	0.0	0.3	2.7	0.0	0.6	1.7	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	34.2	18.5	0.0	0.0	29.7	18.1	0.0	28.4	16.0	16.2
LnGrp LOS	A	A	C	B	A	A	C	B		C	B	B
Approach Vol, veh/h		4			879			887	A		671	
Approach Delay, s/veh		34.2			18.5			18.4			16.9	
Approach LOS		C			B			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.3	21.3		5.2	6.1	22.6		22.4				
Change Period (Y+Rc), s	4.6	5.8		4.6	4.6	5.8		4.6				
Max Green Setting (Gmax), s	5.0	28.4		31.0	5.5	27.9		31.0				
Max Q Clear Time (g_c+I1), s	3.5	10.2		2.1	2.7	7.3		14.5				
Green Ext Time (p_c), s	0.0	5.2		0.0	0.0	3.5		3.4				

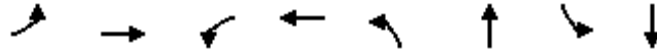
Intersection Summary

HCM 6th Ctrl Delay	18.1
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.  
Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Timings  
6: Haven Av. & Lemon Av.

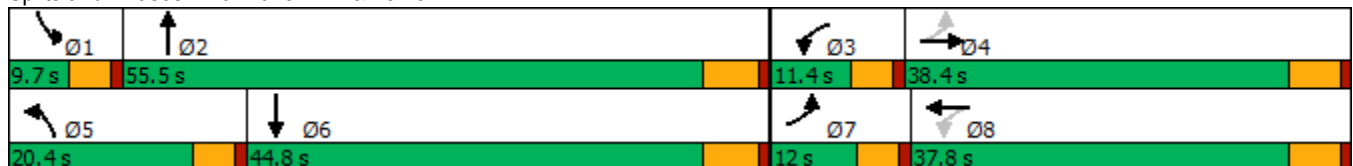


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↗	↖	↗	↖	↑↑↑	↖	↑↑↑
Traffic Volume (vph)	236	129	194	41	186	1668	22	1537
Future Volume (vph)	236	129	194	41	186	1668	22	1537
Turn Type	pm+pt	NA	pm+pt	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases	4		8					
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	38.4	9.6	36.4	9.6	24.8	9.6	23.8
Total Split (s)	12.0	38.4	11.4	37.8	20.4	55.5	9.7	44.8
Total Split (%)	10.4%	33.4%	9.9%	32.9%	17.7%	48.3%	8.4%	39.0%
Yellow Time (s)	3.6	4.4	3.6	4.4	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4	4.6	5.4	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	29.5	20.2	24.6	19.4	14.1	54.1	5.1	38.9
Actuated g/C Ratio	0.29	0.20	0.24	0.19	0.14	0.54	0.05	0.39
v/c Ratio	0.63	0.75	0.81	0.21	0.79	0.73	0.27	0.86
Control Delay	36.9	44.1	55.2	22.4	65.8	21.6	58.5	35.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.9	44.1	55.2	22.4	65.8	21.6	58.5	35.0
LOS	D	D	E	C	E	C	E	D
Approach Delay		40.8		46.3		25.6		35.3
Approach LOS		D		D		C		D

Intersection Summary

Cycle Length: 115	
Actuated Cycle Length: 100.7	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.86	
Intersection Signal Delay: 32.1	Intersection LOS: C
Intersection Capacity Utilization 90.6%	ICU Level of Service E
Analysis Period (min) 15	

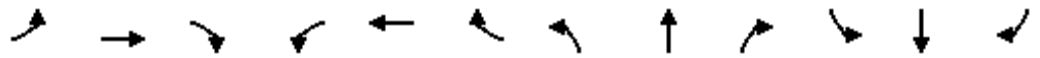
Splits and Phases: 6: Haven Av. & Lemon Av.



HCM 6th Signalized Intersection Summary  
6: Haven Av. & Lemon Av.

Chaffey College (JN 13236)

07/29/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	236	129	146	194	41	31	186	1668	236	22	1537	88
Future Volume (veh/h)	236	129	146	194	41	31	186	1668	236	22	1537	88
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	0.99		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1900	1841	1885	1826	1900	1870	1900	1885	1767	1885	1900
Adj Flow Rate, veh/h	246	134	90	202	43	29	194	1738	209	23	1601	92
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	0	4	1	5	0	2	0	1	9	1	0
Cap, veh/h	416	198	133	292	186	125	229	2305	276	41	1929	111
Arrive On Green	0.08	0.19	0.19	0.07	0.18	0.18	0.13	0.49	0.49	0.02	0.39	0.39
Sat Flow, veh/h	1781	1049	704	1795	1017	686	1781	4687	561	1682	4977	286
Grp Volume(v), veh/h	246	0	224	202	0	72	194	1280	667	23	1104	589
Grp Sat Flow(s),veh/h/ln	1781	0	1753	1795	0	1702	1781	1729	1790	1682	1716	1832
Q Serve(g_s), s	7.4	0.0	11.0	6.8	0.0	3.3	9.8	27.6	27.8	1.2	26.8	26.8
Cycle Q Clear(g_c), s	7.4	0.0	11.0	6.8	0.0	3.3	9.8	27.6	27.8	1.2	26.8	26.8
Prop In Lane	1.00		0.40	1.00		0.40	1.00		0.31	1.00		0.16
Lane Grp Cap(c), veh/h	416	0	332	292	0	311	229	1701	880	41	1330	710
V/C Ratio(X)	0.59	0.00	0.68	0.69	0.00	0.23	0.85	0.75	0.76	0.57	0.83	0.83
Avail Cap(c_a), veh/h	416	0	627	292	0	598	305	1863	964	93	1450	774
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.3	0.0	34.8	31.6	0.0	32.2	39.3	18.9	19.0	44.5	25.5	25.5
Incr Delay (d2), s/veh	1.5	0.0	2.4	5.8	0.0	0.4	12.3	1.6	3.2	4.5	3.9	7.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.0	4.7	1.4	0.0	1.4	4.9	10.0	10.8	0.6	10.6	11.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.8	0.0	37.2	37.4	0.0	32.5	51.7	20.5	22.2	49.1	29.4	32.6
LnGrp LOS	C	A	D	D	A	C	D	C	C	D	C	C
Approach Vol, veh/h		470			274			2141			1716	
Approach Delay, s/veh		34.4			36.1			23.9			30.8	
Approach LOS		C			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.8	51.2	11.4	22.9	16.4	41.6	12.0	22.3				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.4	4.6	5.8	4.6	5.4				
Max Green Setting (Gmax), s	5.1	49.7	6.8	33.0	15.8	39.0	7.4	32.4				
Max Q Clear Time (g_c+1), s	3.2	29.8	8.8	13.0	11.8	28.8	9.4	5.3				
Green Ext Time (p_c), s	0.0	12.9	0.0	1.1	0.1	6.9	0.0	0.3				

Intersection Summary

HCM 6th Ctrl Delay	28.3
HCM 6th LOS	C

Timings  
7: Haven Av. & I-210 WB Ramps

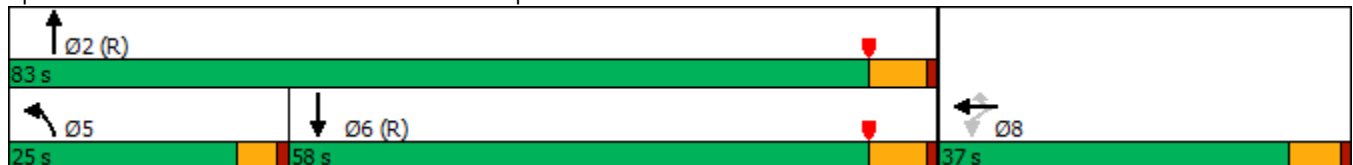


Lane Group	WBL	WBT	WBR	NBL	NBT	SBT
Lane Configurations	↶	↷	↷	↶↷	↶↷↷	↶↷↷
Traffic Volume (vph)	552	5	860	638	1678	1500
Future Volume (vph)	552	5	860	638	1678	1500
Turn Type	Perm	NA	Perm	Prot	NA	NA
Protected Phases		8		5	2	6
Permitted Phases	8		8			
Detector Phase	8	8	8	5	2	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.8	10.8	10.8	9.7	31.2	31.2
Total Split (s)	37.0	37.0	37.0	25.0	83.0	58.0
Total Split (%)	30.8%	30.8%	30.8%	20.8%	69.2%	48.3%
Yellow Time (s)	4.8	4.8	4.8	3.7	5.2	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	4.7	6.2	6.2
Lead/Lag				Lead		Lag
Lead-Lag Optimize?				Yes		Yes
Recall Mode	None	None	None	None	C-Max	C-Max
Act Effct Green (s)	31.2	31.2	31.2	20.3	76.8	51.8
Actuated g/C Ratio	0.26	0.26	0.26	0.17	0.64	0.43
v/c Ratio	1.18	1.25	1.08	1.16	0.54	1.12
Control Delay	143.3	166.8	102.9	133.6	12.7	91.2
Queue Delay	0.0	0.0	0.0	0.0	1.2	0.0
Total Delay	143.3	166.8	102.9	133.6	13.8	91.2
LOS	F	F	F	F	B	F
Approach Delay		138.1			46.8	91.2
Approach LOS		F			D	F

