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# **Ramona – Indian Warehouse Project (PR 20-05212)**

**TRAFFIC ANALYSIS  
CITY OF PERRIS**

PREPARED BY:

Aric Evatt, PTP  
aevatt@urbanxroads.com

Robert Vu, PE  
rvu@urbanxroads.com

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## 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>IX</b>
<b>LIST OF ABBREVIATED TERMS</b> .....	<b>XI</b>
<b>1 INTRODUCTION</b> .....	<b>1</b>
1.1 Summary of Findings.....	1
1.2 Project Overview.....	3
1.3 Analysis Scenarios.....	3
1.4 Study Area.....	6
1.5 Deficiencies.....	8
1.6 Recommendations.....	9
1.7 On-Site Roadway Improvements.....	13
1.8 Site Access Improvements.....	13
1.9 Queuing Analysis at the Project Driveways.....	17
1.10 Truck Access.....	18
1.11 VMT Analysis.....	18
<b>2 METHODOLOGIES</b> .....	<b>21</b>
2.1 Level of Service.....	21
2.2 Intersection Capacity Analysis.....	21
2.3 Traffic Signal Warrant Analysis Methodology.....	23
2.4 Minimum Level of Service (LOS).....	24
2.5 Deficiency Criteria.....	24
2.6 Project Fair Share Calculation Methodology.....	25
<b>3 AREA CONDITIONS</b> .....	<b>27</b>
3.1 Existing Circulation Network.....	27
3.2 General Plan Circulation Elements.....	27
3.3 Truck Routes.....	27
3.4 Transit Service.....	27
3.5 Bicycle & Pedestrian Facilities.....	36
3.6 Existing Traffic Counts.....	36
3.7 Intersection Operations Analysis.....	40
3.8 Traffic Signal Warrants Analysis.....	42
<b>4 PROJECTED FUTURE TRAFFIC</b> .....	<b>43</b>
4.1 Project Trip Generation.....	43
4.2 Project Trip Distribution.....	45
4.3 Modal Split.....	45
4.4 Project Trip Assignment.....	45
4.5 Background Traffic.....	51
4.6 Cumulative Development Traffic.....	51
4.7 Near-Term Traffic Conditions.....	55
4.8 Horizon Year (2040) Conditions.....	58
<b>5 E+P TRAFFIC CONDITIONS</b> .....	<b>61</b>

5.1 Roadway Improvements ..... 61

5.2 E+P Traffic Volume Forecasts..... 61

5.3 Intersection Operations Analysis ..... 61

5.4 Traffic Signal Warrants Analysis..... 63

**6 EAC AND EAPC (2023) TRAFFIC CONDITIONS ..... 65**

6.1 Roadway Improvements ..... 65

6.2 EAC (2023) Traffic Volume Forecasts..... 65

6.3 EAPC (2023) Traffic Volume Forecasts..... 65

6.4 Intersection Operations Analysis ..... 68

6.5 Traffic Signal Warrants Analysis..... 68

6.6 Recommended Improvements ..... 69

**7 EAC AND EAPC (2025) TRAFFIC CONDITIONS ..... 71**

7.1 Roadway Improvements ..... 71

7.2 EAC (2025) Traffic Volume Forecasts..... 71

7.3 EAPC (2025) Traffic Volume Forecasts..... 71

7.4 Intersection Operations Analysis ..... 74

7.5 Traffic Signal Warrants Analysis..... 74

7.6 Recommended Improvements ..... 75

**8 HORIZON YEAR (2040) TRAFFIC CONDITIONS ..... 77**

8.1 Roadway Improvements ..... 77

8.2 Horizon Year (2040) Without Project Traffic Volume Forecasts..... 77

8.3 Horizon Year (2040) With Project Traffic Volume Forecasts ..... 77

8.4 Intersection Operations Analysis ..... 80

8.5 Traffic Signal Warrants Analysis..... 80

8.6 Recommended Improvements ..... 80

**9 LOCAL AND REGIONAL FUNDING MECHANISMS ..... 83**

9.1 Transportation Uniform Mitigation Fee (TUMF) Program..... 83

9.2 City of Perris Development Impact Fee (DIF) Program ..... 83

9.3 North Perris Road and Bridge Benefit District (NPRBBD) ..... 84

9.4 Fair Share Contribution ..... 85

**10 REFERENCES..... 87**



## **APPENDICES**

- APPENDIX 1.1: TRAFFIC STUDY SCOPING AGREEMENT**
- APPENDIX 1.2: SITE ADJACENT QUEUING ANALYSIS**
- APPENDIX 3.1: EXISTING TRAFFIC COUNTS – MARCH 2020**
- APPENDIX 3.2: EXISTING (2021) CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS**
- APPENDIX 4.1: POST-PROCESSING WORKSHEETS**
- APPENDIX 5.1: E+P CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS**
- APPENDIX 6.1: EAC (2023) CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS**
- APPENDIX 6.2: EAPC (2023) CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS**
- APPENDIX 6.3: EAC (2023) CONDITIONS TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS**
- APPENDIX 6.4: EAPC (2023) CONDITIONS TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS**
- APPENDIX 6.5: EAPC (2023) CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS WITH IMPROVEMENTS**
- APPENDIX 7.1: EAC (2025) CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS**
- APPENDIX 7.2: EAPC (2025) CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS**
- APPENDIX 7.3: EAC (2025) CONDITIONS TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS**
- APPENDIX 7.4: EAPC (2025) CONDITIONS TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS**
- APPENDIX 7.5: EAPC (2025) CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS WITH IMPROVEMENTS**
- APPENDIX 8.1: HORIZON YEAR (2040) WITHOUT PROJECT CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS**
- APPENDIX 8.2: HORIZON YEAR (2040) WITH PROJECT CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS**
- APPENDIX 8.3: HORIZON YEAR (2040) WITHOUT PROJECT CONDITIONS TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS**
- APPENDIX 8.4: HORIZON YEAR (2040) WITH PROJECT CONDITIONS TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS**
- APPENDIX 8.5: HORIZON YEAR (2040) WITH PROJECT CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS WITH IMPROVEMENTS**

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**LIST OF EXHIBITS**

EXHIBIT 1-1: LOCATION MAP..... 2

EXHIBIT 1-2: PRELIMINARY SITE PLAN ..... 4

EXHIBIT 1-3: STUDY AREA ..... 7

EXHIBIT 1-4: SITE ACCESS RECOMMENDATIONS ..... 14

EXHIBIT 1-5: CONCEPT STRIPING WITH TRUCK TEMPLATES ..... 15

EXHIBIT 1-6: TRUCK TURNING TEMPLATES ..... 19

EXHIBIT 3-1: EXISTING NUMBER OF THROUGH LANES AND INTERSECTION CONTROLS ..... 28

EXHIBIT 3-2: CITY OF PERRIS GENERAL PLAN CIRCULATION ELEMENT..... 29

EXHIBIT 3-3: CITY OF PERRIS GENERAL PLAN ROADWAY CROSS-SECTIONS ..... 30

EXHIBIT 3-4: PERRIS VALLEY COMMERCE CENTER SPECIFIC PLAN CIRCULATION PLAN ..... 31

EXHIBIT 3-5: PERRIS VALLEY COMMERCE CENTER SPECIFIC PLAN CROSS-SECTIONS ..... 32

EXHIBIT 3-6: CITY OF PERRIS TRUCK ROUTES ..... 33

EXHIBIT 3-7: PERRIS VALLEY COMMERCE CENTER SPECIFIC PLAN TRUCK ROUTE PLAN ..... 34

EXHIBIT 3-8: PERRIS VALLEY COMMERCE CENTER SPECIFIC PLAN MASS TRANSIT ROUTES ..... 35

EXHIBIT 3-9: CITY OF PERRIS PROPOSED BIKEWAYS AND TRAIL IMPROVEMENTS ..... 37

EXHIBIT 3-10: PERRIS VALLEY COMMERCE CENTER SPECIFIC PLAN TRAIL SYSTEM..... 38

EXHIBIT 3-11: EXISTING PEDESTRIAN FACILITIES..... 39

EXHIBIT 3-12: EXISTING (2021) TRAFFIC VOLUMES (IN ACTUAL VEHICLES) ..... 41

EXHIBIT 4-1: PROJECT (INDUSTRIAL PASSENGER CAR) TRIP DISTRIBUTION ..... 46

EXHIBIT 4-2: PROJECT (INDUSTRIAL TRUCK) TRIP DISTRIBUTION ..... 47

EXHIBIT 4-3: PROJECT (HOTEL) TRIP DISTRIBUTION ..... 48

EXHIBIT 4-4: PROJECT (PHASE I) ONLY TRAFFIC VOLUMES (IN ACTUAL VEHICLES) ..... 49

EXHIBIT 4-5: PROJECT (BUILDOUT) ONLY TRAFFIC VOLUMES (IN ACTUAL VEHICLES)..... 50

EXHIBIT 4-6: CUMULATIVE DEVELOPMENT LOCATION MAP ..... 52

EXHIBIT 4-7: CUMULATIVE (2023) ONLY TRAFFIC VOLUMES (IN ACTUAL VEHICLES) ..... 56

EXHIBIT 4-7: CUMULATIVE (2025) ONLY TRAFFIC VOLUMES (IN ACTUAL VEHICLES) ..... 57

EXHIBIT 5-1: E+P TRAFFIC VOLUMES (IN ACTUAL VEHICLES) ..... 62

EXHIBIT 6-1: EAC (2023) TRAFFIC VOLUMES (IN ACTUAL VEHICLES) ..... 66

EXHIBIT 6-2: EAPC (2023) TRAFFIC VOLUMES (IN ACTUAL VEHICLES) ..... 67

EXHIBIT 7-1: EAC (2025) TRAFFIC VOLUMES (IN ACTUAL VEHICLES) ..... 72

EXHIBIT 7-2: EAPC (2025) TRAFFIC VOLUMES (IN ACTUAL VEHICLES) ..... 73

EXHIBIT 8-1: HORIZON YEAR (2040) WITHOUT PROJECT TRAFFIC VOLUMES (IN ACTUAL VEHICLES).... 78

EXHIBIT 8-2: HORIZON YEAR (2040) WITH PROJECT TRAFFIC VOLUMES (IN ACTUAL VEHICLES)..... 79

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**LIST OF TABLES**

**TABLE 1-1: INTERSECTION ANALYSIS LOCATIONS ..... 6**

**TABLE 1-2: SUMMARY OF LOS BY ANALYSIS SCENARIO ..... 9**

**TABLE 1-3: SUMMARY OF IMPROVEMENTS BY ANALYSIS SCENARIO ..... 12**

**TABLE 2-1: SIGNALIZED INTERSECTION LOS THRESHOLDS..... 22**

**TABLE 2-2: UNSIGNALIZED INTERSECTION LOS THRESHOLDS..... 23**

**TABLE 2-3: TRAFFIC SIGNAL WARRANT ANALYSIS LOCATIONS..... 24**

**TABLE 3-1: INTERSECTION ANALYSIS FOR EXISTING (2021) CONDITIONS ..... 40**

**TABLE 4-1: PROJECT TRIP GENERATION RATES ..... 44**

**TABLE 4-2: PROJECT TRIP GENERATION SUMMARY ..... 44**

**TABLE 4-3: CUMULATIVE DEVELOPMENT LAND USE SUMMARY (1 OF 2) ..... 53**

**TABLE 4-3: CUMULATIVE DEVELOPMENT LAND USE SUMMARY (2 OF 2) ..... 54**

**TABLE 5-1: INTERSECTION ANALYSIS FOR E+P CONDITIONS..... 61**

**TABLE 6-1: INTERSECTION ANALYSIS FOR EAC & EAPC (2023) CONDITIONS ..... 68**

**TABLE 6-2: INTERSECTION ANALYSIS FOR EAC & EAPC (2023) CONDITIONS WITH IMPROVEMENTS.... 69**

**TABLE 7-1: INTERSECTION ANALYSIS FOR EAC & EAPC (2025) CONDITIONS ..... 74**

**TABLE 7-2: INTERSECTION ANALYSIS FOR EAC & EAPC (2025) CONDITIONS WITH IMPROVEMENTS.... 75**

**TABLE 8-1: INTERSECTION ANALYSIS FOR HORIZON YEAR (2040) CONDITIONS..... 80**

**TABLE 8-2: INTERSECTION ANALYSIS FOR HORIZON YEAR (2040) WITH PROJECT CONDITIONS WITH IMPROVEMENTS ..... 81**

**TABLE 9-1: NPRBBB FACILITES..... 85**

**TABLE 9-2: FAIR SHARE CONTRIBUTION ..... 86**

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## **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
EAC	Existing plus Ambient Growth plus Cumulative
EAPC	Existing plus Ambient Growth plus Project plus Cumulative
HCM	Highway Capacity Manual
ITE	Institute of Transportation Engineers
LOS	Level of Service
N/A	Not Applicable
NP	No Project (or Without Project)
NPRBBD	North Perris Road and Bridge Benefit District
PCE	Passenger Car Equivalents
PHF	Peak Hour Factor
Project	Ramona – Indian Warehouse Project
PVCC SP	Perris Valley Commerce Center Specific Plan
RTA	Riverside Transit Authority
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
sf	Square Feet
TA	Traffic Analysis
TSF	Thousand Square Feet
TUMF	Transportation Uniform Mitigation Fee
WP	With Project
WRCOG	Western Riverside Council of Governments
V/C	Volume to Capacity

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# 1 INTRODUCTION

This report presents the results of the focused traffic analysis (TA) for the proposed Ramona – Indian Warehouse Project (“Project”), which is located west of Perris Boulevard, north of Ramona Expressway, east of Indian Avenue, within the City of Perris’ *Perris Valley Commerce Center Specific Plan* (PVCC SP) as shown on Exhibit 1-1.

The purpose of this traffic analysis is to evaluate the potential deficiencies related to traffic and circulation system operations that may result from the development of the proposed Project, and to recommend improvements to mitigate potential deficiencies in order to achieve acceptable circulation system operational conditions. This report has been prepared in accordance with the approved Project Traffic Study Scoping agreement through consultation with City of Perris staff, which is provided in Appendix 1.1 of this report. The scoping agreement provides an outline of the Project study area, trip generation, trip distribution, and analysis methodology.

The PVCC SP Environmental Impact Report (EIR) concluded that the potential deficiencies related to level of service on study area roadways were less than significant. The PVCC SP EIR did not evaluate peak hour operations of any key study area intersections. (1)

## 1.1 SUMMARY OF FINDINGS

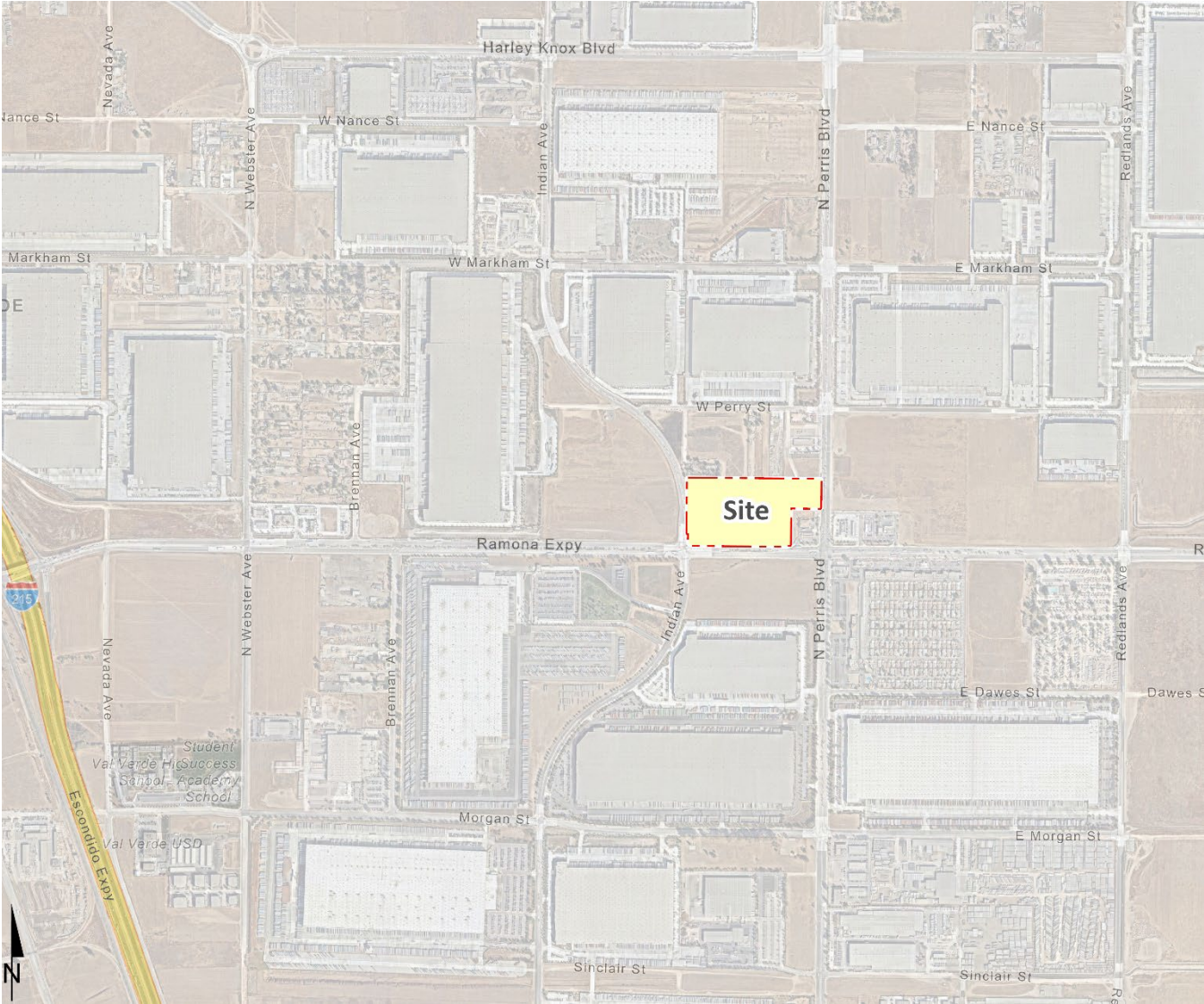
The Project is proposing to construct the following improvements as design features in conjunction with development of the site:

- Project to construct Driveway 1 on Indian Avenue for the westbound traffic, Driveway 2 on Ramona Expressway with stop controls for the southbound traffic, and Driveway 3 on Perris Boulevard with stop controls for the eastbound traffic in order to facilitate site access.

Additional details and intersection lane geometrics are provided in Section 1.7 *On-Site Roadway Improvements* and Section 1.8 *Site Access Improvements* of this report.

As provided in the City of Perris’s VMT Scoping Form for Land Use Projects, the Project meets Local-Serving Land Use for the hotel component and Net Daily Trips less than 500 ADT for the warehousing component screening criteria. As such, the Project’s VMT impact is less than significant; no additional VMT analysis is required as described in Section 1.11 *VMT Analysis* of this report.

EXHIBIT 1-1: LOCATION MAP



## 1.2 PROJECT OVERVIEW

The Project is proposed to consist of a 232,575 square foot (sf) multi-tenant warehouse building and a 125-room hotel. The warehouse building is anticipated to be constructed by the year 2023 and the hotel is anticipated to be constructed by the year 2025. The proposed Project land use is consistent with the PVCC SP, which is Light Industrial and Commercial. Vehicular and truck traffic access will be provided via the following driveways (see Exhibit 1-2):

- Indian Avenue & Driveway 1 – right-in/right-out/left-in access for both passenger cars and trucks
- Driveway 2 & Ramona Expressway – right-in/right-out access for passenger cars only
- Perris Boulevard & Driveway 3 – right-in/right-out access for passenger cars only

Regional access to the Project site is provided via the I-215 Freeway and Harley Knox Boulevard/Ramona Expressway/future Placentia Interchange (anticipated completion of the interchange per the Riverside County Transportation Commission or RCTC is 2022). Note there is no truck traffic permitted on Ramona Expressway within the City of Perris. As such, all project-related trucks are anticipated to utilize the Harley Knox Boulevard interchange to access the I-215 Freeway.

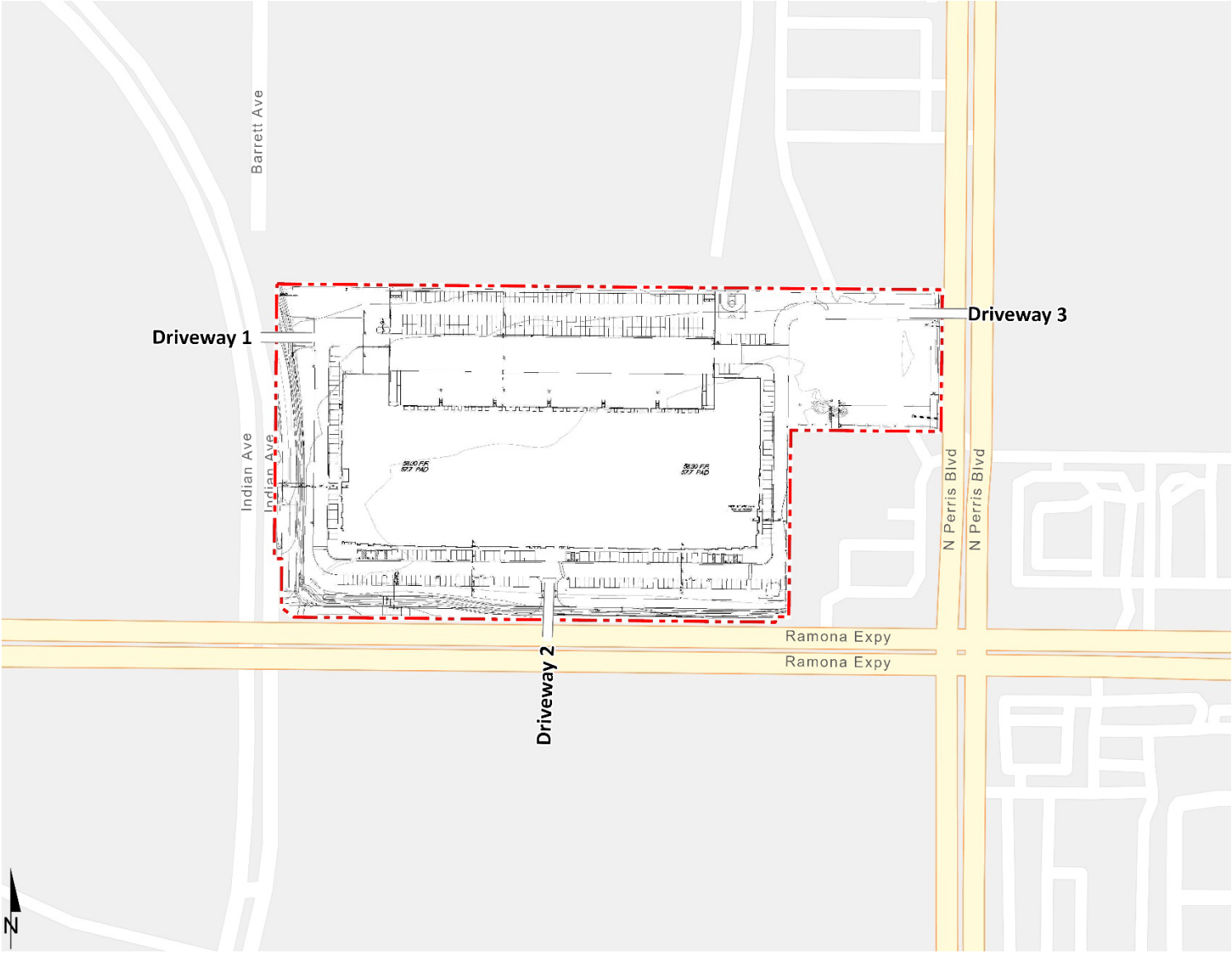
Trips generated by the Project’s proposed land uses have been estimated based on trip generation rates collected by the Institute of Transportation Engineers (ITE) Trip Generation Manual, 10<sup>th</sup> Edition, 2017. (2) The Project is estimated to generate 1,402 two-way trip-ends per day on a typical weekday with approximately 96 AM peak hour trips and 116 PM peak hour trips (actual vehicles). 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 (E+P)
- Existing Plus Ambient Growth Plus Cumulative Projects (EAC) (2023)
- Existing Plus Ambient Growth Plus Project Plus Cumulative Projects (EAPC) (2023)
- Existing Plus Ambient Growth Plus Cumulative Projects (EAC) (2025)
- Existing Plus Ambient Growth Plus Project Plus Cumulative Projects (EAPC) (2025)
- Horizon Year (2040) Without Project
- Horizon Year (2040) With Project

**EXHIBIT 1-2: PRELIMINARY SITE PLAN**



**1.3.1 EXISTING (2021) CONDITIONS**

Information for Existing (2021) conditions is disclosed to represent the baseline traffic conditions as they existed at the time this report was prepared. Traffic counts were conducted in March 2020, when local schools were in session and operating on a typical bell schedule (prior to closures related to the COVID-19 pandemic). Based on vehicle classification, vehicles converted to passenger-car-equivalent (PCE) due to the presence of heavy trucks within the study area.

**1.3.2 EXISTING PLUS PROJECT CONDITIONS**

The Existing Plus Project (E+P) analysis determines any significant traffic operation and circulation system deficiencies that would occur on the existing roadway system in the scenario of the Project being placed upon Existing conditions.

**1.3.3 EXISTING PLUS AMBIENT GROWTH PLUS PROJECT PLUS CUMULATIVE (2023) CONDITIONS**

To account for growth in traffic between Existing (2021) conditions and the Project Opening Year (2023), a traffic growth rate of 6.09% was assumed. The 3.0 percent annual growth rate (compounded annually) is intended to capture non-specific ambient traffic growth. Conservatively, the TA estimates of area traffic growth then add traffic generated by other known or probable related projects. These related projects are at least in part already accounted for in the assumed 6.09% total ambient growth in traffic noted above; and in some instances, these related projects would likely not be implemented and operational within the 2023 Opening Year time frame assumed for the Project. The resulting traffic growth rate utilized in the TA (6.09% ambient growth + traffic generated by related projects) would therefore tend to overstate rather than understate background cumulative traffic deficiencies under 2023 conditions.

**1.3.4 EXISTING PLUS AMBIENT GROWTH PLUS PROJECT PLUS CUMULATIVE (2025) CONDITIONS**

To account for growth in traffic between Existing (2021) conditions and the Project Opening Year (2025), a traffic growth rate of 12.55% was assumed. The 3.0 percent annual growth rate (compounded annually) is intended to capture non-specific ambient traffic growth. Conservatively, the TA estimates of area traffic growth then add traffic generated by other known or probable related projects. These related projects are at least in part already accounted for in the assumed 12.55% total ambient growth in traffic noted above; and in some instances, these related projects would likely not be implemented and operational within the 2025 Opening Year time frame assumed for the Project. The resulting traffic growth rate utilized in the TA (12.55% ambient growth + traffic generated by related projects) would therefore tend to overstate rather than understate background cumulative traffic deficiencies under 2025 conditions.

**1.3.4 HORIZON YEAR (2040) CONDITIONS**

Traffic projections for Horizon Year (2040) conditions were derived from the City of Perris Transportation Analysis Model (RivTAM) using accepted procedures for model forecast refinement and smoothing.

The Horizon Year conditions analyses will be utilized to determine if improvements funded through regional transportation mitigation fee programs, such as the Western Riverside Council of Governments (WRCOG) Transportation Uniform Mitigation Fee (TUMF) and Development Impact Fee (DIF) programs, can accommodate the long-range cumulative traffic at the target level of service (LOS) identified in the City of Perris (lead agency) General Plan. (3) Each of these regional transportation fee programs are discussed in more detail in Section 9 *Local and Regional Funding Mechanisms*.

**1.4 STUDY AREA**

To ensure that this TA satisfies the City of Perris’ traffic study requirements, Urban Crossroads, Inc. prepared a Project traffic study scoping package for review by City of Perris staff prior to the preparation of this report.

**1.4.1 INTERSECTIONS**

The 6 study area intersections shown on Exhibit 1-3 and listed in Table 1-1 were selected for this TA based on the City’s Traffic Study Guidelines and in consultation with City of Perris staff. The City requires analysis of intersections where the Project would contribute 50 or more peak hour trips. Based on the location of the Project site and the trip distribution patterns, the Project is anticipated to contribute more than 50 peak hour trips to all study area intersections and to the State Highway System. The Project trip generation, distribution, and volumes are further explained in Chapter 4 *Project Future Traffic* of this TA.

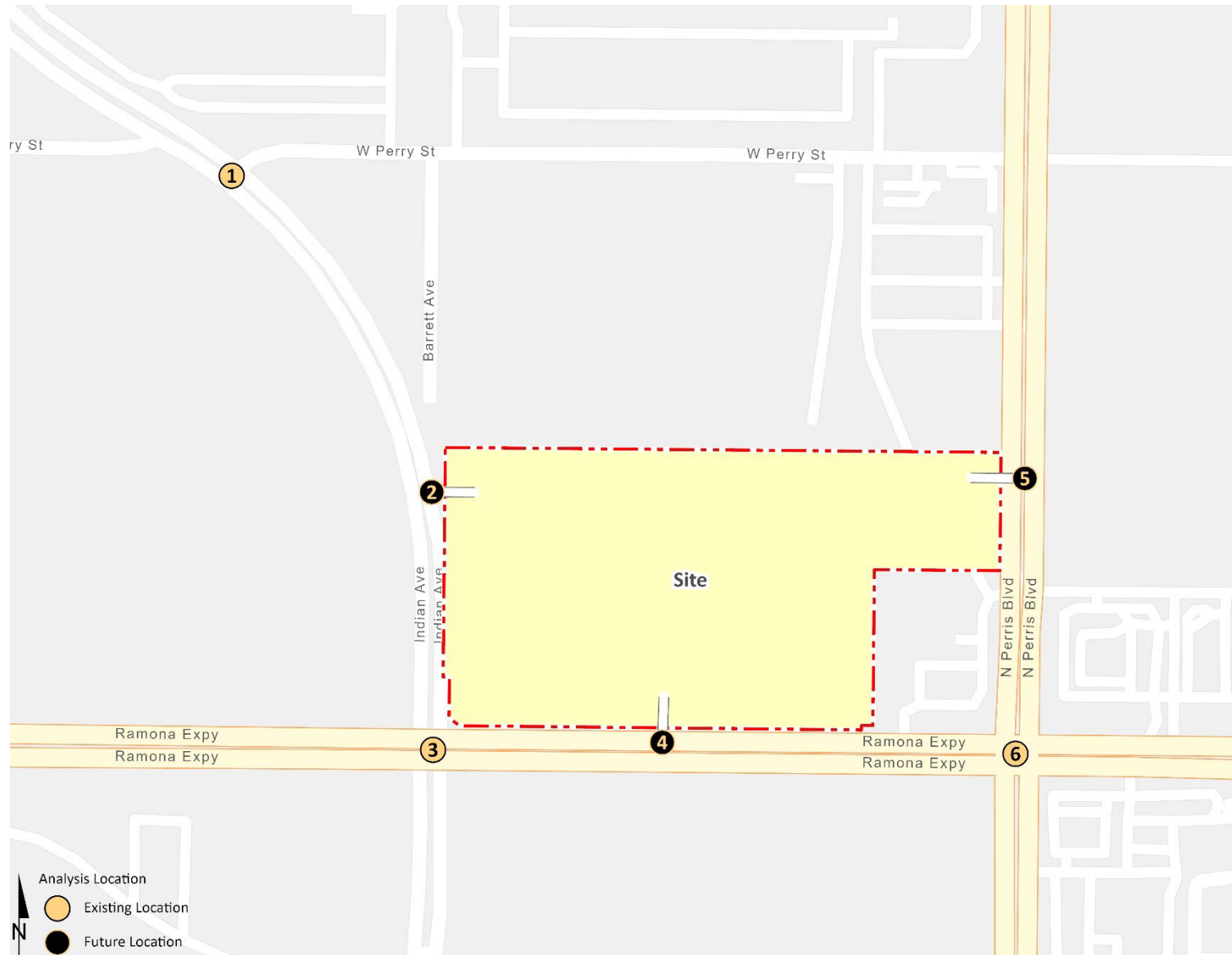
**TABLE 1-1: INTERSECTION ANALYSIS LOCATIONS**

ID	Intersection Location	Jurisdiction	CMP?
1	Indian Av. & Perry St.	City of Perris	No
2	Indian Av. & Driveway 1 – Future Intersection	City of Perris	No
3	Indian Av. & Ramona Exwy.	City of Perris	No
4	Driveway 2 & Ramona Exwy. – Future Intersection	City of Perris	No
5	Perris Bl. & Driveway 3 – Future Intersection	City of Perris	No
6	Perris Bl. & Ramona Exwy.	City of Perris	No

\* Note: CMP = Congestion Management Program

The intent of a Congestion Management Program (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. None of the study area intersections are identified as CMP facilities in the County of Riverside CMP. (4)

**EXHIBIT 1-3: STUDY AREA**



## 1.5 DEFICIENCIES

This section provides a summary of deficiencies by analysis scenario. Section 2 *Methodologies* provides information on the methodologies used in the analysis and Section 6 *EAPC (2023) Traffic Conditions* includes the detailed analysis. A summary of LOS results for all analysis scenarios is presented on Table 1-2.

### 1.5.1 E+P CONDITIONS

Consistent with Existing (2021) traffic conditions, no study area intersections are anticipated to operate at a deficient LOS (i.e., LOS E or worse) for E+P traffic conditions.

### 1.5.2 EAPC (2023) CONDITIONS

Consistent with Background (2023) traffic conditions, the following study area intersection is anticipated to operate at a deficient LOS (i.e., LOS E or worse) for Background (2023) traffic conditions:

- Indian Av. & Ramona Exwy. (#3) – LOS F PM peak hour only
- Perris Bl. & Ramona Exwy. (#6) – LOS F AM and PM peak hours

The Project contributes to these cumulative deficiencies and the deficiencies are considered indirect.

### 1.5.3 EAPC (2025) CONDITIONS

Consistent with Background (2025) traffic conditions, the following study area intersection is anticipated to operate at a deficient LOS (i.e., LOS E or worse) for Background (2025) traffic conditions:

- Indian Av. & Ramona Exwy. (#3) – LOS F AM and PM peak hours
- Perris Bl. & Ramona Exwy. (#6) – LOS F AM and PM peak hours

The Project contributes to these cumulative deficiencies and the deficiencies are considered indirect.

### 1.5.4 HORIZON YEAR (2040) CONDITIONS

Consistent with Long-Range (2040) traffic conditions, the following study area intersection is anticipated to operate at a deficient LOS (i.e., LOS E or worse) for Long-Range (2040) traffic conditions:

- Indian Av. & Perry St. (#1) – LOS E PM peak hour only

The Project contributes to this cumulative deficiency and the deficiency is considered indirect.

During Long-Range (2040) traffic conditions, vehicles will utilize Mid-County Parkway which will reduce the traffic volumes along Ramona Expressway. As such, the peak hour intersection operations at various locations along Ramona Expressway may improve in comparison to EAPC (2023 or 2025) traffic conditions.



## 1.6 RECOMMENDATIONS

This section provides a summary of deficiencies and recommended improvements. Section 2 *Methodologies* provides information on the methodologies used in the analyses and Section 5 *E+P Traffic Analysis*, Section 6 *EAC and EAPC (2023) Traffic Analysis*, Section 7 *EAC and EAPC (2023) Traffic Analysis*, and Section 8 *Horizon Year (2040) Traffic Analysis* include the detailed analyses. The same study area intersection deficiencies occur without and with Project traffic for all analysis scenarios (see Table 1-2). As such, there are no direct project-related deficiencies, however, the Project would cumulatively contribute to each of the deficiencies identified on Table 1-2. Each project implementing the PVCC SP is required to incorporate applicable mitigation from the PVCC Specific Plan EIR. The relevant traffic mitigation measures from the PVCC Specific Plan EIR are identified in Section 1.5.1.

**TABLE 1-2: SUMMARY OF LOS BY ANALYSIS SCENARIO**

#	Intersection	Existing		E+P		EAC 2023		EAPC 2023		EAC 2025		EAPC 2025		2040 Without Project		2040 With Project	
		AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
1	Indian Av. & Perry St.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
2	Indian Av. & Driveway 1	N/A	N/A	●	●	N/A	N/A	●	●	N/A	N/A	●	●	N/A	N/A	●	●
3	Indian Av. & Ramona Exwy.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
4	Driveway 2 & Ramona Exwy.	N/A	N/A	●	●	N/A	N/A	●	●	N/A	N/A	●	●	N/A	N/A	●	●
5	Perris Bl. & Driveway 3	N/A	N/A	●	●	N/A	N/A	●	●	N/A	N/A	●	●	N/A	N/A	●	●
6	Perris Bl. & Ramona Exwy.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

● = A - D   ● = E   ● = F

### 1.6.1 PVCC SPECIFIC PLAN EIR TRAFFIC MITIGATION MEASURES

- MM Trans 1** Future implementing development projects shall construct on-site roadway improvements pursuant to the general alignments and right-of-way sections set forth in the PVCC Circulation Plan, except where said improvements have previously been constructed.
- MM Trans 2** Sight distance at the project entrance roadway of each implementing development project shall be reviewed with respect to standard City of Perris sight distance standards at the time of preparation of final grading, landscape and street improvement plans.
- MM Trans 3** Each implementing development project shall participate in the phased construction of off-site traffic signals through payment of that project’s fair share of traffic signal mitigation fees and the cost of other off-site improvements through payment of fair share mitigation fees which include TUMF (Transportation Uniform Mitigation Fee), DIF (Development Impact Fee), and the NPRBBD (North Perris Road and Bridge Benefit District). The fees shall be collected and utilized as needed by the City of Perris to construct the improvements necessary to maintain the required level of service and build or improve roads to their build-out level.

- MM Trans 4** Prior to the approval of individual implementing development projects, the Riverside Transit Agency (RTA) shall be contacted to determine if the RTA has plans for the future provision of bus routing in the project area that would require bus stops at the project access points. If the RTA has future plans for the establishment of a bus route that will serve the project area, road improvements adjacent to the project site shall be designed to accommodate future bus turnouts at locations established through consultation with the RTA. RTA shall be responsible for the construction and maintenance of the bus stop facilities. The area set aside for bus turnouts shall conform to RTA design standards, including the design of the contact between sidewalk and curb and gutter at bus stops and the use of ADA-compliant paths to the major building entrances in the project.
- MM Trans 5** Bike racks shall be installed in all parking lots in compliance with City of Perris standards.
- MM Trans 6** Each implementing development project that is located adjacent to the MWD Trail shall coordinate with the City of Perris Parks and Recreation Department to determine the development plan for the trail.
- MM Trans 7** Implementing project-level traffic studies shall be required for all subsequent implementing development proposals within the boundaries of the PVCC as approved by the City of Perris Engineering Department. These subsequent traffic studies shall identify specific project deficiencies and needed roadway improvements to be constructed in conjunction with each implementing development project. All intersection spacing for individual tracts or maps shall conform to the minimum City intersection spacing standards. All turn pocket lengths shall conform at least to the minimum City turn pocket length standards. If any of the proposed improvements are found to be infeasible, the implementing development project applicant would be required to provide alternative feasible improvements to achieve levels of service satisfactory to the City.
- MM Trans 8** Proposed mitigation measures resulting from project-level traffic studies shall be coordinated with the North Perris Road and Bridge Benefit District (NPRBBD) to ensure that they are in conformance with the ultimate improvements planned by the NPRBBD. The applicant shall be eligible to receive proportional credits against the NPRBBD for construction of project level mitigation that is included in the NPRBBD.

## 1.6.2 CIRCULATION SYSTEM DEFICIENCIES AND RECOMMENDED IMPROVEMENTS

A summary of the operationally deficient study area intersections and recommended improvements required to achieve acceptable circulation system performance are described in detail within Section 3 *Area Conditions*, Section 5 *E+P Traffic Conditions*, Section 6 *EAC and EAPC (2023) Traffic Conditions*, Section 7 *EAC and EAPC (2025) Traffic Analysis*, and Section 8 *Horizon Year (2040) Traffic Conditions* of this report.

A summary of off-site improvements needed to address intersection operational deficiencies for each analysis scenario is included in Table 1-3. These recommended improvements are consistent with or less than the geometrics assumed in the City of Perris and County of Riverside General Plan Circulation Elements. Improvements found to be included in the Western Riverside Council of Governments (WRCOG) Transportation Uniform Mitigation Fee (TUMF) program, City of Perris’s (lead agency) Development Impact Fee (DIF) program, or North Perris Road and Bridge Benefit District (NPRBBD) have been identified as such. The NPRBBD includes additional improvements to supplement the TUMF and DIF network. NPRBBD fees are inclusive of TUMF and DIF.

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

#	Intersection Location	Jurisdiction	Recommended Improvements			Horizon Year (2040) With Project	Improvements in DIF, TUMF, NPRBBD, etc. <sup>1,2</sup>	Project Responsibility	Project Fair Share <sup>3</sup>
			E+P	EAPC (2023)	EAPC (2025)				
1	Indian Av. & Perry St.	City of Perris	- None	- None	- None	- Install a traffic signal	No	Fair Share	11.6%
3	Indian Av. & Ramona Exwy.	City of Perris	- None	- Add a 2nd EB left turn lane	- Same	- Same	No	Fair Share	5.1%
6	Perris Bl. & Ramona Exwy.	City of Perris	- None	- Restripe the NB right turn lane as a shared through-right turn lane	- Same	- Same	No	Fair Share	3.0%
				- Restripe the SB right turn lane as a shared through-right turn lane	- Same	- Same	No		

<sup>1</sup> Improvements included in TUMF Nexus, NPRBBD, or City of Perris DIF programs have been identified as such.

<sup>2</sup> Program improvements constructed by Project may be eligible for fee credit. In lieu fee payment is at discretion of City. Represents the fair share percentage for the Project during the most impacted peak hour.

<sup>3</sup> Total project fair share contribution consists of the improvements which are not already included in the City-wide DIF/NPRBBD/County TUMF for those intersections wholly or partially within the City of Perris.

## 1.7 ON-SITE ROADWAY IMPROVEMENTS

The recommended site-adjacent roadway improvements for the Project are described below. Exhibit 1-4 illustrates the site access recommendations.

**Ramona Expressway** – Ramona Expressway is an east-west oriented roadway located along the Project’s northern boundary. Ramona Expressway is currently constructed at its ultimate half-section pavement width as an Expressway (184-foot right-of-way) between the western and eastern boundaries consistent with the PVCC SP and the City of Perris General Plan Circulation Element.

**Indian Avenue** – Indian Avenue is a north-south oriented roadway located along the Project’s western boundary. Indian Avenue is currently constructed at its ultimate half-section pavement width as a Secondary (94-foot right-of-way) between the Project’s northern and southern boundaries consistent with the PVCC SP and the City of Perris General Plan Circulation Element. At the City’s request, a conceptual striping plan for Indian Avenue is shown on Exhibit 1-5.

**Perris Boulevard** – Perris Boulevard is a north-south oriented roadway located along the Project’s eastern boundary. Perris Boulevard is currently constructed at its ultimate half-section pavement width as an Arterial (128-foot right-of-way) between the northern and southern boundaries consistent with the PVCC SP and the City of Perris General Plan Circulation Element.

Wherever necessary, roadways adjacent to the Project, site access points and site-adjacent intersections will be constructed to be consistent with the identified roadway classifications and respective cross-sections in the PVCC Specific Plan or City of Perris General Plan Circulation Element.

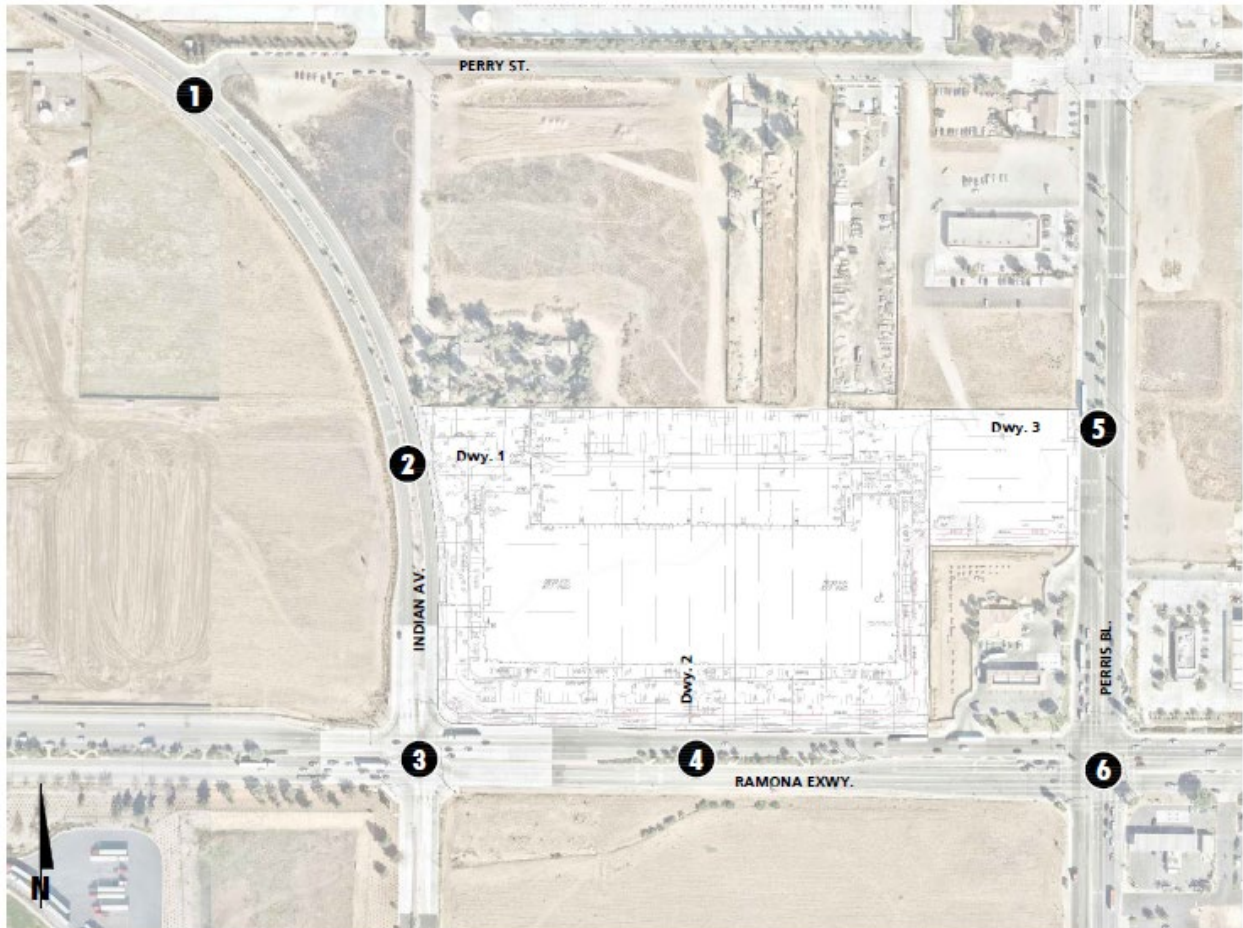
## 1.8 SITE ACCESS IMPROVEMENTS

The recommended site access driveway improvements for the Project are described below. Exhibit 1-4 also illustrates the site access improvements. Construction of on-site and site adjacent improvements shall occur in conjunction with adjacent Project development activity or as needed for Project access purposes.

**Indian Avenue & Driveway 1** – Install a stop control on the westbound approach and construct the intersection with the following geometrics:

- Northbound Approach: One through lane and one shared through-right turn lane.
- Southbound Approach: One left turn lane with a minimum of 200-feet of storage and two through lanes.
- Eastbound Approach: Not Applicable (N/A)
- Westbound Approach (Project Driveway 1): One right turn only lane.
- Due to the low traffic volumes making right turns into the driveway, a right turn deceleration lane is not required for traffic operations.

EXHIBIT 1-4: SITE ACCESS RECOMMENDATIONS

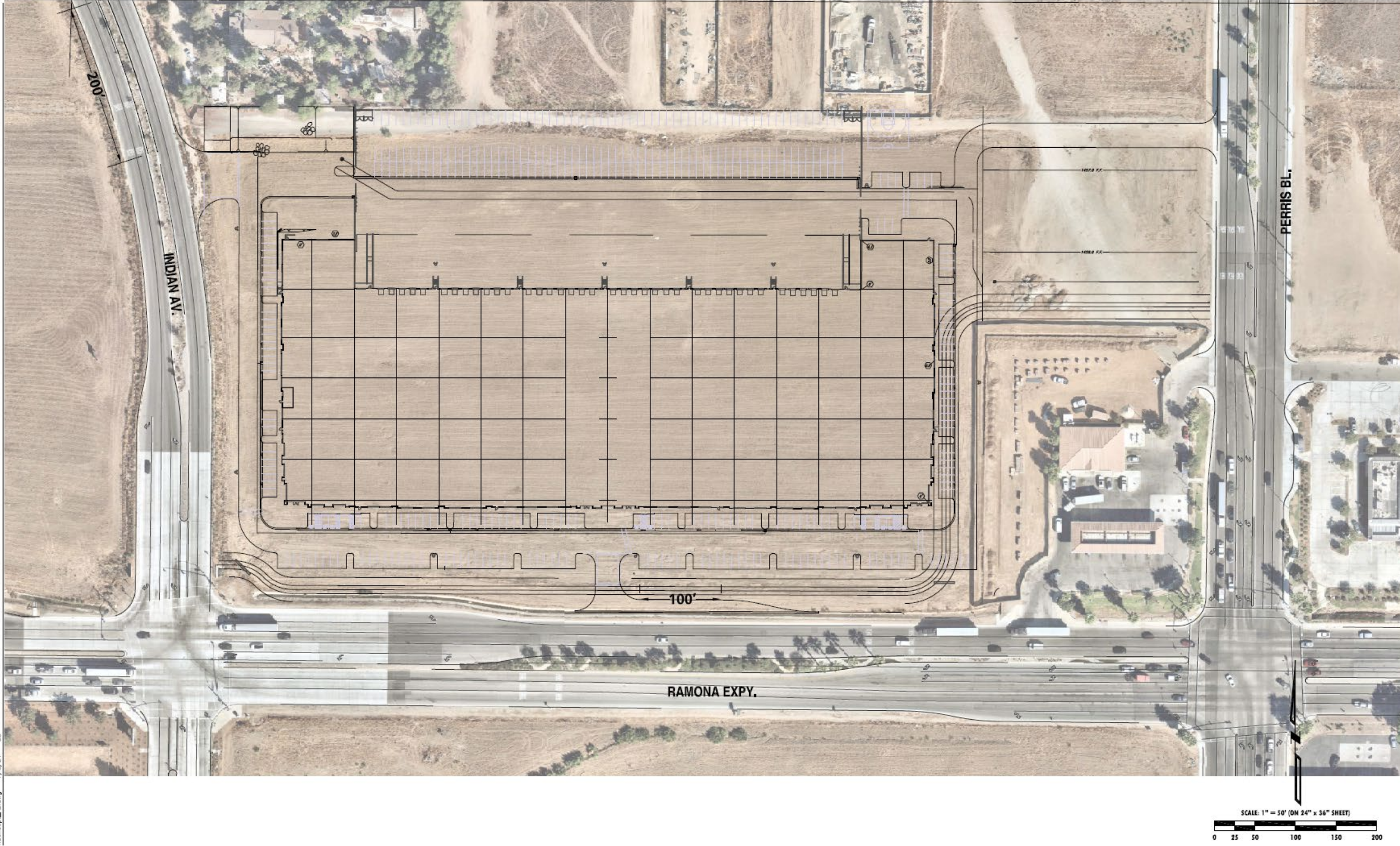


2	Indian Av. & Dwy. 1	4	Dwy. 2 & Ramona Expy.	5	Dwy. 3 & Ramona Expy.

- = Stop Sign Improvement
- = Existing Lane
- = Lane Improvement
- 100' = Recommended Turn Pocket Length



EXHIBIT 1-5: CONCEPT STRIPING WITH TRUCK TEMPLATES



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**Driveway 2 & Ramona Expressway** – Install a stop control on the southbound approach and construct the intersection with the following geometrics:

- Northbound Approach: N/A
- Southbound Approach (Project Driveway 2): One right turn only lane.
- Eastbound Approach: Three through lanes.
- Westbound Approach: Three through lanes and one right turn only lane with a minimum of 100-feet of storage.

**Perris Boulevard & Driveway 3** – Install a stop control on the eastbound approach and construct the intersection with the following geometrics:

- Northbound Approach: Three through lanes.
- Southbound Approach: Two through lanes and one shared through-right turn lane.
- Eastbound Approach (Project Driveway 3): One right turn only lane.
- Westbound Approach: N/A
- Due to the low traffic volumes making right turns into the driveway, a right turn deceleration lane is not required for traffic operations.

Wherever necessary, roadways adjacent to the Project, site access points and site-adjacent intersections will be constructed to be consistent with the identified roadway classifications and respective cross-sections in the PVCC Specific Plan or City of Perris General Plan Circulation Element.

On-site traffic signing and striping should be implemented agreeable with the provisions of the California Manual on Uniform Traffic Control Devices (CA MUTCD) and 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 Perris/County of Riverside sight distance standards at the time of preparation of final grading, landscape and street improvement plans.

## 1.9 QUEUING ANALYSIS AT THE PROJECT DRIVEWAYS

A queuing analysis was conducted along the site adjacent roadways of Indian Avenue, Ramona Expressway, and Perris Boulevard for Horizon Year (2040) With Project traffic conditions to determine the 95<sup>th</sup> percentile queues. The analysis was conducted for the weekday AM and weekday PM peak hours. The traffic modeling and signal timing optimization software package Synchro/SimTraffic (Version 11) has been utilized to assess queues at the Project access points. Synchro is a macroscopic traffic software program that is based on the signalized and unsignalized intersection capacity analyses as specified in the HCM. 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 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

jurisdictions utilize the 95<sup>th</sup> percentile queues for design purposes. SimTraffic simulations have been recorded 5 times, during the weekday AM and weekday PM peak hours, and has been seeded for 30-minute periods with 60-minute recording intervals. Queuing results are provided in Appendix 1.2. Based on the 95<sup>th</sup> percentile queues under Horizon Year (2040) With Project traffic conditions, no driveway blockages are anticipated along Indian Avenue, Ramona Expressway, and Perris Boulevard during the peak hours. The queuing analysis results were utilized to determine the minimum left turn pocket storage at Driveway 1 on Indian Avenue and the right turn pocket storage at Driveway 2 in Ramona Expressway.

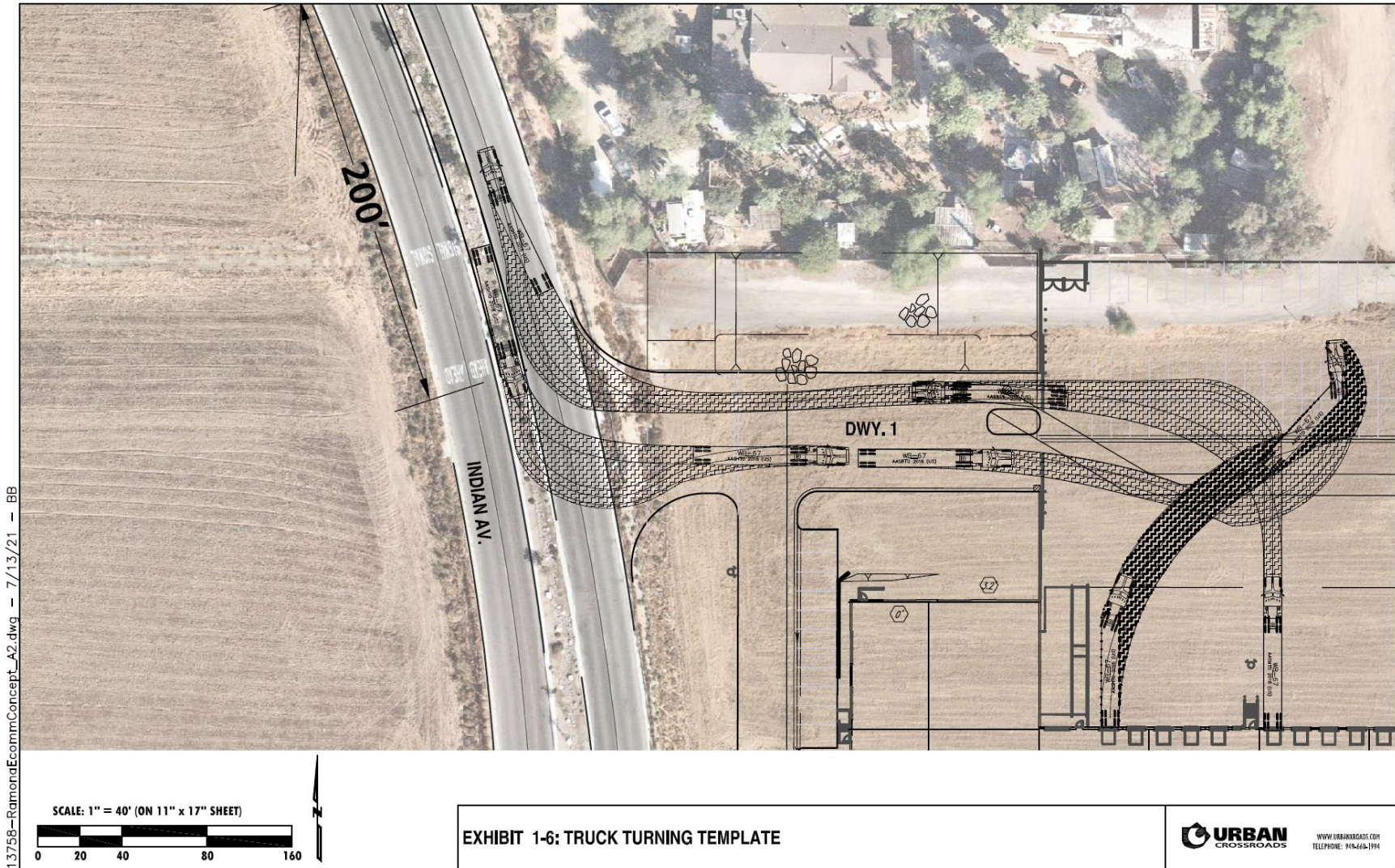
### **1.10 TRUCK ACCESS**

Due to the typical wide turning radius of large trucks, a truck turning template has been overlaid on the site plan at the Project driveways in order to determine appropriate curb radii and to verify that trucks will have sufficient space to execute turning maneuvers (see Exhibit 1-6). Only driveways that are to be utilized by heavy trucks have been evaluated. As shown on Exhibit 1-6, the Project driveways will be able to accommodate the wide turning radius of heavy trucks (WB-67, which has a 53-foot trailer).

### **1.11 VMT ANALYSIS**

The City of Perris adopted Transportation Impact Analysis Guidelines for CEQA (City Guidelines). (5) The City Guidelines include VMT thresholds that were recently reviewed and adopted by City Council on May 12, 2020. The VMT Scoping Form for Land Use Projects, provided by the City of Perris, has been completed and reviewed for accuracy. As shown in Appendix 1.1, the Project meets Local-Serving Land Use for the hotel component and Net Daily Trips less than 500 ADT for the warehousing component screening criteria. As such, the Project's VMT impact is less than significant; no additional VMT analysis is required.

EXHIBIT 1-6: TRUCK TURNING TEMPLATES



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## 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 City of Perris traffic study guidelines.

### 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 Highway Capacity Manual (HCM) methodology expresses the LOS at an intersection in terms of delay time for the various intersection approaches. (6) The HCM uses different procedures depending on the type of intersection control.

#### 2.2.1 SIGNALIZED INTERSECTIONS

The City of Perris requires signalized intersection operations analysis based on the methodology described in the HCM. (6) 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 Existing (2021) baseline, E+P, EAC (2023), EAPC (2023), EAPC (2025), and Horizon Year (2040) traffic conditions.

**2.2.2 UNSIGNALIZED INTERSECTIONS**

The City of Perris requires the operations of unsignalized intersections be evaluated using the methodology described the HCM. (6) The LOS rating is based on the weighted average control delay expressed in seconds per vehicle (see Table 2-2).

**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

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. The “worst case” movement delay and LOS is reported for the intersection. For all-way stop controlled intersections, LOS is computed for the intersection as a whole.

**2.3 TRAFFIC SIGNAL WARRANT ANALYSIS METHODOLOGY**

The term "signal warrants" refers to the list of established criteria used by the 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 California Department of Transportation (Caltrans) California Manual on Uniform Traffic Control Devices (CA MUTCD) for all study area intersections. (7)

The signal warrant criteria for Existing conditions are based upon several factors, including volume of vehicular and pedestrian traffic, frequency of accidents, and location of school areas. The Caltrans CA MUTCD indicates that the installation of a traffic signal should be considered if one or more of the signal warrants are met. (7) Specifically, this TA utilizes the Peak Hour Volume-based Warrant 3 as the appropriate representative traffic signal warrant analysis for existing study area intersections for all analysis scenarios. 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.

Future intersections that do not currently exist have been assessed regarding the potential need for new traffic signals based on future average daily traffic (ADT) volumes, using the Caltrans planning level ADT-based signal warrant analysis worksheets. Traffic signal warrant analyses were performed for the following study area intersection shown in Table 2-3:

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

ID	Intersection Location	Jurisdiction
1	Indian Av. & Perry St. – Cumulative Conditions Only	City of Perris

Traffic signal warrant analyses were performed for all of the full access unsignalized study area intersections. The traffic signal warrant analyses for future conditions are presented in Section 6 *EAC and EAPC (2023) Traffic Analysis*, Section 7 *EAC and EAPC (2025) Traffic Analysis*, and Section 8 *Horizon Year (2040) 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 LEVEL OF SERVICE (LOS)**

The definition of an intersection deficiency has been obtained from the City of Perris’ General Plan. LOS D along all City maintained roads (including intersections) and LOS D along I-215 and SR-74 (including intersections with local streets and roads). An exception to the local road standard is LOS E, at intersections of any Arterials and Expressways with SR-74, the Ramona-Cajalco Expressway, or at I-215 Freeway ramps. (8)

LOS E may be allowed within the boundaries of the Downtown Specific Plan Area to the extent that it would support transit-oriented development and walkable communities. Increased congestion in this area will facilitate an increase in transit ridership and encourage development of a complementary mix of land uses within a comfortable walking distance from light rail stations.

**2.5 DEFICIENCY CRITERIA**

This section outlines the methodology used in this analysis related to identifying circulation system deficiencies. The following deficiency criteria has been utilized for the City of Perris. To determine whether the addition of project-related traffic at a study intersection would result in a deficiency, the following will be utilized:

- A project-related deficiency is considered direct and significant when a study intersection operates at an acceptable LOS for existing conditions (without the project) and the addition of 50 or more AM or PM peak hour project trips causes the intersection to operate at an unacceptable LOS for existing plus project (E+P) traffic conditions.
- A project-related deficiency is considered direct and significant when a study intersection operates at an unacceptable LOS for existing conditions (without the project) and the addition of 50 or more AM or PM peak hour project trips causes the intersection delay to increase by 2 seconds or more.



- A cumulative deficiency is considered significant when a study intersection is forecast to operate at an unacceptable LOS with the addition of cumulative/background traffic and 50 or more AM or PM peak hour project trips.

## 2.6 PROJECT FAIR SHARE CALCULATION METHODOLOGY

Improvements found to be included in the NPRBBD (which are inclusive of TUMF and DIF), will be identified as such. For improvements that do not appear to be in either of the pre-existing fee programs, a fair share financial contribution based on the Project's proportional share may be imposed in order to mitigate the Project's share of deficiencies in lieu of construction. It should be noted that fair share calculations are for informational purposes only and the City Engineer will determine the appropriate improvements to be implemented by a project (to be identified in the conditions of approval).

If the intersection is currently operating at acceptable LOS under Existing traffic conditions, the Project's fair share cost of improvements would be determined based on the following equation, which is the ratio of Project traffic to new traffic, where new traffic is total future traffic less existing baseline traffic:

$$\text{Project Fair Share \%} = \text{Project Traffic} / (\text{Total Traffic} - \text{Existing Traffic})$$

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### **3 AREA CONDITIONS**

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

#### **3.1 EXISTING CIRCULATION NETWORK**

Pursuant to the scoping agreement with City of Perris staff (Appendix 1.1), the study area includes a total of 6 existing and future intersections as shown previously on Exhibit 1-2. 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 GENERAL PLAN CIRCULATION ELEMENTS**

As noted previously, the Project site is located within PVCC SP in the City of Perris. Exhibit 3-2 shows the City of Perris General Plan Circulation Element, and Exhibit 3-3 illustrates the City of Perris General Plan roadway cross-sections. Exhibit 3-4 illustrates the PVCC SP Circulation Plan and Exhibit 3-5 shows the corresponding PVCC SP roadway cross-sections.

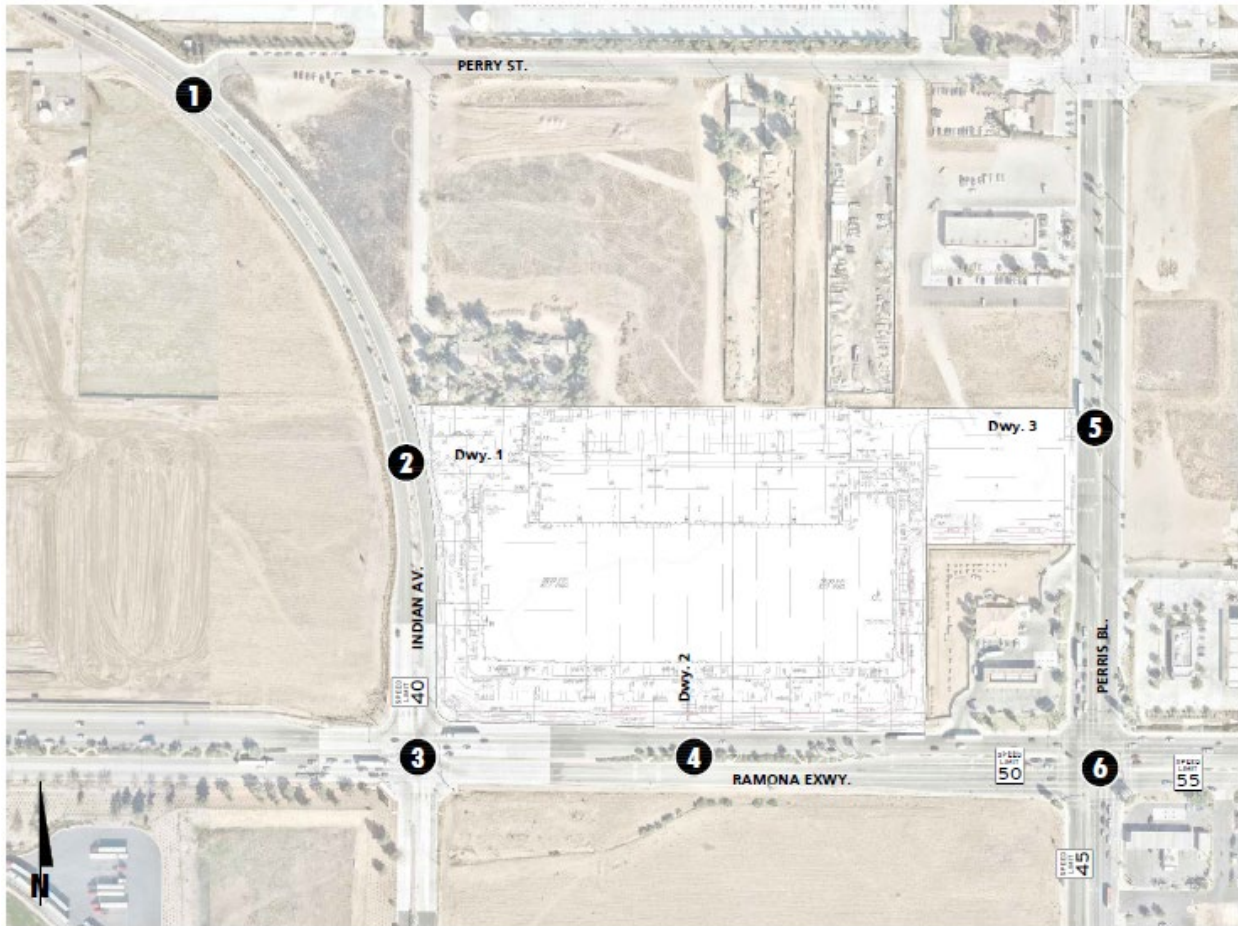
#### **3.3 TRUCK ROUTES**

The City of Perris designated truck route map is shown on Exhibit 3-6. Indian Avenue is identified as a designated truck route. The PVCC SP truck route plan is shown on Exhibit 3-7. The truck routes identified within the study area on Exhibit 3-7 are consistent with those identified on Exhibit 3-6. These designated truck route maps have been utilized to route truck traffic from the Project and future cumulative development projects throughout the study area.

#### **3.4 TRANSIT SERVICE**

Mass transit routes within the PVCC SP are shown on Exhibit 3-8. Exhibit 3-8 also shows existing routes along Indian Avenue and Ramona Expressway. The study area is currently served by the Riverside Transit Authority (RTA), a public transit agency serving the Riverside County region. RTA currently serves the study area via Route 19 and 41, which could potentially serve the proposed Project. Transit service is reviewed and updated by RTA 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.

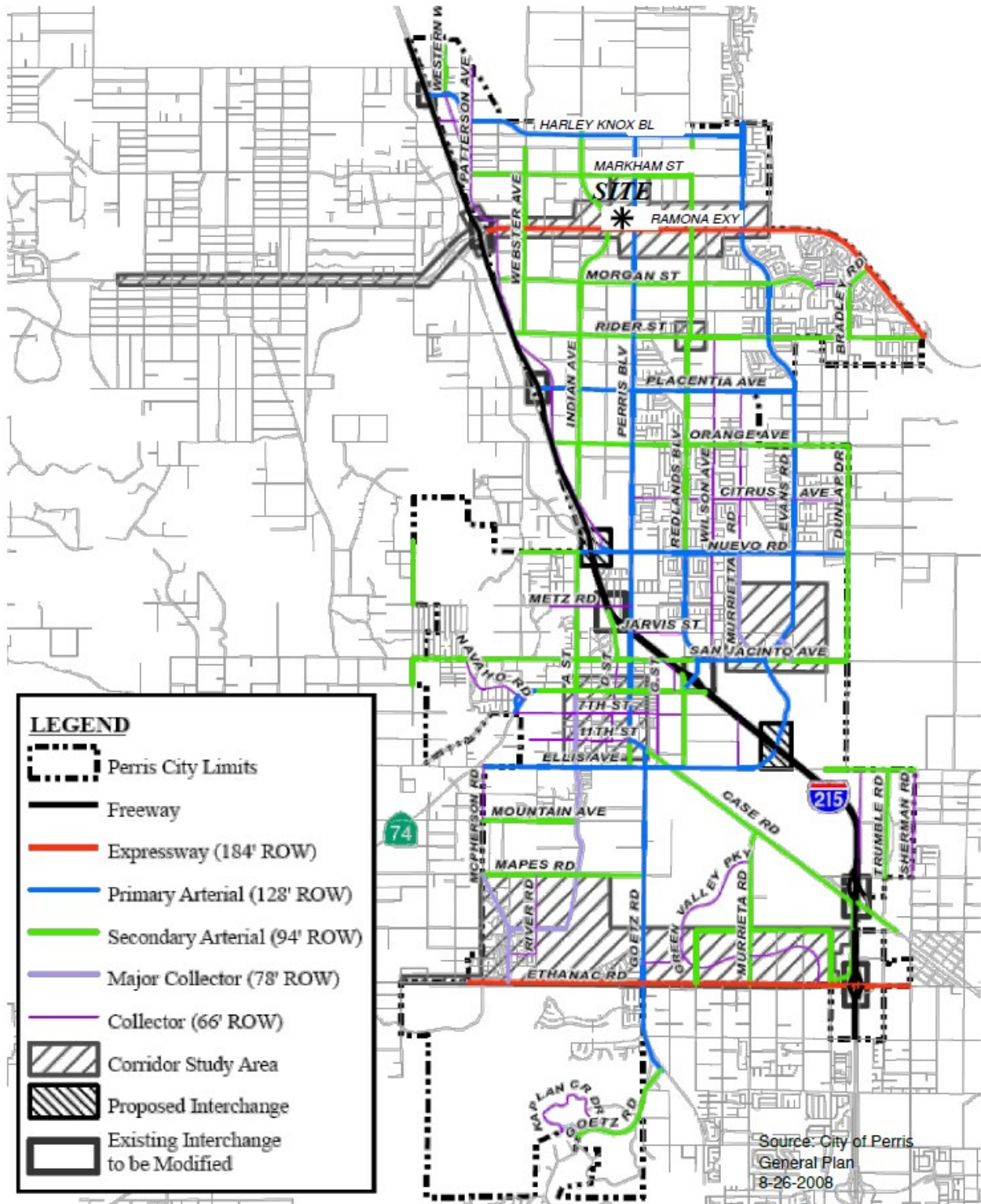
**EXHIBIT 3-1: EXISTING NUMBER OF THROUGH LANES AND INTERSECTION CONTROLS**



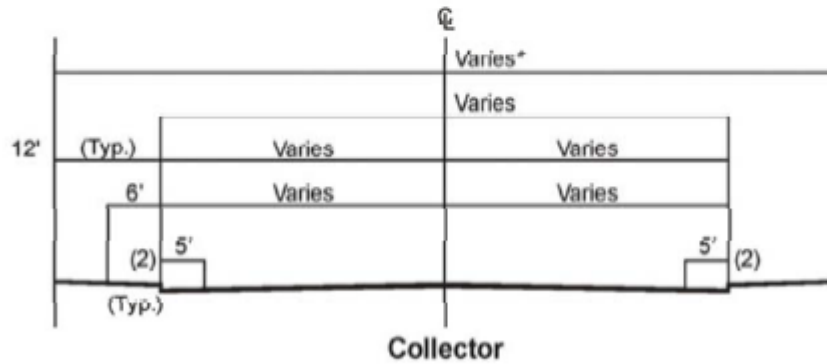
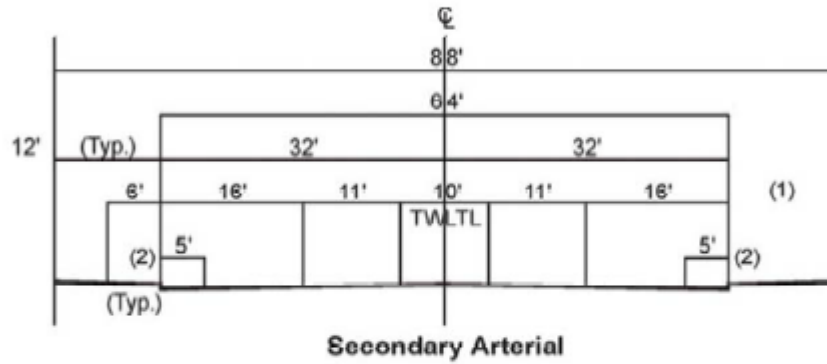
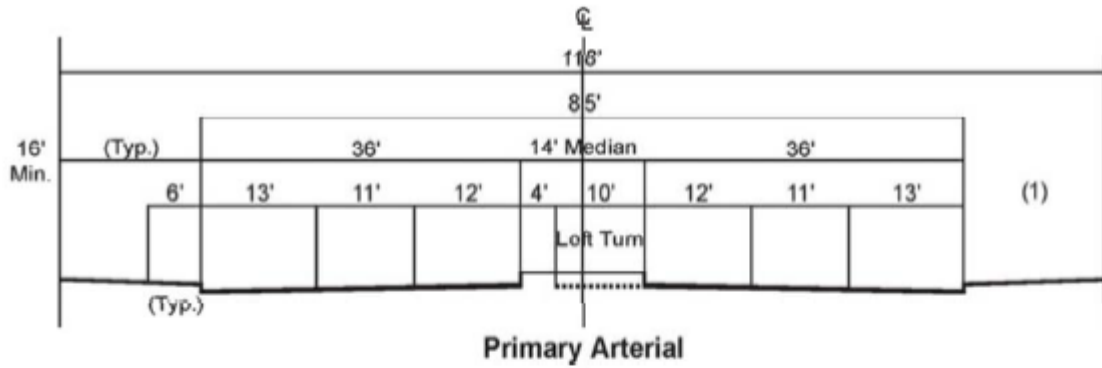
1	Indian Av. & Perry St.	2	Indian Av. & Dwy. 1	3	Indian Av. & Ramona Expy.
		<p>Future Intersection</p>			
4	Dwy. 2 & Ramona Expy.	5	Dwy. 3 & Ramona Expy.	6	Perris Bl. & Ramona Expy.
<p>Future Intersection</p>		<p>Future Intersection</p>			

- = Traffic Signal
- = Stop Sign
- 4** = Number of Lanes
- D** = Divided
- U** = Undivided
- = Speed Limit (MPH)

EXHIBIT 3-2: CITY OF PERRIS GENERAL PLAN CIRCULATION ELEMENT



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



**Legend**

- (1) No stopping any time both sides.
- (2) Bike lane where designated.

\* The width of the collector street can range from 40 feet to 64 feet curb-to-curb.