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 67 (56%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow  
 Natural Cycle: 120  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.25  
 Intersection Signal Delay: 85.2  
 Intersection LOS: F  
 Intersection Capacity Utilization 114.2%  
 ICU Level of Service H  
 Analysis Period (min) 15

Splits and Phases: 7: Haven Av. & I-210 WB Ramps



HCM 6th Signalized Intersection Summary  
7: Haven Av. & I-210 WB Ramps

Chaffey College (JN 13236)  
07/29/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↖	↔	↗	↖↗	↑↑↑			↑↑↑	
Traffic Volume (veh/h)	0	0	0	552	5	860	638	1678	0	0	1500	781
Future Volume (veh/h)	0	0	0	552	5	860	638	1678	0	0	1500	781
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
Work Zone On Approach				No			No				No	
Adj Sat Flow, veh/h/ln				1885	1352	1885	1885	1885	0	0	1885	1885
Adj Flow Rate, veh/h				791	0	413	679	1785	0	0	1596	672
Peak Hour Factor				0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %				1	37	1	1	1	0	0	1	1
Cap, veh/h				934	0	415	589	3294	0	0	1554	627
Arrive On Green				0.26	0.00	0.26	0.17	0.64	0.00	0.00	0.43	0.43
Sat Flow, veh/h				3591	0	1598	3483	5316	0	0	3769	1453
Grp Volume(v), veh/h				791	0	413	679	1785	0	0	1518	750
Grp Sat Flow(s),veh/h/ln				1795	0	1598	1742	1716	0	0	1716	1621
Q Serve(g_s), s				25.1	0.0	31.0	20.3	22.9	0.0	0.0	51.8	51.8
Cycle Q Clear(g_c), s				25.1	0.0	31.0	20.3	22.9	0.0	0.0	51.8	51.8
Prop In Lane				1.00		1.00	1.00		0.00	0.00		0.90
Lane Grp Cap(c), veh/h				934	0	415	589	3294	0	0	1481	700
V/C Ratio(X)				0.85	0.00	0.99	1.15	0.54	0.00	0.00	1.03	1.07
Avail Cap(c_a), veh/h				934	0	415	589	3294	0	0	1481	700
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.09	0.09	0.00	0.00	0.40	0.40
Uniform Delay (d), s/veh				42.1	0.0	44.3	49.9	11.9	0.0	0.0	34.1	34.1
Incr Delay (d2), s/veh				7.3	0.0	42.6	70.6	0.1	0.0	0.0	21.7	43.5
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				11.7	0.0	16.6	14.3	7.7	0.0	0.0	24.5	27.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				49.5	0.0	86.9	120.4	12.0	0.0	0.0	55.8	77.6
LnGrp LOS				D	A	F	F	B	A	A	F	F
Approach Vol, veh/h					1204			2464			2268	
Approach Delay, s/veh					62.3			41.9			63.0	
Approach LOS					E			D			E	
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		83.0			25.0	58.0		37.0				
Change Period (Y+Rc), s		6.2			* 4.7	6.2		5.8				
Max Green Setting (Gmax), s		76.8			* 20	51.8		31.2				
Max Q Clear Time (g_c+I1), s		24.9			22.3	53.8		33.0				
Green Ext Time (p_c), s		15.3			0.0	0.0		0.0				

Intersection Summary

HCM 6th Ctrl Delay	54.1
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Timings  
8: Haven Av. & I-210 EB Ramps

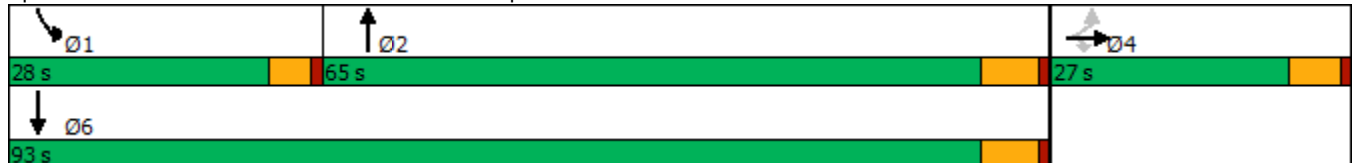


Lane Group	EBL	EBT	EBR	NBT	SBL	SBT
Lane Configurations	↶	↷	↷	↑↑↑	↶↷	↑↑↑
Traffic Volume (vph)	582	7	314	1734	779	1273
Future Volume (vph)	582	7	314	1734	779	1273
Turn Type	Perm	NA	Perm	NA	Prot	NA
Protected Phases		4		2	1	6
Permitted Phases	4		4			
Detector Phase	4	4	4	2	1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.8	10.8	10.8	30.2	9.7	31.2
Total Split (s)	27.0	27.0	27.0	65.0	28.0	93.0
Total Split (%)	22.5%	22.5%	22.5%	54.2%	23.3%	77.5%
Yellow Time (s)	4.8	4.8	4.8	5.2	3.7	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	6.2	4.7	6.2
Lead/Lag				Lag	Lead	
Lead-Lag Optimize?				Yes	Yes	
Recall Mode	None	None	None	None	None	None
Act Effect Green (s)	21.2	21.2	21.2	58.8	23.3	86.8
Actuated g/C Ratio	0.18	0.18	0.18	0.49	0.19	0.72
v/c Ratio	1.11	1.13	0.88	1.33dr	1.23	0.36
Control Delay	129.1	138.3	60.6	138.2	158.0	6.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.4
Total Delay	129.1	138.3	60.6	138.2	158.0	7.0
LOS	F	F	E	F	F	A
Approach Delay		111.0		138.2		64.3
Approach LOS		F		F		E

Intersection Summary





















Cycle Length: 120  
 Actuated Cycle Length: 120  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.24  
 Intersection Signal Delay: 107.8  
 Intersection LOS: F  
 Intersection Capacity Utilization 114.2%  
 ICU Level of Service H  
 Analysis Period (min) 15  
 dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 8: Haven Av. & I-210 EB Ramps



HCM 6th Signalized Intersection Summary  
 8: Haven Av. & I-210 EB Ramps

Chaffey College (JN 13236)  
 07/29/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	582	7	314	0	0	0	0	1734	1114	779	1273	0
Future Volume (veh/h)	582	7	314	0	0	0	0	1734	1114	779	1273	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1856				0	1885	1885	1885	1885	0
Adj Flow Rate, veh/h	647	0	57				0	1845	885	829	1354	0
Peak Hour Factor	0.94	0.94	0.94				0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	3				0	1	1	1	1	0
Cap, veh/h	639	0	278				0	1727	733	676	3723	0
Arrive On Green	0.18	0.00	0.18				0.00	0.49	0.49	0.19	0.72	0.00
Sat Flow, veh/h	3619	0	1572				0	3695	1496	3483	5316	0
Grp Volume(v), veh/h	647	0	57				0	1789	941	829	1354	0
Grp Sat Flow(s),veh/h/ln	1810	0	1572				0	1716	1591	1742	1716	0
Q Serve(g_s), s	21.2	0.0	3.7				0.0	58.8	58.8	23.3	11.9	0.0
Cycle Q Clear(g_c), s	21.2	0.0	3.7				0.0	58.8	58.8	23.3	11.9	0.0
Prop In Lane	1.00		1.00				0.00		0.94	1.00		0.00
Lane Grp Cap(c), veh/h	639	0	278				0	1681	779	676	3723	0
V/C Ratio(X)	1.01	0.00	0.21				0.00	1.06	1.21	1.23	0.36	0.00
Avail Cap(c_a), veh/h	639	0	278				0	1681	779	676	3723	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	49.4	0.0	42.2				0.0	30.6	30.6	48.3	6.2	0.0
Incr Delay (d2), s/veh	38.6	0.0	0.4				0.0	41.3	105.2	114.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.7	0.0	1.4				0.0	31.8	43.3	20.5	3.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	88.0	0.0	42.6				0.0	71.9	135.8	162.8	6.3	0.0
LnGrp LOS	F	A	D				A	F	F	F	A	A
Approach Vol, veh/h		704						2730			2183	
Approach Delay, s/veh		84.3						93.9			65.7	
Approach LOS		F						F			E	
Timer - Assigned Phs	1	2	4	6								
Phs Duration (G+Y+Rc), s	28.0	65.0	27.0	93.0								
Change Period (Y+Rc), s	* 4.7	6.2	5.8	6.2								
Max Green Setting (Gmax), s	* 23	58.8	21.2	86.8								
Max Q Clear Time (g_c+I1), s	25.3	60.8	23.2	13.9								
Green Ext Time (p_c), s	0.0	0.0	0.0	9.7								