TWLTL = Two Way Left Turn Lane

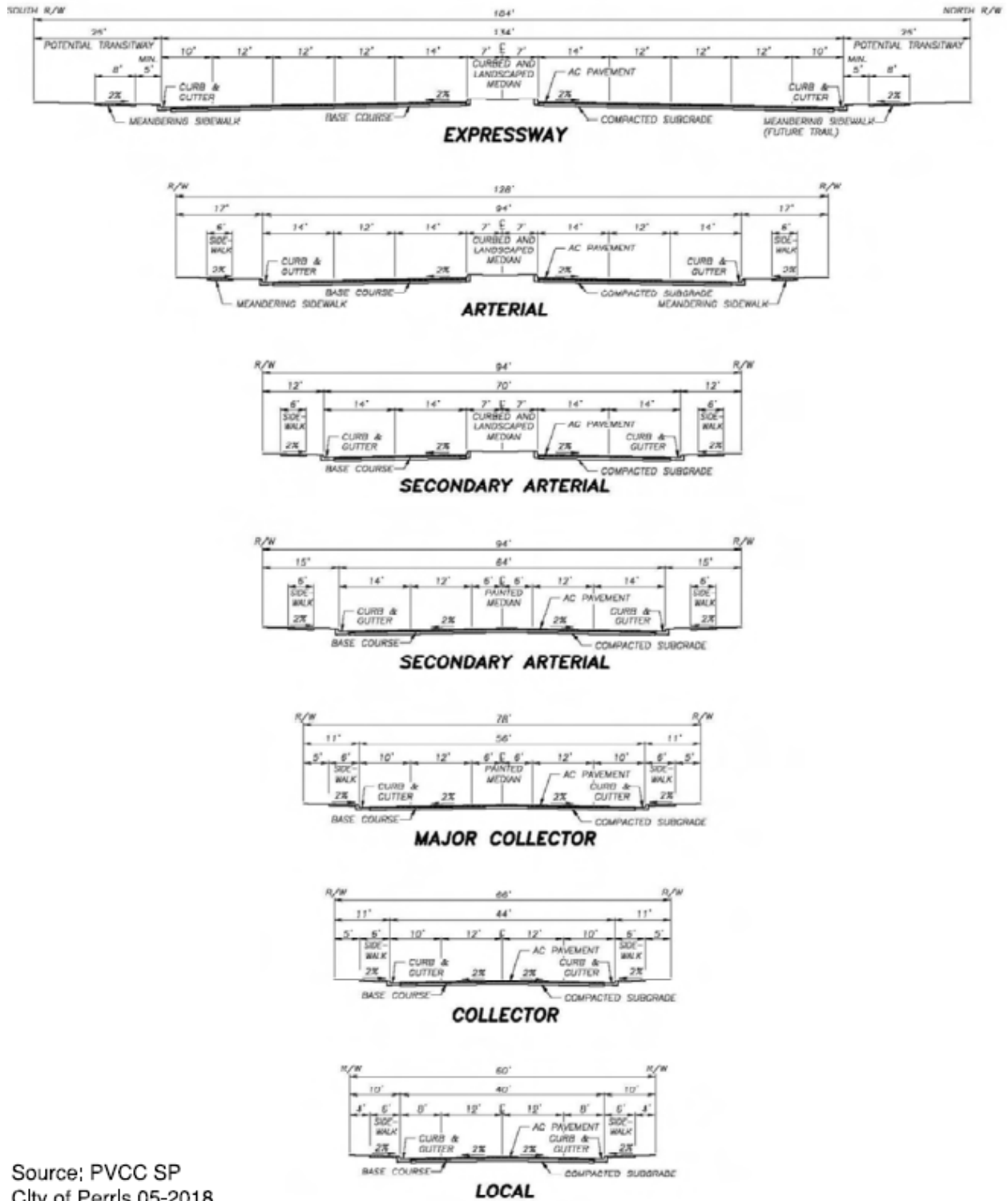
Source: City of Perris  
General Plan 8-2008



**EXHIBIT 3-4: PERRIS VALLEY COMMERCE CENTER SPECIFIC PLAN CIRCULATION PLAN**



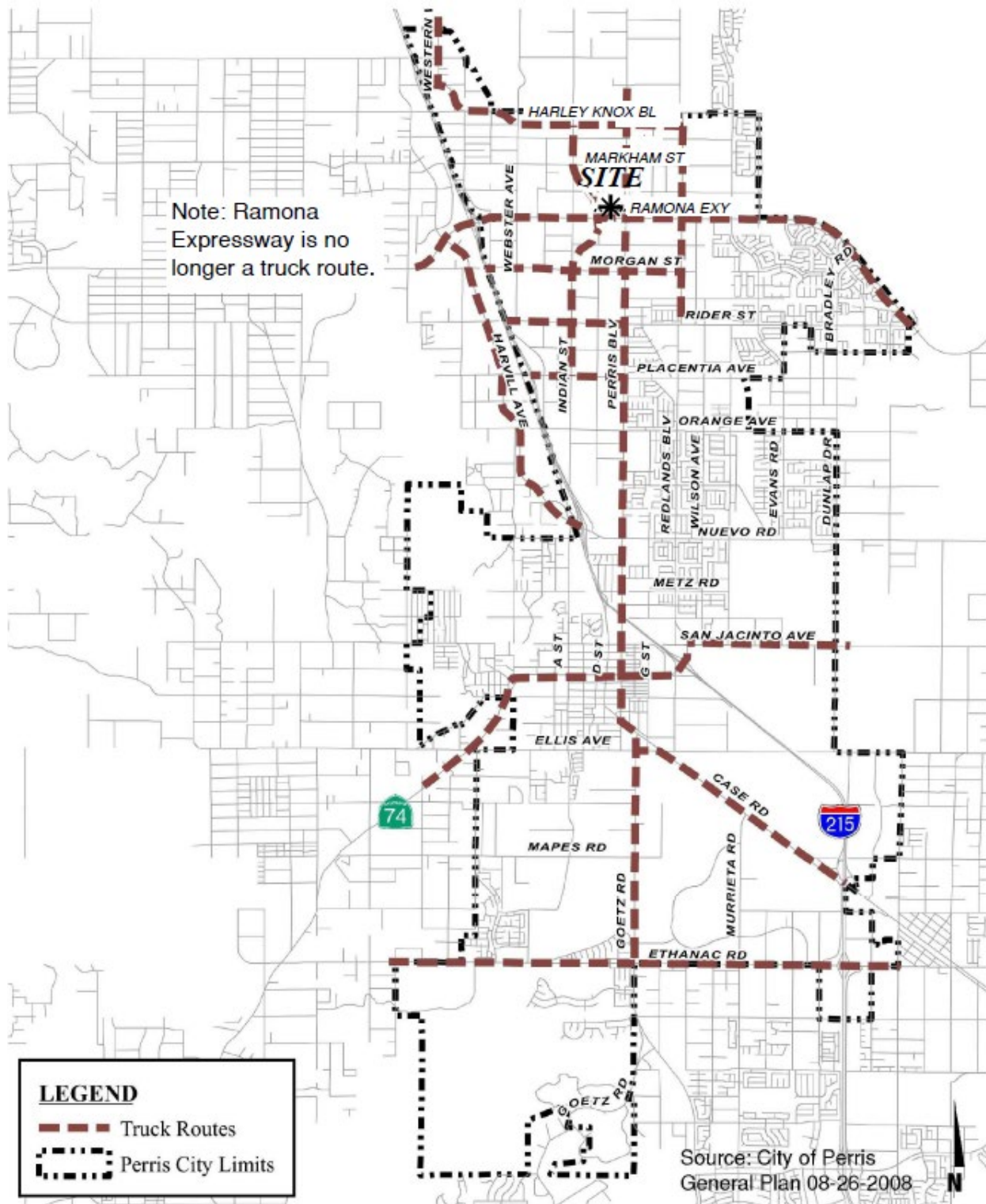
**EXHIBIT 3-5: PERRIS VALLEY COMMERCE CENTER SPECIFIC PLAN CROSS-SECTIONS**



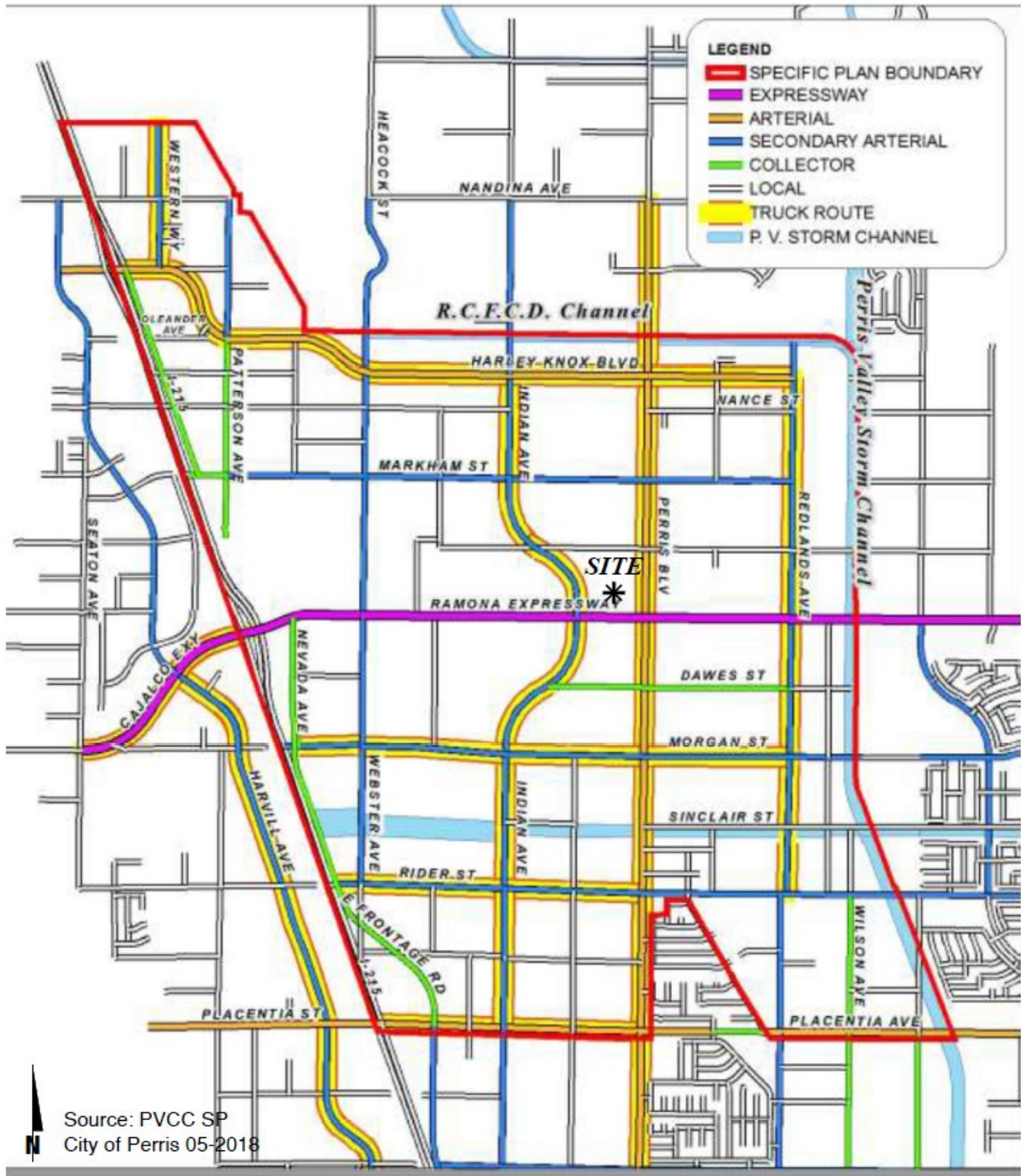
Source; PVCC SP  
City of Perris 05-2018



EXHIBIT 3-6: CITY OF PERRIS TRUCK ROUTES



**EXHIBIT 3-7: PERRIS VALLEY COMMERCE CENTER SPECIFIC PLAN TRUCK ROUTE PLAN**





**EXHIBIT 3-8: PERRIS VALLEY COMMERCE CENTER SPECIFIC PLAN MASS TRANSIT ROUTES**



### 3.5 BICYCLE & PEDESTRIAN FACILITIES

In an effort to promote alternative modes of transportation, the City of Perris also includes a proposed bikeways and trail system. The City of Perris proposed bikeways and trail system is shown on Exhibit 3-9. Ramona Expressway, Indian Avenue, and Perris Boulevard are proposed to have Class II bike lanes. PVCC SP Trail System is shown on Exhibit 3-10. Field observations conducted in March 2020 indicate nominal pedestrian and bicycle activity within the study area. Exhibit 3-11 illustrates the existing bicycle and pedestrian facilities, including bike lanes, sidewalks and crosswalk locations.

### 3.6 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 2020, when local schools were in session and operating on a typical bell schedule (prior to closures related to the COVID-19 pandemic). 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)

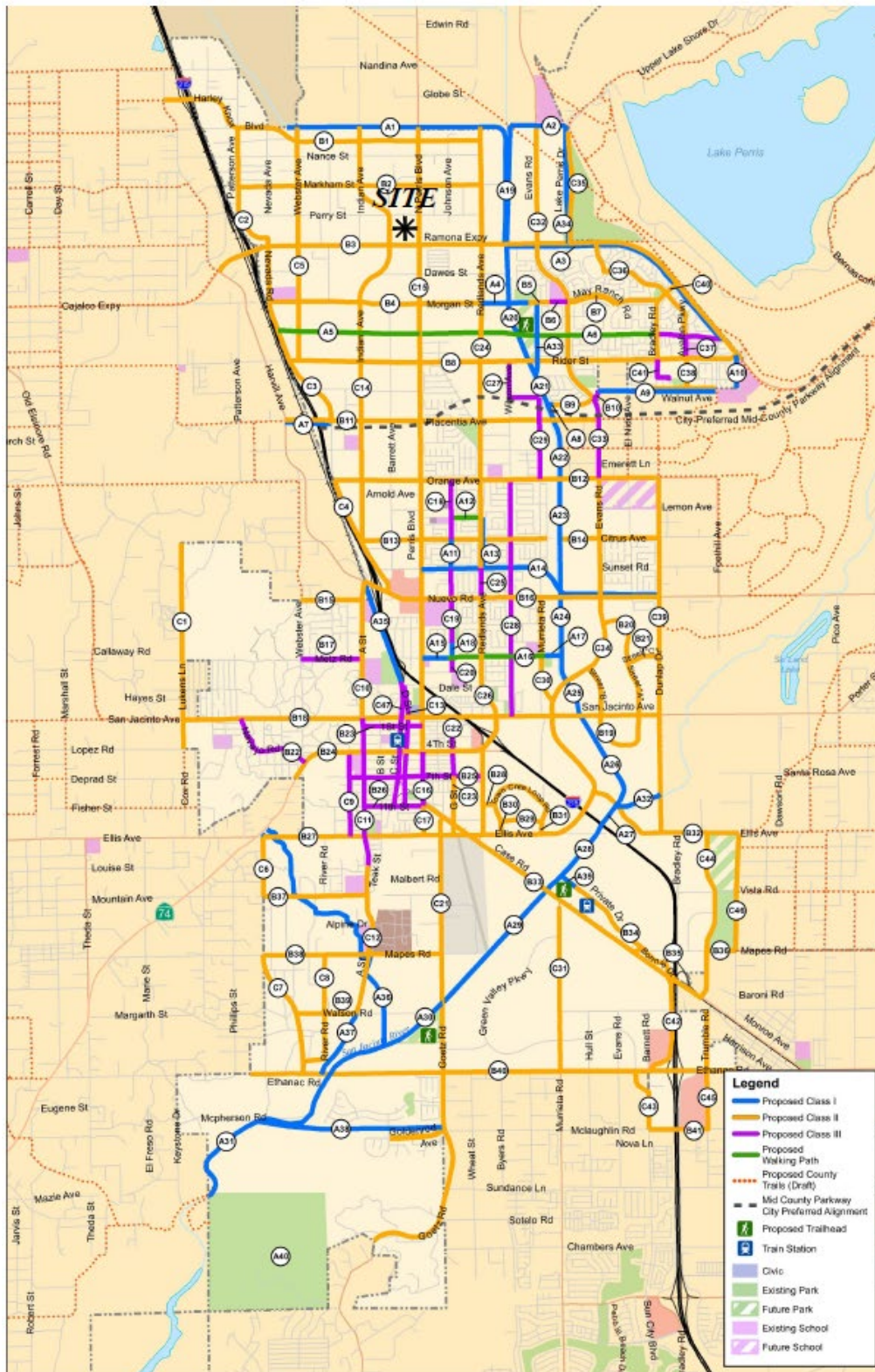
The weekday AM and weekday PM peak hour count data are representative of typical weekday peak hour traffic conditions in the study area. There were no observations made in the field that would indicate atypical traffic conditions on the count dates, such as construction activity or detour routes and near-by schools were in session and operating on normal schedules. March 2020 traffic counts were increased by 3% to reflect 2021 baseline traffic conditions for the purposes of this analysis.

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 March 2020 include the vehicle classifications as shown below:

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

To represent the impact large trucks, buses, and recreational vehicles have on traffic flow, all trucks were converted into PCEs. 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. For this analysis, a PCE factor of 1.5 has been applied to 2-axle trucks, 2.0 for 3-axle trucks, and 3.0 for 4+-axle trucks to estimate each turning movement. These factors are consistent with the values recommended for use in the County of Riverside's traffic study guidelines. (9)

**EXHIBIT 3-9: CITY OF PERRIS PROPOSED BIKEWAYS AND TRAIL IMPROVEMENTS**



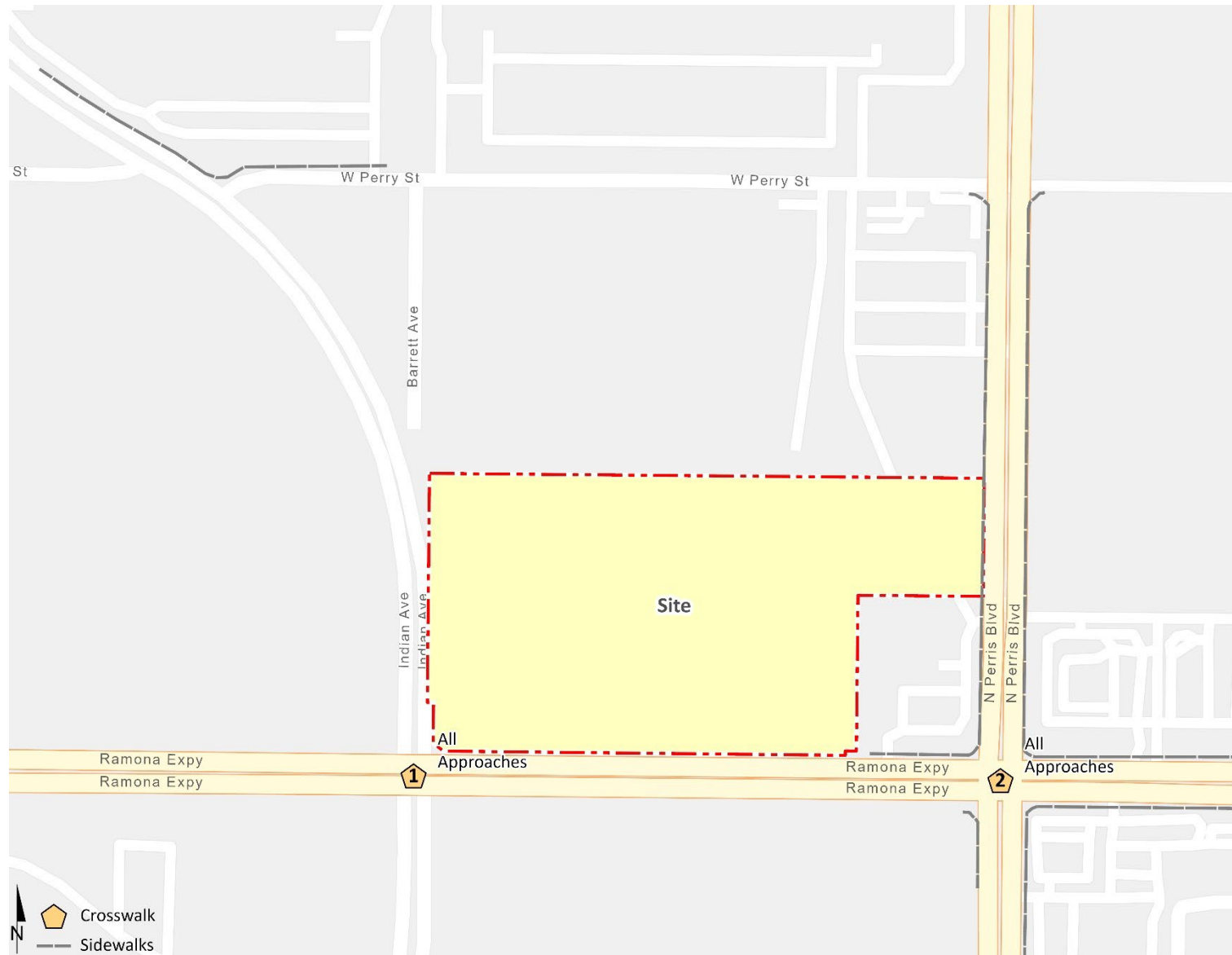
SOURCE: CITY OF PERRIS (FEBRUARY 20, 2015)



EXHIBIT 3-10: PERRIS VALLEY COMMERCE CENTER SPECIFIC PLAN TRAIL SYSTEM



**EXHIBIT 3-11: EXISTING PEDESTRIAN FACILITIES**



Existing weekday average daily traffic (ADT) volumes on arterial highways throughout the study area are shown on Exhibit 3-12 (in actual vehicles). Where actual 24-hour tube count data was not available, Existing ADT volumes were based upon factored intersection peak hour counts collected by Urban Crossroads, Inc. using the following formula for each intersection leg:

$$\text{Weekday PM Peak Hour (Approach Volume + Exit Volume)} \times 12.37 = \text{Leg Volume}$$

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 8.08 percent. As such, the above equation utilizing a factor of 12.37 estimates the ADT volumes on the study area roadway segments assuming a peak-to-daily relationship of approximately 8.08 percent (i.e.,  $1/0.0808 = 12.37$ ) 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 3-12.

### 3.7 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 3-1 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 3-1: INTERSECTION ANALYSIS FOR EXISTING (2021) CONDITIONS**

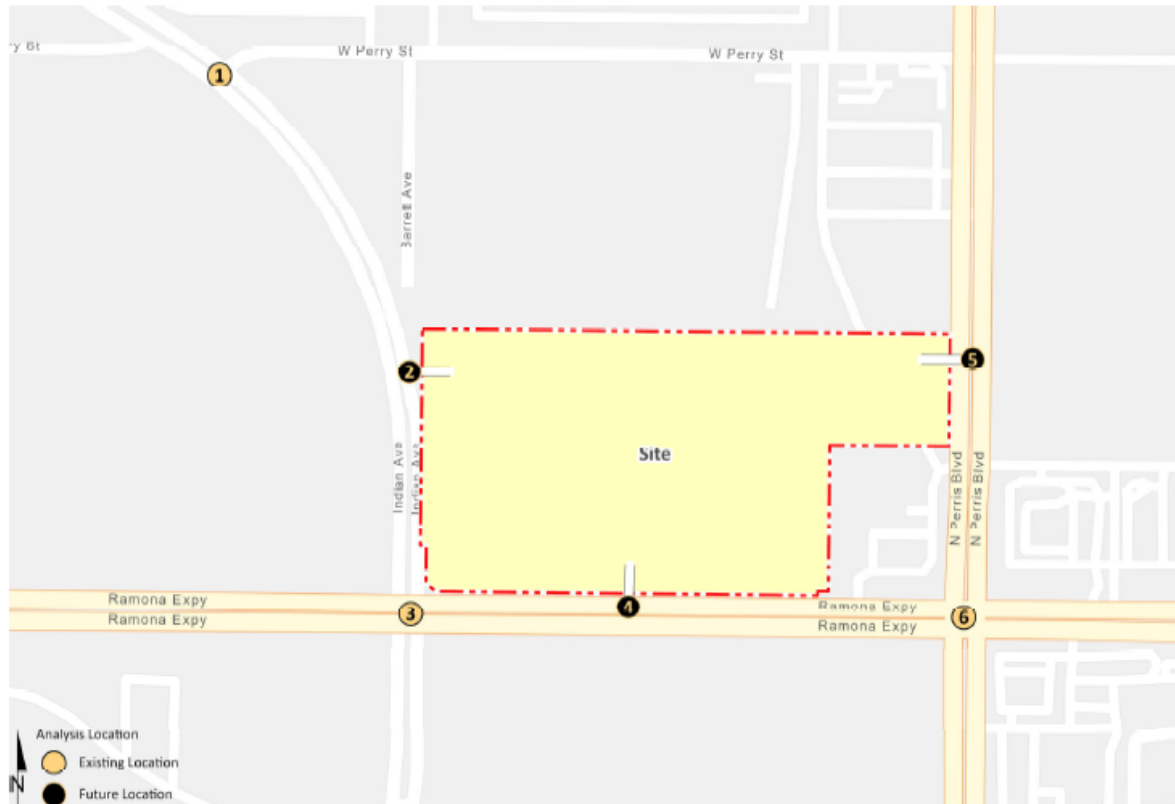
# Intersection	Traffic Control <sup>1</sup>	Delay <sup>2</sup> (secs.)		Level of Service	
		AM	PM	AM	PM
1 Indian Av. & Perry St.	CSS	9.8	8.9	A	A
2 Indian Av. & Driveway 1		Future Intersection			
3 Indian Av. & Ramona Exwy.	TS	21.2	24.4	C	C
4 Driveway 2 & Ramona Exwy.	CSS	Future Intersection			
5 Perris Bl. & Driveway 3		Future Intersection			
6 Perris Bl. & Ramona Exwy.	TS	33.0	27.6	C	C

<sup>1</sup> CSS = Cross-street Stop; TS = Traffic Signal

<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.



**EXHIBIT 3-12: EXISTING (2021) TRAFFIC VOLUMES (IN ACTUAL VEHICLES)**



1	Indian Av. & Perry St.	2	Indian Av. & Driveway 1	3	Indian Av. & Ramona Exwy.	4	Driveway 2 & Ramona Exwy.	5	Perris Bl. & Driveway 3
4,900	100			4,850	34,750				
		<i>Future Intersection</i>					<i>Future Intersection</i>		<i>Future Intersection</i>
	4,850			35,000	6,350				

6	Perris Bl. & Ramona Exwy.
21,800	30,100
33,950	19,900

##(##) AM(PM) Peak Hour Intersection Volumes

## Average Daily Trips

### **3.8 TRAFFIC SIGNAL WARRANTS ANALYSIS**

Traffic signal warrants for Existing traffic conditions are based on existing peak hour intersection turning volumes. There are no applicable study area intersections that may warrant a traffic signal for Existing (2021) traffic conditions.

## 4 PROJECTED FUTURE TRAFFIC

The Project is proposed to consist of a 232,575 sf multi-tenant warehouse building and a 125-room hotel. The warehouse building is anticipated to be constructed by the year 2023 and the hotel is anticipated to be constructed by the year 2025. Vehicular and truck traffic access will be provided via the following driveways:

- Indian Avenue & Driveway 1 – right-in/right-out/left-in access for both passenger cars and trucks
- Driveway 2 & Ramona Expressway – right-in/right-out access for passenger cars only
- Perris Boulevard & Driveway 3 – right-in/right-out access for passenger cars only

Regional access to the Project site is provided via the I-215 Freeway and Harley Knox Boulevard/Ramona Expressway/future Placentia Interchange (anticipated completion of the interchange per RCTC is 2022).

### 4.1 PROJECT 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. Trip generation rates for the Project are shown in Table 4-1 and Table 4-2 shows the PCE trip generation summary illustrating daily and peak hour trip generation estimates based on the Institute of Transportation Engineers (ITE) Trip Generation Manual (11<sup>th</sup> Edition, 2021). (2) (10) For purposes of this analysis, the following ITE land use codes and vehicle mixes have been utilized:

- ITE Land Use Code 150 has been used to derive site specific trip generation estimates for the 232,575 sf building of the proposed Project. The vehicle mix has been obtained from the ITE's Trip Generation Manual Supplement (dated February 2020). This study provides the following vehicle mix: AM Peak Hour: 87.0% passenger cars and 13.0% trucks; PM Peak Hour: 85.0% passenger cars and 15.0% trucks; Weekday Daily: 73.0% passenger cars and 27.0% trucks. The truck percentages were further broken down by axle type per the following South Coast Air Quality Management District (SCAQMD) recommended truck mix: 2-Axle = 16.7%; 3-Axle = 20.7%; 4+-Axle = 62.6%.
- Hotel (ITE Land Use Code 310)

As noted on Table 4-2, refinements to the raw trip generation estimates have been made to provide a more detailed breakdown of trips between passenger cars and trucks. Trip generation for heavy trucks was further broken down by truck type (or axle type). The total truck percentage is comprised of 3 different truck types: 2-axle, 3-axle, and 4+-axle trucks. PCE factors were applied to the trip generation rates for heavy trucks (large 2-axles, 3-axles, 4+-axles). PCEs allow the typical “real-world” mix of vehicle types to be represented as a single, standardized unit, such as the passenger car, to be used for the purposes of capacity and level of service analyses. The PCE factors are consistent with the recommended PCE factors in the City's traffic study guidelines. (9)

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

Land Use <sup>1</sup>	ITE LU		AM Peak Hour			PM Peak Hour			Daily
	Units <sup>2</sup>	Code	In	Out	Total	In	Out	Total	
<b>Actual Vehicle Trip Generation Rates</b>									
Hotel	RM	310	0.26	0.20	0.46	0.30	0.29	0.59	7.99
Warehousing <sup>3</sup>	TSF	150	0.131	0.039	0.170	0.050	0.130	0.180	1.710
Passenger Cars			0.120	0.030	0.150	0.034	0.116	0.150	1.110
2-Axle Trucks			0.002	0.001	0.003	0.003	0.002	0.005	0.100
3-Axle Trucks			0.002	0.002	0.004	0.003	0.003	0.006	0.124
4+-Axle Trucks			0.007	0.006	0.013	0.010	0.009	0.019	0.376
<b>Passenger Car Equivalent (PCE) Trip Generation Rates<sup>4</sup></b>									
Warehousing <sup>3</sup>	TSF	150	0.131	0.039	0.170	0.050	0.130	0.180	1.710
Passenger Cars			0.120	0.030	0.150	0.034	0.116	0.150	1.110
2-Axle Trucks			0.003	0.002	0.005	0.005	0.003	0.008	0.150
3-Axle Trucks			0.004	0.004	0.008	0.006	0.006	0.012	0.248
4+-Axle Trucks			0.021	0.017	0.038	0.030	0.026	0.056	1.127

<sup>1</sup> Trip Generation Source: Institute of Transportation Engineers (ITE), *Trip Generation Manual*, 11th Edition (2021).

<sup>2</sup> RM = Rooms; TSF = thousand square feet

<sup>3</sup> 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.

Normalized % - With Cold Storage: 34.7% 2-Axle trucks, 11.0% 3-Axle trucks, 54.3% 4-Axle trucks.

<sup>4</sup> PCE factors per Riverside County TIA Guidelines: 2-axle = 1.5; 3-axle = 2.0; 4+-axle = 3.0.

**TABLE 4-2: PROJECT TRIP GENERATION SUMMARY**

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 (Actual)</b>									
Hotel		125 RM	33	25	58	38	36	74	1,000
Warehouse		232.575 TSF							
Passenger Cars:			28	7	35	8	27	35	260
Truck Trips:									
2-Axle Trucks			0	0	0	1	0	1	24
3-Axle Trucks			0	0	0	1	1	2	30
4-Axle+ Trucks			2	1	3	2	2	4	88
Truck Trips			2	1	3	4	3	7	142
<b>TOTAL TRIPS (Actual)<sup>2</sup></b>			<b>63</b>	<b>33</b>	<b>96</b>	<b>50</b>	<b>66</b>	<b>116</b>	<b>1,402</b>
<b>Project Trip Generation Summary (PCE)</b>									
Hotel		125 RM	33	25	58	38	36	74	1,000
Warehouse		232.575 TSF							
Passenger Cars:			28	7	35	8	27	35	260
Truck Trips:									
2-Axle Trucks (PCE = 1.5)			1	0	1	1	1	2	36
3-Axle Trucks (PCE = 2.0)			1	1	2	1	1	2	58
4-Axle+ Trucks (PCE = 3.0)			5	4	9	7	6	13	264
Truck Trips			7	5	12	9	8	17	358
<b>TOTAL TRIPS (PCE)<sup>2</sup></b>			<b>68</b>	<b>37</b>	<b>105</b>	<b>55</b>	<b>71</b>	<b>126</b>	<b>1,618</b>

<sup>1</sup> RM = Rooms; TSF = thousand square feet

<sup>2</sup> TOTAL TRIPS = Passenger Cars + Truck Trips.

The proposed Project’s trip generation, based on actual vehicles, is included in Table 4-2 for informational purposes only. The proposed Project is anticipated to generate 1,402 two-way trip-ends per day with 96 AM peak hour trips and 116 PM peak hour trips (actual vehicles), as shown in Table 4-2. For the purposes of the operations analysis, the PCE values shown in Table 4-2 will be utilized.

## 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 for both passenger cars and truck traffic and are consistent with other similar projects that have been reviewed and approved by City of Perris staff. The truck trip distribution patterns have been developed based on the anticipated travel patterns for the warehousing trucks. The Project trip distribution patterns for both passenger cars and trucks were developed based on an understanding of existing travel patterns in the area, the geographical location of the site, and the site's proximity to the regional arterial and state highway system. It should be noted that the passenger car trip distribution patterns assume the I-215 Freeway and Placentia Avenue interchange is in place (anticipated completion of the interchange is 2022). Given the Project's proximity, project-related trucks are anticipated to utilize the Harley Knox Boulevard interchange to access the I-215 Freeway.

The Project industrial passenger car trip distribution pattern is graphically depicted on Exhibit 4-1. The Project industrial truck trip distribution pattern is graphically depicted on Exhibit 4-2. Finally, the Project industrial truck trip distribution pattern is graphically depicted on Exhibit 4-3. Each of these distribution patterns was reviewed and approved by the City of Perris as part of the traffic study scoping process (see Appendix 1.1).

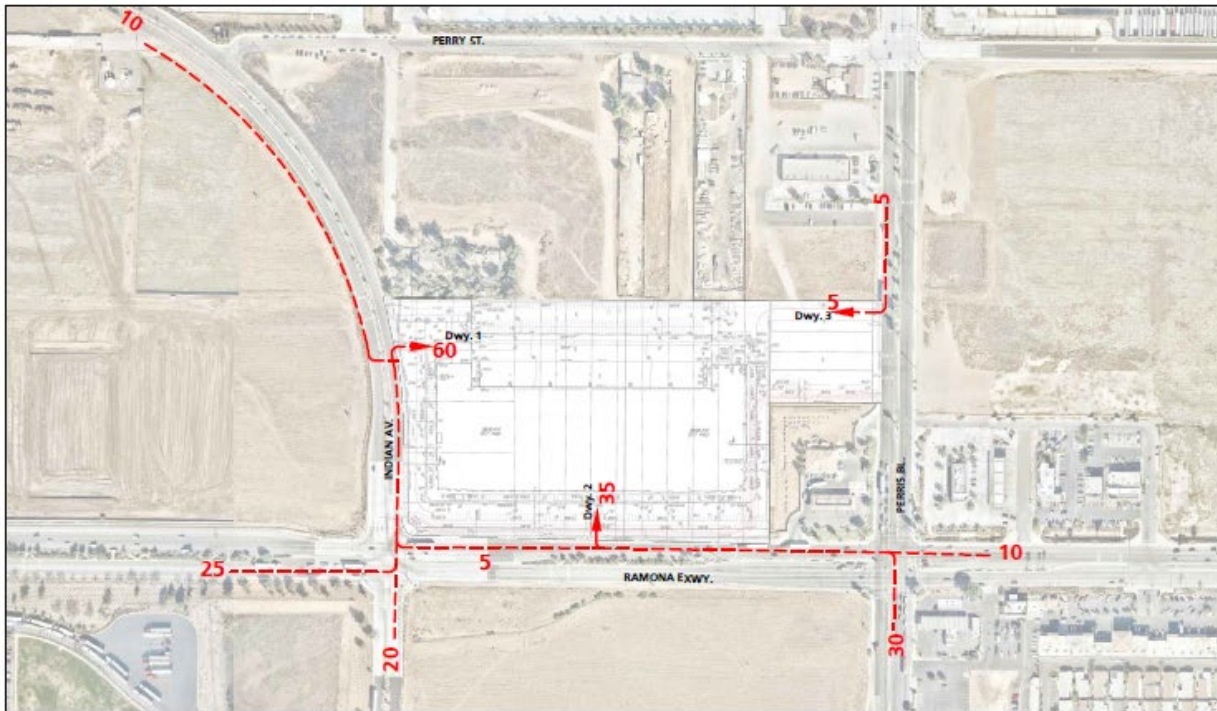
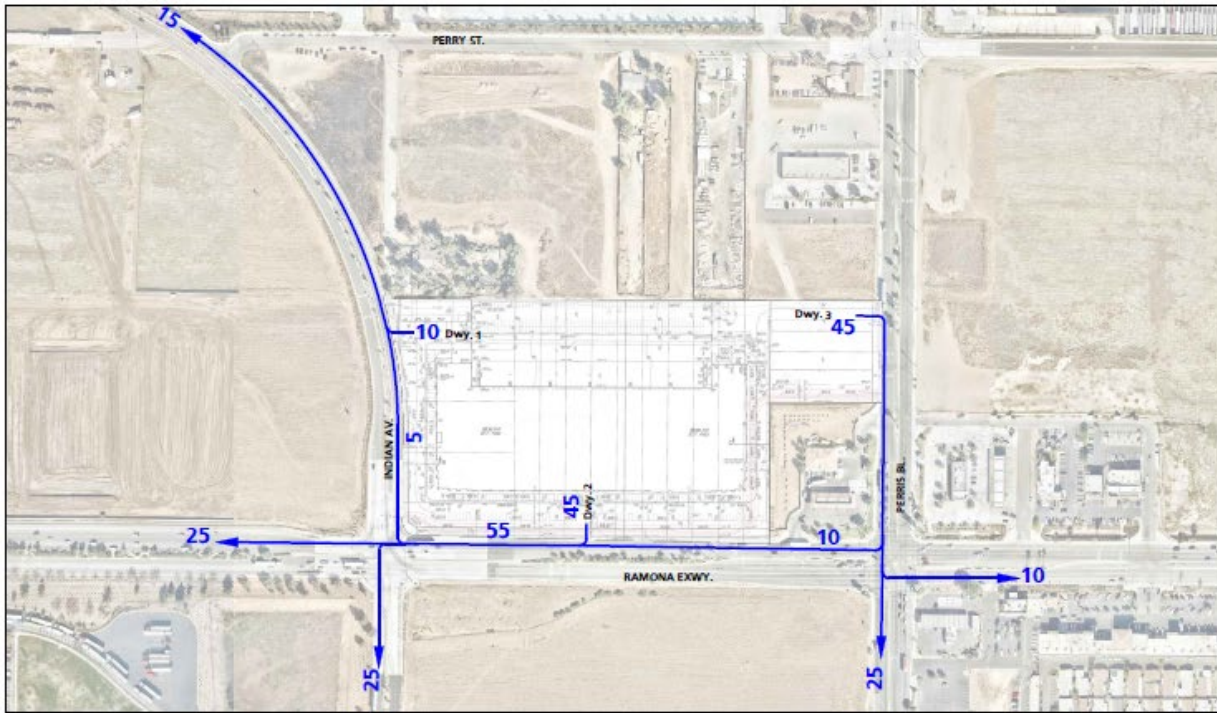
## 4.3 MODAL SPLIT

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 (employee trips only).

## 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 (Phase I) ADT and peak hour intersection turning movement volumes are shown on Exhibit 4-4 in actual vehicles. Project (Buildout) ADT and peak hour intersection turning movement volumes are shown on Exhibit 4-5 in actual vehicles.