Intersection Summary

HCM 6th Ctrl Delay	81.7
HCM 6th LOS	F

Notes

User approved volume balancing among the lanes for turning movement.  
 \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection						
Int Delay, s/veh	0.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔		↔	↑	↔	↔
Traffic Vol, veh/h	573	11	11	435	8	8
Future Vol, veh/h	573	11	11	435	8	8
Conflicting Peds, #/hr	0	3	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	0
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	2	0	0	1	0	0
Mvmt Flow	699	13	13	530	10	10

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	715	0	1265 709
Stage 1	-	-	-	-	709 -
Stage 2	-	-	-	-	556 -
Critical Hdwy	-	-	4.1	-	6.4 6.2
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	-	-	2.2	-	3.5 3.3
Pot Cap-1 Maneuver	-	-	895	-	189 438
Stage 1	-	-	-	-	491 -
Stage 2	-	-	-	-	578 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	892	-	186 437
Mov Cap-2 Maneuver	-	-	-	-	390 -
Stage 1	-	-	-	-	490 -
Stage 2	-	-	-	-	569 -

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	14
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	390	437	-	-	892	-
HCM Lane V/C Ratio	0.025	0.022	-	-	0.015	-
HCM Control Delay (s)	14.5	13.4	-	-	9.1	-
HCM Lane LOS	B	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-

Intersection						
Int Delay, s/veh	0.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	571	11	11	437	8	8
Future Vol, veh/h	571	11	11	437	8	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	60	-	0	-
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	2	0	0	1	0	0
Mvmt Flow	688	13	13	527	10	10

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	701	0	1248
Stage 1	-	-	-	-	695
Stage 2	-	-	-	-	553
Critical Hdwy	-	-	4.1	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	-	-	2.2	-	3.5
Pot Cap-1 Maneuver	-	-	905	-	193
Stage 1	-	-	-	-	499
Stage 2	-	-	-	-	580
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	905	-	190
Mov Cap-2 Maneuver	-	-	-	-	396
Stage 1	-	-	-	-	499
Stage 2	-	-	-	-	572

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	14
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	420	-	-	905	-
HCM Lane V/C Ratio	0.046	-	-	0.015	-
HCM Control Delay (s)	14	-	-	9	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection						
Int Delay, s/veh	0.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑		↑	↑	↑	↑
Traffic Vol, veh/h	568	11	11	440	8	8
Future Vol, veh/h	568	11	11	440	8	8
Conflicting Peds, #/hr	0	2	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	0	0	1	0	0
Mvmt Flow	653	13	13	506	9	9

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	668	0	1194
Stage 1	-	-	-	-	662
Stage 2	-	-	-	-	532
Critical Hdwy	-	-	4.1	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	-	-	2.2	-	3.5
Pot Cap-1 Maneuver	-	-	931	-	208
Stage 1	-	-	-	-	517
Stage 2	-	-	-	-	593
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	929	-	205
Mov Cap-2 Maneuver	-	-	-	-	410
Stage 1	-	-	-	-	516
Stage 2	-	-	-	-	585

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	13.6
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	435	-	-	929	-
HCM Lane V/C Ratio	0.042	-	-	0.014	-
HCM Control Delay (s)	13.6	-	-	8.9	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection						
Int Delay, s/veh	0.6					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔		↔	↑	↔	↔
Traffic Vol, veh/h	566	11	23	442	8	29
Future Vol, veh/h	566	11	23	442	8	29
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	170	-	0	50
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	0	0	1	0	0
Mvmt Flow	615	12	25	480	9	32

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	627	0	1151 621
Stage 1	-	-	-	-	621 -
Stage 2	-	-	-	-	530 -
Critical Hdwy	-	-	4.1	-	6.4 6.2
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	-	-	2.2	-	3.5 3.3
Pot Cap-1 Maneuver	-	-	965	-	221 491
Stage 1	-	-	-	-	540 -
Stage 2	-	-	-	-	594 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	965	-	215 491
Mov Cap-2 Maneuver	-	-	-	-	421 -
Stage 1	-	-	-	-	540 -
Stage 2	-	-	-	-	579 -

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	13
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	421	491	-	-	965	-
HCM Lane V/C Ratio	0.021	0.064	-	-	0.026	-
HCM Control Delay (s)	13.7	12.8	-	-	8.8	-
HCM Lane LOS	B	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	0.2	-	-	0.1	-