**EXHIBIT 4-1: PROJECT (INDUSTRIAL PASSENGER CAR) TRIP DISTRIBUTION**



10 = Percent To/From Project

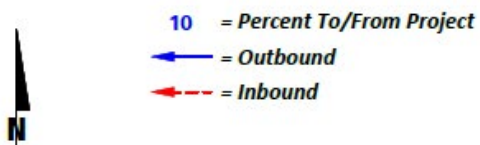
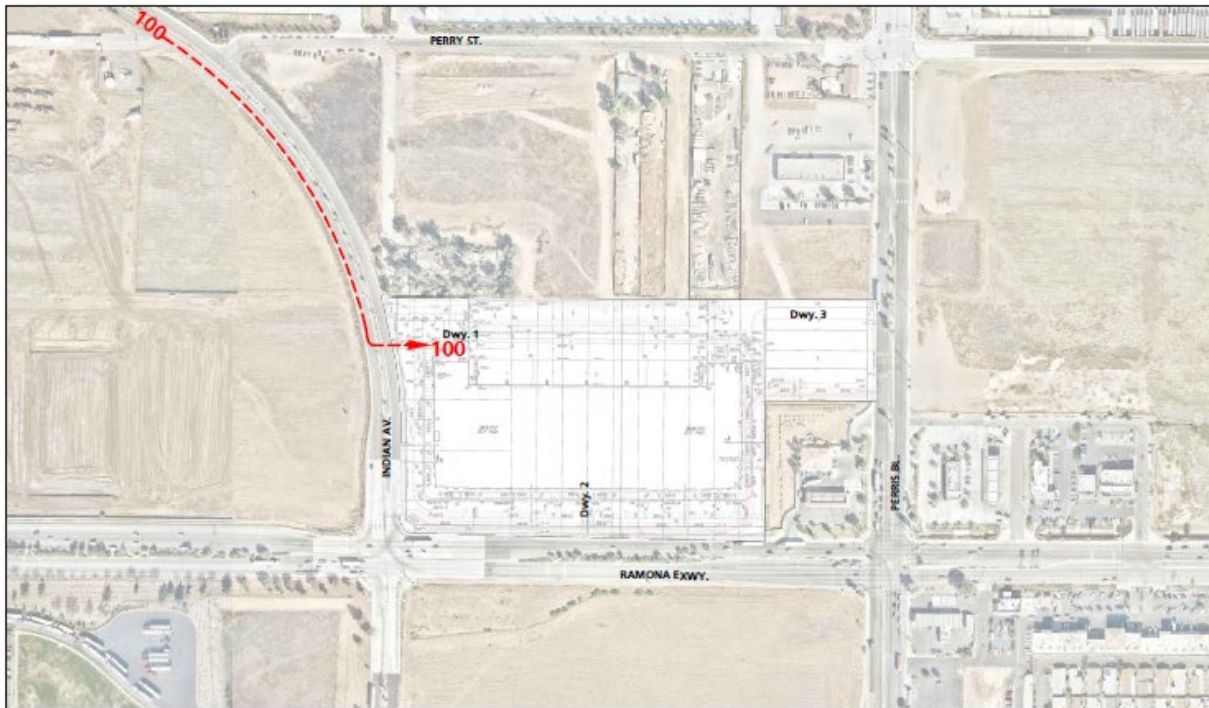
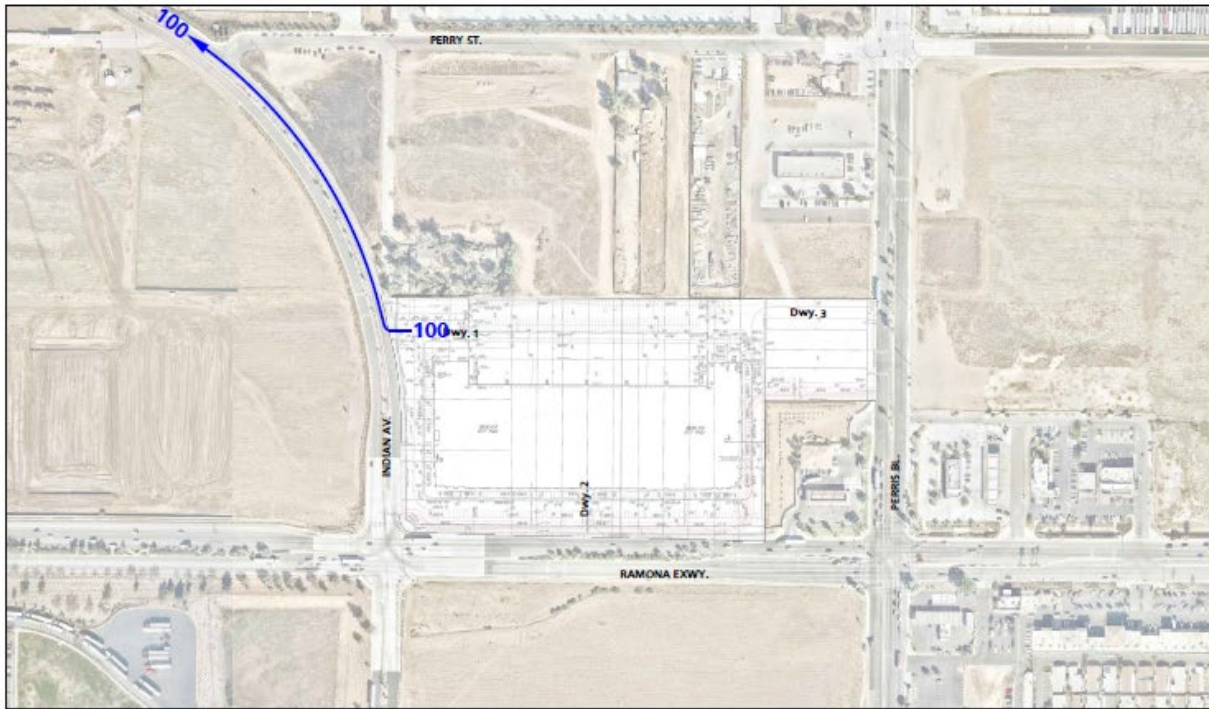
← = Outbound

--- = Inbound

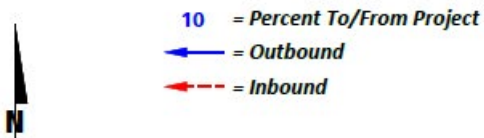
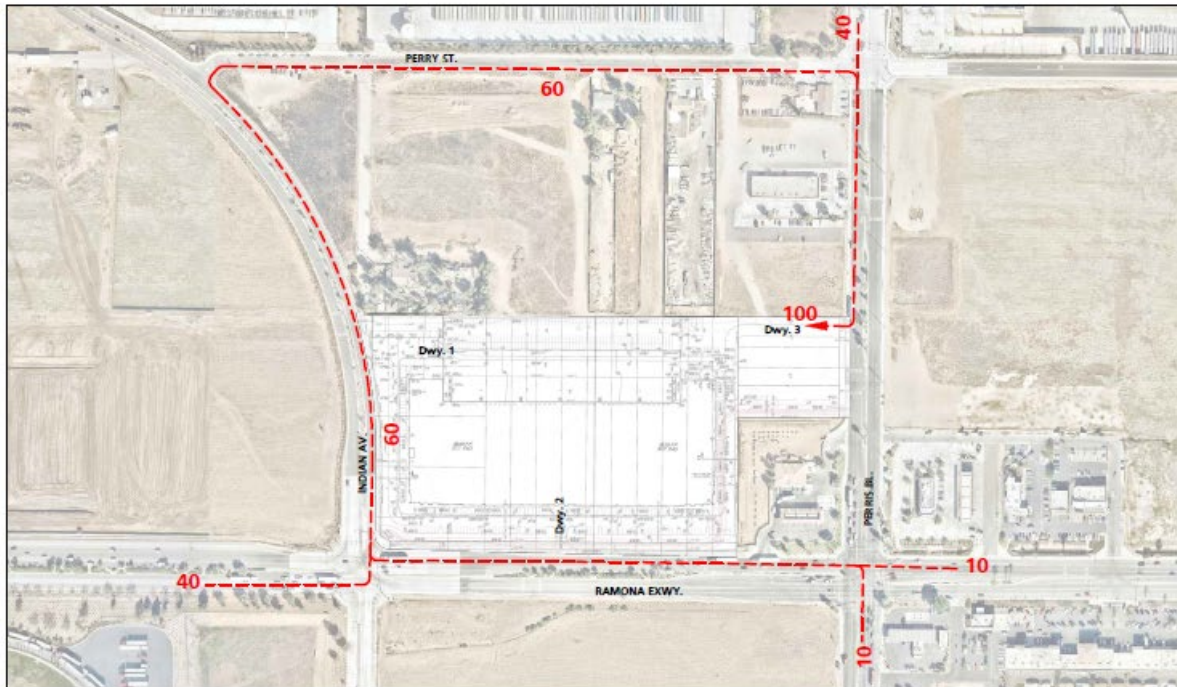
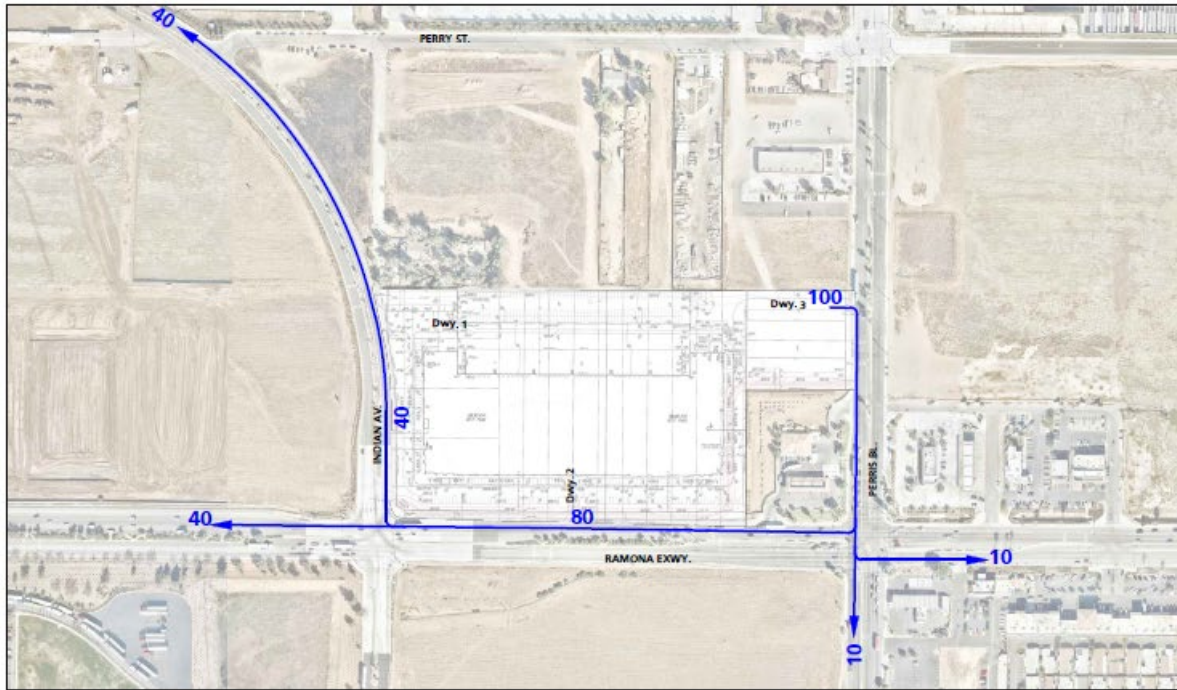




EXHIBIT 4-2: PROJECT (INDUSTRIAL TRUCK) TRIP DISTRIBUTION

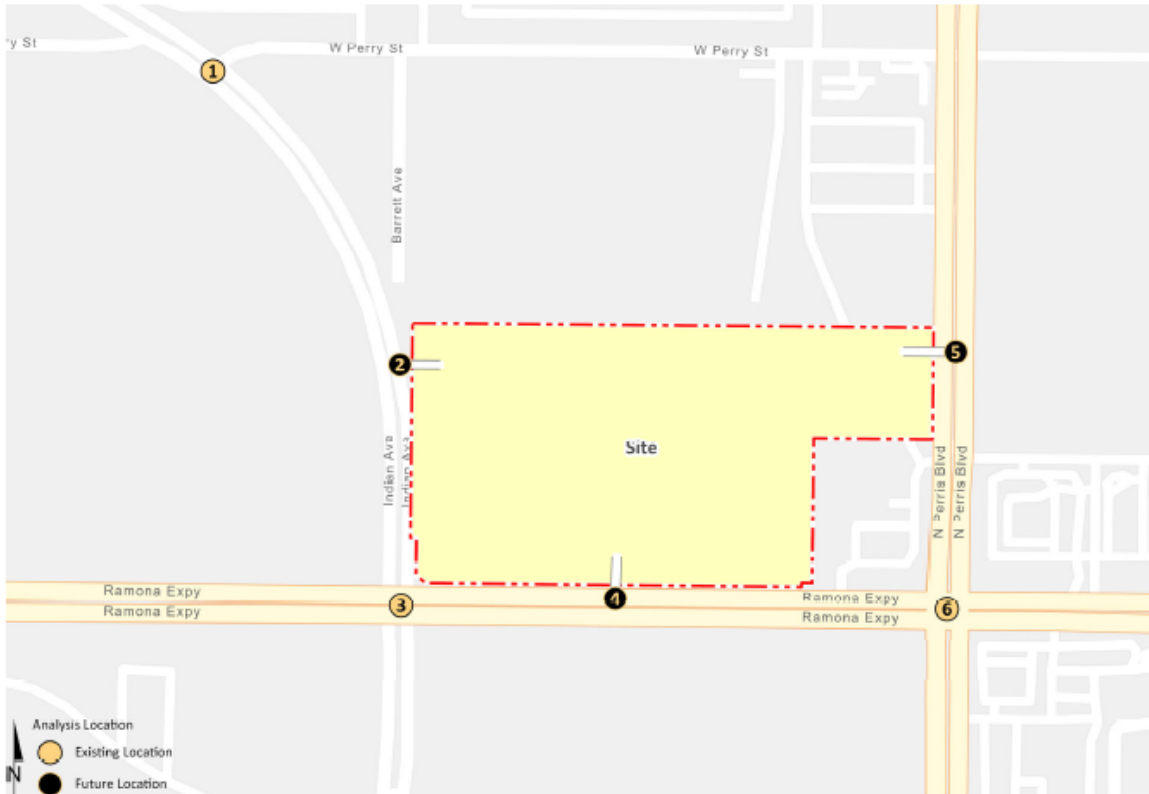


**EXHIBIT 4-3: PROJECT (HOTEL) TRIP DISTRIBUTION**





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



1	2	3	4	5	6
Indian Av. & Perry St.	Indian Av. & Driveway 1	Indian Av. & Ramona Exwy.	Driveway 2 & Ramona Exwy.	Perris Bl. & Driveway 3	Perris Bl. & Ramona Exwy.
<p>200</p> <p>← 5(5)</p> <p>↑ 2(7)</p> <p>200</p>	<p>150</p> <p>← 5(5)</p> <p>↑ 2(6)</p> <p>0(1) ↑</p> <p>14(4) →</p> <p>250</p> <p>Nominal</p>	<p>Nominal</p> <p>← 2(2)</p> <p>← 2(7)</p> <p>↑ 2(7)</p> <p>7(2) →</p> <p>6(2) ↑</p> <p>100</p> <p>Nominal</p>	<p>100</p> <p>← 3(12)</p> <p>← 10(3)</p> <p>← 2(3)</p> <p>100</p> <p>Nominal</p>	<p>← 1(0)</p> <p>3(12) →</p> <p>Nominal</p>	<p>Nominal</p> <p>← 1(3)</p> <p>← 2(7)</p> <p>← 1(3)</p> <p>← 3(1)</p> <p>8(2) →</p> <p>Nominal</p>

###(###) AM(PM) Peak Hour Intersection Volumes  
 ## Average Daily Trips



## 4.5 BACKGROUND TRAFFIC

Future year traffic forecasts have been based upon background (ambient) growth at 3% per year over 2 years, for 2023 traffic conditions, and 3% per year over 3 years, for 2025 traffic conditions. The total ambient growth is 6.09% for 2023 traffic conditions and 12.55% for 2025 traffic conditions. This ambient growth rate is added to existing traffic volumes to account for area-wide growth not reflected by cumulative development projects.

Ambient growth has been added to daily and peak hour traffic volumes on surrounding roadways, in addition to traffic generated by the development of future projects that have been approved but not yet built and/or for which development applications have been filed and are under consideration by governing agencies.

The Southern California Association of Governments (SCAG) 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) growth forecasts for the City of Perris identifies projected growth in population of 74,900 in 2016 to 121,000 in 2045, or a 61.6% increase over the 29-year period. The change in population equates to roughly a 1.67 percent growth rate compounded annually. Similarly, growth over the same 29-year period in households is projected to increase by 96.5 percent, or 2.36 percent growth rate, compounded annually. Finally, growth in employment over the same 29-year period is projected to increase by 64.0 percent, or a 1.72 percent annual growth rate. The average annual growth rate between population, households, and employment is 1.92 percent per year. (11) Therefore, the use of an annual growth rate of 3.0 percent would appear to conservatively approximate the anticipated regional growth in traffic volumes in the City of Perris, especially when considered along with the addition of Project-related traffic and traffic generated by other known development projects. As such, the growth in traffic volumes assumed in this traffic analysis would tend to overstate as opposed to understate the potential deficiencies to traffic and circulation.

## 4.6 CUMULATIVE DEVELOPMENT TRAFFIC

Other reasonably foreseeable development projects which are either approved or being processed concurrently in the study area have also been included as part of a cumulative analysis scenario. A cumulative project list was developed for the purposes of this analysis through consultation with planning and engineering staff from the City of Perris. The cumulative project list includes known and foreseeable projects that are anticipated to contribute traffic to the study area intersections. The adjacent jurisdiction of the County of Riverside have also been contacted to obtain the most current list of cumulative projects from their respective jurisdictions.

Where applicable, cumulative projects anticipated to contribute measurable traffic (i.e., 50 or more peak hour trips) to study area intersections have been manually added to the study area network to generate EAC and EAPC forecasts. In other words, this list of cumulative development projects has been reviewed to determine which projects would likely contribute measurable traffic through the study area intersections (e.g., those cumulative projects in close proximity to the proposed Project). For the purposes of this analysis, the cumulative projects that were determined to affect one or more of the study area intersections are shown on Exhibit 4-6, listed in Table 4-3, and have been considered for inclusion.

**EXHIBIT 4-6: CUMULATIVE DEVELOPMENT LOCATION MAP**

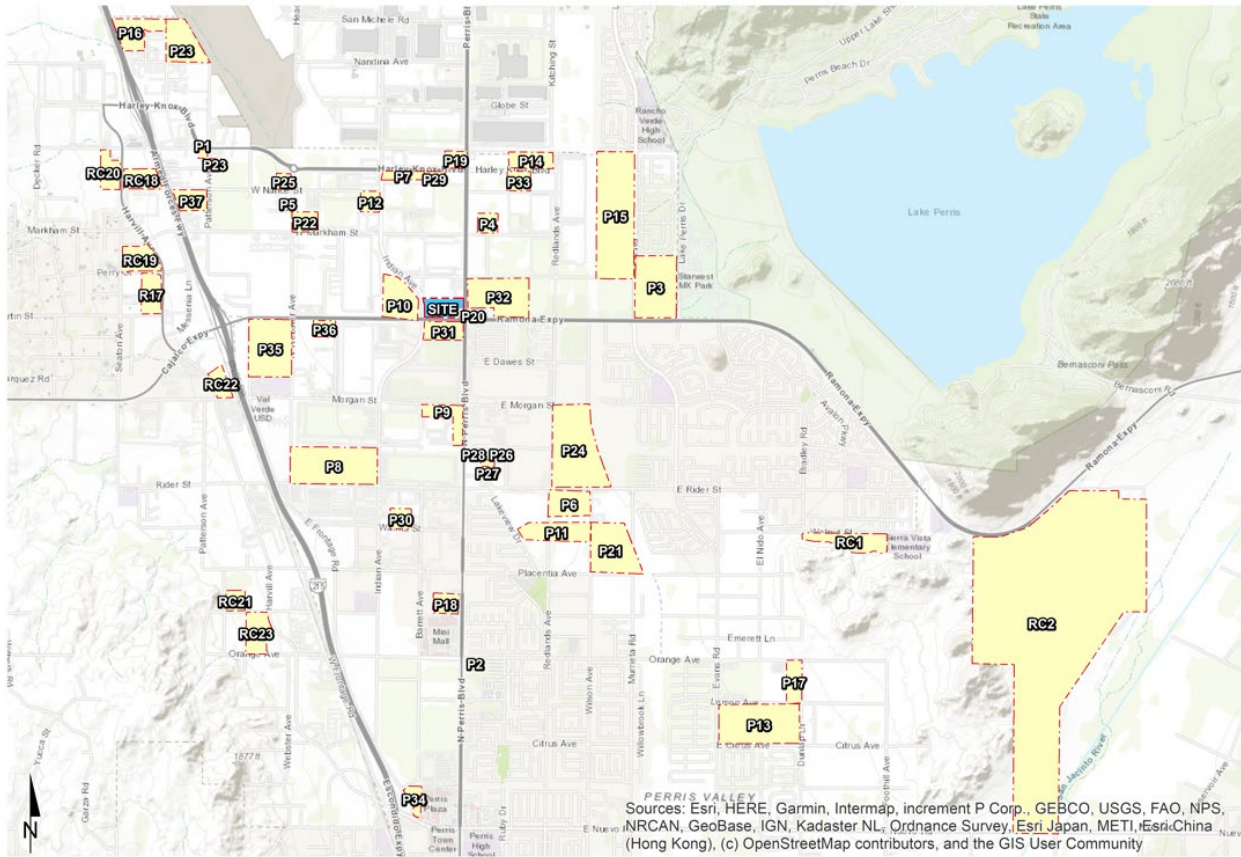


TABLE 4-3: CUMULATIVE DEVELOPMENT LAND USE SUMMARY (1 OF 2)

No.	Project Name / Case Number	Jurisdiction	Land Use	Quantity	Units <sup>1</sup>	Location
P1	Canyon Steel (CS)	Perris	Industrial	25.000	TSF	NWC OF PATTERSON AVE. & CALIFORNIA AVE.
P2	Tract 32497	Perris	Single Family Detached	131	DU	SWC OF MEDICAL CENTER DR. & ORANGE AVE.
P3	Stratford Ranch East / TTM 38071	Perris	Single Family Detached	197	DU	NEC OF EVANS RD. & RAMONA EXWY.
	APN 302200005	Perris	Single Family Detached	19	DU	NEC OF EVANS RD. & RAMONA EXWY.
P4	Perris Truck Yard	Perris	Truck Yard	9.5	AC	NORTH OF MARKHAM ST. & EAST OF PERRIS BL.
P5	Marijuana Manufacturing (MM)	Perris	Industrial	1.000	TSF	NWC OF WEBSTER AVE. & WASHINGTON ST.
	Holistic Inc.	Perris	Cultivation	5.000	TSF	872 WASHINGTON AVE.
P6	First Indus (Goodwin)	Perris	High-Cube Warehouse	338.000	TSF	SEC OF REDLANDS AVE. & RIDER ST.
P7	Kwasizur Industrial	Perris	Warehousing	138.000	TSF	SEC OF INDIAN AVE. & HARLEY KNOX BL.
P8	Rados / DPR 07-0119	Perris	High-Cube Warehouse	1,200.000	TSF	NWC OF INDIAN AVE. & RIDER ST.
P9	Patriot Industrial	Perris	Warehousing	286.000	TSF	SWC OF PERRIS BL. & MORGAN ST.
P10	Indian/Ramona Warehouse / DPR 18-00002	Perris	High-Cube Warehouse	428.730	TSF	NORTH OF RAMONA EXWY. WEST OF INDIAN AVE.
P11	Lakecreek East and West	Perris	High-Cube Warehouse	556.000	TSF	SOUTH OF RIDER ST. & EITHER SIDE OF REDLANDS AVE.
P12	Westcoast Textile / DPR 16-00001	Perris	Warehousing	180.000	TSF	SWC OF INDIAN ST. & NANCE ST.
P13	Tract 31659	Perris	Single Family Detached	161	DU	NEC OF EVANS RD. & CITRUS AVE.
	Tract 32041	Perris	Single Family Detached	122	DU	NWC OF DUNLAP RD. & CITRUS AVE.
P14	Harley Knox Commerce Park / DPR 16-004	Perris	High-Cube Warehouse	386.278	TSF	NWC OF HARLEY KNOX BLVD. & REDLANDS AVE.
P15	Stratford Ranch West / TTM 36648	Perris	Single Family Detached	90	DU	WEST OF EVANS RD. AT MARKHAM ST.
P16	First March Logistics	Perris	Warehousing	589.971	TSF	NWC OF NATWAR LN & NANDINA AVE.
P17	Citrus Court / TTM 37038	Perris	Single Family Detached	111	DU	SWC OF DUNLAP RD. & ORANGE AVE.
P18	Weinerschnitzel / CUP 17-05083	Perris	Fast-Food Restaurant	2.000	TSF	WEST OF PERRIS BL., SOUTH OF PLACENTIA AVE.
P19	March Plaza / CUP16-05165	Perris	Commercial Retail	47.253	TSF	NWC OF PERRIS BL. AND HARLEY KNOX BL.
P20	Cali Express Carwash / CUP 16-05258	Perris	Automated Car Wash	5.600	TSF	NWC OF PERRIS BL. AND RAMONA EXWY.
P21	Wilson Industrial / DPR 19-00007	Perris	High-Cube Warehouse	303.000	TSF	SEC OF WILSON AVE. AND RIDER ST.
P22	Integra Expansion / MMOD 17-05075	Perris	High-Cube Warehouse	273.000	TSF	NCE OF MARKHAM ST. AND WEBSTER AVE.
P23	Duke - Patterson at Nance	Perris	High-Cube Warehouse	580.000	TSF	NEC OF PATTERSON AVE. & NANCE ST.
P24	Rider 2/4	Perris	High-Cube Warehouse	1,373.449	TSF	NEC OF REDLANDS AVE. AND RIDER ST.
P25	AAA	Perris	Industrial	2.000	TSF	SEC OF HARLEY KNOX BL. & WEBSTER AVE.
P26	Pulliam Indus	Perris	Industrial	16.000	TSF	LOTS 10 & 12 ON COMMERCE DR., E OF PERRIS
P27	Burge Indus 1	Perris	Industrial	18.000	TSF	E OF PERRIS BL. & N OF COMMERCE DR.
P28	Burge Indus 2	Perris	Industrial	19.000	TSF	E OF PERRIS BL. & S OF COMMERCE DR.
P29	Nance Industrial	Perris	Warehousing	156.000	TSF	BETWEEN HARLEY KNOX BL. & NANCE ST.
P30	Dedeaux Walnut Warehouse	Perris	Industrial	205.830	TSF	N SIDE OF WALNUT AVE. BTW INDIAN AVE. & BARRETT AVE.
P31	Perris and Ramona Warehouse	Perris	Industrial	347.938	TSF	S SIDE OF RAMONA EXWY. BTW INDIAN AVE. & PERRIS BLVD.
P32	OLC3	Perris	High-Cube Warehouse	878.750	TSF	SEC OF PERRY ST. & PERRIS BLVD.
			Retail	45.000	TSF	
P33	Harley Knox Commerce Center	Perris	Warehousing	156.780	TSF	S SIDE OF HARLEY KNOX BL. AND W OF REDLANDS AVE.
P34	Perris Plaza (Buildout)	Perris	Shopping Center	173.000	TSF	NEC OF NEEVO RD. & FRONTAGE RD.
P35	Ramona Gateway Commerce Center	Perris	High-Cube Fulfillment	902.713	TSF	SWC OF WEBSTER AVE. & RAMONA EXWY.
			High-Cube Cold Storage	47.511	TSF	
			Fast-Food Restaurant w/ DT	16.500	TSF	
			Fast-Food Restaurant w/o DT	10.200	TSF	
			Coffee Shop w/ DT	2.400	TSF	
			Automated Car Wash	1	Tunnel	
			Gas Station w/ Market	16	VFP	
P36	Ramona & Brennan	Perris	Warehousing	162.871	TSF	SWC OF BRENNAN AVE. & RAMONA EXWY.
P37	Patterson Commerce Center	Perris	High-Cube Fulfillment	224.247	TSF	SWC OF PATTERSON AVE. & NANCE ST.
			High-Cube Cold Storage	39.573	TSF	

**TABLE 4-3: CUMULATIVE DEVELOPMENT LAND USE SUMMARY (2 OF 2)**

No.	Project Name / Case Number	Jurisdiction	Land Use	Quantity	Units <sup>1</sup>	Location
RC1	McCanna Hills / TTM 33978	Riv. Co.	Single Family Detached	63	DU	SWC OF SHERMAN AVE. & WALNUT AVE.
RC2	Stoneridge	Riv. Co.	High-Cube Cold Storage	1695.355	T5F	NORTH OF NUEVO RD., SOUTH OF RAMONA EXWY., EAST OF
			High-Cube Fulfillment	2966.872	T5F	
			High-Cube Warehouse	2966.872	T5F	
			Manufacturing	847.678	T5F	
			Warehouse	427.759	T5F	
			Industrial Park	641.639	T5F	
			Free-Standing Discount Superstore	100.000	T5F	
			Commercial Retail	21.968	T5F	
RC3	Majestic Freeway Business Center - Building 12	Riv. Co.	Warehousing	154.751	T5F	NEC OF HARVILL AVE. & COMMERCE CENTER DR.
RC4	Majestic Freeway Business Center - Building 15	Riv. Co.	Warehousing	90.279	T5F	NWC OF HARVILL AVE. & COMMERCE CENTER DR.
RC5	PPT180025: Seaton Commerce Center	Riv. Co.	High-Cube Warehouse	210.800	T5F	SEC OF SEATON AVE. & PERRY ST.
RC6	Majestic Freeway Business Center - Building 11	Riv. Co.	High-Cube Warehouse	391.045	T5F	NEC OF HARVILL AVE. & PERRY ST.
RC7	Majestic Freeway Business Center - Buildings 1, 3 & 4	Riv. Co.	Warehousing	48.930	T5F	NWC OF HARVILL AVE. & CAJALCO RD.
			High-Cube Warehouse	1195.740	T5F	
RC8	Val Verde Logistics Center	Riv. Co.	High-Cube Warehouse	280.308	T5F	NWC OF HARVILL AVE. & OLD CAJALCO RD.
RC9	Dedeaux Truck Terminal	Riv. Co.	Truck Terminal	55.700	T5F	NORTH OF RIDER ST., WEST OF HARVILL AVE.
RC10	Harvill & Rider Warehouse	Riv. Co.	High-Cube Warehouse	284.746	T5F	NORTH OF RIDER ST., EAST OF HARVILL AVE.
			General Light Industrial	50.249	T5F	
RC11	PP26293	Riv. Co.	High-Cube Warehouse	612.481	T5F	SWC OF PATTERSON AVE. & RIDER ST.
RC12	PPT180023: Rider Commerce Center	Riv. Co.	Warehousing	204.330	T5F	NEC OF PATTERSON AVE. & RIDER ST.
RC13	PP26173	Riv. Co.	High-Cube Warehouse	423.665	T5F	SWC OF HARVILL AVE. & RIDER ST.
RC14	Barker Logistics	Riv. Co.	High-Cube Warehouse	699.630	T5F	SWC OF PATTERSON AVE. & PLACENTIA ST.
RC15	Placentia Truck Trailer Parking Lot	Riv. Co.	High-Cube Warehouse	335	Space	NWC OF HARVILL AVE. & PLACENTIA AVE.
RC16	PP26241	Riv. Co.	Warehousing	23.600	T5F	SEC OF HARVILL AVE. & PLACENTIA ST.
RC17	Majestic Freeway Business Center - Building 13	Riv. Co.	High-Cube Warehouse	322.997	T5F	SWC OF HARVILL AVE. & PERRY ST.
RC18	Majestic Freeway Business Center - Building 14A/B	Riv. Co.	Warehousing	354.583	T5F	SWC OF HARVILL AVE. & COMMERCE CENTER DR.
RC19	Majestic Freeway Business Center - Building 17	Riv. Co.	High-Cube Warehouse	268.955	T5F	NEC OF HARVILL AVE. & AMERICA'S TIRE DR.
RC20	Majestic Freeway Business Center - Building 18	Riv. Co.	High-Cube Warehouse	317.760	T5F	SWC OF HARVILL AVE. & PEREGRINE WY.
RC21	Thrifty Oil	Riv. Co.	Warehousing	171.270	T5F	NEC OF TOBACCO RD. & WATER AV.
RC22	Harvill & Cajalco	Riv. Co.	General Light Industrial	99.770	T5F	NEC OF HARVILL AV. & CAJALCO RD.
			Trailer Yard/Storage	133	Spaces	
RC23	Harvill & Water	Riv. Co.	High-Cube Fulfillment	434.823	T5F	SWC OF HARVILL AV. & WATER AV.

<sup>1</sup> DU = Dwelling Units; T5F = Thousand Square Feet

Although it is unlikely that these cumulative projects would be fully built and occupied by Year 2023 or 2025, they have been included in an effort to conduct a conservative analysis and overstate as opposed to understate potential traffic deficiencies.

Any other cumulative projects that are not expected to contribute measurable traffic to study area intersections have not been included since the traffic would dissipate due to the distance from the Project site and study area intersections. Any additional traffic generated by other projects not on the cumulative projects list is accounted for through background ambient growth factors that have been applied to the peak hour volumes at study area intersections as discussed in Section 4.5 *Background Traffic*. Cumulative (2023) Only ADT and peak hour intersection turning movement volumes are shown on Exhibit 4-7 in actual vehicles. Cumulative (2025) Only ADT and peak hour intersection turning movement volumes are shown on Exhibit 4-8 in actual vehicles.

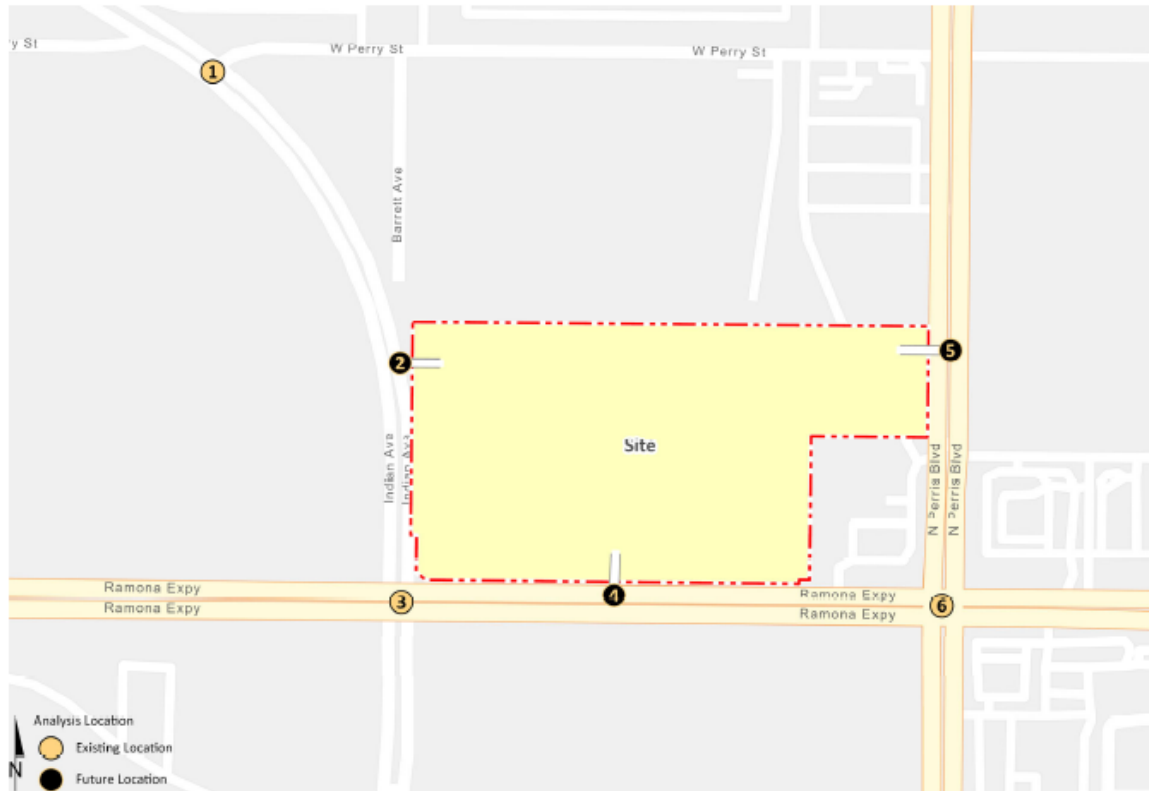
#### 4.7 NEAR-TERM TRAFFIC CONDITIONS

The “buildup” approach combines existing traffic counts with a background ambient growth factor to forecast EAC and EAPC traffic conditions. An ambient growth factor of 3.0% per year to account for background (area-wide) traffic increases that occur over time up to the year 2023 or 2025 from the year 2021 (3.0 percent per year, compounded annually). Traffic volumes generated by the Project are then added to assess the near-term traffic conditions. The 2023 and 2025 roadway networks are similar to the Existing conditions roadway network, with the exception of future driveways proposed to be developed by the Project.

The near-term traffic analysis includes the following traffic conditions, with the various traffic components:

- **Existing Plus Ambient Growth Plus Cumulative (2023)**
  - Existing 2021 counts
  - Ambient growth traffic (6.09%)
  - Cumulative Development traffic
- **Existing Plus Ambient Growth Plus Cumulative Plus Project (2023)**
  - Existing Plus Ambient Growth Plus Cumulative (2023)
  - Project traffic
- **Existing Plus Ambient Growth Plus Cumulative (2025)**
  - Existing 2021 counts
  - Ambient growth traffic (12.55%)
  - Cumulative Development traffic
- **Existing Plus Ambient Growth Plus Cumulative Plus Project (2025)**
  - Existing Plus Ambient Growth Plus Cumulative (2025)
  - Project traffic

EXHIBIT 4-7: CUMULATIVE (2023) ONLY TRAFFIC VOLUMES (IN ACTUAL VEHICLES)

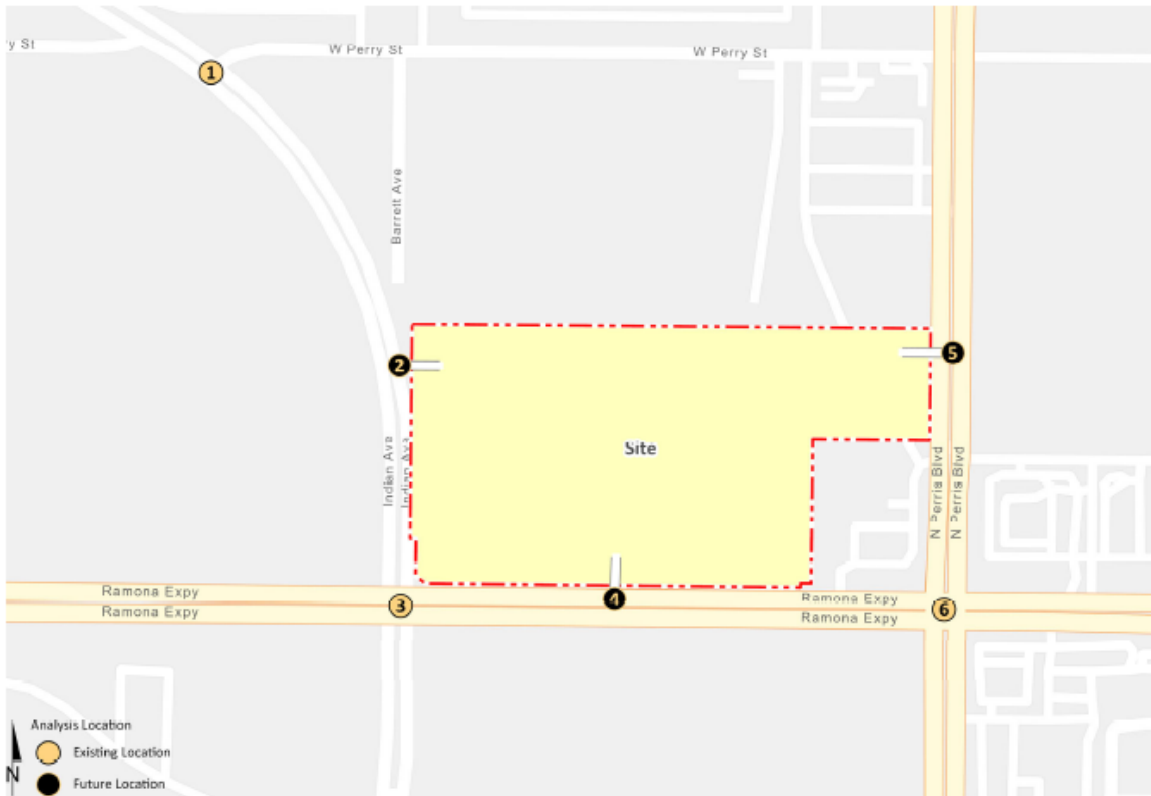


1	Indian Av. & Perry St.	2	Indian Av. & Driveway 1	3	Indian Av. & Ramona Exwy.	4	Driveway 2 & Ramona Exwy.	5	Perris Bl. & Driveway 3
1,480 15(5) 128(237) 5(14) 2(5) 500			Future Intersection	1,450 103(128) 26(10) 160(308) 319(1009) 21(15) 55,450	52,900 50(100) 864(582) 1(0) 17(46) 9(129) 1(2) 1,650		Future Intersection		Future Intersection
6 Perris Bl. & Ramona Exwy.									
1,950 15(7) 53(54) 230(1009) 87(88) 53,200									

###(###) AM(PM) Peak Hour Intersection Volumes  
 ## Average Daily Trips



**EXHIBIT 4-7: CUMULATIVE (2025) ONLY TRAFFIC VOLUMES (IN ACTUAL VEHICLES)**



1	Indian Av. & Perry St.	2	Indian Av. & Driveway 1	3	Indian Av. & Ramona Exwy.	4	Driveway 2 & Ramona Exwy.	5	Perris Bl. & Driveway 3																																																				
<p>1,550</p> <table border="1"> <tr> <td>15(5)</td> <td></td> <td></td> <td></td> </tr> <tr> <td>136(241)</td> <td></td> <td></td> <td></td> </tr> <tr> <td>5(14)</td> <td>5(2)</td> <td>7</td> <td>↑</td> </tr> <tr> <td>2(5)</td> <td>219(539)</td> <td></td> <td></td> </tr> </table> <p>500</p>	15(5)				136(241)				5(14)	5(2)	7	↑	2(5)	219(539)				<p>Future Intersection</p>		<p>4,550</p> <table border="1"> <tr> <td>103(128)</td> <td></td> <td></td> <td></td> </tr> <tr> <td>26(10)</td> <td></td> <td></td> <td></td> </tr> <tr> <td>9(108)</td> <td></td> <td></td> <td></td> </tr> <tr> <td>55(104)</td> <td></td> <td></td> <td></td> </tr> <tr> <td>905(628)</td> <td></td> <td></td> <td></td> </tr> <tr> <td>7(5)</td> <td></td> <td></td> <td></td> </tr> <tr> <td>160(308)</td> <td>17(46)</td> <td>7</td> <td>↑</td> </tr> <tr> <td>391(1046)</td> <td>9(129)</td> <td>↑</td> <td></td> </tr> <tr> <td>21(15)</td> <td>11(7)</td> <td>↑</td> <td></td> </tr> </table> <p>56,500</p>	103(128)				26(10)				9(108)				55(104)				905(628)				7(5)				160(308)	17(46)	7	↑	391(1046)	9(129)	↑		21(15)	11(7)	↑		<p>54,200</p>	<p>Future Intersection</p>	<p>Future Intersection</p>	<p>1,300</p>	<p>1,800</p>
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<p>6</p> <p>Perris Bl. &amp; Ramona Exwy.</p> <p>2,600</p> <table border="1"> <tr> <td>20(28)</td> <td></td> <td></td> <td></td> </tr> <tr> <td>54(59)</td> <td></td> <td></td> <td></td> </tr> <tr> <td>55(173)</td> <td></td> <td></td> <td></td> </tr> <tr> <td>158(98)</td> <td></td> <td></td> <td></td> </tr> <tr> <td>901(612)</td> <td></td> <td></td> <td></td> </tr> <tr> <td>102(66)</td> <td></td> <td></td> <td></td> </tr> <tr> <td>21(26)</td> <td>65(114)</td> <td>7</td> <td>↑</td> </tr> <tr> <td>230(1009)</td> <td>45(63)</td> <td>↑</td> <td></td> </tr> <tr> <td>87(88)</td> <td>47(87)</td> <td>↑</td> <td></td> </tr> </table> <p>54,550</p>	20(28)				54(59)				55(173)				158(98)				901(612)				102(66)				21(26)	65(114)	7	↑	230(1009)	45(63)	↑		87(88)	47(87)	↑							<p>53,050</p> <p>4,850</p>																			
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###(###) AM(PM) Peak Hour Intersection Volumes  
 ## Average Daily Trips

## 4.8 HORIZON YEAR (2040) CONDITIONS

“Buildout” traffic projections for Horizon Year conditions are based on traffic model forecasts and were derived from the RivTAM using accepted procedures for model forecast refinement and smoothing for study area intersections located within the County of Riverside. The Horizon Year traffic conditions analyses was utilized to determine if improvements funded through regional transportation mitigation fee programs, such as the TUMF, can accommodate the long-range traffic at the target LOS identified in the City of Perris General Plan.