**APPENDIX 6.3:**

**HORIZON YEAR (2051) WITHOUT PROJECT CONDITIONS TRAFFIC SIGNAL WARRANT  
ANALYSIS WORKSHEETS**

This Page Intentionally Left Blank



**Figure 4C-4. Warrant 3, Peak Hour (70% Factor)**

**(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)**

Traffic Conditions = **2051 Without Project Conditions - Weekday PM Peak Hour**

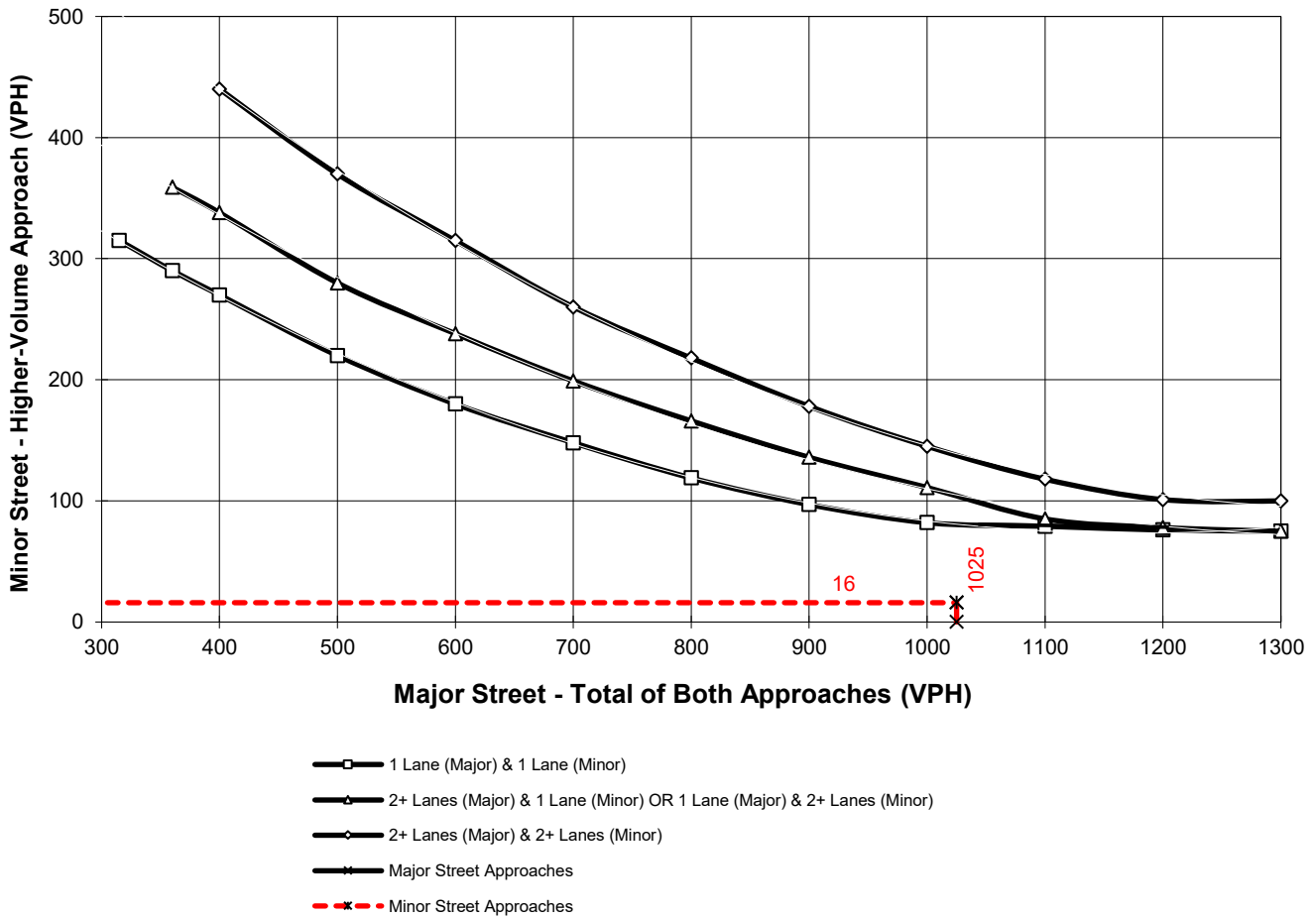
Major Street Name = **Wilson Av.**

Total of Both Approaches (VPH) = **1025**  
 Number of Approach Lanes Major Street = **1**

Minor Street Name = **Driveway 2**

High Volume Approach (VPH) = **16**  
 Number of Approach Lanes Minor Street = **1**

**SIGNAL WARRANT NOT SATISFIED**



\*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

### Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **2051 Without Project Conditions - Weekday PM Peak Hour**

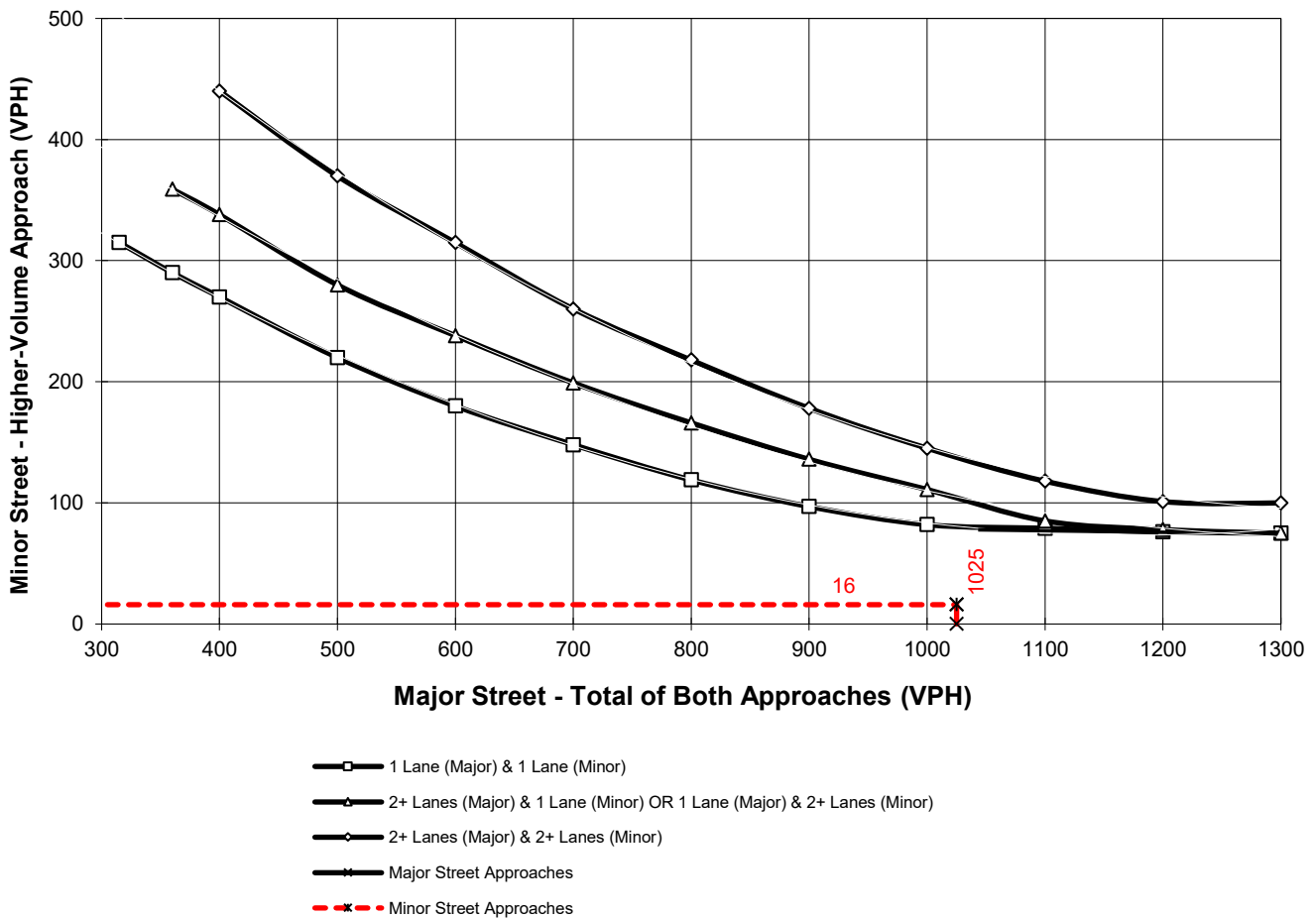
Major Street Name = **Wilson Av.**

Total of Both Approaches (VPH) = **1025**  
 Number of Approach Lanes Major Street = **1**

Minor Street Name = **Driveway 3**

High Volume Approach (VPH) = **16**  
 Number of Approach Lanes Minor Street = **1**

**SIGNAL WARRANT NOT SATISFIED**



\*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

### Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **2051 Without Project Conditions - Weekday PM Peak Hour**