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 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 of 2020. The RivTAM has a base (validation) year of 2012 and a horizon (future forecast) year of 2040. The RivTAM 2040 model utilized for the purposes of this analysis assumes buildout of the City of Perris and includes the future Mid-County Parkway.

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.

As previously discussed in Section 4.5 *Background Traffic*, the currently adopted SCAG 2020 RTP/SCS growth forecasts for the City of Perris identifies a projected average growth of 1.92 percent per year. Typically, the model growth is prorated and is subsequently added to the existing (base validation) traffic volumes to represent Horizon Year traffic conditions. Horizon Year turning volumes were compared to EAPC (2025) volumes in order to ensure a minimum growth as a part of the refinement process. The minimum growth includes any additional growth between EAPC (2025) and Horizon Year (2040) traffic conditions that is not accounted for by the traffic generated by cumulative development projects and ambient growth rates assumed between Existing (2021) and EAPC (2025) conditions.

The future Horizon Year (2040) Without Project peak hour turning movements were then reviewed by Urban Crossroads, Inc. for reasonableness, and in some cases, were adjusted to achieve flow conservation, reasonable growth, and reasonable diversion between parallel routes. Flow conservation checks ensure that traffic flow between two closely spaced intersections, such as two adjacent driveway locations, is verified in order to make certain that vehicles leaving one intersection are entering the adjacent intersection and that there is no unexplained loss of vehicles. The result of this traffic forecasting procedure is a series of traffic volumes which are suitable for traffic operations analysis.

RivTAM does not include a truck component or have data that is unusually low. As such, in an effort to conduct a conservative analysis, the presence of trucks has been accounted for based on the manual volume adjustments made to demonstrate growth above EAPC (2025) traffic forecasts, which are presented and evaluated in PCE (see Section 3.7 *Existing Traffic Counts* for discussion on PCE). As such, the Horizon Year (2040) forecasts are also assumed to be in PCE for the purposes of this analysis. Post-processing worksheets for Horizon Year (2040) Without Project traffic conditions are provided in Appendix 4.1.

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## 5 E+P TRAFFIC CONDITIONS

This section discusses the traffic forecasts for Existing Plus Project (E+P) conditions and the resulting intersection operations and traffic signal warrant analyses.

### 5.1 ROADWAY IMPROVEMENTS

The lane configurations and traffic controls assumed to be in place for E+P conditions are consistent with those shown previously on Exhibit 3-1, with the exception of the following:

- Project driveways and those facilities assumed to be constructed by the Project to provide site access are also assumed to be in place for E+P conditions only (e.g., intersection and roadway improvements at the Project’s frontage and driveways).

### 5.2 E+P TRAFFIC VOLUME FORECASTS

This scenario includes Existing traffic volumes plus Project (Buildout) traffic. The ADT and peak hour intersection turning movement volumes (in actual vehicles), which can be expected for E+P traffic conditions are shown on Exhibit 5-1.

### 5.3 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 study area intersections are anticipated to continue to operate at an acceptable LOS during the peak hours, consistent with Existing (2021) traffic conditions. The intersection operations analysis worksheets are included in Appendix 5.1 of this TA.

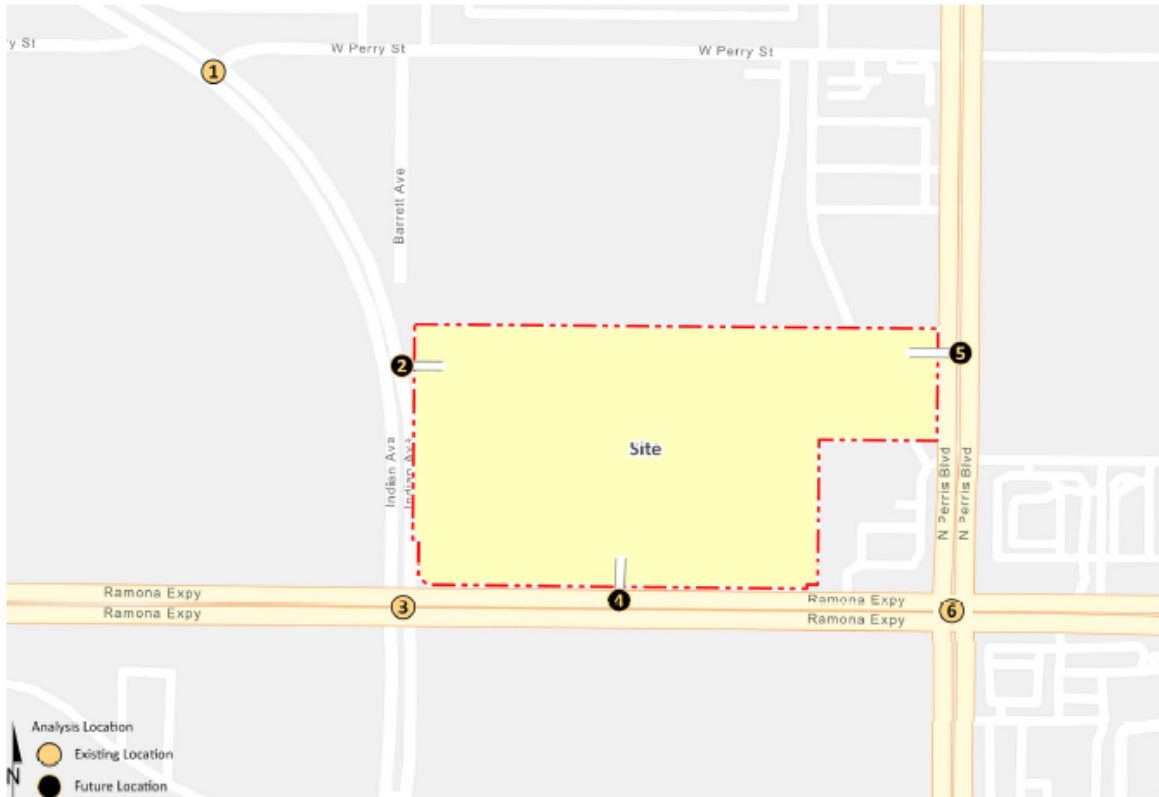
**TABLE 5-1: INTERSECTION ANALYSIS FOR E+P CONDITIONS**

# Intersection	Traffic Control <sup>1</sup>	Existing				Existing + Project			
		Delay <sup>2</sup> (secs.)		Level of Service		Delay <sup>2</sup> (secs.)		Level of Service	
		AM	PM	AM	PM	AM	PM	AM	PM
1 Indian Av. & Perry St.	CSS	9.8	8.9	A	A	10.0	9.0	B	A
2 Indian Av. & Driveway 1	CSS	Does Not Exist				9.9	9.0	A	A
3 Indian Av. & Ramona Exwy.	TS	21.2	24.4	C	C	22.1	24.6	C	C
4 Driveway 2 & Ramona Exwy.	CSS	Does Not Exist				20.5	16.4	C	C
5 Perris Bl. & Driveway 3	CSS	Does Not Exist				11.9	15.6	B	C
6 Perris Bl. & Ramona Exwy.	TS	33.0	27.6	C	C	33.1	27.8	C	C

<sup>1</sup> CSS = Cross-street Stop; TS = Traffic Signal; CSS = Improvement

<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.

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



1	2	3	4	5	6																																																																																										
Indian Av. & Perry St.	Indian Av. & Driveway 1	Indian Av. & Ramona Exwy.	Driveway 2 & Ramona Exwy.	Perris Bl. & Driveway 3	Perris Bl. & Ramona Exwy.																																																																																										
<table border="1"> <tr><td>5,250</td><td>400</td></tr> <tr><td>← 89(241)</td><td>↑ 3(5)</td></tr> <tr><td>↓</td><td>↓</td></tr> <tr><td>↑ 374(174)</td><td>↑ 33(27)</td></tr> <tr><td>↓</td><td>↓</td></tr> <tr><td>5,550</td><td>5,550</td></tr> </table>	5,250	400	← 89(241)	↑ 3(5)	↓	↓	↑ 374(174)	↑ 33(27)	↓	↓	5,550	5,550	<table border="1"> <tr><td>5,550</td><td>250</td></tr> <tr><td>← 84(236)</td><td>↑ 2(6)</td></tr> <tr><td>↓ 5(5)</td><td>↓</td></tr> <tr><td>↑ 405(196)</td><td>↑ 14(4)</td></tr> <tr><td>↓</td><td>↓</td></tr> <tr><td>5,450</td><td>5,450</td></tr> </table>	5,550	250	← 84(236)	↑ 2(6)	↓ 5(5)	↓	↑ 405(196)	↑ 14(4)	↓	↓	5,450	5,450	<table border="1"> <tr><td>5,450</td><td>35,350</td></tr> <tr><td>← 18(24)</td><td>↑ 116(54)</td></tr> <tr><td>↓ 50(139)</td><td>↑ 1488(1089)</td></tr> <tr><td>↓ 16(73)</td><td>↑ 54(110)</td></tr> <tr><td>↓ 152(74)</td><td>↓ 90(90)</td></tr> <tr><td>↑ 958(1507)</td><td>↑ 151(72)</td></tr> <tr><td>↓ 53(83)</td><td>↓ 27(29)</td></tr> <tr><td>6,400</td><td>6,400</td></tr> </table>	5,450	35,350	← 18(24)	↑ 116(54)	↓ 50(139)	↑ 1488(1089)	↓ 16(73)	↑ 54(110)	↓ 152(74)	↓ 90(90)	↑ 958(1507)	↑ 151(72)	↓ 53(83)	↓ 27(29)	6,400	6,400	<table border="1"> <tr><td>100</td><td>35,350</td></tr> <tr><td>↓ 3(12)</td><td>↑ 10(3)</td></tr> <tr><td>↓</td><td>↑ 1654(1241)</td></tr> <tr><td>↓</td><td>↓</td></tr> <tr><td>1001(1609)</td><td>↓</td></tr> <tr><td>6,400</td><td>6,400</td></tr> </table>	100	35,350	↓ 3(12)	↑ 10(3)	↓	↑ 1654(1241)	↓	↓	1001(1609)	↓	6,400	6,400	<table border="1"> <tr><td>22,350</td><td></td></tr> <tr><td>← 34(38)</td><td></td></tr> <tr><td>↓ 591(1031)</td><td></td></tr> <tr><td>↓</td><td></td></tr> <tr><td>↑ 28(48)</td><td></td></tr> <tr><td>↓</td><td></td></tr> <tr><td>1179(731)</td><td></td></tr> <tr><td>↓</td><td></td></tr> <tr><td>1,050</td><td>22,350</td></tr> </table>	22,350		← 34(38)		↓ 591(1031)		↓		↑ 28(48)		↓		1179(731)		↓		1,050	22,350	<table border="1"> <tr><td>22,350</td><td>30,250</td></tr> <tr><td>↑ 198(213)</td><td>↑ 133(117)</td></tr> <tr><td>↓ 319(614)</td><td>↑ 1159(762)</td></tr> <tr><td>↓ 102(252)</td><td>↑ 87(92)</td></tr> <tr><td>↓ 295(244)</td><td>↑</td></tr> <tr><td>↑ 613(1121)</td><td>↑</td></tr> <tr><td>↓ 93(244)</td><td>↑</td></tr> <tr><td>↑ 288(203)</td><td>↑ 752(370)</td></tr> <tr><td>↓</td><td>↑ 90(101)</td></tr> <tr><td>34,500</td><td>30,050</td></tr> </table>	22,350	30,250	↑ 198(213)	↑ 133(117)	↓ 319(614)	↑ 1159(762)	↓ 102(252)	↑ 87(92)	↓ 295(244)	↑	↑ 613(1121)	↑	↓ 93(244)	↑	↑ 288(203)	↑ 752(370)	↓	↑ 90(101)	34,500	30,050
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↑ 613(1121)	↑																																																																																														
↓ 93(244)	↑																																																																																														
↑ 288(203)	↑ 752(370)																																																																																														
↓	↑ 90(101)																																																																																														
34,500	30,050																																																																																														

###(###) AM(PM) Peak Hour Intersection Volumes  
 ## Average Daily Trips

## 5.4 TRAFFIC SIGNAL WARRANTS ANALYSIS

There are no applicable study area intersections that may meet peak hour volume-based or planning level (ADT) traffic signal warrants under E+P traffic conditions.

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## 6 EAC AND EAPC (2023) TRAFFIC CONDITIONS

This section discusses the methods used to develop EAC and EAPC (2023) traffic forecasts and the resulting intersection operations and traffic signal warrant analyses.

### 6.1 ROADWAY IMPROVEMENTS

The lane configurations and traffic controls assumed to be in place for EAC and EAPC (2023) conditions are consistent with those shown previously on Exhibit 3-1, with the exception of the following:

- Project driveways and those facilities assumed to be constructed by the Project to provide site access are also assumed to be in place for EAPC conditions only (e.g., intersection and roadway improvements along the Project's frontage and driveways).
- Driveways and those facilities assumed to be constructed by cumulative developments to provide site access are also assumed to be in place for EAC and EAPC (2023) conditions only (e.g., intersection and roadway improvements along the cumulative development's frontages).

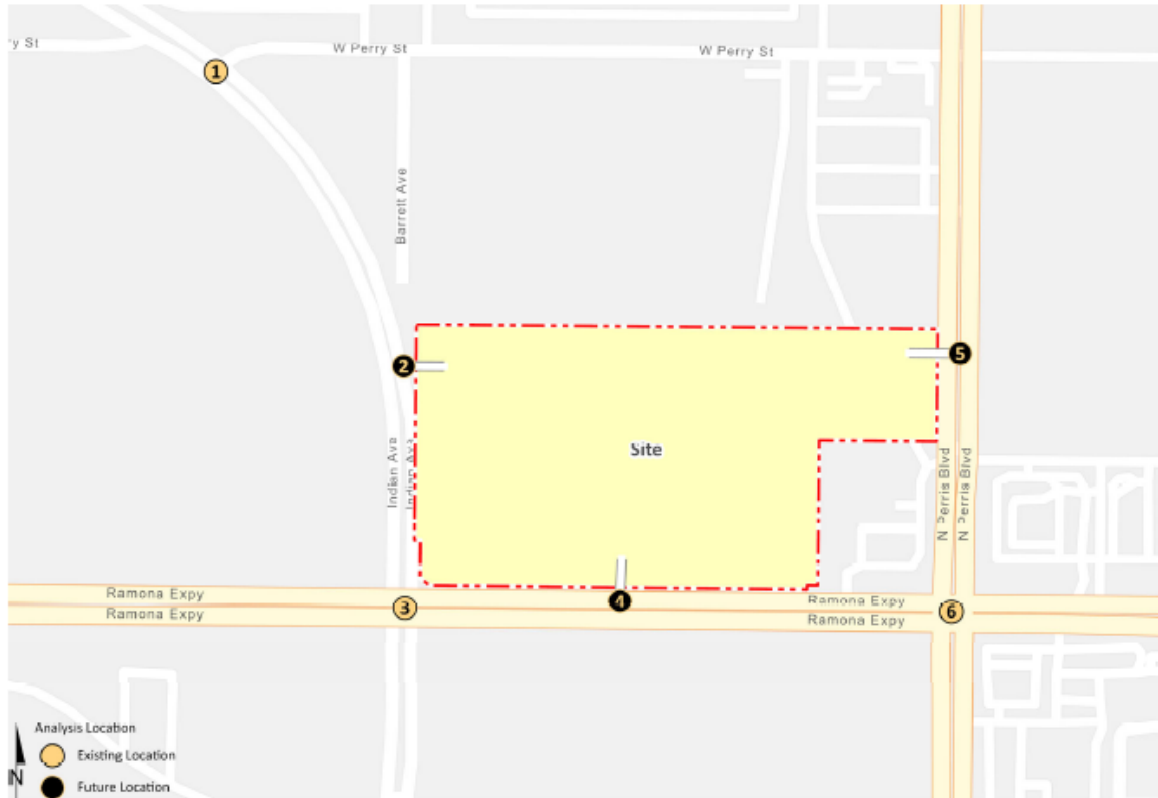
### 6.2 EAC (2023) TRAFFIC VOLUME FORECASTS

To account for background traffic, other known cumulative development projects in the study area were included in addition to 6.09% of ambient growth for EAC (2023) traffic conditions. The weekday ADT and weekday AM and PM peak hour volumes (in actual vehicles) which can be expected for EAC (2023) traffic conditions are shown on Exhibit 6-1.

### 6.3 EAPC (2023) TRAFFIC VOLUME FORECASTS

To account for background traffic, other known cumulative development projects in the study area were included in addition to 6.09% of ambient growth for EAPC (2023) traffic conditions in conjunction with traffic associated with the proposed Project (Phase I). The weekday ADT and weekday AM and PM peak hour volumes (in actual vehicles) which can be expected for EAPC (2023) traffic conditions are shown on Exhibit 6-2.

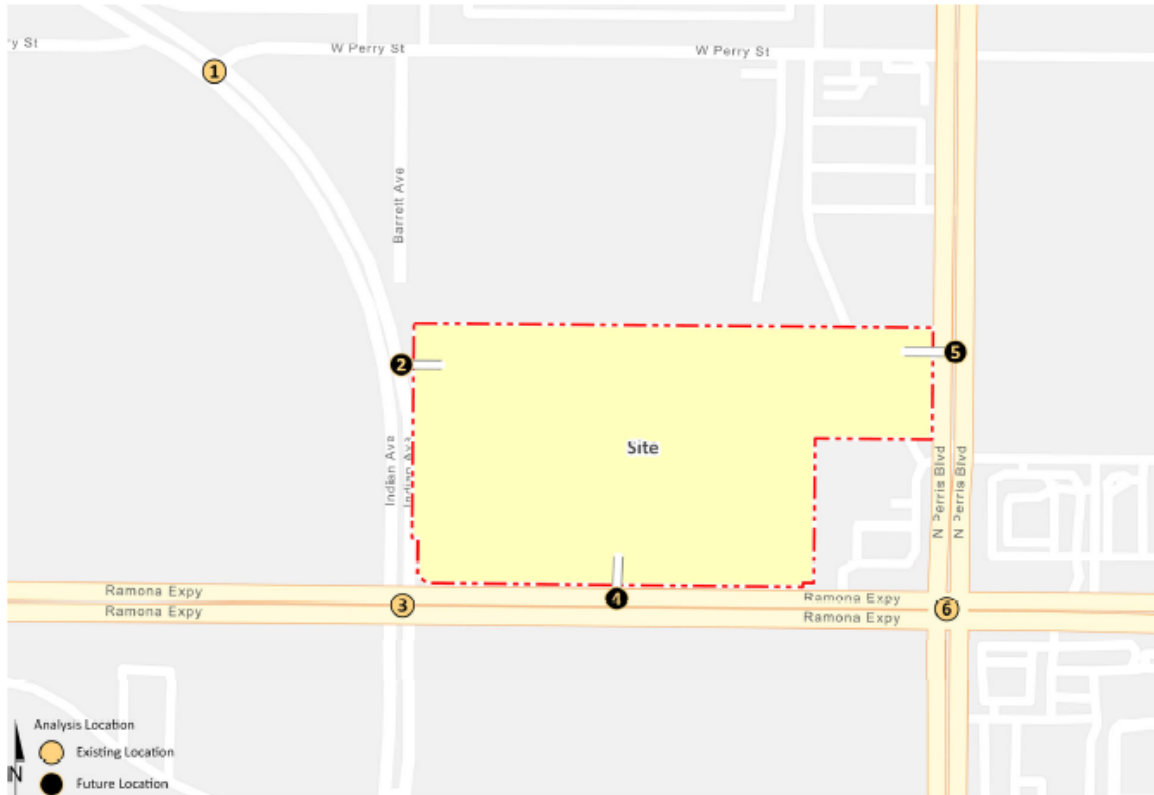
**EXHIBIT 6-1: EAC (2023) TRAFFIC VOLUMES (IN ACTUAL VEHICLES)**



1	Indian Av. & Perry St.	2	Indian Av. & Driveway 1	3	Indian Av. & Ramona Exwy.	4	Driveway 2 & Ramona Exwy.	5	Perris Bl. & Driveway 3																			
6,600	100			6,600	89,750																							
<table border="1"> <tr> <td>15(5)</td> <td>217(487)</td> <td>3(5)</td> </tr> <tr> <td>5(14)</td> <td>5(2)</td> <td>598(697)</td> </tr> <tr> <td>2(5)</td> <td>14(4)</td> <td>14(4)</td> </tr> </table>	15(5)	217(487)	3(5)	5(14)	5(2)	598(697)	2(5)	14(4)	14(4)		<i>Future Intersection</i>		<table border="1"> <tr> <td>122(153)</td> <td>79(157)</td> <td>18(181)</td> <td>154(132)</td> <td>2430(1715)</td> <td>56(109)</td> </tr> <tr> <td>300(368)</td> <td>1335(2608)</td> <td>77(103)</td> <td>70(141)</td> <td>163(203)</td> <td>30(33)</td> </tr> </table>	122(153)	79(157)	18(181)	154(132)	2430(1715)	56(109)	300(368)	1335(2608)	77(103)	70(141)	163(203)	30(33)		<i>Future Intersection</i>	
15(5)	217(487)	3(5)																										
5(14)	5(2)	598(697)																										
2(5)	14(4)	14(4)																										
122(153)	79(157)	18(181)	154(132)	2430(1715)	56(109)																							
300(368)	1335(2608)	77(103)	70(141)	163(203)	30(33)																							
500	6,350			92,600	8,400																							
6	Perris Bl. & Ramona Exwy.																											
25,050	83,200																											
<table border="1"> <tr> <td>203(199)</td> <td>387(695)</td> <td>143(425)</td> <td>288(214)</td> <td>2077(1379)</td> <td>162(140)</td> </tr> <tr> <td>318(277)</td> <td>880(2198)</td> <td>186(347)</td> <td>358(323)</td> <td>839(454)</td> <td>117(181)</td> </tr> </table>	203(199)	387(695)	143(425)	288(214)	2077(1379)	162(140)	318(277)	880(2198)	186(347)	358(323)	839(454)	117(181)																
203(199)	387(695)	143(425)	288(214)	2077(1379)	162(140)																							
318(277)	880(2198)	186(347)	358(323)	839(454)	117(181)																							
89,250	25,250																											

###(###) AM(PM) Peak Hour Intersection Volumes  
 ## Average Daily Trips

**EXHIBIT 6-2: EAPC (2023) TRAFFIC VOLUMES (IN ACTUAL VEHICLES)**



1	Indian Av. & Perry St.	2	Indian Av. & Driveway 1	3	Indian Av. & Ramona Exwy.	4	Driveway 2 & Ramona Exwy.	5	Perris Bl. & Driveway 3
6,800	100	6,800	250	6,650	89,850	100	89,850	25,050	
15(5) ↓ 222(492) ↑ 3(5)		← 219(492) ↓ 5(5) ↑ 2(6)		↓ 122(153) ↓ 79(157) ↓ 18(181) ↑ 156(134) ↑ 2432(1722) ↑ 58(116)		↓ 3(12) ↑ 10(3) ↓ 2642(1959)		↓ 1(0) ↓ 733(1319)	
5(14) ↓ 2(5) ↓		↑ 5(2) ↑ 600(704) ↑ 14(4) ↑		307(370) ↓ 1335(2608) → 77(103) ↓ 70(141) ↓ 169(205) ↑ 30(33) ↑		1383(2822) →		3(12) ↓ 1445(945) ↑	
500	6,550	6,650	92,650	8,450	89,850	Nominal	25,100		
<b>6 Perris Bl. &amp; Ramona Exwy.</b>									
25,100	83,250								
↓ 204(202) ↓ 389(702) ↓ 1444(28)	↑ 288(214) ↑ 2080(1380)								
318(277) ↓ 880(2198) → 186(347) ↓	↑ 162(140) ↑ 366(325) ↑ 839(454) ↑ 117(181)								
89,300	25,350								

###(###) AM(PM) Peak Hour Intersection Volumes  
 ## Average Daily Trips

### 6.4 INTERSECTION OPERATIONS ANALYSIS

LOS calculations were conducted for the study intersections to evaluate their operations under EAC (2023) conditions with roadway and intersection geometrics consistent with Section 6.1 *Roadway Improvements*. As shown in Table 6-1, all the study area intersections are anticipated to operate at acceptable LOS during the peak hours under EAC and EAPC (2023) traffic conditions, with the exception of the following intersections:

- Indian Av. & Ramona Exwy. (#3) – LOS F PM peak hour only
- Perris Bl. & Ramona Exwy. (#6) – LOS F AM and PM peak hours

The intersection operations analysis worksheets for EAC and EAPC (2023) traffic conditions are included in Appendix 6.1 and Appendix 6.2 of this TA, respectively.

**TABLE 6-1: INTERSECTION ANALYSIS FOR EAC & EAPC (2023) CONDITIONS**

# Intersection	Traffic Control <sup>1</sup>	EAC (2023)				EAPC (2023)			
		Delay <sup>2</sup> (secs.)		Level of Service		Delay <sup>2</sup> (secs.)		Level of Service	
		AM	PM	AM	PM	AM	PM	AM	PM
1 Indian Av. & Perry St.	CSS	13.6	20.2	B	C	13.8	20.6	B	C
2 Indian Av. & Driveway 1	CSS	Does Not Exist				10.8	11.1	B	B
3 Indian Av. & Ramona Exwy.	TS	68.9	94.6	E	F	70.3	96.7	E	F
4 Driveway 2 & Ramona Exwy.	CSS	Does Not Exist				41.5	25.1	E	D
5 Perris Bl. & Driveway 3	CSS	Does Not Exist				12.1	16.4	B	C
6 Perris Bl. & Ramona Exwy.	TS	<b>116.4</b>	<b>88.5</b>	<b>F</b>	<b>F</b>	<b>116.8</b>	<b>88.7</b>	<b>F</b>	<b>F</b>

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

<sup>1</sup> CSS = Cross-street Stop; TS = Traffic Signal; CSS = Improvement

<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.

### 6.5 TRAFFIC SIGNAL WARRANTS ANALYSIS

Traffic signal warrants have been performed for EAC and EAPC (2023) traffic conditions based on peak hour volumes and daily traffic (ADT). No traffic signals are warranted at the study area intersections (see Appendices 6.3 and 6.4).

## 6.6 RECOMMENDED IMPROVEMENTS

Improvement strategies have been recommended at intersections that have been identified as deficient under EAPC (2023) traffic conditions in an effort to achieve an acceptable LOS (i.e., LOS E or better).

The effectiveness of the recommended improvement strategies to address EAPC (2023) traffic deficiencies are presented in Table 6-2. Worksheets for EAPC (2023) conditions, with improvements, HCM calculation worksheets are provided in Appendix 6.5.

The Project Applicant shall participate in the funding of off-site improvements, including traffic signals that are needed to serve cumulative traffic conditions through the payment of NPRBBD fees (if the improvements are included in the NPRBBD fee program) or on a fair share basis (if the improvements are not included in the NPRBBD fee program). These fees shall be collected by the City of Perris, with the proceeds solely used as part of a funding mechanism aimed at ensuring that regional highways and arterial expansions keep pace with the projected population increases.

**TABLE 6-2: INTERSECTION ANALYSIS FOR EAC & EAPC (2023) CONDITIONS WITH IMPROVEMENTS**

# Intersection	Traffic Control <sup>1</sup>	Intersection Approach Lanes <sup>2</sup>												Delay <sup>3</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					
3 Indian Av. & Ramona Exwy.																		
-Without Improvements	TS	1	2	0	1	2	1	1	3	0	1	3	1	70.3	96.7	E	F	
- With Improvements <sup>4</sup>	TS	1	2	0	1	2	1	<u>2</u>	3	0	1	3	1	51.5	73.4	D	E	
6 Perris Bl. & Ramona Exwy.																		
-Without Improvements	TS	2	2	1	2	2	1	2	3	1	2	3	0	116.8	88.7	F	F	
- With Improvements <sup>4</sup>	TS	2	<u>3</u>	0	2	<u>3</u>	0	2	3	1	2	3	0	73.7	78.1	E	E	

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

<sup>1</sup> TS = Traffic Signal

<sup>2</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.

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

<sup>3</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>4</sup> Per the City of Perris General Plan, LOS E is permitted at intersections along the Ramona-Cajalco Expressway.

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## 7 EAC AND EAPC (2025) TRAFFIC CONDITIONS

This section discusses the methods used to develop EAC and EAPC (2025) traffic forecasts and the resulting intersection operations and traffic signal warrant analyses.

### 7.1 ROADWAY IMPROVEMENTS

The lane configurations and traffic controls assumed to be in place for EAC and EAPC (2025) conditions are consistent with those shown previously on Exhibit 3-1, with the exception of the following:

- Project driveways and those facilities assumed to be constructed by the Project to provide site access are also assumed to be in place for EAPC conditions only (e.g., intersection and roadway improvements along the Project's frontage and driveways).
- Driveways and those facilities assumed to be constructed by cumulative developments to provide site access are also assumed to be in place for EAC and EAPC (2025) conditions only (e.g., intersection and roadway improvements along the cumulative development's frontages).

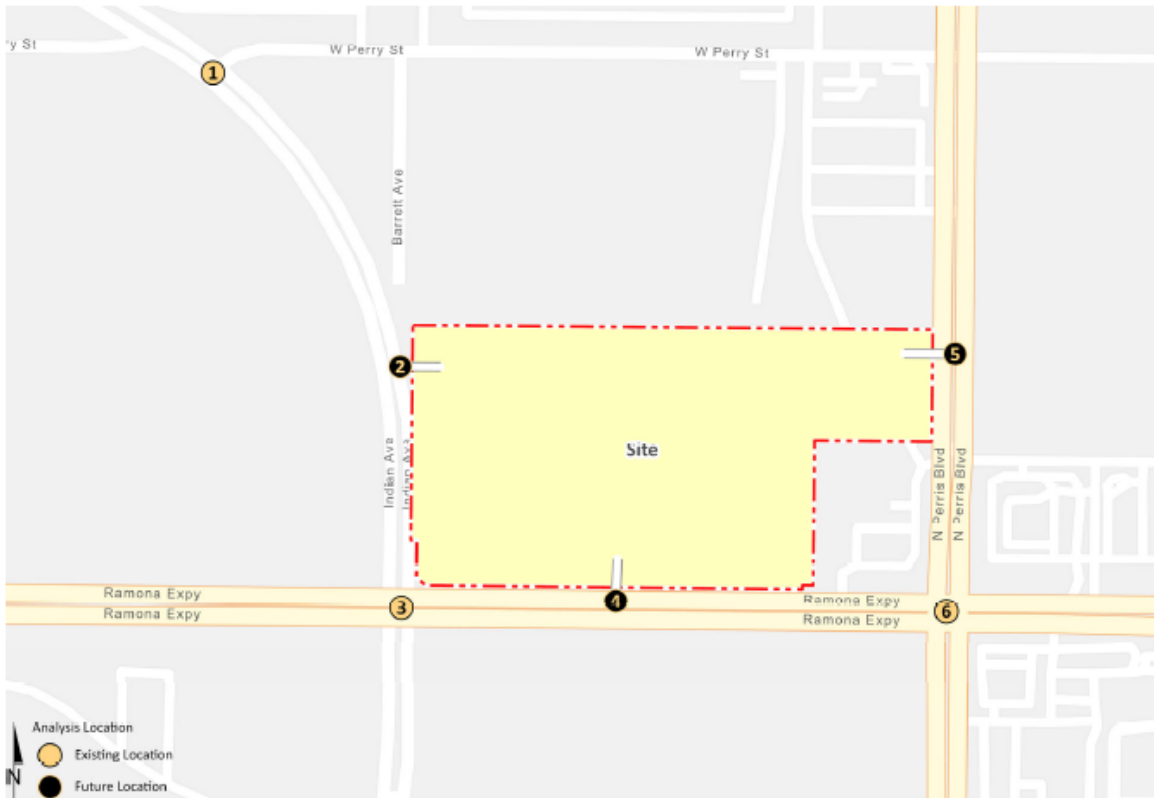
### 7.2 EAC (2025) TRAFFIC VOLUME FORECASTS

To account for background traffic, other known cumulative development projects in the study area were included in addition to 12.55% of ambient growth for EAC (2025) traffic conditions. The weekday ADT and weekday AM and PM peak hour volumes (in actual vehicles) which can be expected for EAC (2025) traffic conditions are shown on Exhibit 7-1.

### 7.3 EAPC (2025) TRAFFIC VOLUME FORECASTS

To account for background traffic, other known cumulative development projects in the study area were included in addition to 12.55% of ambient growth for EAPC (2025) traffic conditions in conjunction with traffic associated with the proposed Project (Buildout). The weekday ADT and weekday AM and PM peak hour volumes (in actual vehicles) which can be expected for EAPC (2025) traffic conditions are shown on Exhibit 7-2.

**EXHIBIT 7-1: EAC (2025) TRAFFIC VOLUMES (IN ACTUAL VEHICLES)**



1 Indian Av. & Perry St.	2 Indian Av. & Driveway 1	3 Indian Av. & Ramona Exwy.	4 Driveway 2 & Ramona Exwy.	5 Perris Bl. & Driveway 3																																										
<table border="1"> <tr> <td>7,090</td> <td>150</td> </tr> <tr> <td> <table border="1"> <tr> <td>15(5)</td> <td>231(507)</td> <td>3(6)</td> </tr> <tr> <td>↓</td> <td>↑</td> <td>↑</td> </tr> </table> </td> <td></td> </tr> <tr> <td>5(14) →</td> <td>5(2) ↑</td> <td>626(711) ↑</td> <td>15(5) ↑</td> </tr> <tr> <td>2(5) ↓</td> <td></td> <td></td> <td></td> </tr> <tr> <td>500</td> <td>6,800</td> </tr> </table>	7,090	150	<table border="1"> <tr> <td>15(5)</td> <td>231(507)</td> <td>3(6)</td> </tr> <tr> <td>↓</td> <td>↑</td> <td>↑</td> </tr> </table>	15(5)	231(507)	3(6)	↓	↑	↑		5(14) →	5(2) ↑	626(711) ↑	15(5) ↑	2(5) ↓				500	6,800	Future Intersection	<table border="1"> <tr> <td>7,000</td> <td>93,300</td> </tr> <tr> <td> <table border="1"> <tr> <td>123(155)</td> <td>82(166)</td> <td>27(190)</td> <td>165(138)</td> </tr> <tr> <td>↓</td> <td>↓</td> <td>↓</td> <td>↑</td> </tr> </table> </td> <td>2566(1830)</td> </tr> <tr> <td>309(372) →</td> <td>66(122) ↑</td> <td>73(147) ↑</td> <td>172(208) ↑</td> </tr> <tr> <td>1469(2742) →</td> <td>81(108) ↓</td> <td>41(40) ↓</td> <td></td> </tr> <tr> <td>95,900</td> <td>8,960</td> </tr> </table>	7,000	93,300	<table border="1"> <tr> <td>123(155)</td> <td>82(166)</td> <td>27(190)</td> <td>165(138)</td> </tr> <tr> <td>↓</td> <td>↓</td> <td>↓</td> <td>↑</td> </tr> </table>	123(155)	82(166)	27(190)	165(138)	↓	↓	↓	↑	2566(1830)	309(372) →	66(122) ↑	73(147) ↑	172(208) ↑	1469(2742) →	81(108) ↓	41(40) ↓		95,900	8,960	Future Intersection	Future Intersection
7,090	150																																													
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6 Perris Bl. & Ramona Exwy.																						
<table border="1"> <tr> <td>27,150</td> <td>86,950</td> </tr> <tr> <td> <table border="1"> <tr> <td>219(232)</td> <td>409(739)</td> <td>166(450)</td> <td>308(230)</td> </tr> <tr> <td>↓</td> <td>↓</td> <td>↓</td> <td>↑</td> </tr> </table> </td> <td>2199(1464)</td> </tr> <tr> <td>353(301) →</td> <td>376(336) ↑</td> <td>891(479) ↑</td> <td>148(201) ↑</td> </tr> <tr> <td>920(2271) →</td> <td>192(363) ↓</td> <td></td> <td></td> </tr> <tr> <td>92,750</td> <td>27,250</td> </tr> </table>	27,150	86,950	<table border="1"> <tr> <td>219(232)</td> <td>409(739)</td> <td>166(450)</td> <td>308(230)</td> </tr> <tr> <td>↓</td> <td>↓</td> <td>↓</td> <td>↑</td> </tr> </table>	219(232)	409(739)	166(450)	308(230)	↓	↓	↓	↑	2199(1464)	353(301) →	376(336) ↑	891(479) ↑	148(201) ↑	920(2271) →	192(363) ↓			92,750	27,250
27,150	86,950																					
<table border="1"> <tr> <td>219(232)</td> <td>409(739)</td> <td>166(450)</td> <td>308(230)</td> </tr> <tr> <td>↓</td> <td>↓</td> <td>↓</td> <td>↑</td> </tr> </table>	219(232)	409(739)	166(450)	308(230)	↓	↓	↓	↑	2199(1464)													
219(232)	409(739)	166(450)	308(230)																			
↓	↓	↓	↑																			
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920(2271) →	192(363) ↓																					
92,750	27,250																					

###(###) AM(PM) Peak Hour Intersection Volumes  
 ## Average Daily Trips



### 7.4 INTERSECTION OPERATIONS ANALYSIS

LOS calculations were conducted for the study intersections to evaluate their operations under EAC (2025) conditions with roadway and intersection geometrics consistent with Section 7.1 *Roadway Improvements*. As shown in Table 7-1, all the study area intersections are anticipated to operate at acceptable LOS during the peak hours under EAC and EAPC (2025) traffic conditions, with the exception of the following intersections:

- Indian Av. & Ramona Exwy. (#3) – LOS F PM peak hour only
- Perris Bl. & Ramona Exwy. (#6) – LOS F AM and PM peak hours

The intersection operations analysis worksheets for EAC and EAPC (2025) traffic conditions are included in Appendix 7.1 and Appendix 7.2 of this TA, respectively.

**TABLE 7-1: INTERSECTION ANALYSIS FOR EAC & EAPC (2025) CONDITIONS**

# Intersection	Traffic Control <sup>1</sup>	EAC (2025)				EAPC (2025)			
		Delay <sup>2</sup> (secs.)		Level of Service		Delay <sup>2</sup> (secs.)		Level of Service	
		AM	PM	AM	PM	AM	PM	AM	PM
1 Indian Av. & Perry St.	CSS	14.1	20.8	B	C	14.3	21.7	B	C
2 Indian Av. & Driveway 1	CSS	Does Not Exist				11.1	11.4	B	B
3 Indian Av. & Ramona Exwy.	TS	<b>83.3</b>	<b>111.7</b>	F	F	<b>87.7</b>	<b>116.3</b>	F	F
4 Driveway 2 & Ramona Exwy.	CSS	Does Not Exist				48.0	30.0	E	D
5 Perris Bl. & Driveway 3	CSS	Does Not Exist				13.2	20.5	B	C
6 Perris Bl. & Ramona Exwy.	TS	<b>146.9</b>	<b>110.4</b>	F	F	<b>147.3</b>	<b>113.4</b>	F	F

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

<sup>1</sup> CSS = Cross-street Stop; TS = Traffic Signal; CSS = Improvement

<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.

### 7.5 TRAFFIC SIGNAL WARRANTS ANALYSIS

Traffic signal warrants have been performed for EAC and EAPC (2025) traffic conditions based on peak hour volumes and daily traffic (ADT). No traffic signals are warranted at the study area intersections (see Appendices 7.3 and 7.4).

## 7.6 RECOMMENDED IMPROVEMENTS

Improvement strategies have been recommended at intersections that have been identified as deficient under EAPC (2025) traffic conditions in an effort to achieve an acceptable LOS (i.e., LOS E or better).

The effectiveness of the recommended improvement strategies to address EAPC (2025) traffic deficiencies are presented in Table 7-2. Worksheets for EAPC (2025) conditions, with improvements, HCM calculation worksheets are provided in Appendix 7.5.

The Project Applicant shall participate in the funding of off-site improvements, including traffic signals that are needed to serve cumulative traffic conditions through the payment of NPRBBD fees (if the improvements are included in the NPRBBD fee program) or on a fair share basis (if the improvements are not included in the NPRBBD fee program). These fees shall be collected by the City of Perris, with the proceeds solely used as part of a funding mechanism aimed at ensuring that regional highways and arterial expansions keep pace with the projected population increases.

**TABLE 7-2: INTERSECTION ANALYSIS FOR EAC & EAPC (2025) CONDITIONS WITH IMPROVEMENTS**

# Intersection	Traffic Control <sup>1</sup>	Intersection Approach Lanes <sup>2</sup>												Delay <sup>3</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				
3 Indian Av. & Ramona Exwy. -Without Improvements	TS	1	2	0	1	2	1	1	3	0	1	3	1	87.7	116.3	F	F
	- With Improvements <sup>4</sup>	TS	1	2	0	1	2	1	<u>2</u>	3	0	1	3	67.6	77.7	E	E
6 Perris Bl. & Ramona Exwy. -Without Improvements	TS	2	2	1	2	2	1	2	3	1	2	3	0	147.3	113.4	F	F
	- With Improvements <sup>4</sup>	TS	2	<u>3</u>	0	2	<u>3</u>	0	2	3	1	2	3	0	79.0	79.4	E

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

<sup>1</sup> TS = Traffic Signal

<sup>2</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.

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

<sup>3</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>4</sup> Per the City of Perris General Plan, LOS E is permitted at intersections along the Ramona-Cajalco Expressway.

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## 8 HORIZON YEAR (2040) TRAFFIC CONDITIONS

This section discusses the methods used to develop Horizon Year (2040) Without and With Project traffic forecasts, and the resulting intersection operations and traffic signal warrant operations analyses.

### 8.1 ROADWAY IMPROVEMENTS

The lane configurations and traffic controls assumed to be in place for Horizon Year (2040) conditions are consistent with those shown previously on Exhibit 3-1, with the exception of the following:

- Project driveways and those facilities assumed to be constructed by the Project to provide site access are also assumed to be in place for Horizon Year (2040) conditions only (e.g., intersection and roadway improvements along the Project's frontage and driveways).
- Driveways and those facilities assumed to be constructed by cumulative developments to provide site access are also assumed to be in place for Horizon Year (2040) conditions only (e.g., intersection and roadway improvements along the cumulative development's frontages).
- The regional, grade-separated transportation facility referred to as the Mid-County Parkway between the I-215 Freeway (at Placentia Avenue) and SR-79 is assumed to be in place consistent with the County's long range plans (and RivTAM traffic model infrastructure).

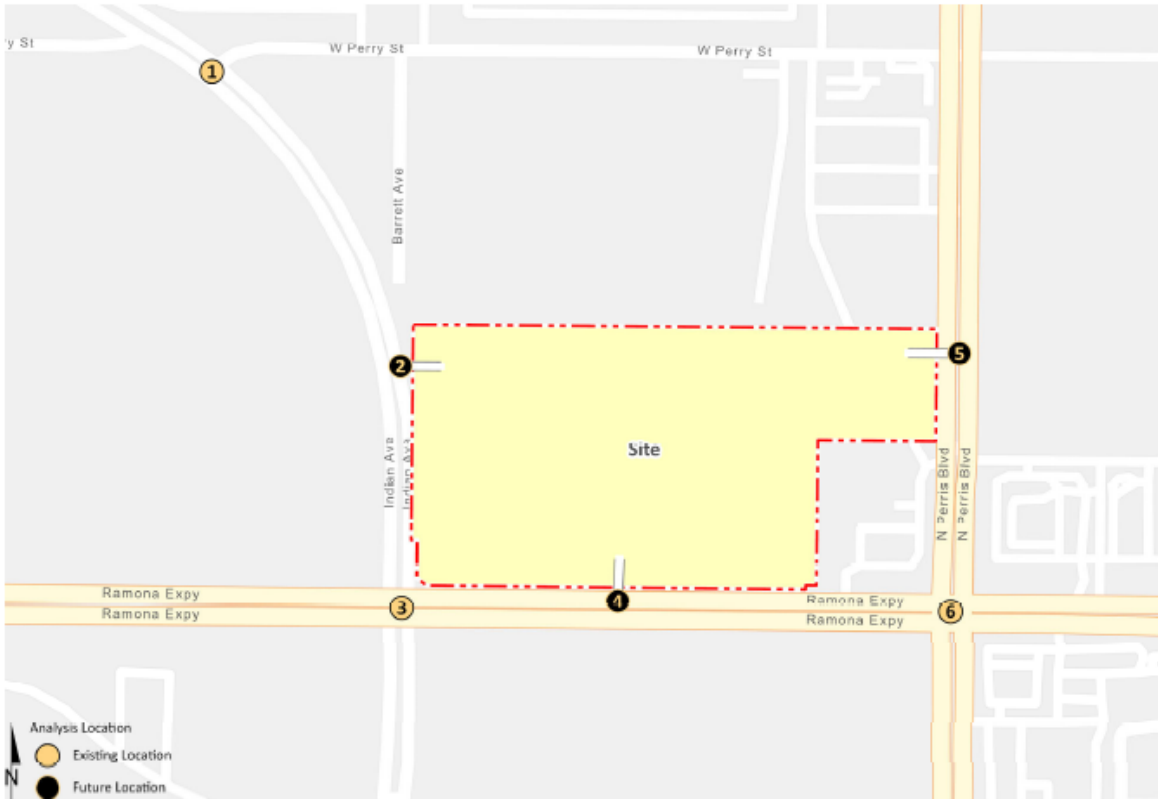
### 8.2 HORIZON YEAR (2040) WITHOUT PROJECT TRAFFIC VOLUME FORECASTS

This scenario includes the refined post-processed volumes obtained from the RivTAM (see Section 4.8 *Horizon Year Volume Development* of this TA for a detailed discussion on the post-processing methodology). The Horizon Year (2040) Without Project traffic forecasts reflect the future roadway network contemplated by the City's General Plan. The weekday ADT and weekday AM and PM peak hour volumes which can be expected for Horizon Year (2040) Without Project traffic conditions is shown on Exhibit 8-1.

### 8.3 HORIZON YEAR (2040) WITH PROJECT TRAFFIC VOLUME FORECASTS

This scenario includes the refined post-processed volumes obtained from the RivTAM plus proposed Project volumes. The weekday ADT and weekday AM and PM peak hour volumes which can be expected for Horizon Year (2040) With Project traffic conditions are shown on Exhibit 8-2.

**EXHIBIT 8-1: HORIZON YEAR (2040) WITHOUT PROJECT TRAFFIC VOLUMES (IN ACTUAL VEHICLES)**

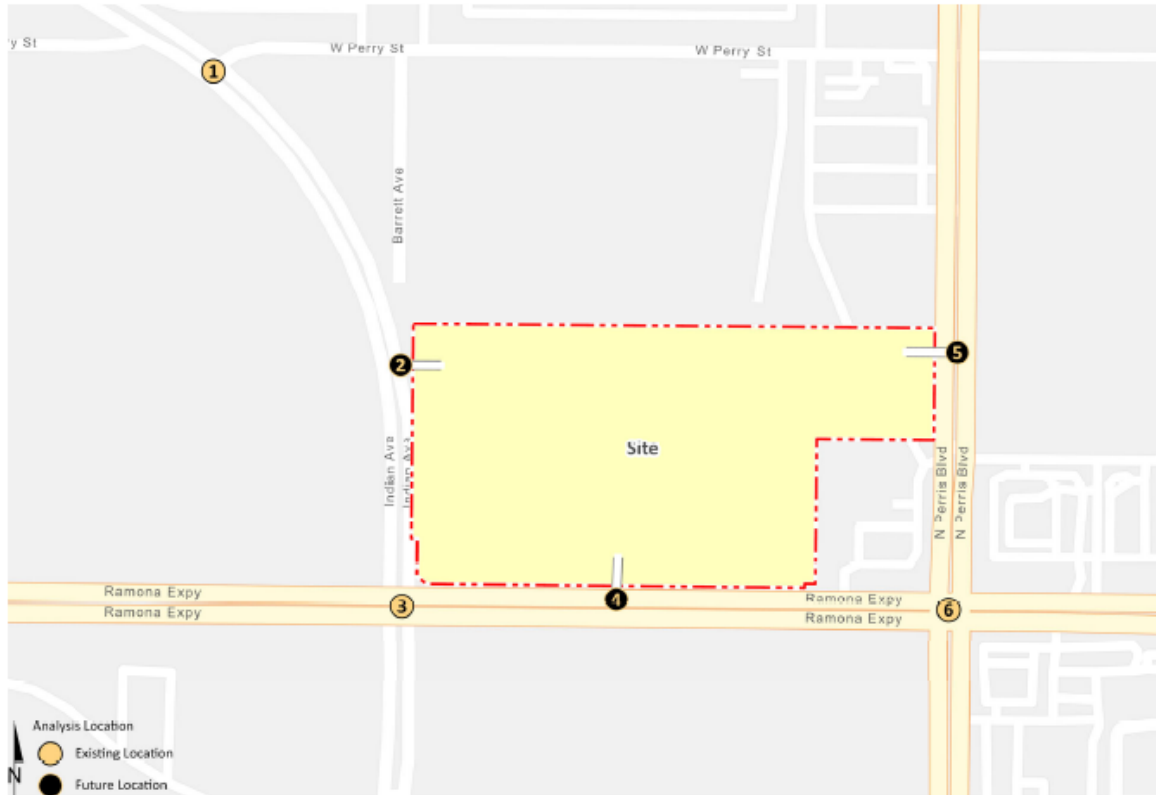


1	Indian Av. & Perry St.	2	Indian Av. & Driveway 1	3	Indian Av. & Ramona Expy.	4	Driveway 2 & Ramona Expy.	5	Perris Bl. & Driveway 3
11,250		150		10,650		40,950			
16(5)			<i>Future Intersection</i>	149(368)		164(84)	<i>Future Intersection</i>		<i>Future Intersection</i>
359(1002)		4(6)		143(341)		1714(1273)			
5(15)		5(2)		69(298)		178(126)			
2(5)		482(543)	175(219)		1156(1773)				
		15(5)	192(220)		131(252)				
500		11,250		40,950		13,550			
6	Perris Bl. & Ramona Expy.								
32,900		73,300							
353(249)									
509(825)									
185(373)									
344(422)									
789(1479)									
153(377)									
76,200		26,300							

###(###) AM(PM) Peak Hour Intersection Volumes

## Average Daily Trips

**EXHIBIT 8-2: HORIZON YEAR (2040) WITH PROJECT TRAFFIC VOLUMES (IN ACTUAL VEHICLES)**



1	Indian Av. & Perry St.	2	Indian Av. & Driveway 1	3	Indian Av. & Ramona Exwy.	4	Driveway 2 & Ramona Exwy.	5	Perris Bl. & Driveway 3
11,600	450	11,900	250	11,250	41,550	100	54,750	34,000	
16(5)	364(1007)	361(1007)	5(5)	149(368)	143(341)	3(12)	10(3)	34(38)	1047(1447)
5(15)	4(6)	2(6)	195(236)	182(108)	1726(1294)		2085(1522)		
2(5)	5(2)	532(589)	1156(1773)	180(133)	1287(2277)			28(48)	1603(1334)
	494(564)	14(4)	192(220)	131(252)					
	35(28)		169(249)	62(206)					
500	11,900	11,800	41,400	13,600	54,750	1,050			34,050
<b>6 Perris Bl. &amp; Ramona Exwy.</b>									
33,500	73,400								
374(281)	386(263)								
513(835)	1362(959)								
188(379)	205(187)								
344(422)	320(228)								
789(1479)	873(649)								
153(377)	116(246)								
76,800	26,500								

###(###) AM(PM) Peak Hour Intersection Volumes

## Average Daily Trips

### 8.4 INTERSECTION OPERATIONS ANALYSIS

LOS calculations were conducted for the study intersections to evaluate their operations under Horizon Year (2040) conditions with roadway and intersection geometrics consistent with Section 8.1 *Roadway Improvements*. As shown in Table 8-1, all the study area intersections are anticipated to operate at acceptable LOS during the peak hours under Horizon Year (2040) Without and With Project traffic conditions, with the exception of the following intersections:

- Indian Av. & Perry St. (#1) – LOS E PM peak hour only

Vehicles will utilize Mid-County Parkway which will reduce the traffic volumes along Ramona Expressway. As such, the peak hour intersection operations at various locations along Ramona Expressway may improve in comparison to EAPC (2023) traffic conditions.

The intersection operations analysis worksheets for Horizon Year (2040) Without and With Project traffic conditions are included in Appendix 8.1 and Appendix 8.2 of this TA, respectively.

**TABLE 8-1: INTERSECTION ANALYSIS FOR HORIZON YEAR (2040) CONDITIONS**

# Intersection	Traffic Control <sup>1</sup>	2040 Without Project				2040 With Project			
		Delay <sup>2</sup> (secs.)		Level of Service		Delay <sup>2</sup> (secs.)		Level of Service	
		AM	PM	AM	PM	AM	PM	AM	PM
1 Indian Av. & Perry St.	CSS	14.0	39.1	B	E	14.3	40.8	C	E
2 Indian Av. & Driveway 1	<u>CSS</u>	Does Not Exist				10.2	10.4	B	B
3 Indian Av. & Ramona Exwy.	TS	28.8	76.4	C	E	30.0	77.3	C	E
4 Driveway 2 & Ramona Exwy.	<u>CSS</u>	Does Not Exist				27.4	19.6	D	C
5 Perris Bl. & Driveway 3	<u>CSS</u>	Does Not Exist				15.0	20.6	C	C
6 Perris Bl. & Ramona Exwy.	TS	62.3	44.2	E	D	63.0	44.9	E	D

<sup>1</sup> BOLD = Level of Service (LOS) does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

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

<sup>3</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.

### 8.5 TRAFFIC SIGNAL WARRANTS ANALYSIS

Traffic signal warrants have been performed for Horizon Year (2040) Without and With Project traffic conditions based on peak hour volumes. No traffic signals are warranted at the study area intersections (see Appendices 8.3 and 8.4).

### 8.6 RECOMMENDED IMPROVEMENTS

Improvement strategies have been recommended at intersections that have been identified as deficient under Horizon Year (2040) With Project traffic conditions in an effort to achieve an acceptable LOS (i.e., LOS E or better).

The effectiveness of the recommended improvement strategies to address Horizon Year (2040) With Project traffic deficiencies are presented in Table 8-2. Worksheets for Horizon Year (2040) With Project conditions, with improvements, HCM calculation worksheets are provided in Appendix 8.5.

The Project Applicant shall participate in the funding of off-site improvements, including traffic signals that are needed to serve cumulative traffic conditions through the payment of NPRBBD fees (if the improvements are included in the NPRBBD fee program) or on a fair share basis (if the improvements are not included in the NPRBBD fee program). These fees shall be collected by the City of Perris, with the proceeds solely used as part of a funding mechanism aimed at ensuring that regional highways and arterial expansions keep pace with the projected population increases.

**TABLE 8-2: INTERSECTION ANALYSIS FOR HORIZON YEAR (2040) WITH PROJECT CONDITIONS WITH IMPROVEMENTS**

# Intersection	Traffic Control <sup>1</sup>	Intersection Approach Lanes <sup>2</sup>												Delay <sup>3</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	L	T	R		
1 Indian Av. & Perry St.																		
-Without Improvements	CSS	<u>1</u>	2	0	<u>1</u>	2	0	0	<u>1</u>	0	0	<u>1</u>	<u>0</u>	14.3	40.8	C	E	
- With Improvements	TS	<u>1</u>	2	0	<u>1</u>	2	0	0	<u>1</u>	0	0	<u>1</u>	<u>0</u>	4.0	5.7	A	A	

\* **BOLD** = Level of Service (LOS) does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).  
<sup>1</sup> TS = Traffic Signal  
<sup>2</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.  
 L = Left; T = Through; R = Right; d = Defacto Right Turn Lane; 1 = Improvement  
<sup>3</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.

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## 9 LOCAL AND REGIONAL FUNDING MECHANISMS

Transportation improvements throughout the City of Perris are funded through a combination of project mitigation, fair share contributions or development impact fee programs, such as TUMF program, the City’s DIF program, or the NPRBBD program.

### 9.1 TRANSPORTATION UNIFORM MITIGATION FEE (TUMF) PROGRAM

The Western Riverside Council of Governments (WRCOG) is responsible for establishing and updating TUMF rates. The County may grant to developers a credit against the specific components of fees for the dedication of land, or the construction of facilities identified in the list of improvements funded by each of these fee programs. Fees are based upon projected land uses and a related transportation need to address growth based upon a 2016 Nexus study.

TUMF is an ambitious regional program created to address cumulative impacts of growth throughout western Riverside County. Program guidelines are being handled on an iterative basis. Exemptions, credits, reimbursements, and local administration are being deferred to primary agencies. The County of Riverside serves this function for the proposed Project. Fees submitted to the County are passed on to the WRCOG as the ultimate program administrator.

TUMF guidelines empower a local zone committee to prioritize and arbitrate certain projects. The Project is located in the Central Zone. The zone has developed a 5-year capital improvement program to prioritize public construction of certain roads. TUMF is focused on improvements necessitated by regional growth.

### 9.2 CITY OF PERRIS DEVELOPMENT IMPACT FEE (DIF) PROGRAM

In 1991, the City of Perris created a Development Impact Fee program to impose and collect fees from new residential, commercial, and industrial development for the purpose of funding roadways and intersections necessary to accommodate City growth as identified in the City’s General Plan Circulation Element. This DIF program has been successfully implemented by the City since 1991 and was updated in 2014. The City updated the DIF program to add new roadway segments and intersections necessary to accommodate future growth and to ensure that the identified street improvements would operate at or above the City’s LOS performance threshold. The City’s DIF program includes facilities that are not part of, or which may exceed improvements identified and covered by the TUMF program. As a result, the pairing of the regional and local fee programs provides a more comprehensive funding and implementation plan to ensure an adequate and interconnected transportation system. 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.

Similar to the TUMF Program, after the City’s DIF fees are collected, they are placed in a separate interest-bearing 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 Public Works 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.

The City has an established, proven track record with respect to implementing the City's DIF Program. Many of the roadway segments and intersections included within the study area for this Traffic Impact Analysis are at various stages of widening and improvement based on the City's collection of DIF fees. Under this Program, as a result of the City's continual monitoring of the local circulation system, the City ensures that DIF improvements are constructed prior to when the LOS would otherwise fall below the City's established performance criteria.

### **9.3 NORTH PERRIS ROAD AND BRIDGE BENEFIT DISTRICT (NPRBBD)**

The NPRBBD is comprised of approximately 3,500 acres of land located within the northern portion of the City of Perris. The NPRBBD boundary is consistent with the boundary of the PVCC SP. As such, the Project will be subject to the NPRBBD. The purpose of the NPRBBD is to improve the efficiency of the financing of specific regional road and bridge improvements that are determined to provide benefit to the developing properties within the NPRBBD boundary. In addition, the NPRBBD includes additional improvements to supplement the TUMF and DIF network. NPRBBD fees are inclusive of TUMF and DIF. A significant portion of the fees collected through this mechanism are earmarked for use within the boundary sufficient to fully fund the included improvements. The balance of TUMF is transmitted to WRCOG for use in addressing cumulative impacts elsewhere within Western Riverside County. The City treats the DIF component collected within the NPRBBD in a similar way to ensure the local circulation network outside the program boundaries is adequately addressed.

Table 9-1 lists each facility identified within the NPRBBD, the General Plan roadway classification and the current estimated construction cost for the facilities.

**TABLE 9-1: NPRBBD FACILITES**

Facility Name	General Plan Classification	Estimated Cost
Indian Avenue	Secondary Arterial	\$11,343,500
Perris Boulevard	Arterial	\$17,350,800
Redlands Avenue	Secondary Arterial	\$14,845,000
Harley Knox Boulevard	Arterial	\$31,813,700
Markham Street	Secondary Arterial	\$2,132,000
Ramona Expressway	Expressway	\$10,865,000
Morgan Street	Secondary Arterial	\$2,899,500
Rider Street	Secondary Arterial	\$3,803,000
Placentia Avenue	Arterial	\$18,705,900
Indian Avenue Bridge	Secondary Arterial	\$701,800
Harley Knox Boulevard Bridge	Arterial	\$4,210,800
Ramona Expressway Bridge	Expressway	\$2,105,800
Placentia Avenue Bridge	Arterial	\$6,316,200
Harley Knox Boulevard Interchange @ I-215	Arterial	\$17,371,000
Placentia Avenue Interchange @ I-215	Arterial	\$8,389,000
4-Lane Intersections – Traffic Signals	4 – Signal Locations	\$870,000
6-Lane Intersections – Traffic Signals	11 – Signal Locations	\$3,190,000
<b>District Totals</b>		<b>\$156,913,000</b>

The facilities identified within the NPRBBD provide additional benefit by providing alternate truck routes within the City of Perris. It should be noted that NPRBBD fees are to be paid in conjunction with TUMF and City DIF fees as a one-time fee payment to the City prior to the issuance of a building permit.

#### 9.4 FAIR SHARE CONTRIBUTION

Project improvements may include a combination of fee payments to established programs, construction of specific improvements, payment of a fair share contribution toward future improvements or a combination of these approaches. Improvements constructed by development may be eligible for a fee credit or reimbursement through the program where appropriate (to be determined at the City’s discretion). When off-site improvements are identified with a minor share of responsibility assigned to proposed development, the approving jurisdiction may elect to collect a fair share contribution or require the development to construct improvements. Detailed fair share calculations, for each peak hour, have been provided in Table 9-2 for the applicable deficient study area intersection based on PCE volumes. These fees are collected with the proceeds solely used as part of a funding mechanism aimed at ensuring that regional highways and arterial expansions keep pace with the projected population increases.

**TABLE 9-2: FAIR SHARE CONTRIBUTION**

#	Intersection	Existing	Project	2040 WP Volume	Net New Traffic	Project % of New Traffic	
1	Indian Av. & Perry St.	AM:	559	46	955	396	<b>11.6%</b>
		PM:	455	59	1,642	1,187	5.0%
3	Indian Av. & Ramona Exwy.	AM:	3,367	58	4,506	1,139	5.1%
		PM:	3,532	71	5,585	2,053	3.5%
6	Perris Bl. & Ramona Exwy.	AM:	4,228	46	5,753	1,525	3.0%
		PM:	4,393	59	6,395	2,002	2.9%

**BOLD** = Denotes highest fair share percentage.

## 10 REFERENCES

1. **City of Perris.** *Perris Valley Commerce Center Specific Plan.* 2012.
2. **Institute of Transportation Engineers.** *Trip Generation.* 11th Edition. 2021.
3. **Western Riverside Council of Governments.** *TUMF Nexus Study, 2016 Program Update.* July 2017.
4. **Riverside County Transportation Commission.** *2011 Riverside County Congestion Management Program.* County of Riverside : RCTC, December 14, 2011.
5. **City of Perris.** *Transportation Impact Analysis Guidelines for CEQA.* City of Perris : s.n., May 2020.
6. **Transportation Research Board.** *Highway Capacity Manual (HCM).* s.l. : National Academy of Sciences, 2010.
7. **Caltrans.** *California Manual on Uniform Traffic Control Devices (MUTCD).* [book auth.] California Department of Transportation. *California Manual on Uniform Traffic Control Devices (CAMUTCD).* 2017.
8. **City of Perris.** *General Plan Circulation Element.* City of Perris : s.n., August 26, 2008.
9. **County of Riverside Transportation Department.** *Transportation Analysis Guidelines for Level of Service Vehicle Miles Traveled.* County of Riverside : s.n., December 2020.
10. **WSP.** *TUMF High-Cube Warehouse Trip Generation Study.* County of Riverside : s.n., January 29, 2019.
11. **Southern California Association of Governments.** *Connect SoCal: 2020-20415 Regional Transportation Plan/Sustainable Communities Strategy of the SCAG.* SCAG Region : s.n., Adopted September 2020.

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**APPENDIX 1.1:**  
**TRAFFIC STUDY SCOPING AGREEMENT**

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June 9, 2021

Ms. Chantal Power  
City of Perris  
135 N. D Street  
Perris, CA 92570

**SUBJECT: JM REALTY PERRIS DEVELOPMENT PROJECT (PR 20-05212) SCOPING AGREEMENT**

Dear Ms. Chantal Power:

Urban Crossroads, Inc. is pleased to submit this scoping agreement to the City of Perris for the proposed JM Realty Perris Development Project development (“Project”), which is located west of Perris Boulevard, north of Ramona Expressway, east of Indian Avenue, within the City of Perris’ *Perris Valley Commerce Center Specific Plan (PVCC SP)*. It is our understanding that the Project is to consist of a 232,575 square foot (sf) multi-tenant warehouse building and a 125-room hotel. The Project is anticipated to be constructed in one phase by the year 2022. A preliminary site plan, of which the traffic study will be based on, is shown on Exhibit 1. The following describes the access proposed for the site:

- Indian Avenue & Driveway 1 – right-in/right-out/left-in access for both passenger cars and trucks
- Driveway 2 & Ramona Expressway – right-in/right-out access for passenger cars only
- Perris Boulevard & Driveway 3 – right-in/right-out access for passenger cars only

The purpose of this agreement is to obtain comments from City of Perris on the proposed traffic study scope of work. The remainder of this agreement describes the proposed analysis methodology, trip generation, trip distribution, and traffic assignment/project trips on the surrounding roadway network, which have been used to establish the proposed project study area and analysis locations.

**STUDY AREA**

Consistent with County of Riverside traffic study guidelines, the study area limits have been set based upon a threshold of 50 peak hour project trips. In other words, the study area includes any intersection of Collector roadway or higher classification street with another Collector roadway or higher classification street, at which the proposed Project will add 50 or more peak hour trips. This methodology is also utilized in other near-by agencies, such as the City of Perris. The proposed intersection analysis locations have been identified on Exhibit 2.

## **ANALYSIS SCENARIOS**

The following analysis scenarios will be analyzed for this traffic study:

- Existing (2021)
- Existing Plus Project (E+P)
- Existing Plus Ambient Growth Plus Cumulative (E+A+C) (2022)
- Existing Plus Ambient Growth Plus Project Plus Cumulative (E+A+P+C) (2022)
- Horizon Year (2040) Without Project
- Horizon Year (2040) With Project

## **METHODOLOGY**

The methodology used to evaluate peak hour intersection performance is based on the Transportation Research Board's Highway Capacity Manual (HCM), 6<sup>th</sup> Edition. This methodology rates operations based on peak hour delay and associated level of service (LOS).

## **LEVEL OF SERVICE (LOS) CRITERIA**

Required LOS for roadway segments and intersections within the City of Perris is LOS D. An exception to the local road standard is LOS E, at intersections of any Arterials and Expressways with SR-74, the Ramona-Cajalco Expressway or at I-215 Freeway ramps. For the purposes of this traffic impact analysis, LOS D has also been considered the acceptable threshold for all intersections within the study area

## **PROJECT TRIP GENERATION**

In order to develop the traffic characteristics of the proposed Project, trip-generation statistics published in the Institute of Transportation Engineers (ITE) Trip Generation Manual (10<sup>th</sup> Edition, 2017) have been used. For purposes of this analysis, the following ITE land use codes and vehicle mixes have been utilized:

- Warehousing – ITE Land Use Code 150 has been used to derive site specific trip generation estimates for the 232,575 sf building of the proposed Project. The vehicle mix has been obtained from the ITE's Trip Generation Manual Supplement (dated February 2020). This study provides the following vehicle mix: AM Peak Hour: 87.0% passenger cars and 13.0% trucks; PM Peak Hour: 85.0% passenger cars and 15.0% trucks; Weekday Daily: 73.0% passenger cars and 27.0% trucks. The truck percentages were further broken down by axle type per the following South Coast Air Quality Management District (SCAQMD) recommended truck mix: 2-Axle = 16.7%; 3-Axle = 20.7%; 4+-Axle = 62.6%.

- Hotel – ITE Land Use Code 310 is assumed within the Commercial area.

As noted in Table 1, refinements to the raw trip generation estimates have been made to provide a more detailed breakdown of trips between passenger cars and trucks. Trip generation for heavy trucks was further broken down by truck type (or axle type). The total truck percentage is comprised of 3 different truck types: 2-axle, 3-axle, and 4+-axle trucks. Passenger Car Equivalent (PCE) factors were applied to the trip generation rates for heavy trucks (large 2-axes, 3-axes, 4+-axes). PCEs allow the typical “real-world” mix of vehicle types to be represented as a single, standardized unit, such as the passenger car, to be used for the purposes of capacity and level of service analyses. The PCE factors are consistent with the recommended PCE factors in Riverside County’s Transportation Analysis Guidelines for Level of Service Vehicle Miles Travelled (December 2020). Note that these procedures are consistent with those adopted by the County of Riverside for warehouse projects.

The Project is estimated to generate a total of 1,622 two-way trips per day on a typical weekday with approximately 105 AM peak hour trips and 128 PM peak hour trips, as shown in Table 2. For the purposes of the operations analysis, the PCE values shown in Table 2 will be utilized. The trip generation in actual vehicles are shown for informational purposes only.

## **PROJECT TRIP DISTRIBUTIONS**

The project trip distribution patterns for both passenger cars and trucks have been developed based on recent experience on other studies for similar land uses in the vicinity and comments provided by City of Perris staff. Passenger car distribution patterns will be based on existing and planned land uses and roadway infrastructure in the area. Truck distribution patterns will be based on City truck routes, proximity to the freeway system, and the Project Applicant’s input on percentage of traffic oriented to the Port of Long Beach or other destination. The industrial passenger car and truck trip distributions are illustrated on Exhibits 3 and 4, respectively. The hotel trip distribution is illustrated on Exhibit 5. It should be noted that the passenger car and truck trip distribution patterns assume the I-215 Freeway and Placentia Avenue interchange is in place (anticipated completion of the intersection per the County of Riverside is 2021).

## **AMBIENT GROWTH RATE**

Consistent with other City of Perris traffic studies performed by Urban Crossroads, an ambient growth rate of 3 percent per year will be used for this analysis.

## **SPECIAL ISSUES**

The following special issues will be addressed as part of the TA:

- A truck turning template will be overlaid on the site plan for each project driveway anticipated to have heavy trucks in order to determine appropriate curb radii and to verify that trucks will have sufficient space to execute turn maneuvers.
- Traffic signal warrant analyses will be conducted for all unsignalized study area intersections for all applicable analysis scenarios.
- Review driveway spacing for Indian Avenue along the Project frontage per the Perris Valley Commerce Center Specific Plan driveway spacing criteria.
- Evaluate the potential need for right turn deceleration lanes on Perris Boulevard based upon the speed of the roadway and the peak hour volumes.
- Evaluate the potential need for right turn deceleration lanes on Ramona Expressway based upon the speed of the roadway and the peak hour volumes.
- Evaluate the peak hour queuing at the Project driveways located along Perris Boulevard and Indian Avenue.

## **CUMULATIVE DEVELOPMENT PROJECTS**

A list of cumulative development projects and their proposed land uses are shown in Table 3. Exhibit 6 illustrates the locations of these cumulative development projects.

If you have any questions, please contact me directly at (949) 861-0177.

Respectfully submitted,

URBAN CROSSROADS, INC.

A handwritten signature in cursive script that reads "Charlene So".

Charlene So, PE  
Associate Principal



**CITY OF PERRIS  
VMT SCOPING FORM FOR LAND USE PROJECTS**

This Scoping Form acknowledges the City of Perris requirements for the evaluation of transportation impacts under CEQA. The analysis provided in this form should follow the City of Perris TIA Guidelines, dated May 12, 2020.

**I. Project Description**

Tract/Case No.

Project Name:

Project Location:

Project Description:   
(Please attach a copy of the project Site Plan)

Current GP Land Use:

Proposed GP Land Use:

Current Zoning:

Proposed Zoning:

If a project requires a General Plan Amendment or Zone change, then additional information and analysis should be provided to ensure the project is consistent with RHNA and RTP/SCS Strategies.

**II. VMT Screening Criteria**

A. Is the Project 100% affordable housing?	<input type="checkbox"/> YES	<input type="checkbox"/>	<input type="checkbox"/> NO	<input checked="" type="checkbox"/> X	Attachments: <input type="text"/>
B. Is the Project within 1/2 mile of qualifying transit?	<input type="checkbox"/> YES	<input type="checkbox"/>	<input type="checkbox"/> NO	<input checked="" type="checkbox"/> X	Attachments: <input type="text"/>
C. Is the Project a local serving land use?	<input type="checkbox"/> YES	<input type="checkbox"/>	<input type="checkbox"/> NO	<input checked="" type="checkbox"/> X	Attachments: <input type="text"/>
D. Is the Project in a low VMT area?	<input type="checkbox"/> YES	<input type="checkbox"/>	<input type="checkbox"/> NO	<input checked="" type="checkbox"/> X	Attachments: <input type="text"/>
E. Are the Project's Net Daily Trips less than 500 ADT?	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> X	<input type="checkbox"/> NO	<input type="checkbox"/>	Attachments: <input type="text"/>

**Low VMT Area Evaluation:**

Citywide VMT Averages <sup>1</sup>			
Citywide Home-Based VMT =	15.05	VMT/Capita	
Citywide Employment-Based VMT =	11.62	VMT/Employee	

[WRCOG VMT MAP](#)

Project TAZ	VMT Rate for Project TAZ <sup>1</sup>	Type of Project	
3754	13.42 VMT/Capita	Residential:	<input type="checkbox"/>
	12.19 VMT/Employee	Non-Residential:	<input checked="" type="checkbox"/> X

<sup>1</sup> Base year (2012) projections from RIVTAM.

**Trip Generation Evaluation:**

Source of Trip Generation:

Project Trip Generation:  Average Daily Trips (ADT)

Internal Trip Credit:	YES	<input type="checkbox"/>	NO	<input checked="" type="checkbox"/> X	% Trip Credit:	<input type="text"/>
Pass-By Trip Credit:	YES	<input type="checkbox"/>	NO	<input checked="" type="checkbox"/> X	% Trip Credit:	<input type="text"/>
Affordable Housing Credit:	YES	<input type="checkbox"/>	NO	<input checked="" type="checkbox"/> X	% Trip Credit:	<input type="text"/>
Existing Land Use Trip Credit:	YES	<input type="checkbox"/>	NO	<input checked="" type="checkbox"/> X	Trip Credit:	<input type="text"/>

Net Project Daily Trips:  Average Daily Trips (ADT) Attachments:

Does project trip generation warrant an LOS evaluation outside of CEQA?  YES  NO  X



**III. VMT Screening Summary**

**A. Is the Project presumed to have a less than significant impact on VMT?**

A Project is presumed to have a less than significant impact on VMT if the Project satisfies at least one (1) of the VMT screening criteria.

<b>Less Than Significant</b>
------------------------------

**B. Is mitigation required?**

If the Project does not satisfy at least one (1) of the VMT screening criteria, then mitigation is required to reduce the Project's impact on VMT.

<b>No Mitigation Required</b>
-------------------------------

**C. Is additional VMT modeling required to evaluate Project impacts?**

YES		NO	X
-----	--	----	---

If the Project requires a zone change and/or General Plan Amendment AND generates 2,500 or more net daily trips, then additional VMT modeling using RIVTAM/RIVCOM is required. If the project generates less than 2,500 net daily trips, the Project TAZ VMT Rate can be used for mitigation purposes.

**IV. MITIGATION**

**A. Citywide Average VMT Rate (Threshold of Significance) for Mitigation Purposes:**

N/A	N/A
-----	-----

**B. Unmitigated Project TAZ VMT Rate:**

N/A	N/A
-----	-----

**C. Percentage Reduction Required to Achieve the Citywide Average VMT:**

N/A
-----

**D. VMT Reduction Mitigation Measures:**

<b>Source of VMT Reduction Estimates:</b>	CAPCOA
---	--------

<b>Project Location Setting</b>	Suburban Center
---------------------------------	-----------------

	VMT Reduction Mitigation Measure:	Estimated VMT Reduction (%)
1.		0.00%
2.		0.00%
3.		0.00%
4.		0.00%
5.		0.00%
6.		0.00%
7.		0.00%
8.		0.00%
9.		0.00%
10.		0.00%
<b>Total VMT Reduction (%)</b>		<b>0.00%</b>

(Attach additional pages, if necessary, and a copy of all mitigation calculations.)

**E. Mitigated Project TAZ VMT Rate:**

N/A	N/A
-----	-----

**F. Is the project presumed to have a less than significant impact with mitigation?**

N/A
-----

If the mitigated Project VMT rate is below the Citywide Average Rate, then the Project is presumed to have a less than significant impact with mitigation. If the answer is no, then additional VMT modeling may be required and a potentially significant and unavoidable impact may occur. All mitigation measures identified in Section IV.D. are subject to become Conditions of Approval of the project. Development review and processing fees should be submitted with, or prior to the submittal of this Form. The Planning Department staff will not process the Form prior to fees being paid to the City.

Prepared By		Developer/Applicant	
<b>Company:</b>	Urban Crossroads, Inc.	<b>Company:</b>	JM Realty Group, Inc.
<b>Contact:</b>	Charlene Hwang So	<b>Contact:</b>	Joe McKay
<b>Address:</b>	1133 Camelback St. #8329, Newport Beach, CA 92660	<b>Address:</b>	3535 Inland Empire Blvd, Ontario, CA 91764
<b>Phone:</b>	(949) 861-0177	<b>Phone:</b>	714-313-1452
<b>Email:</b>	cso@urbanxroads.com	<b>Email:</b>	jmckay@jmrealtygroup.com   mfine@jmrealtygr
<b>Date:</b>	6/22/2022	<b>Date:</b>	6/22/2022
<b>Approved by:</b>			
<b>Perris Planning Division</b>	<b>Date</b>	<b>Perris City Engineer</b>	<b>Date</b>



**CITY OF PERRIS  
VMT SCOPING FORM FOR LAND USE PROJECTS**

This Scoping Form acknowledges the City of Perris requirements for the evaluation of transportation impacts under CEQA. The analysis provided in this form should follow the City of Perris TIA Guidelines, dated May 12, 2020.

**I. Project Description**

Tract/Case No.

Project Name:

Project Location:

Project Description:   
(Please attach a copy of the project Site Plan)

Current GP Land Use:

Proposed GP Land Use:

Current Zoning:

Proposed Zoning:

If a project requires a General Plan Amendment or Zone change, then additional information and analysis should be provided to ensure the project is consistent with RHNA and RTP/SCS Strategies.

**II. VMT Screening Criteria**

A. Is the Project 100% affordable housing?	<input type="checkbox" value="YES"/>	<input type="checkbox"/>	<input type="checkbox" value="NO"/>	<input type="checkbox" value="X"/>	Attachments: <input type="text"/>
B. Is the Project within 1/2 mile of qualifying transit?	<input type="checkbox" value="YES"/>	<input type="checkbox"/>	<input type="checkbox" value="NO"/>	<input type="checkbox" value="X"/>	Attachments: <input type="text"/>
C. Is the Project a local serving land use?	<input type="checkbox" value="YES"/>	<input checked="" type="checkbox" value="X"/>	<input type="checkbox" value="NO"/>	<input type="checkbox"/>	Attachments: <input type="text"/>
D. Is the Project in a low VMT area?	<input type="checkbox" value="YES"/>	<input type="checkbox"/>	<input type="checkbox" value="NO"/>	<input type="checkbox" value="X"/>	Attachments: <input type="text"/>
E. Are the Project's Net Daily Trips less than 500 ADT?	<input type="checkbox" value="YES"/>	<input type="checkbox"/>	<input type="checkbox" value="NO"/>	<input type="checkbox" value="X"/>	Attachments: <input type="text"/>

**Low VMT Area Evaluation:**

Citywide VMT Averages <sup>1</sup>			
Citywide Home-Based VMT =	15.05	VMT/Capita	
Citywide Employment-Based VMT =	11.62	VMT/Employee	

[WRCOG VMT MAP](#)

Project TAZ	VMT Rate for Project TAZ <sup>1</sup>		Type of Project	
3754	13.42	VMT/Capita	Residential:	<input type="checkbox"/>
	12.19	VMT/Employee	Non-Residential:	<input checked="" type="checkbox" value="X"/>

<sup>1</sup> Base year (2012) projections from RIVTAM.

**Trip Generation Evaluation:**

Source of Trip Generation:

<b>Project Trip Generation:</b>	<input type="text" value="1,000"/>	<input type="text" value="Average Daily Trips (ADT)"/>		
Internal Trip Credit:	YES <input type="checkbox"/>	NO <input checked="" type="checkbox" value="X"/>	% Trip Credit:	<input type="text"/>
Pass-By Trip Credit:	YES <input type="checkbox"/>	NO <input checked="" type="checkbox" value="X"/>	% Trip Credit:	<input type="text"/>
Affordable Housing Credit:	YES <input type="checkbox"/>	NO <input checked="" type="checkbox" value="X"/>	% Trip Credit:	<input type="text"/>
Existing Land Use Trip Credit:	YES <input type="checkbox"/>	NO <input checked="" type="checkbox" value="X"/>	Trip Credit:	<input type="text"/>

Net Project Daily Trips:   Attachments:

Does project trip generation warrant an LOS evaluation outside of CEQA?