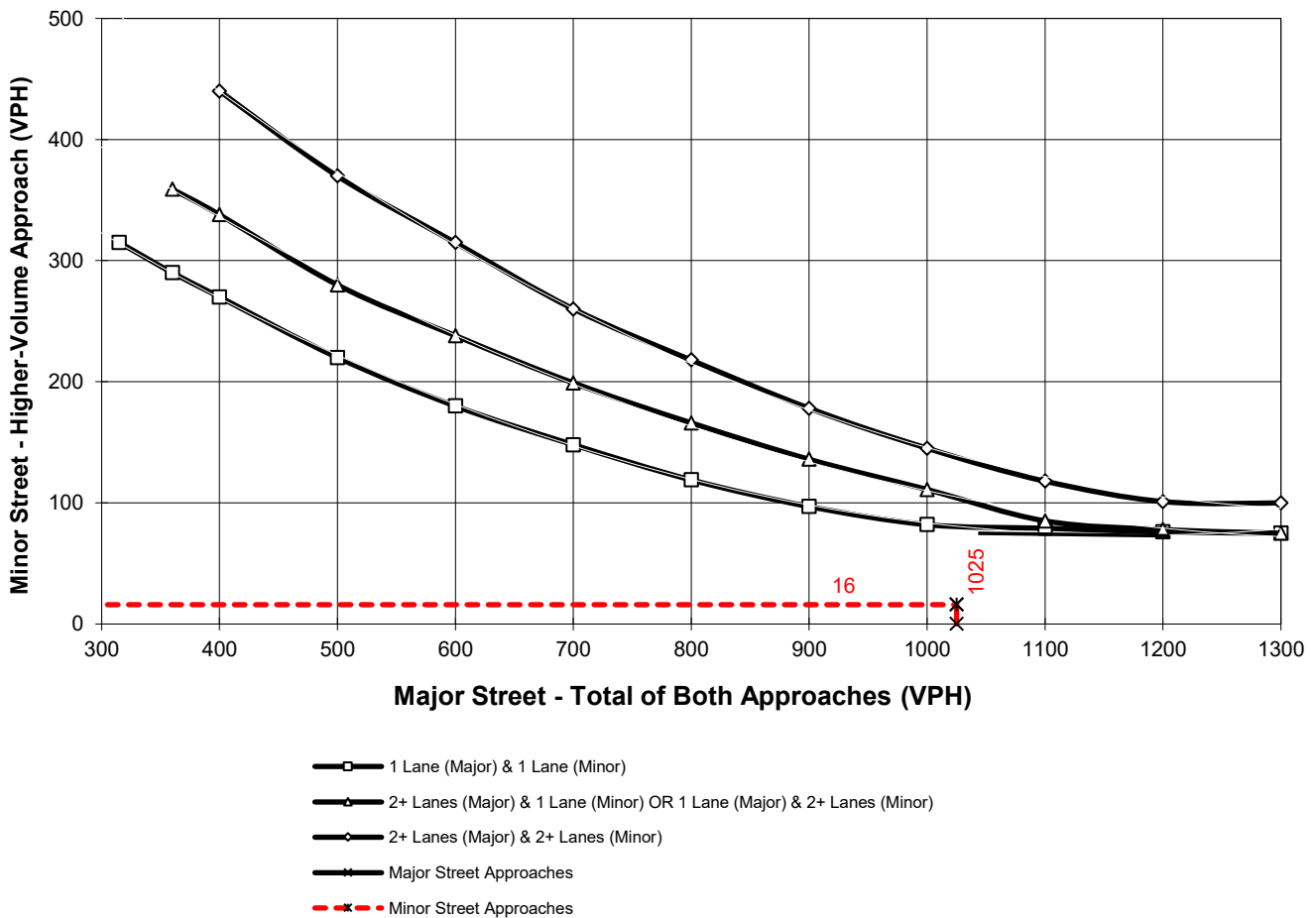
Major Street Name = **Wilson Av.**

Total of Both Approaches (VPH) = **1025**  
 Number of Approach Lanes Major Street = **1**

Minor Street Name = **Driveway 4**

High Volume Approach (VPH) = **16**  
 Number of Approach Lanes Minor Street = **1**

**SIGNAL WARRANT NOT SATISFIED**



\*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

### Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **2051 Without Project Conditions - Weekday PM Peak Hour**

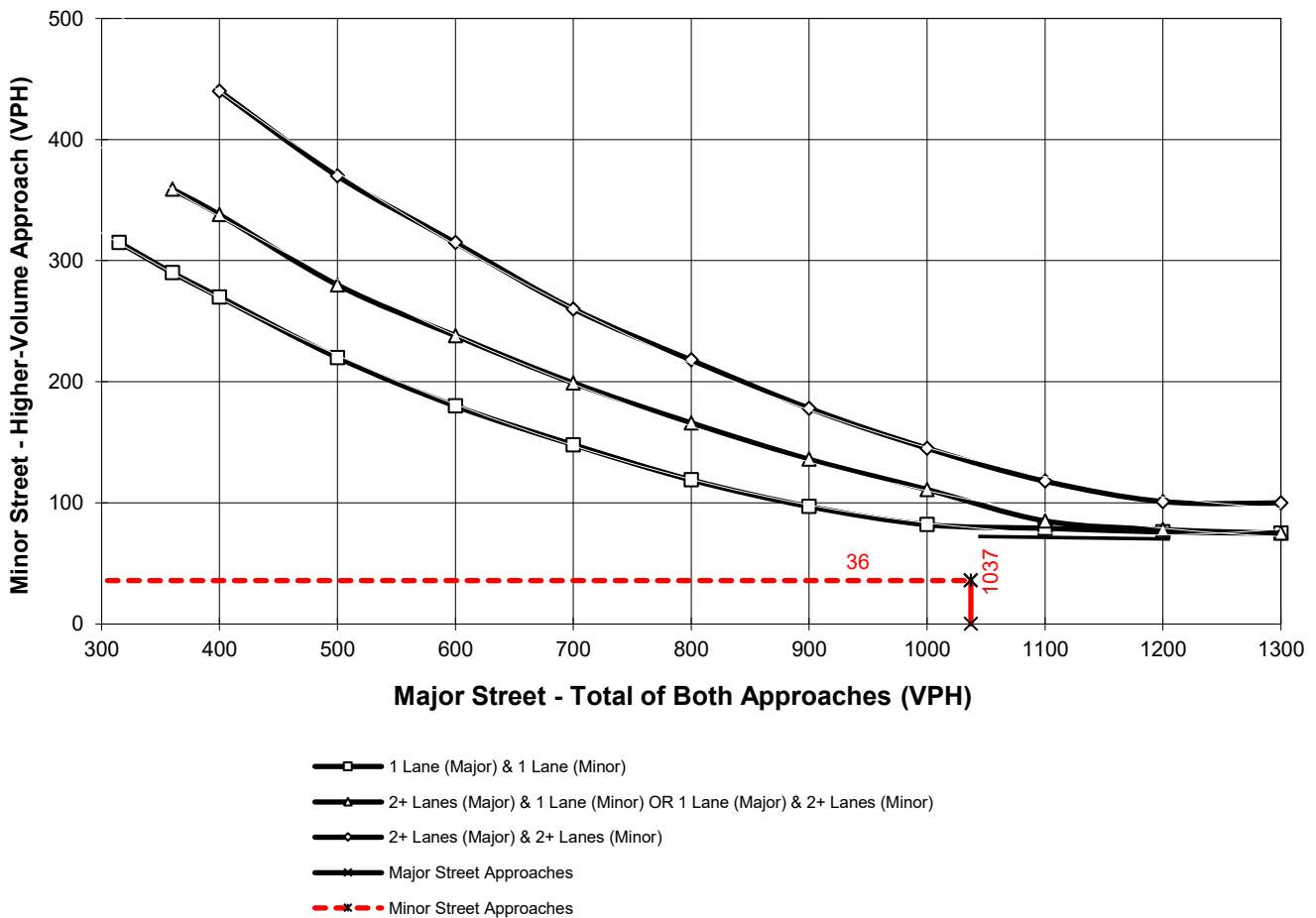
Major Street Name = **Wilson Av.**

Total of Both Approaches (VPH) = **1037**  
 Number of Approach Lanes Major Street = **1**

Minor Street Name = **College Dr.**

High Volume Approach (VPH) = **36**  
 Number of Approach Lanes Minor Street = **1**

**SIGNAL WARRANT NOT SATISFIED**



\*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

**APPENDIX 6.4:**

**HORIZON YEAR (2051) WITH PROJECT CONDITIONS TRAFFIC SIGNAL WARRANT  
ANALYSIS WORKSHEETS**

This Page Intentionally Left Blank

### Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **2051 With Project Conditions - Weekday PM Peak Hour**