**III. VMT Screening Summary**

**A. Is the Project presumed to have a less than significant impact on VMT?**

A Project is presumed to have a less than significant impact on VMT if the Project satisfies at least one (1) of the VMT screening criteria.

<b>Less Than Significant</b>
------------------------------

**B. Is mitigation required?**

If the Project does not satisfy at least one (1) of the VMT screening criteria, then mitigation is required to reduce the Project's impact on VMT.

<b>No Mitigation Required</b>
-------------------------------

**C. Is additional VMT modeling required to evaluate Project impacts?**

YES		NO	X
-----	--	----	---

If the Project requires a zone change and/or General Plan Amendment AND generates 2,500 or more net daily trips, then additional VMT modeling using RIVTAM/RIVCOM is required. If the project generates less than 2,500 net daily trips, the Project TAZ VMT Rate can be used for mitigation purposes.

**IV. MITIGATION**

**A. Citywide Average VMT Rate (Threshold of Significance) for Mitigation Purposes:**

N/A	N/A
-----	-----

**B. Unmitigated Project TAZ VMT Rate:**

N/A	N/A
-----	-----

**C. Percentage Reduction Required to Achieve the Citywide Average VMT:**

N/A
-----

**D. VMT Reduction Mitigation Measures:**

<b>Source of VMT Reduction Estimates:</b>	CAPCOA
---	--------

<b>Project Location Setting</b>	Suburban Center
---------------------------------	-----------------

	VMT Reduction Mitigation Measure:	Estimated VMT Reduction (%)
1.		0.00%
2.		0.00%
3.		0.00%
4.		0.00%
5.		0.00%
6.		0.00%
7.		0.00%
8.		0.00%
9.		0.00%
10.		0.00%
<b>Total VMT Reduction (%)</b>		<b>0.00%</b>

(Attach additional pages, if necessary, and a copy of all mitigation calculations.)

**E. Mitigated Project TAZ VMT Rate:**

N/A	N/A
-----	-----

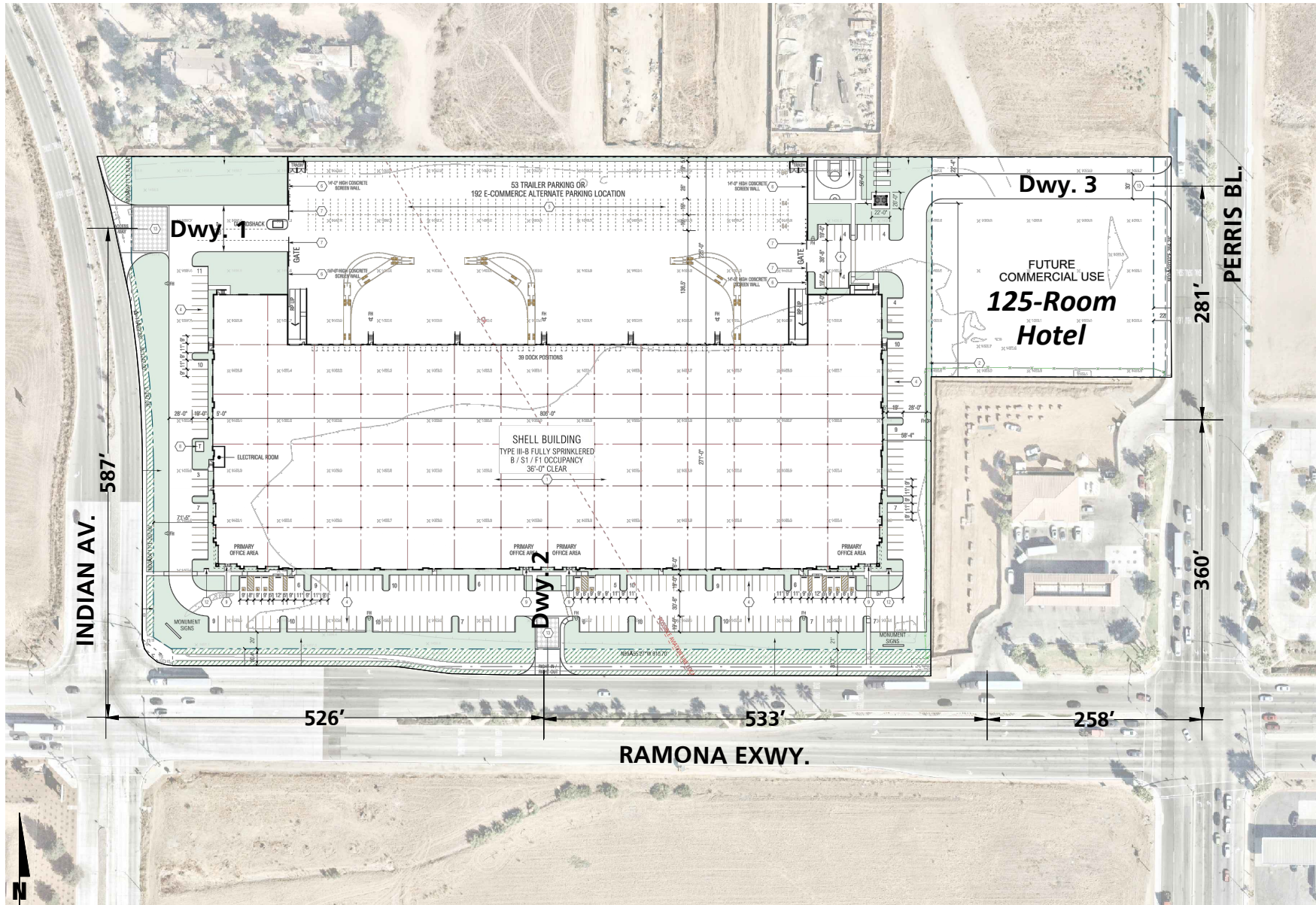
**F. Is the project presumed to have a less than significant impact with mitigation?**

N/A
-----

If the mitigated Project VMT rate is below the Citywide Average Rate, then the Project is presumed to have a less than significant impact with mitigation. If the answer is no, then additional VMT modeling may be required and a potentially significant and unavoidable impact may occur. All mitigation measures identified in Section IV.D. are subject to become Conditions of Approval of the project. Development review and processing fees should be submitted with, or prior to the submittal of this Form. The Planning Department staff will not process the Form prior to fees being paid to the City.

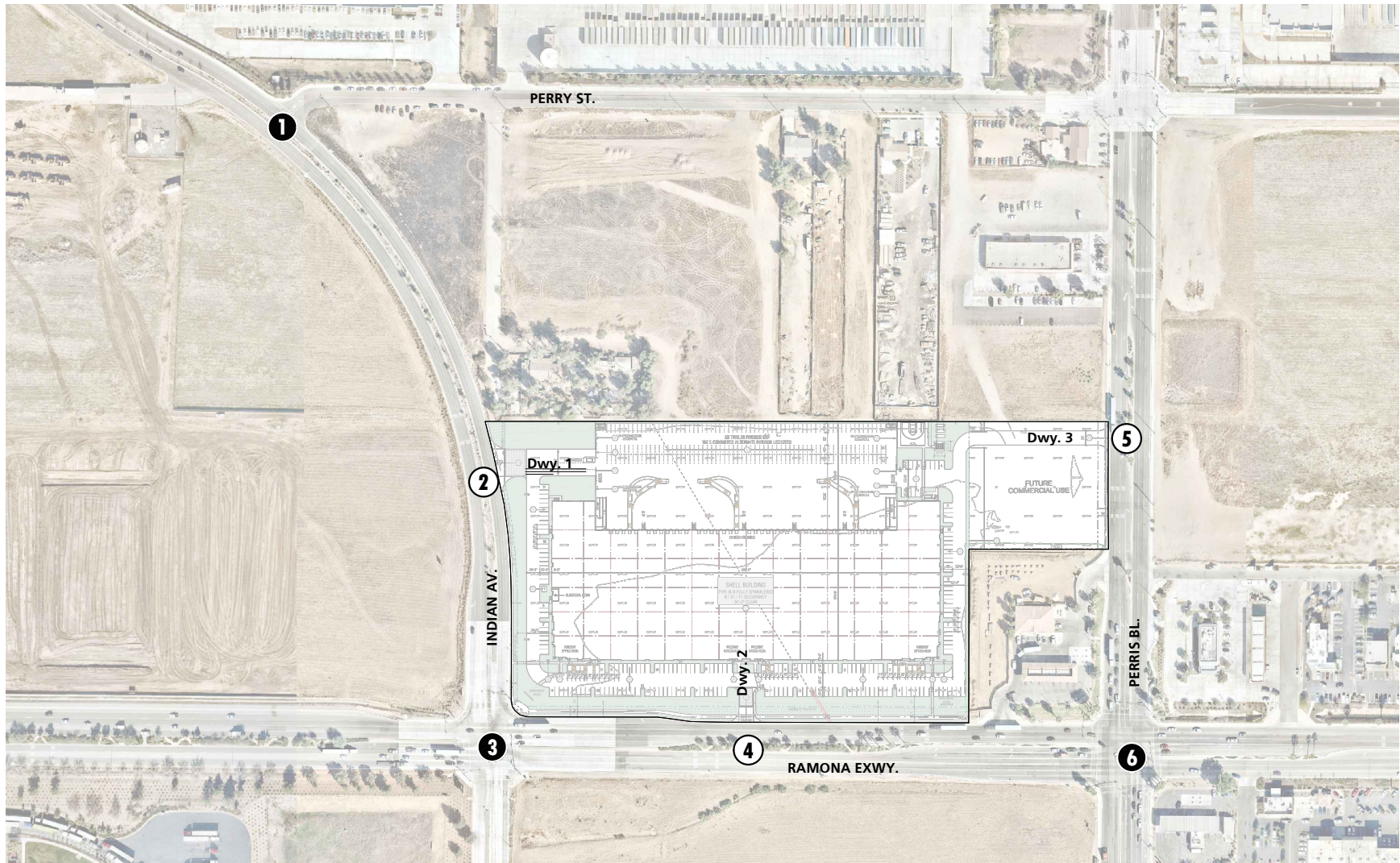
Prepared By		Developer/Applicant	
<b>Company:</b>	Urban Crossroads, Inc.	<b>Company:</b>	JM Realty Group, Inc.
<b>Contact:</b>	Charlene So	<b>Contact:</b>	Joe McKay
<b>Address:</b>	1133 Camelback St. #8329, Newport Beach, CA 92660	<b>Address:</b>	3535 Inland Empire Blvd, Ontario, CA 91764
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<b>Email:</b>	cso@urbanxroads.com	<b>Email:</b>	jmckay@jmrealtygroup.com   mfine@jmrealtygr
<b>Date:</b>	6/24/2022	<b>Date:</b>	6/24/2022
<b>Approved by:</b>			
<b>Perris Planning Division</b>	<b>Date</b>	<b>Perris City Engineer</b>	<b>Date</b>

EXHIBIT 1: PRELIMINARY SITE PLAN





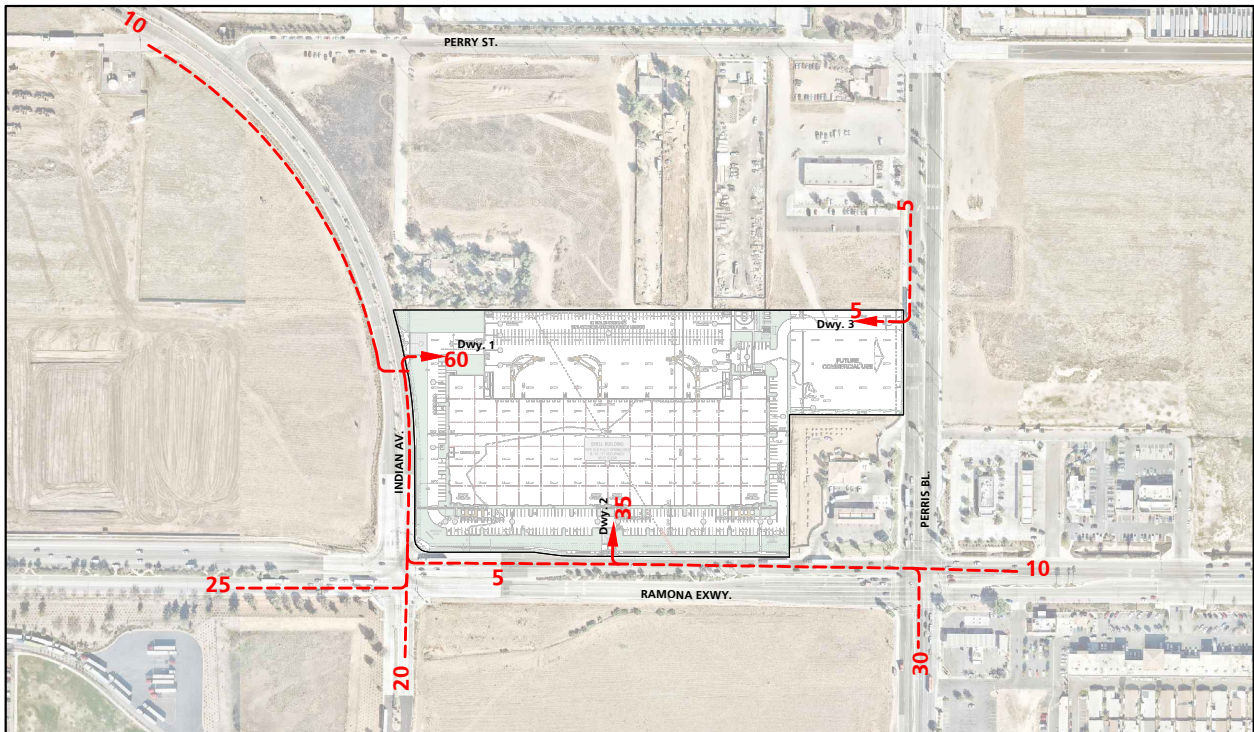
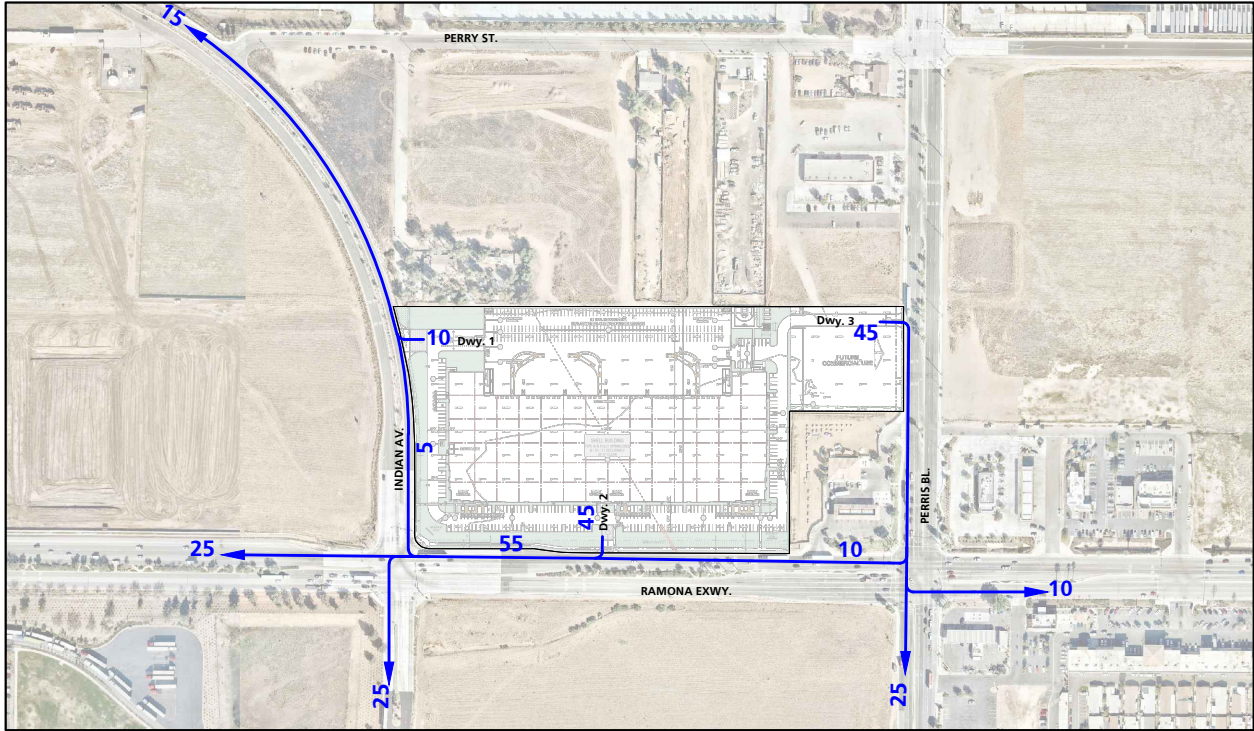
### EXHIBIT 2: LOCATION MAP



- 0** = Existing Intersection Analysis Location
- 0** = Future Intersection Analysis Location



**EXHIBIT 3: PROJECT (INDUSTRIAL PASSENGER CAR) TRIP DISTRIBUTION**



10 = Percent To/From Project

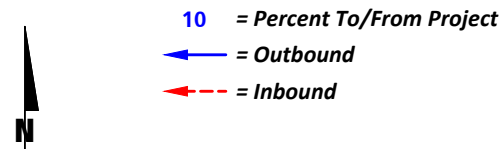
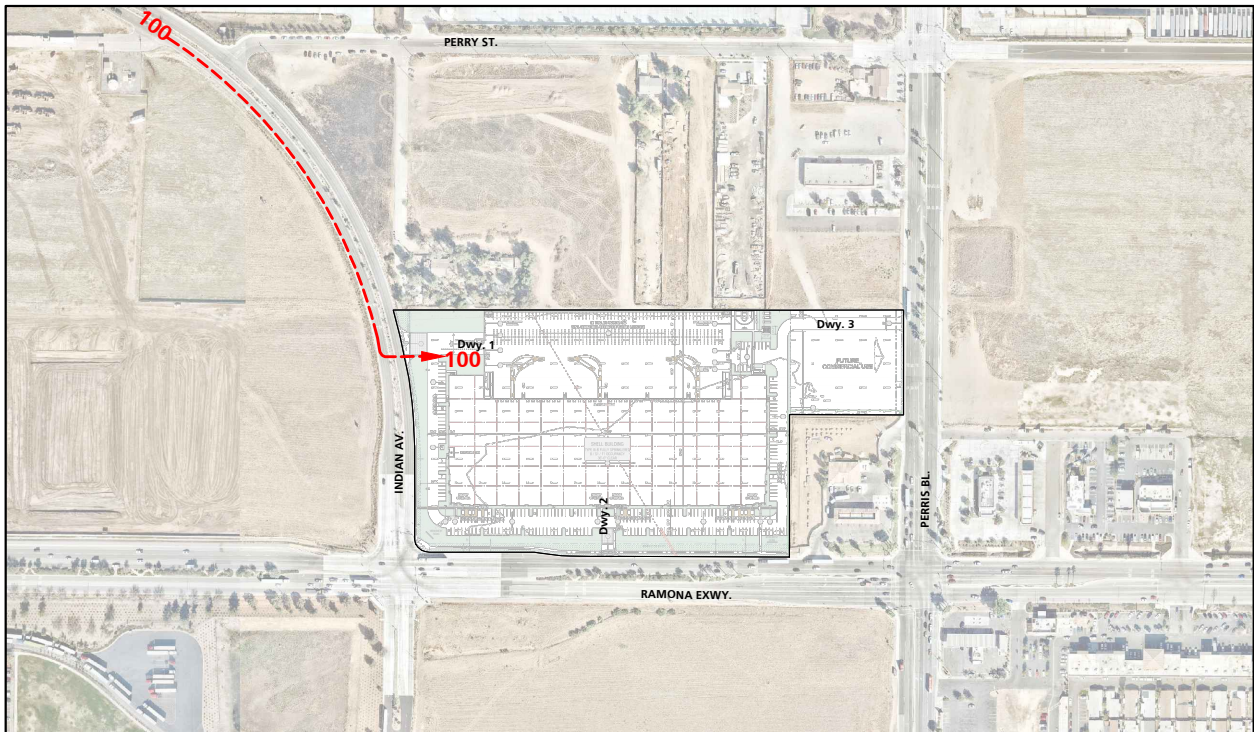
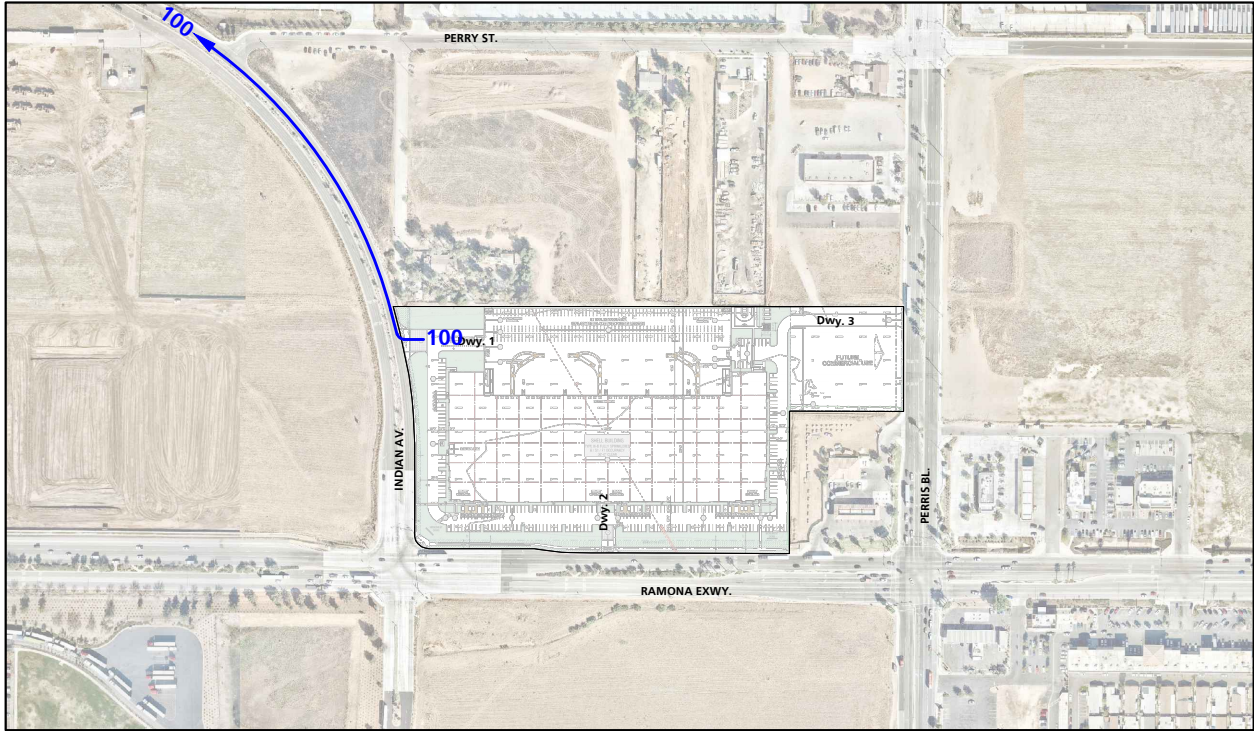
← = Outbound

← = Inbound



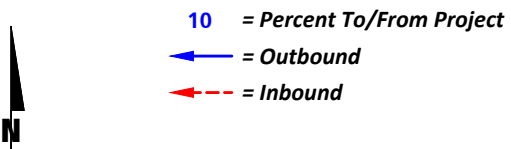
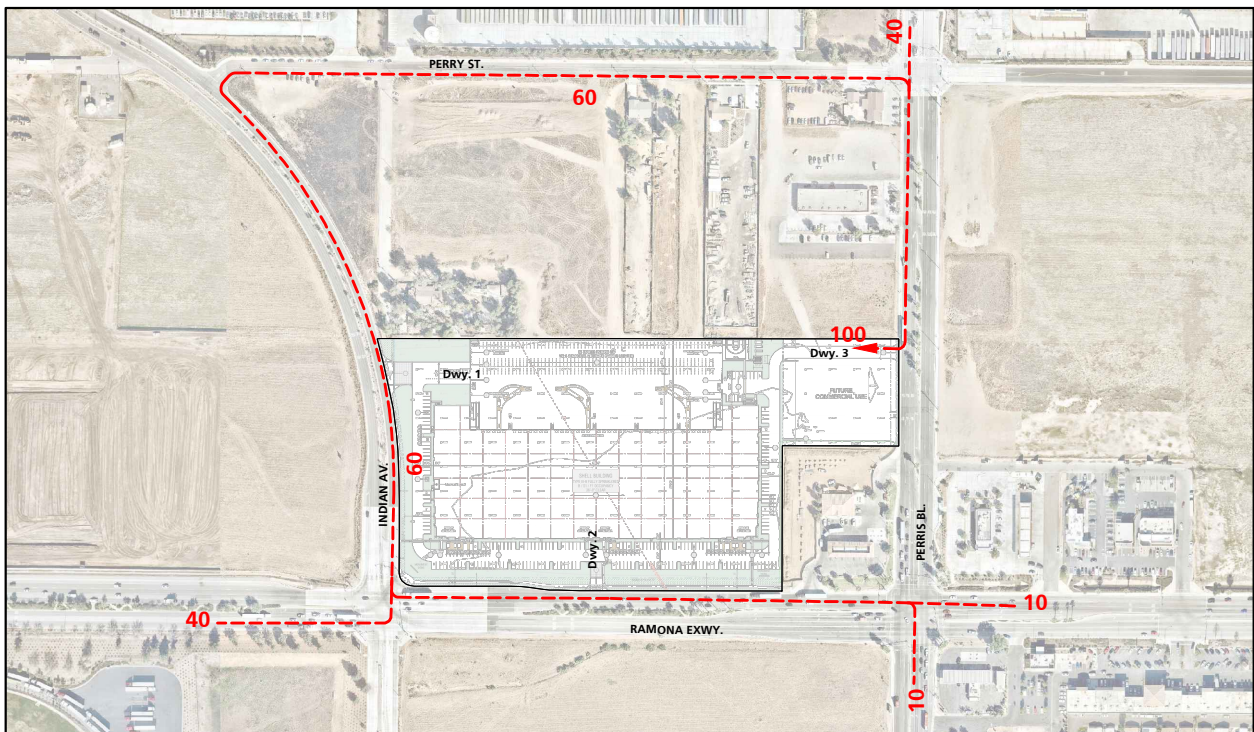
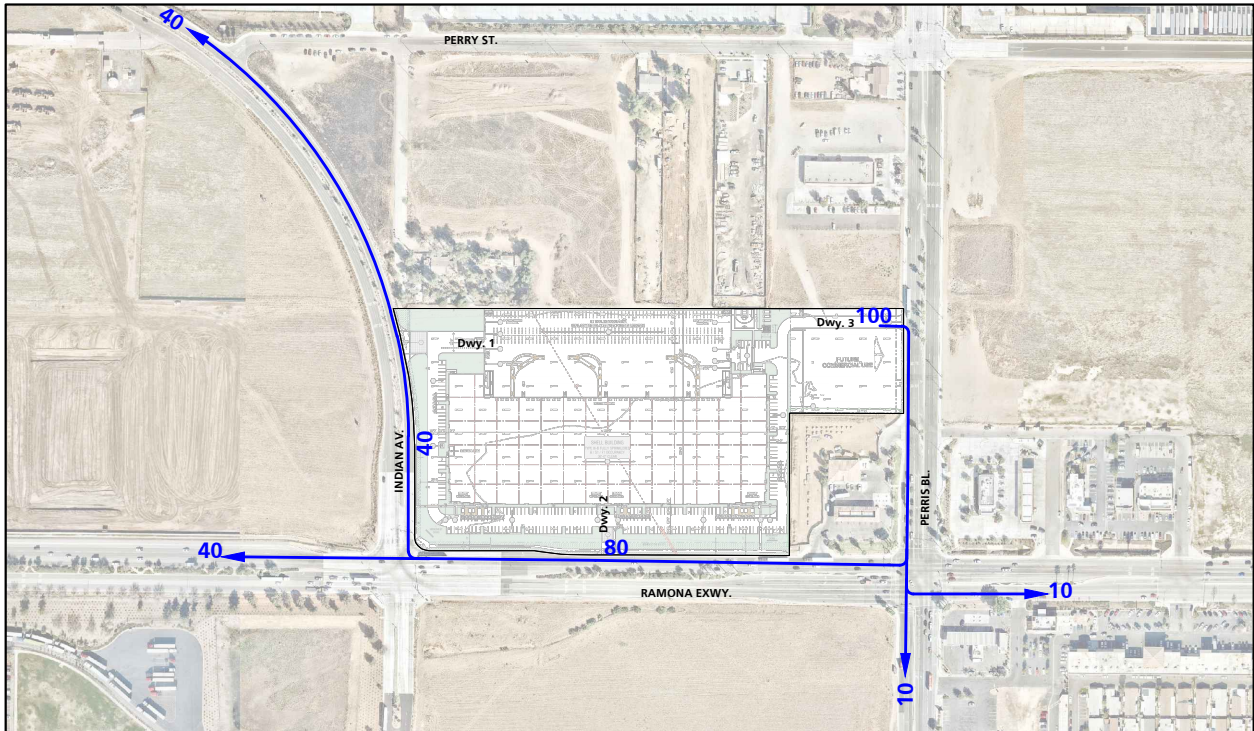


**EXHIBIT 4: PROJECT (INDUSTRIAL TRUCK) TRIP DISTRIBUTION**



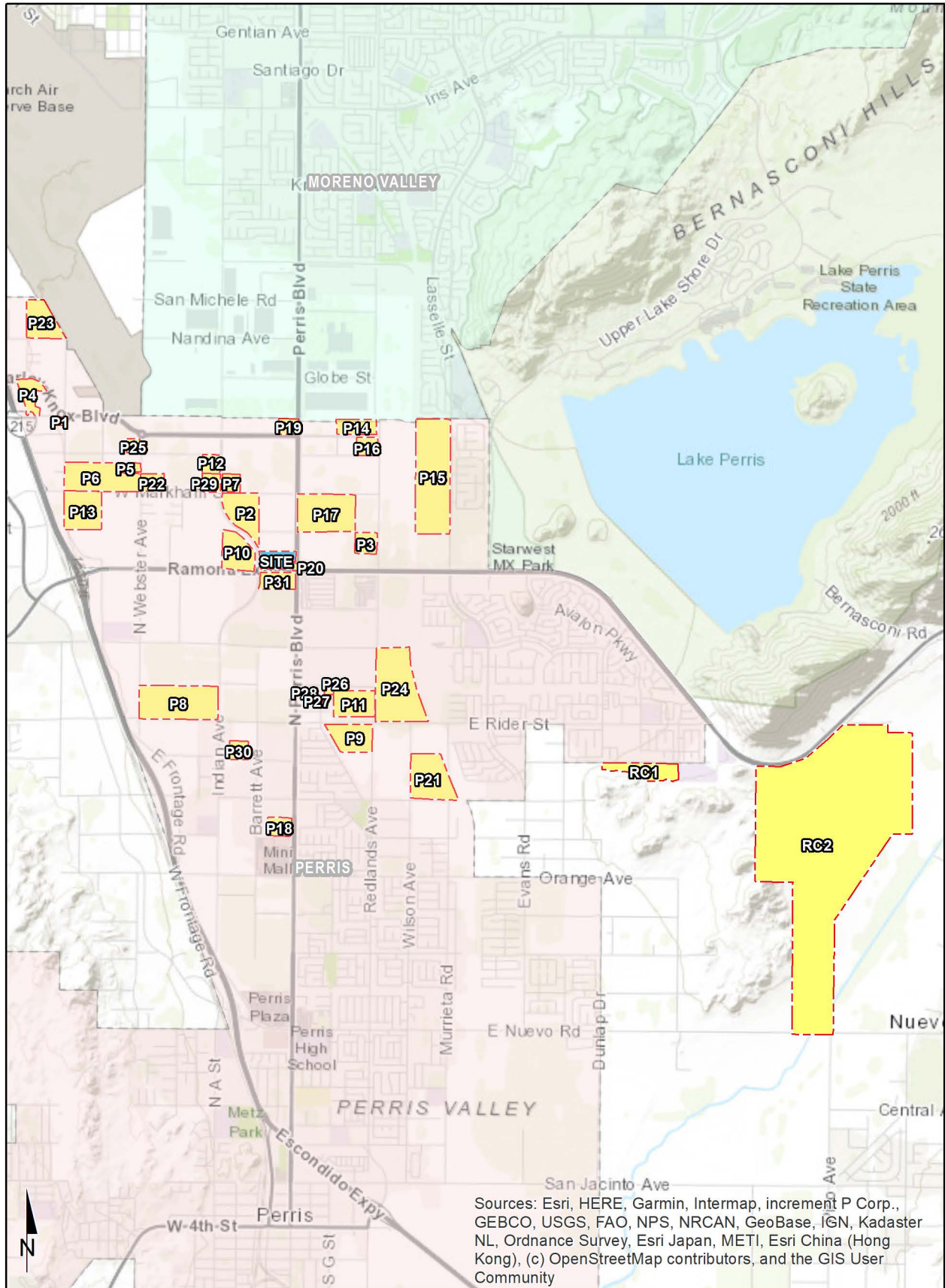


**EXHIBIT 5: PROJECT (HOTEL) TRIP DISTRIBUTION**





**EXHIBIT 6: CUMULATIVE DEVELOPMENT LOCATION MAP**



**Table 1**

**Trip Generation Rates**

Land Use <sup>1</sup>	ITE LU		AM Peak Hour			PM Peak Hour			Daily
	Units <sup>2</sup>	Code	In	Out	Total	In	Out	Total	
<b>Actual Vehicle Trip Generation Rates</b>									
Hotel	RM	310	0.28	0.19	0.47	0.31	0.29	0.60	8.36
Warehousing <sup>3</sup>	TSF	150	0.131	0.039	0.170	0.051	0.139	0.190	1.740
Passenger Cars (AM-87.0%; PM-85.0%; Daily-73.0%)			0.114	0.034	0.148	0.044	0.118	0.162	1.270
2-Axle Trucks (AM-2.17%; PM-2.51%; Daily-4.51%)			0.003	0.001	0.004	0.001	0.003	0.005	0.078
3-Axle Trucks (AM-2.69%; PM-3.11%; Daily-5.59%)			0.004	0.001	0.005	0.002	0.004	0.006	0.097
4-Axle+ Trucks (AM-8.14%; PM-9.39%; Daily-16.90%)			0.011	0.003	0.014	0.005	0.013	0.018	0.294
<b>Passenger Car Equivalent (PCE) Trip Generation Rates<sup>4</sup></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 (PCE = 1.5)			0.004	0.001	0.006	0.002	0.005	0.007	0.118
3-Axle Trucks (PCE = 2.0)			0.007	0.002	0.009	0.003	0.009	0.012	0.194
4-Axle+ Trucks (PCE = 3.0)			0.032	0.010	0.042	0.014	0.039	0.054	0.882

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

<sup>2</sup> 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.

<sup>4</sup> PCE factors per Riverside County TIA Guidelines: 2-axle = 1.5; 3-axle = 2.0; 4+axle = 3.0.

Table 2

Project Trip Generation Summary

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 (Actual)</b>									
Hotel		125 RM	35	24	59	38	37	75	1,046
Warehouse		232.575 TSF							
Passenger Cars:			26	8	34	10	27	37	296
Truck Trips:									
2-Axle Trucks			1	0	1	0	1	1	20
3-Axle Trucks			1	0	1	0	1	1	24
4-Axle+ Trucks			2	1	3	1	3	4	70
Truck Trips			4	1	5	1	5	6	114
<b>TOTAL TRIPS (Actual)<sup>2</sup></b>			<b>65</b>	<b>33</b>	<b>98</b>	<b>49</b>	<b>69</b>	<b>118</b>	<b>1,456</b>
<b>Project Trip Generation Summary (PCE)</b>									
Hotel		125 RM	35	24	59	38	37	75	1,046
Warehouse		232.575 TSF							
Passenger Cars:			26	8	34	10	27	37	296
Truck Trips:									
2-Axle Trucks (PCE = 1.5)			1	0	1	0	1	1	28
3-Axle Trucks (PCE = 2.0)			2	0	2	1	2	3	46
4-Axle+ Trucks (PCE = 3.0)			7	2	9	3	9	12	206
Truck Trips			10	2	12	4	12	16	280
<b>TOTAL TRIPS (PCE)<sup>2</sup></b>			<b>71</b>	<b>34</b>	<b>105</b>	<b>52</b>	<b>76</b>	<b>128</b>	<b>1,622</b>

<sup>1</sup> TSF = thousand square feet

<sup>2</sup> TOTAL TRIPS = Passenger Cars + Truck Trips.