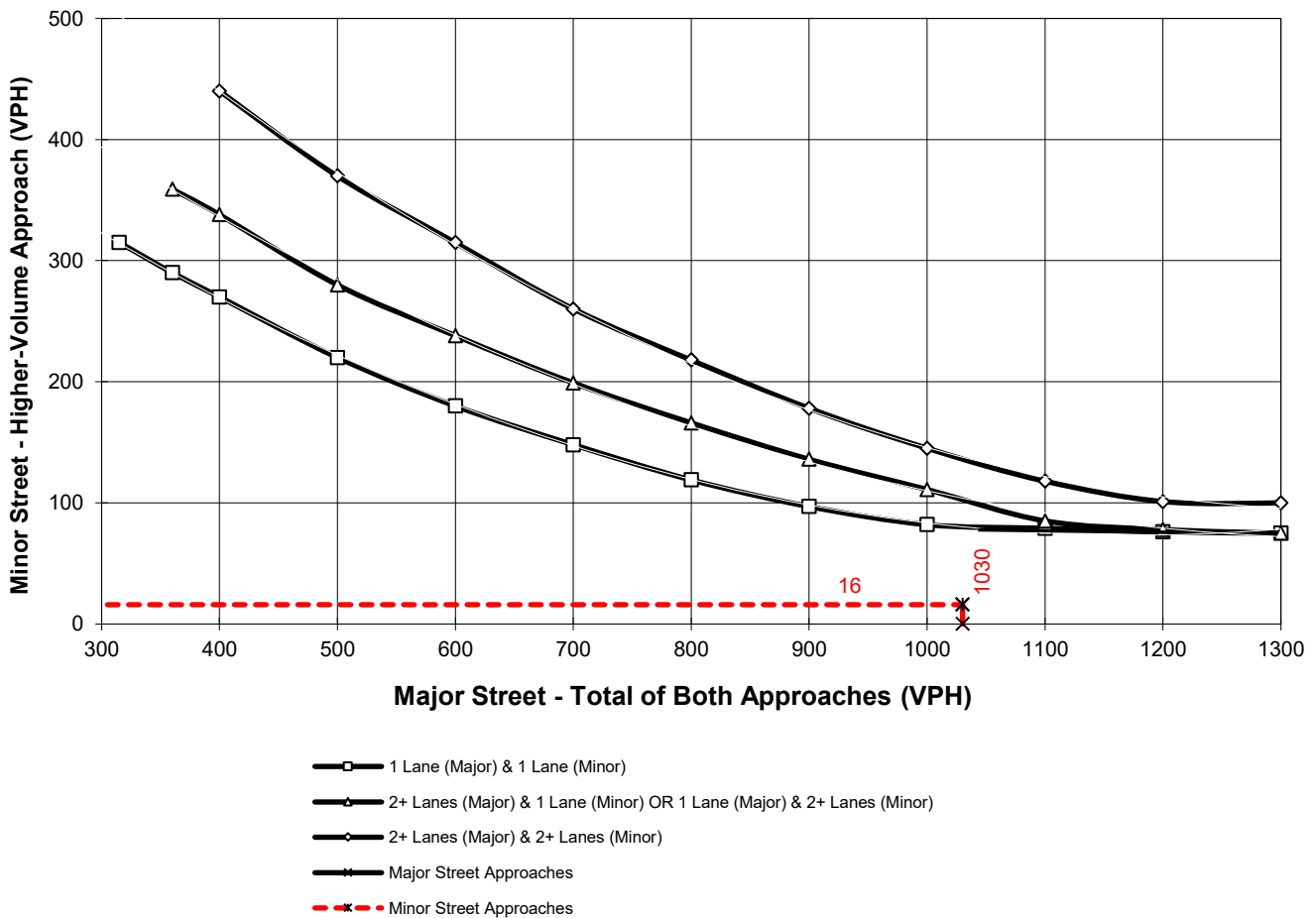
Major Street Name = **Wilson Av.**

Total of Both Approaches (VPH) = **1030**  
 Number of Approach Lanes Major Street = **1**

Minor Street Name = **Driveway 2**

High Volume Approach (VPH) = **16**  
 Number of Approach Lanes Minor Street = **1**

**SIGNAL WARRANT NOT SATISFIED**



\*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

**Figure 4C-4. Warrant 3, Peak Hour (70% Factor)**

**(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)**

Traffic Conditions = **2051 With Project Conditions - Weekday PM Peak Hour**

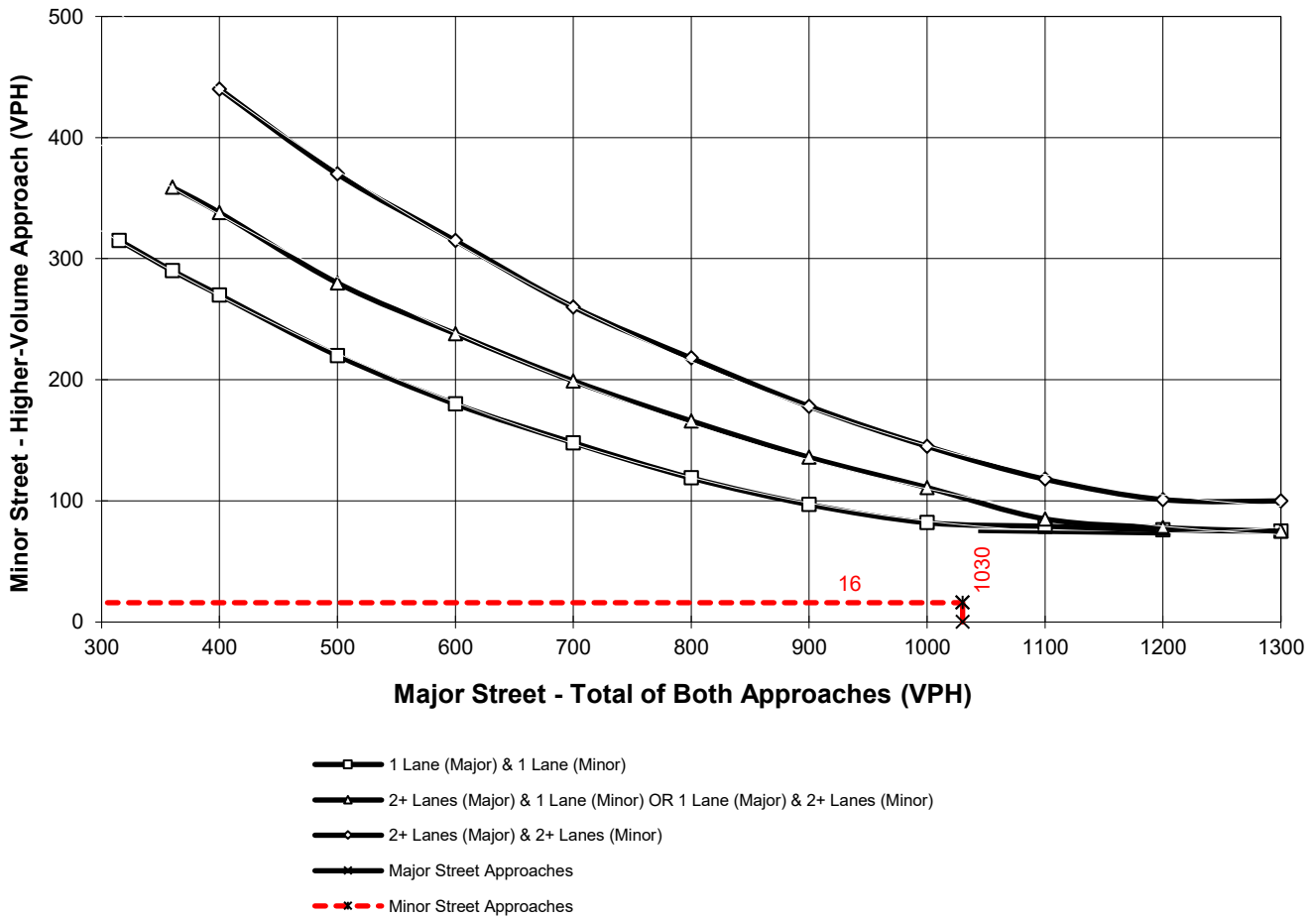
Major Street Name = **Wilson Av.**

Total of Both Approaches (VPH) = **1030**  
 Number of Approach Lanes Major Street = **1**

Minor Street Name = **Driveway 3**

High Volume Approach (VPH) = **16**  
 Number of Approach Lanes Minor Street = **1**

**SIGNAL WARRANT NOT SATISFIED**



\*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane





### Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **2051 With Project Conditions - Weekday PM Peak Hour**

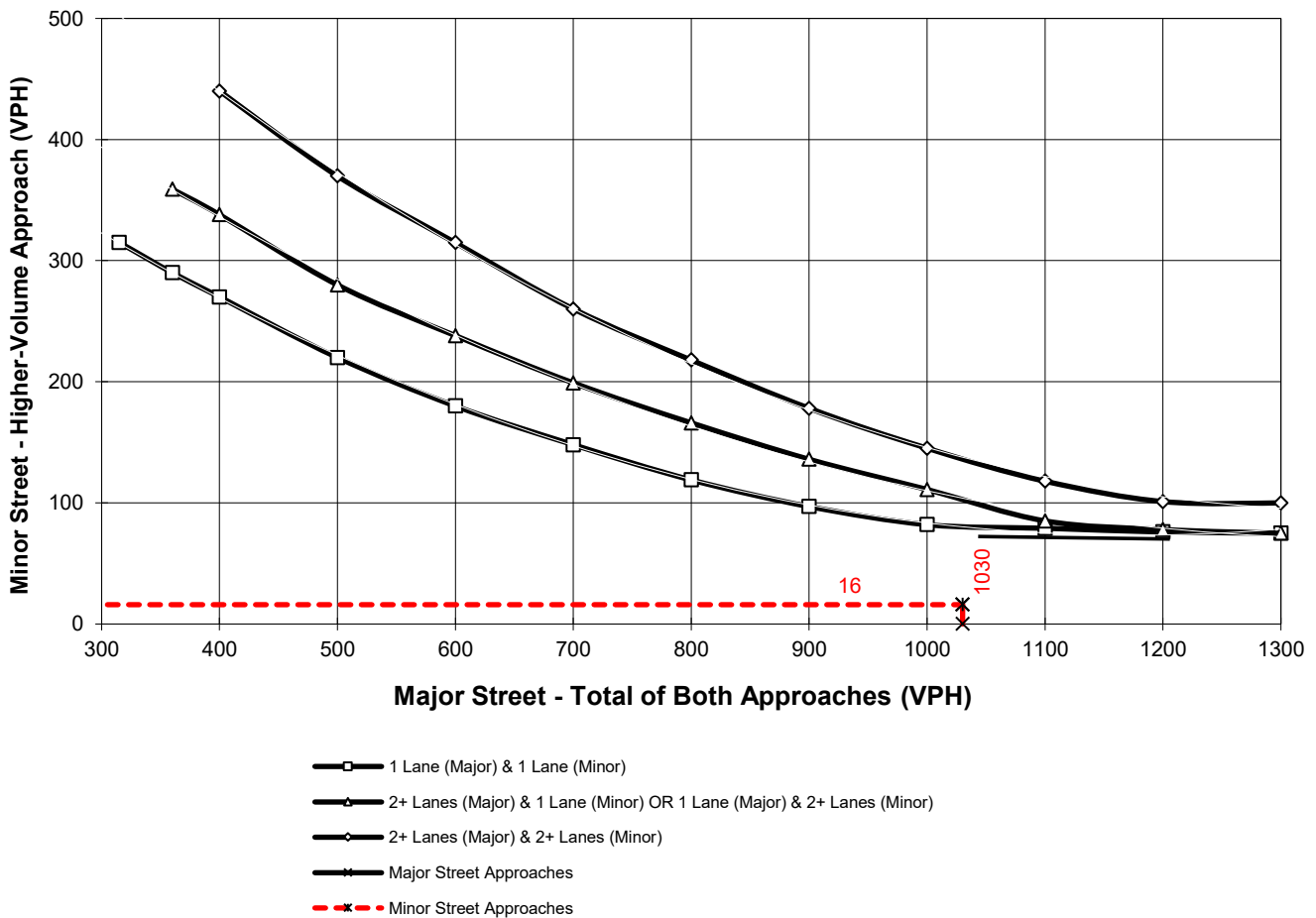
Major Street Name = **Wilson Av.**

Total of Both Approaches (VPH) = **1030**  
 Number of Approach Lanes Major Street = **1**

Minor Street Name = **Driveway 4**

High Volume Approach (VPH) = **16**  
 Number of Approach Lanes Minor Street = **1**

**SIGNAL WARRANT NOT SATISFIED**



\*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

### Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **2051 With Project Conditions - Weekday PM Peak Hour**

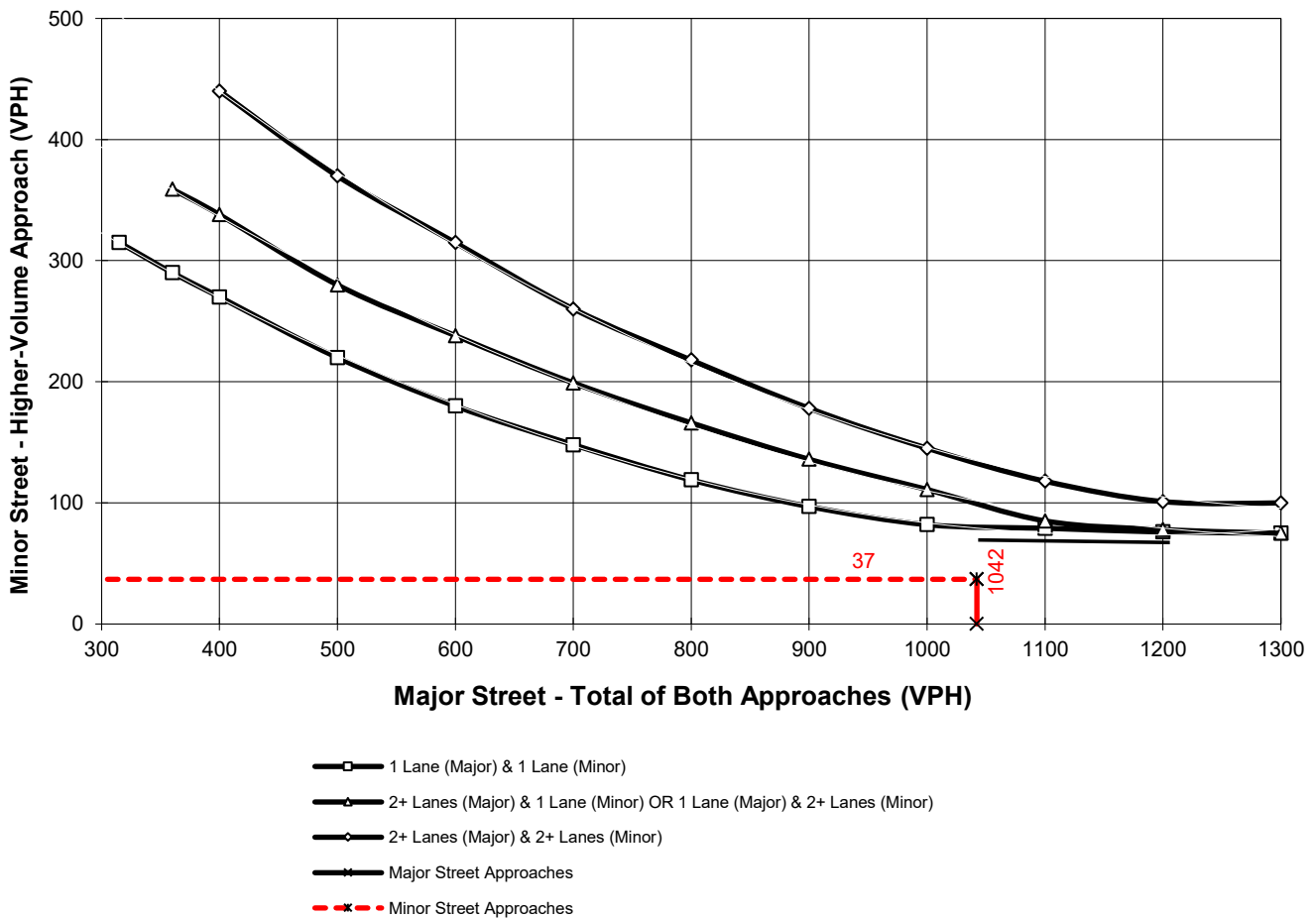
Major Street Name = **Wilson Av.**

Total of Both Approaches (VPH) = **1042**  
 Number of Approach Lanes Major Street = **1**

Minor Street Name = **College Dr.**

High Volume Approach (VPH) = **37**  
 Number of Approach Lanes Minor Street = **1**

**SIGNAL WARRANT NOT SATISFIED**



\*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

**APPENDIX 6.5:**

**HORIZON YEAR (2051) WITH PROJECT CONDITIONS INTERSECTION OPERATIONS  
ANALYSIS WORKSHEETS WITH IMPROVEMENTS**

This Page Intentionally Left Blank

Timings  
8: Haven Av. & I-210 EB Ramps

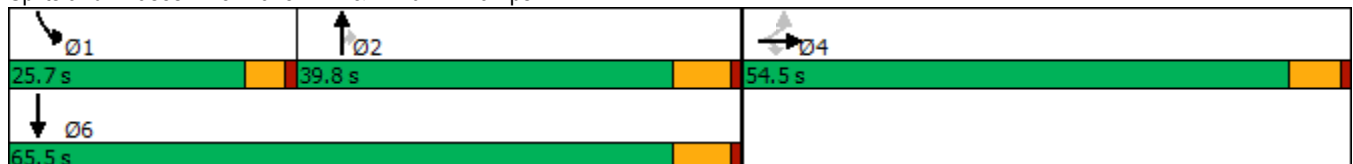


Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	1408	5	338	908	559	588	1094
Future Volume (vph)	1408	5	338	908	559	588	1094
Turn Type	Perm	NA	Perm	NA	Perm	Prot	NA
Protected Phases		4		2		1	6
Permitted Phases	4		4		2		
Detector Phase	4	4	4	2	2	1	6
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.8	10.8	10.8	30.2	30.2	9.7	31.2
Total Split (s)	54.5	54.5	54.5	39.8	39.8	25.7	65.5
Total Split (%)	45.4%	45.4%	45.4%	33.2%	33.2%	21.4%	54.6%
Yellow Time (s)	4.8	4.8	4.8	5.2	5.2	3.7	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	6.2	6.2	4.7	6.2
Lead/Lag				Lag	Lag	Lead	
Lead-Lag Optimize?				Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None
Act Effect Green (s)	48.7	48.7	48.7	33.6	33.6	21.0	59.3
Actuated g/C Ratio	0.41	0.41	0.41	0.28	0.28	0.18	0.49
v/c Ratio	1.03	1.01	0.43	1.01	0.64	1.00	0.43
Control Delay	76.4	71.0	21.6	75.4	7.4	86.0	20.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.5
Total Delay	76.4	71.0	21.6	75.4	7.4	86.0	20.5
LOS	E	E	C	E	A	F	C
Approach Delay		64.7		49.5			43.4
Approach LOS		E		D			D

Intersection Summary





















Cycle Length: 120  
 Actuated Cycle Length: 120  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.03  
 Intersection Signal Delay: 52.8  
 Intersection LOS: D  
 Intersection Capacity Utilization 159.6%  
 ICU Level of Service H  
 Analysis Period (min) 15

Splits and Phases: 8: Haven Av. & I-210 EB Ramps



HCM 6th Signalized Intersection Summary  
8: Haven Av. & I-210 EB Ramps

Chaffey College (JN 13236)  
07/29/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1408	5	338	0	0	0	0	908	559	588	1094	0
Future Volume (veh/h)	1408	5	338	0	0	0	0	908	559	588	1094	0
Initial Q (Qb), veh	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
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1352	1781				0	1841	1856	1885	1856	0
Adj Flow Rate, veh/h	1512	0	28				0	966	300	626	1164	0
Peak Hour Factor	0.94	0.94	0.94				0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	37	8				0	4	3	1	3	0
Cap, veh/h	1450	0	614				0	1024	437	630	2744	0
Arrive On Green	0.41	0.00	0.41				0.00	0.28	0.28	0.18	0.49	0.00
Sat Flow, veh/h	3563	0	1510				0	3681	1572	3591	5567	0
Grp Volume(v), veh/h	1512	0	28				0	966	300	626	1164	0
Grp Sat Flow(s),veh/h/ln	1781	0	1510				0	1841	1572	1795	1856	0
Q Serve(g_s), s	48.7	0.0	1.3				0.0	30.7	20.4	20.8	16.0	0.0
Cycle Q Clear(g_c), s	48.7	0.0	1.3				0.0	30.7	20.4	20.8	16.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	1450	0	614				0	1024	437	630	2744	0
V/C Ratio(X)	1.04	0.00	0.05				0.00	0.94	0.69	0.99	0.42	0.00
Avail Cap(c_a), veh/h	1450	0	614				0	1033	441	630	2758	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	35.5	0.0	21.5				0.0	42.3	38.5	49.3	19.5	0.0
Incr Delay (d2), s/veh	35.7	0.0	0.0				0.0	16.0	4.0	34.1	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	26.9	0.0	0.5				0.0	15.7	8.1	12.0	6.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	71.2	0.0	21.5				0.0	58.3	42.6	83.4	19.5	0.0
LnGrp LOS	F	A	C				A	E	D	F	B	A
Approach Vol, veh/h		1540						1266			1790	
Approach Delay, s/veh		70.3						54.6			41.9	
Approach LOS		E						D			D	
Timer - Assigned Phs	1	2	4	6								
Phs Duration (G+Y+Rc), s	25.7	39.5	54.5	65.2								
Change Period (Y+Rc), s	* 4.7	6.2	5.8	6.2								
Max Green Setting (Gmax), s	* 21	33.6	48.7	59.3								
Max Q Clear Time (g_c+I1), s	22.8	32.7	50.7	18.0								
Green Ext Time (p_c), s	0.0	0.6	0.0	7.5								

Intersection Summary

HCM 6th Ctrl Delay	54.9
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
8: Haven Av. & I-210 EB Ramps



Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	582	7	314	1734	1114	779	1273
Future Volume (vph)	582	7	314	1734	1114	779	1273
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)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.8	10.8	10.8	30.2	30.2	9.7	31.2
Total Split (s)	26.0	26.0	26.0	63.0	63.0	31.0	94.0
Total Split (%)	21.7%	21.7%	21.7%	52.5%	52.5%	25.8%	78.3%
Yellow Time (s)	4.8	4.8	4.8	5.2	5.2	3.7	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	6.2	6.2	4.7	6.2
Lead/Lag				Lag	Lag	Lead	
Lead-Lag Optimize?				Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None
Act Effct Green (s)	20.2	20.2	20.2	56.8	56.8	26.3	87.8
Actuated g/C Ratio	0.17	0.17	0.17	0.47	0.47	0.22	0.73
v/c Ratio	1.05	1.02	0.77	1.11	1.06	1.06	0.33
Control Delay	111.6	104.4	46.6	89.8	65.9	93.9	5.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.4
Total Delay	111.6	104.4	46.6	89.8	65.9	93.9	6.3
LOS	F	F	D	F	E	F	A
Approach Delay		89.0		80.4			39.6
Approach LOS		F		F			D

Intersection Summary





















Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.11	
Intersection Signal Delay: 67.3	Intersection LOS: E
Intersection Capacity Utilization 124.8%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 8: Haven Av. & I-210 EB Ramps



HCM 6th Signalized Intersection Summary  
 8: Haven Av. & I-210 EB Ramps

Chaffey College (JN 13236)  
 07/29/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	582	7	314	0	0	0	0	1734	1114	779	1273	0
Future Volume (veh/h)	582	7	314	0	0	0	0	1734	1114	779	1273	0
Initial Q (Qb), veh	0	0	0					0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00					1.00	0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00					1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1856					0	1885	1885	1885	1885
Adj Flow Rate, veh/h	647	0	57					0	1845	566	829	1354
Peak Hour Factor	0.94	0.94	0.94					0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	3					0	1	1	1	1
Cap, veh/h	609	0	265					0	1785	745	787	4138
Arrive On Green	0.17	0.00	0.17					0.00	0.47	0.47	0.22	0.73
Sat Flow, veh/h	3619	0	1572					0	3770	1575	3591	5656
Grp Volume(v), veh/h	647	0	57					0	1845	566	829	1354
Grp Sat Flow(s),veh/h/ln	1810	0	1572					0	1885	1575	1795	1885
Q Serve(g_s), s	20.2	0.0	3.8					0.0	56.8	35.5	26.3	10.1
Cycle Q Clear(g_c), s	20.2	0.0	3.8					0.0	56.8	35.5	26.3	10.1
Prop In Lane	1.00		1.00					0.00		1.00	1.00	0.00
Lane Grp Cap(c), veh/h	609	0	265					0	1785	745	787	4138
V/C Ratio(X)	1.06	0.00	0.22					0.00	1.03	0.76	1.05	0.33
Avail Cap(c_a), veh/h	609	0	265					0	1785	745	787	4138
HCM Platoon Ratio	1.00	1.00	1.00					1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00					0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	49.9	0.0	43.1					0.0	31.6	26.0	46.8	5.7
Incr Delay (d2), s/veh	54.0	0.0	0.4					0.0	30.6	4.4	47.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0					0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.4	0.0	1.5					0.0	31.2	13.3	16.5	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	103.9	0.0	43.5					0.0	62.2	30.3	93.9	5.7
LnGrp LOS	F	A	D					A	F	C	F	A
Approach Vol, veh/h		704						2411			2183	
Approach Delay, s/veh		99.0						54.7			39.2	
Approach LOS		F						D			D	
Timer - Assigned Phs	1	2	4	6								
Phs Duration (G+Y+Rc), s	31.0	63.0	26.0	94.0								
Change Period (Y+Rc), s	* 4.7	6.2	5.8	6.2								
Max Green Setting (Gmax), s	* 26	56.8	20.2	87.8								
Max Q Clear Time (g_c+I1), s	28.3	58.8	22.2	12.1								
Green Ext Time (p_c), s	0.0	0.0	0.0	9.8								
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			54.2									
HCM 6th LOS			D									
<b>Notes</b>												
User approved volume balancing among the lanes for turning movement.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												