**Table 3**

**Cumulative Development Land Use Summary**

No.	Project Name / Case Number	Jurisdiction	Land Use <sup>1</sup>	Quantity Units <sup>2</sup>	Location
P1	Canyon Steel (CS)	Perris	Industrial	25.000 TSF	NWC OF PATTERSON AVE. & CALIFORNIA AVE.
P2	Duke 2 / DPR 16-00008	Perris	High-Cube Warehouse	669.000 TSF	NEC OF INDIAN AVE. & MARKHAM ST.
P3	First Perry / DPR 16-00013	Perris	High-Cube Warehouse	240.000 TSF	SWC OF REDLANDS AVE. & PERRY ST.
P4	Gateway / DPR 16-00003	Perris	High-Cube Warehouse	400.000 TSF	SOUTH OF HARLEY KNOX BLVD. EAST OF HWY. 215
P5	Marijuana Manufacturing (MM)	Perris	Industrial	1.000 TSF	NW CORNER OF WEBSTER AVE. & WASHINGTON ST.
P6	OLC2 / DPR 14-01-0015	Perris	High-Cube Warehouse	1,037.000 TSF	WEST OF WEBSTER AVE. NORTH OF MARKHAM ST.
P7	Markham Industrial / DPR 16-00015	Perris	Warehousing	170.000 TSF	NEC OF INDIAN AVE. & MARKHAM ST.
P8	Rados / DPR 07-0119	Perris	High-Cube Warehouse	1,200.000 TSF	NWC OF INDIAN AVE. & RIDER ST.
P9	Rider 1 / DPR 16-0365	Perris	High-Cube Warehouse	350.000 TSF	SWC OF REDLANDS AVE. & RIDER ST.
P10	Indian/Ramona Warehouse / DPR 18-00002	Perris	High-Cube Warehouse	428.730 TSF	NORTH OF RAMONA EXWY. WEST OF INDIAN AVE.
P11	Rider 3 / DPR 06-0432	Perris	High-Cube Warehouse	640.000 TSF	NORTH OF RIDER ST. WEST OF REDLANDS AVE.
P12	Westcoast Textile / DPR 16-00001	Perris	Warehousing	180.000 TSF	SWC OF INDIAN ST. & NANCE ST.
P13	Duke at Patterson / DPR 17-00001	Perris	High-Cube Warehouse	811.000 TSF	SEC OF PATTERSON AVE. & MARKHAM ST.
P14	Harley Knox Commerce Park / DPR 16-004	Perris	High-Cube Warehouse	386.278 TSF	NWC OF HARLEY KNOX BLVD. & REDLANDS AVE.
P15	Stratford Ranch Residential / TTM 36648	Perris	SFDR	90 DU	WEST OF EVANS RD. AT MARKHAM ST.
P16	Circle Industrial III	Perris	Warehousing	211.000 TSF	NWC OF REDLANDS AVE. AND NANCE AVE.
P17	Duke @ Perris Blvd.	Perris	High-Cube Warehouse	1,070.000 TSF	SEC OF PERRIS BL. AND MARKHAM ST.
P18	Weinerschnitzel / CUP 17-05083	Perris	Fast-Food Restaurant	2.000 TSF	WEST OF PERRIS BL., SOUTH OF PLACENTIA AVE.
P19	March Plaza / CUP16-05165	Perris	Commercial Retail	47.253 TSF	NWC OF PERRIS BL. AND HARLEY KNOX BL.
P20	Cali Express Carwash / CUP 16-05258	Perris	Carwash	5.600 TSF	NWC OF PERRIS BL. AND RAMONA EXWY.
P21	Wilson Industrial / DPR 19-00007	Perris	High-Cube Warehouse	303.000 TSF	SEC OF WILSON AVE. AND RIDER ST.
P22	Integra Expansion / MMOD 17-05075	Perris	High-Cube Warehouse	273.000 TSF	NCE OF MARKHAM ST. AND WEBSTER AVE.
P23	Western Industrial / DRP 19-00003	Perris	High-Cube Warehouse	250.000 TSF	NEC OF WESTERN WY. AND NANDINA AVE.
P24	Rider 2/4	Perris	High-Cube Warehouse	1,373.449 TSF	NEC OF REDLANDS AV. AND RIDER ST.
P25	AAA	Perris	Industrial	2.000 TSF	SE CORNER OF HARLEY KNOX BL. & WEBSTER AVE.
P26	Pulliam Indus	Perris	Industrial	16.000 TSF	LOTS 10 & 12 ON COMMERCE DR., E OF PERRIS
P27	Burge Indus 1	Perris	Industrial	18.000 TSF	E OF PERRIS BL. & N OF COMMERCE DR.
P28	Burge Indus 2	Perris	Industrial	19.000 TSF	E OF PERRIS BL. & S OF COMMERCE DR.
P29	Phelan Indus	Perris	Industrial	81.000 TSF	N SIDE OF MARKHAM BTW WEBSTER AVE. & PERRIS BLVD.
P30	Dedeaux Walnut Warehouse	Perris	Industrial	205.830 TSF	N SIDE OF WALNUT AVE. BTW INDIAN AVE. & BARRETT AVE.
P31	Perris and Ramona Warehouse	Perris	Industrial	347.938 TSF	S SIDE OF RAMONA EXWY. BTW INDIAN AVE. & PERRIS BLVD.
RC1	McCanna Hills / TTM 33978	Riverside County	SFDR	63 DU	SWC OF SHERMAN AVE. & WALNUT AVE.
RC2	Stoneridge	Riverside County	High-Cube Cold Storage	1695.355 TSF	NORTH OF NUEVO RD., SOUTH OF RAMONA EXWY., EAST OF ANTELOPE RD.
			High-Cube Fulfillment	2966.872 TSF	
			High-Cube Warehouse	2966.872 TSF	
			Manufacturing	847.678 TSF	
			Warehouse	427.759 TSF	
			Industrial Park	641.639 TSF	
			Free-Standing Discount Superstore	100.000 TSF	
			Commercial Retail	21.968 TSF	

<sup>1</sup> SFDR = Single Family Detached Residential

<sup>2</sup> DU = Dwelling Units; TSF = Thousand Square Feet

**APPENDIX 1.2:**  
**SITE ADJACENT QUEUING ANALYSIS**

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Intersection: 2: Indian Av. & Driveway 1

Movement	WB	SB
Directions Served	R	L
Maximum Queue (ft)	25	30
Average Queue (ft)	4	3
95th Queue (ft)	18	17
Link Distance (ft)	483	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	200	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 4: Ramona Exwy. & Driveway 2

Movement	SB
Directions Served	R
Maximum Queue (ft)	22
Average Queue (ft)	1
95th Queue (ft)	11
Link Distance (ft)	416
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: Perris Bl. & Driveway 3

Movement	EB
Directions Served	R
Maximum Queue (ft)	31
Average Queue (ft)	17
95th Queue (ft)	41
Link Distance (ft)	246
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Zone Summary

Zone wide Queuing Penalty: 0

Intersection: 2: Indian Av. & Driveway 1

Movement	WB	SB	SB	SB
Directions Served	R	L	T	T
Maximum Queue (ft)	25	300	759	793
Average Queue (ft)	8	71	618	438
95th Queue (ft)	26	279	928	919
Link Distance (ft)	483		741	741
Upstream Blk Time (%)			34	3
Queuing Penalty (veh)			171	14
Storage Bay Dist (ft)		200		
Storage Blk Time (%)			88	
Queuing Penalty (veh)			9	

Intersection: 4: Ramona Exwy. & Driveway 2

Movement	WB	WB	WB	SB
Directions Served	T	T	T	R
Maximum Queue (ft)	225	154	139	22
Average Queue (ft)	65	42	10	10
95th Queue (ft)	174	145	64	26
Link Distance (ft)	692	692	692	416
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)			0	
Queuing Penalty (veh)			0	

Intersection: 5: Perris Bl. & Driveway 3

Movement	EB
Directions Served	R
Maximum Queue (ft)	56
Average Queue (ft)	34
95th Queue (ft)	53
Link Distance (ft)	246
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Zone Summary

Zone wide Queuing Penalty: 194

**APPENDIX 3.1:**

**EXISTING TRAFFIC COUNTS – MARCH 2020**

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City of Perris  
 N/S: Indian Avenue  
 E/W: Perry Street  
 Weather: Clear

File Name : 03\_PER\_Indian\_Perry AM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 1

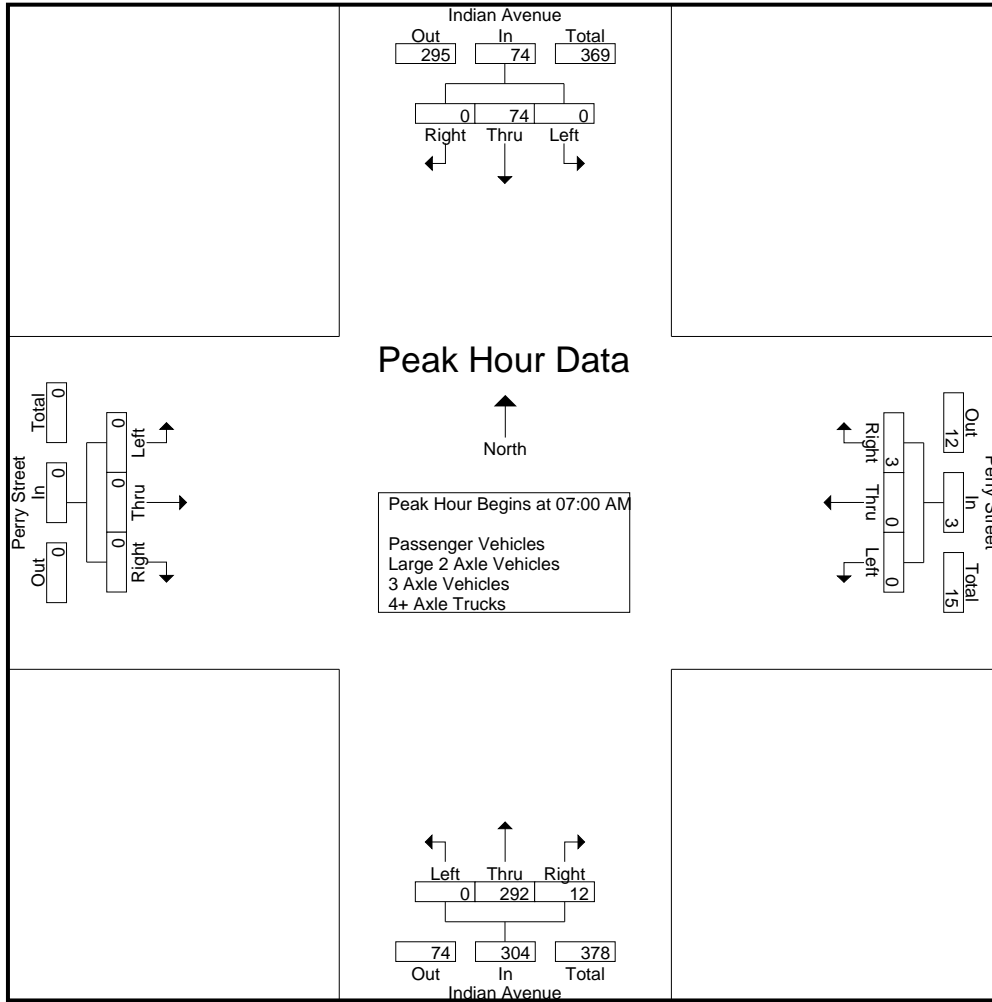
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Indian Avenue Southbound				Perry Street Westbound				Indian Avenue Northbound				Perry Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	13	0	13	0	0	0	0	0	80	2	82	0	0	0	0	95
07:15 AM	0	15	0	15	0	0	1	1	0	76	1	77	0	0	0	0	93
07:30 AM	0	21	0	21	0	0	0	0	0	88	4	92	0	0	0	0	113
07:45 AM	0	25	0	25	0	0	2	2	0	48	5	53	0	0	0	0	80
Total	0	74	0	74	0	0	3	3	0	292	12	304	0	0	0	0	381
08:00 AM	0	18	0	18	0	0	1	1	0	51	1	52	0	0	0	0	71
08:15 AM	0	13	0	13	0	0	1	1	0	25	4	29	0	0	0	0	43
08:30 AM	0	21	0	21	0	0	4	4	0	29	2	31	0	0	0	0	56
08:45 AM	0	22	0	22	0	0	3	3	0	27	1	28	0	0	0	0	53
Total	0	74	0	74	0	0	9	9	0	132	8	140	0	0	0	0	223
Grand Total	0	148	0	148	0	0	12	12	0	424	20	444	0	0	0	0	604
Apprch %	0	100	0		0	0	100		0	95.5	4.5		0	0	0		
Total %	0	24.5	0	24.5	0	0	2	2	0	70.2	3.3	73.5	0	0	0	0	
Passenger Vehicles	0	101	0	101	0	0	12	12	0	374	4	378	0	0	0	0	491
% Passenger Vehicles	0	68.2	0	68.2	0	0	100	100	0	88.2	20	85.1	0	0	0	0	81.3
Large 2 Axle Vehicles	0	7	0	7	0	0	0	0	0	12	11	23	0	0	0	0	30
% Large 2 Axle Vehicles	0	4.7	0	4.7	0	0	0	0	0	2.8	55	5.2	0	0	0	0	5
3 Axle Vehicles	0	6	0	6	0	0	0	0	0	2	3	5	0	0	0	0	11
% 3 Axle Vehicles	0	4.1	0	4.1	0	0	0	0	0	0.5	15	1.1	0	0	0	0	1.8
4+ Axle Trucks	0	34	0	34	0	0	0	0	0	36	2	38	0	0	0	0	72
% 4+ Axle Trucks	0	23	0	23	0	0	0	0	0	8.5	10	8.6	0	0	0	0	11.9

Start Time	Indian Avenue Southbound				Perry Street Westbound				Indian Avenue Northbound				Perry Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	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 07:00 AM																	
07:00 AM	0	13	0	13	0	0	0	0	0	80	2	82	0	0	0	0	95
07:15 AM	0	15	0	15	0	0	1	1	0	76	1	77	0	0	0	0	93
07:30 AM	0	21	0	21	0	0	0	0	0	<b>88</b>	4	<b>92</b>	0	0	0	0	<b>113</b>
07:45 AM	0	<b>25</b>	0	<b>25</b>	0	0	<b>2</b>	<b>2</b>	0	48	<b>5</b>	53	0	0	0	0	80
Total Volume	0	74	0	74	0	0	3	3	0	292	12	304	0	0	0	0	381
% App. Total	0	100	0		0	0	100		0	96.1	3.9		0	0	0		
PHF	.000	.740	.000	.740	.000	.000	.375	.375	.000	.830	.600	.826	.000	.000	.000	.000	.843

City of Perris  
 N/S: Indian Avenue  
 E/W: Perry Street  
 Weather: Clear

File Name : 03\_PER\_Indian\_Perry AM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 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:

	07:15 AM				08:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	15	0	15	0	0	1	1	0	80	2	82	0	0	0	0
+15 mins.	0	21	0	21	0	0	1	1	0	76	1	77	0	0	0	0
+30 mins.	0	<b>25</b>	0	<b>25</b>	0	0	<b>4</b>	<b>4</b>	0	<b>88</b>	4	<b>92</b>	0	0	0	0
+45 mins.	0	18	0	18	0	0	3	3	0	48	<b>5</b>	53	0	0	0	0
Total Volume	0	79	0	79	0	0	9	9	0	292	12	304	0	0	0	0
% App. Total	0	100	0	100	0	0	100	100	0	96.1	3.9	100	0	0	0	0
PHF	.000	.790	.000	.790	.000	.000	.563	.563	.000	.830	.600	.826	.000	.000	.000	.000

City of Perris  
 N/S: Indian Avenue  
 E/W: Perry Street  
 Weather: Clear

File Name : 03\_PER\_Indian\_Perry AM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

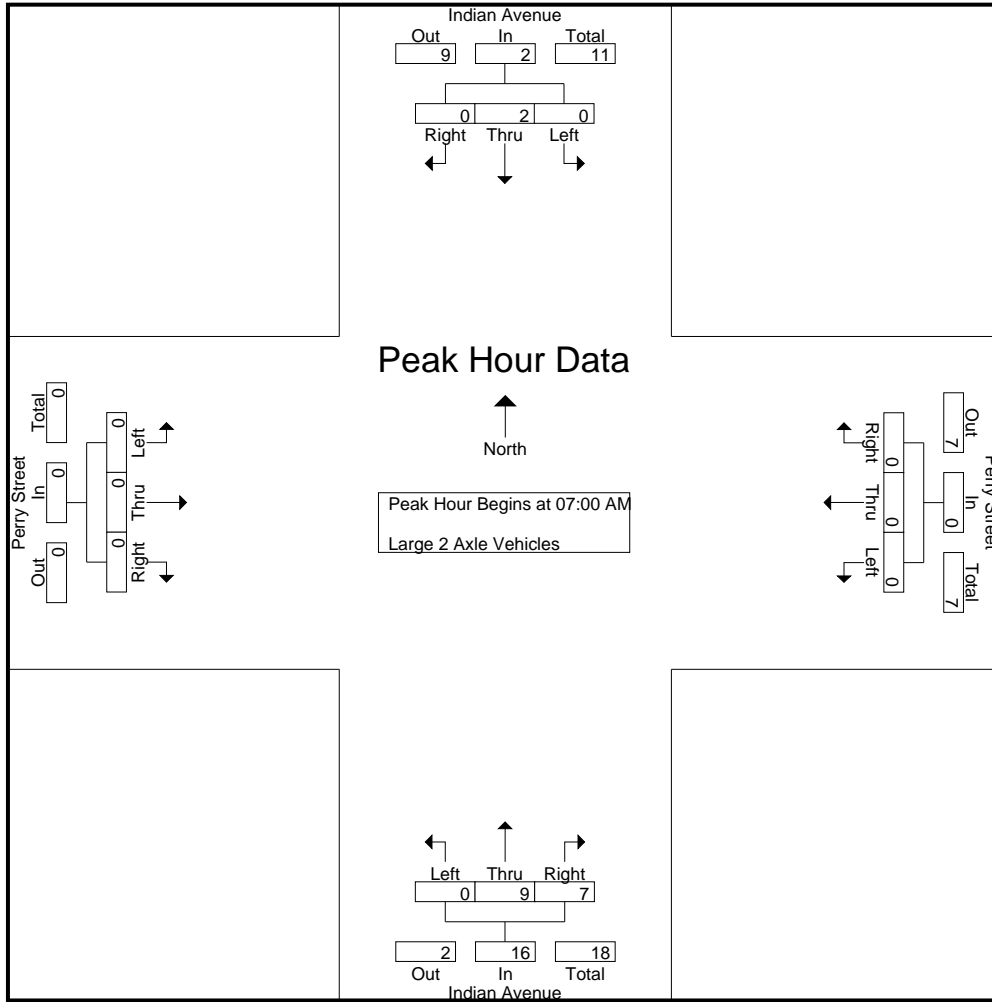
Start Time	Indian Avenue Southbound				Perry Street Westbound				Indian Avenue Northbound				Perry Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	3	1	4	0	0	0	0	4
07:15 AM	0	1	0	1	0	0	0	0	0	3	1	4	0	0	0	0	5
07:30 AM	0	0	0	0	0	0	0	0	0	2	3	5	0	0	0	0	5
07:45 AM	0	1	0	1	0	0	0	0	0	1	2	3	0	0	0	0	4
Total	0	2	0	2	0	0	0	0	0	9	7	16	0	0	0	0	18
08:00 AM	0	2	0	2	0	0	0	0	0	1	1	2	0	0	0	0	4
08:15 AM	0	2	0	2	0	0	0	0	0	1	2	3	0	0	0	0	5
08:30 AM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
08:45 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
Total	0	5	0	5	0	0	0	0	0	3	4	7	0	0	0	0	12
Grand Total	0	7	0	7	0	0	0	0	0	12	11	23	0	0	0	0	30
Apprch %	0	100	0		0	0	0		0	52.2	47.8		0	0	0		
Total %	0	23.3	0	23.3	0	0	0	0	0	40	36.7	76.7	0	0	0	0	

Start Time	Indian Avenue Southbound				Perry Street Westbound				Indian Avenue Northbound				Perry Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	0	0	0	0	3	1	4	0	0	0	0	4
07:15 AM	0	1	0	1	0	0	0	0	0	3	1	4	0	0	0	0	5
07:30 AM	0	0	0	0	0	0	0	0	0	2	3	5	0	0	0	0	5
07:45 AM	0	1	0	1	0	0	0	0	0	1	2	3	0	0	0	0	4
Total Volume	0	2	0	2	0	0	0	0	0	9	7	16	0	0	0	0	18
% App. Total	0	100	0		0	0	0		0	56.2	43.8		0	0	0		
PHF	.000	.500	.000	.500	.000	.000	.000	.000	.000	.750	.583	.800	.000	.000	.000	.000	.900



City of Perris  
 N/S: Indian Avenue  
 E/W: Perry Street  
 Weather: Clear

File Name : 03\_PER\_Indian\_Perry AM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 2



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

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	<b>3</b>	1	4	0	0	0	0
+15 mins.	0	<b>1</b>	0	<b>1</b>	0	0	0	0	0	3	1	4	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	2	<b>3</b>	<b>5</b>	0	0	0	0
+45 mins.	0	1	0	1	0	0	0	0	0	1	2	3	0	0	0	0
Total Volume	0	2	0	2	0	0	0	0	0	9	7	16	0	0	0	0
% App. Total	0	100	0	0	0	0	0	0	0	56.2	43.8		0	0	0	0
PHF	.000	.500	.000	.500	.000	.000	.000	.000	.000	.750	.583	.800	.000	.000	.000	.000

City of Perris  
 N/S: Indian Avenue  
 E/W: Perry Street  
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File Name : 03\_PER\_Indian\_Perry AM  
 Site Code : 05118430  
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 Page No : 1

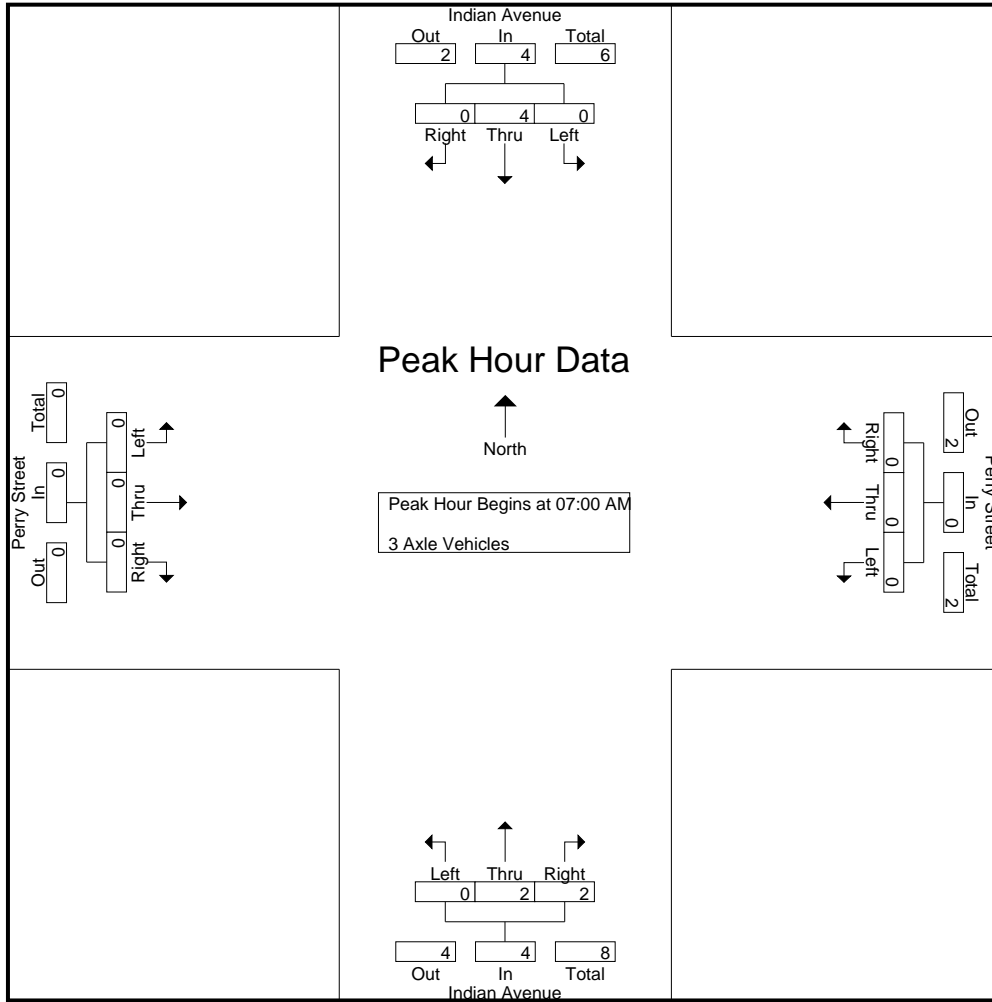
Groups Printed- 3 Axle Vehicles

Start Time	Indian Avenue Southbound				Perry Street Westbound				Indian Avenue Northbound				Perry Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
07:15 AM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
07:30 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
07:45 AM	0	1	0	1	0	0	0	0	0	0	1	1	0	0	0	0	2
Total	0	4	0	4	0	0	0	0	0	2	2	4	0	0	0	0	8
08:00 AM	0	1	0	1	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	1	1	0	0	0	0	1
08:30 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	2	0	2	0	0	0	0	0	0	1	1	0	0	0	0	3
Grand Total	0	6	0	6	0	0	0	0	0	2	3	5	0	0	0	0	11
Apprch %	0	100	0		0	0	0		0	40	60		0	0	0		
Total %	0	54.5	0	54.5	0	0	0	0	0	18.2	27.3	45.5	0	0	0	0	

Start Time	Indian Avenue Southbound				Perry Street Westbound				Indian Avenue Northbound				Perry Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
07:15 AM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
07:30 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
07:45 AM	0	1	0	1	0	0	0	0	0	0	1	1	0	0	0	0	2
Total Volume	0	4	0	4	0	0	0	0	0	2	2	4	0	0	0	0	8
% App. Total	0	100	0		0	0	0		0	50	50		0	0	0		
PHF	.000	.500	.000	.500	.000	.000	.000	.000	.000	.250	.500	.500	.000	.000	.000	.000	.667

City of Perris  
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File Name : 03\_PER\_Indian\_Perry AM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 2



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

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0
+15 mins.	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0
+45 mins.	0	1	0	1	0	0	0	0	0	0	1	1	0	0	0	0
Total Volume	0	4	0	4	0	0	0	0	0	2	2	4	0	0	0	0
% App. Total	0	100	0	0	0	0	0	0	0	50	50	0	0	0	0	0
PHF	.000	.500	.000	.500	.000	.000	.000	.000	.000	.250	.500	.500	.000	.000	.000	.000

City of Perris  
 N/S: Indian Avenue  
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File Name : 03\_PER\_Indian\_Perry AM  
 Site Code : 05118430  
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 Page No : 1

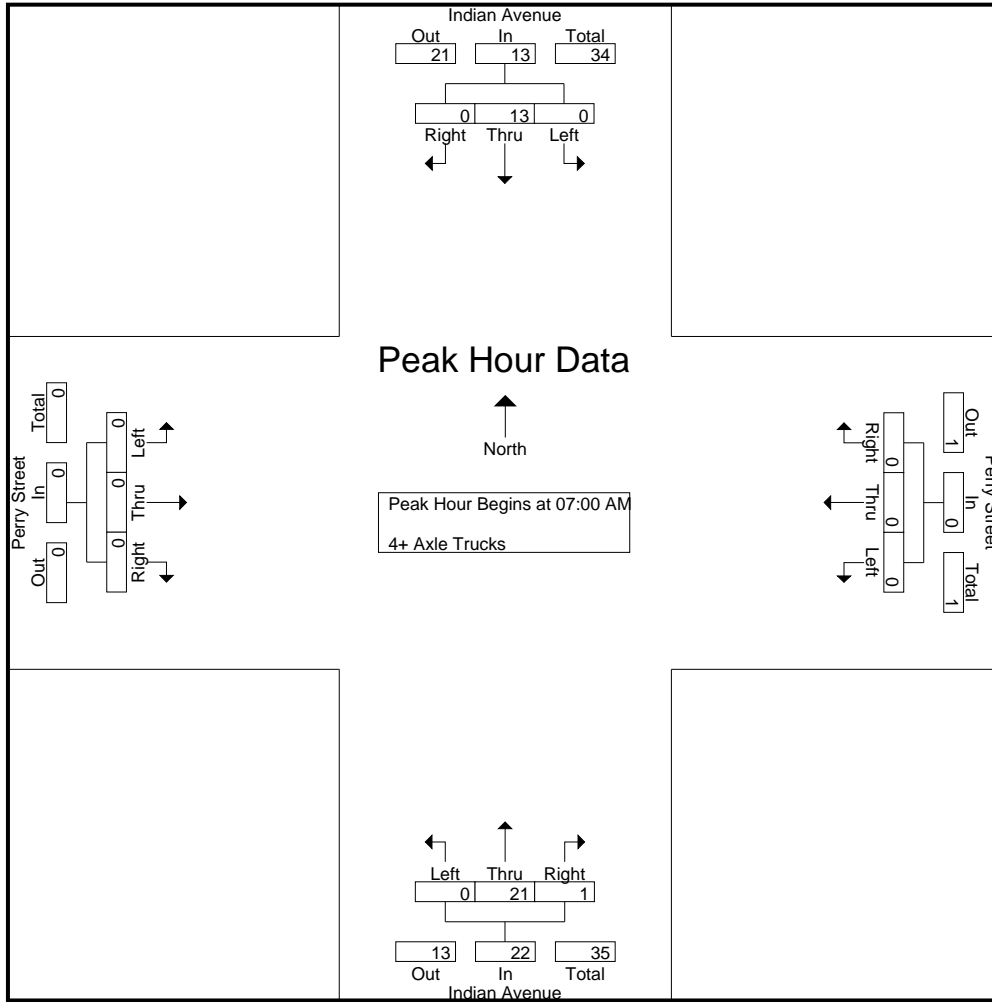
Groups Printed- 4+ Axle Trucks

Start Time	Indian Avenue Southbound				Perry Street Westbound				Indian Avenue Northbound				Perry Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	3	0	3	0	0	0	0	0	5	1	6	0	0	0	0	9
07:15 AM	0	2	0	2	0	0	0	0	0	7	0	7	0	0	0	0	9
07:30 AM	0	4	0	4	0	0	0	0	0	4	0	4	0	0	0	0	8
07:45 AM	0	4	0	4	0	0	0	0	0	5	0	5	0	0	0	0	9
Total	0	13	0	13	0	0	0	0	0	21	1	22	0	0	0	0	35
08:00 AM	0	2	0	2	0	0	0	0	0	3	0	3	0	0	0	0	5
08:15 AM	0	3	0	3	0	0	0	0	0	6	0	6	0	0	0	0	9
08:30 AM	0	8	0	8	0	0	0	0	0	3	1	4	0	0	0	0	12
08:45 AM	0	8	0	8	0	0	0	0	0	3	0	3	0	0	0	0	11
Total	0	21	0	21	0	0	0	0	0	15	1	16	0	0	0	0	37
Grand Total	0	34	0	34	0	0	0	0	0	36	2	38	0	0	0	0	72
Apprch %	0	100	0		0	0	0		0	94.7	5.3		0	0	0		
Total %	0	47.2	0	47.2	0	0	0	0	0	50	2.8	52.8	0	0	0	0	

Start Time	Indian Avenue Southbound				Perry Street Westbound				Indian Avenue Northbound				Perry Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	3	0	3	0	0	0	0	0	5	1	6	0	0	0	0	9
07:15 AM	0	2	0	2	0	0	0	0	0	7	0	7	0	0	0	0	9
07:30 AM	0	4	0	4	0	0	0	0	0	4	0	4	0	0	0	0	8
07:45 AM	0	4	0	4	0	0	0	0	0	5	0	5	0	0	0	0	9
Total Volume	0	13	0	13	0	0	0	0	0	21	1	22	0	0	0	0	35
% App. Total	0	100	0		0	0	0		0	95.5	4.5		0	0	0		
PHF	.000	.813	.000	.813	.000	.000	.000	.000	.000	.750	.250	.786	.000	.000	.000	.000	.972

City of Perris  
 N/S: Indian Avenue  
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File Name : 03\_PER\_Indian\_Perry AM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 2



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

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	3	0	3	0	0	0	0	0	5	1	6	0	0	0	0
+15 mins.	0	2	0	2	0	0	0	0	0	7	0	7	0	0	0	0
+30 mins.	0	4	0	4	0	0	0	0	0	4	0	4	0	0	0	0
+45 mins.	0	4	0	4	0	0	0	0	0	5	0	5	0	0	0	0
Total Volume	0	13	0	13	0	0	0	0	0	21	1	22	0	0	0	0
% App. Total	0	100	0		0	0	0	0	0	95.5	4.5		0	0	0	
PHF	.000	.813	.000	.813	.000	.000	.000	.000	.000	.750	.250	.786	.000	.000	.000	.000

City of Perris  
 N/S: Indian Avenue  
 E/W: Perry Street  
 Weather: Clear

File Name : 03\_PER\_Indian\_Perry PM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 1

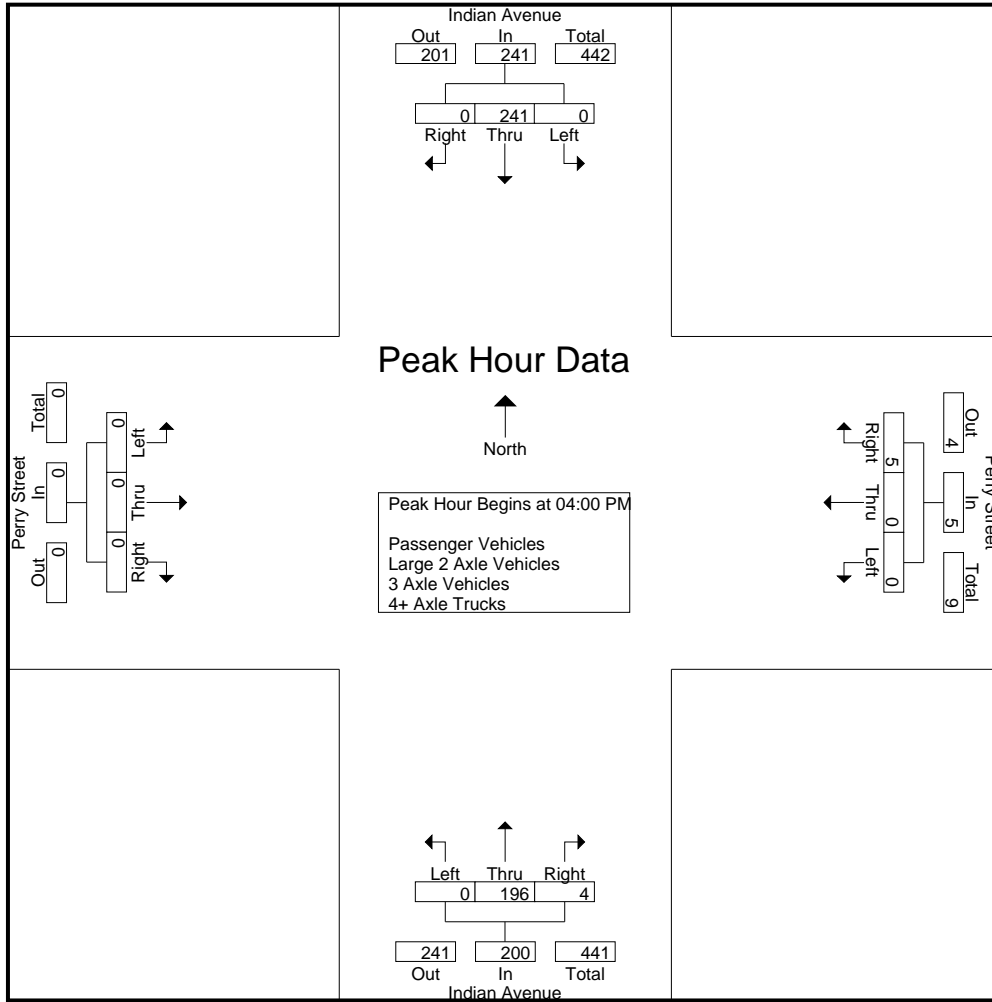
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Indian Avenue Southbound				Perry Street Westbound				Indian Avenue Northbound				Perry Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	54	0	54	0	0	0	0	0	44	0	44	0	0	0	0	98
04:15 PM	0	68	0	68	0	0	0	0	0	41	0	41	0	0	0	0	109
04:30 PM	0	61	0	61	0	0	1	1	0	61	3	64	0	0	0	0	126
04:45 PM	0	58	0	58	0	0	4	4	0	50	1	51	0	0	0	0	113
Total	0	241	0	241	0	0	5	5	0	196	4	200	0	0	0	0	446
05:00 PM	0	63	0	63	0	0	2	2	0	29	2	31	0	0	0	0	96
05:15 PM	0	67	0	67	0	0	1	1	0	16	1	17	0	0	0	0	85
05:30 PM	0	77	0	77	0	0	1	1	0	31	0	31	0	0	0	0	109
05:45 PM	0	49	0	49	0	0	0	0	0	27	0	27	0	0	0	0	76
Total	0	256	0	256	0	0	4	4	0	103	3	106	0	0	0	0	366
Grand Total	0	497	0	497	0	0	9	9	0	299	7	306	0	0	0	0	812
Apprch %	0	100	0		0	0	100		0	97.7	2.3		0	0	0		
Total %	0	61.2	0	61.2	0	0	1.1	1.1	0	36.8	0.9	37.7	0	0	0	0	
Passenger Vehicles	0	450	0	450	0	0	8	8	0	242	4	246	0	0	0	0	704
% Passenger Vehicles	0	90.5	0	90.5	0	0	88.9	88.9	0	80.9	57.1	80.4	0	0	0	0	86.7
Large 2 Axle Vehicles	0	4	0	4	0	0	1	1	0	8	0	8	0	0	0	0	13
% Large 2 Axle Vehicles	0	0.8	0	0.8	0	0	11.1	11.1	0	2.7	0	2.6	0	0	0	0	1.6
3 Axle Vehicles	0	8	0	8	0	0	0	0	0	17	3	20	0	0	0	0	28
% 3 Axle Vehicles	0	1.6	0	1.6	0	0	0	0	0	5.7	42.9	6.5	0	0	0	0	3.4
4+ Axle Trucks	0	35	0	35	0	0	0	0	0	32	0	32	0	0	0	0	67
% 4+ Axle Trucks	0	7	0	7	0	0	0	0	0	10.7	0	10.5	0	0	0	0	8.3

Start Time	Indian Avenue Southbound				Perry Street Westbound				Indian Avenue Northbound				Perry Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	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 04:00 PM																	
04:00 PM	0	54	0	54	0	0	0	0	0	44	0	44	0	0	0	0	98
04:15 PM	0	<b>68</b>	0	<b>68</b>	0	0	0	0	0	41	0	41	0	0	0	0	109
04:30 PM	0	61	0	61	0	0	1	1	0	<b>61</b>	<b>3</b>	<b>64</b>	0	0	0	0	<b>126</b>
04:45 PM	0	58	0	58	0	0	<b>4</b>	<b>4</b>	0	50	1	51	0	0	0	0	113
Total Volume	0	241	0	241	0	0	5	5	0	196	4	200	0	0	0	0	446
% App. Total	0	100	0		0	0	100		0	98	2		0	0	0		
PHF	.000	.886	.000	.886	.000	.000	.313	.313	.000	.803	.333	.781	.000	.000	.000	.000	.885

City of Perris  
 N/S: Indian Avenue  
 E/W: Perry Street  
 Weather: Clear

File Name : 03\_PER\_Indian\_Perry PM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 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:

	04:45 PM				04:30 PM				04:00 PM				04:00 PM			
+0 mins.	0	58	0	58	0	0	1	1	0	44	0	44	0	0	0	0
+15 mins.	0	63	0	63	0	0	4	4	0	41	0	41	0	0	0	0
+30 mins.	0	67	0	67	0	0	2	2	0	<b>61</b>	<b>3</b>	<b>64</b>	0	0	0	0
+45 mins.	0	<b>77</b>	0	<b>77</b>	0	0	1	1	0	50	1	51	0	0	0	0
Total Volume	0	265	0	265	0	0	8	8	0	196	4	200	0	0	0	0
% App. Total	0	100	0	100	0	0	100	100	0	98	2	100	0	0	0	0
PHF	.000	.860	.000	.860	.000	.000	.500	.500	.000	.803	.333	.781	.000	.000	.000	.000



City of Perris  
 N/S: Indian Avenue  
 E/W: Perry Street  
 Weather: Clear

File Name : 03\_PER\_Indian\_Perry PM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 1

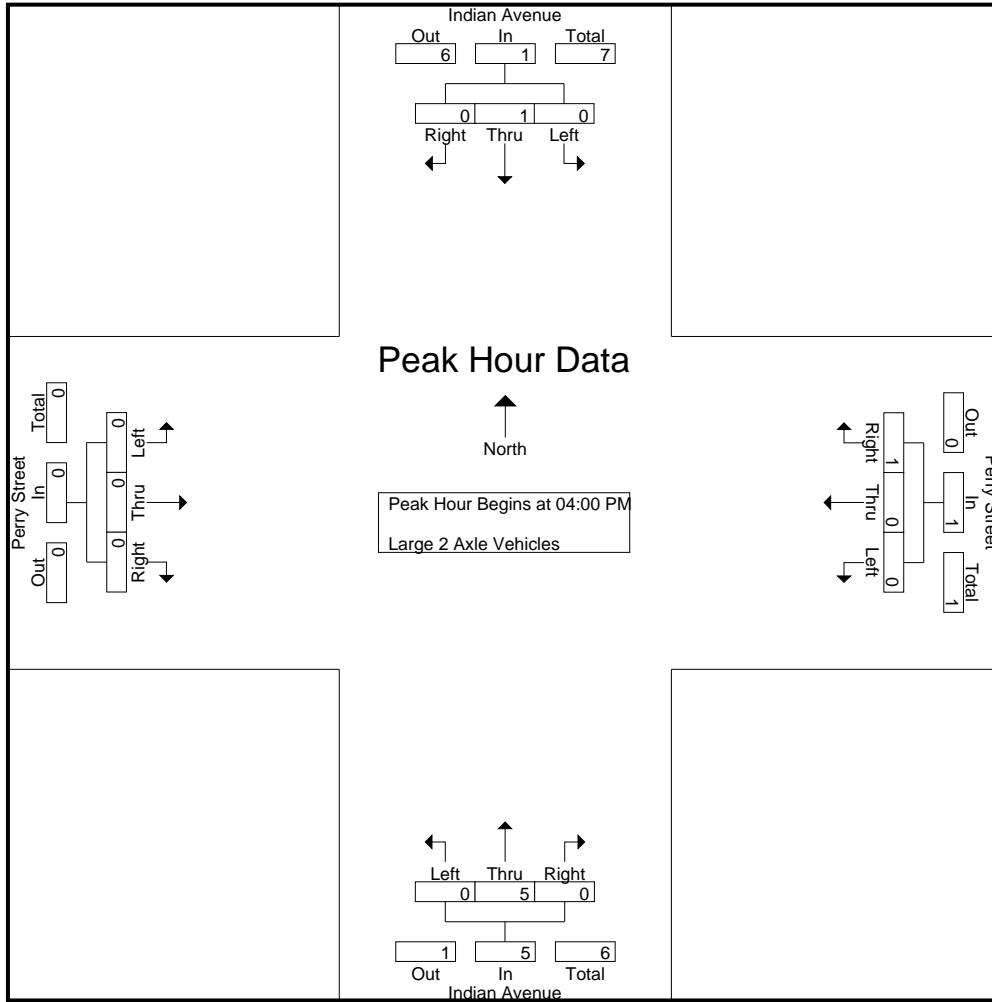
Groups Printed- Large 2 Axle Vehicles

Start Time	Indian Avenue Southbound				Perry Street Westbound				Indian Avenue Northbound				Perry Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
04:15 PM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
04:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	1	1	0	1	0	1	0	0	0	0	2
Total	0	1	0	1	0	0	1	1	0	5	0	5	0	0	0	0	7
05:00 PM	0	1	0	1	0	0	0	0	0	1	0	1	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
05:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
05:45 PM	0	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
Total	0	3	0	3	0	0	0	0	0	3	0	3	0	0	0	0	6
Grand Total	0	4	0	4	0	0	1	1	0	8	0	8	0	0	0	0	13
Apprch %	0	100	0		0	0	100		0	100	0		0	0	0		
Total %	0	30.8	0	30.8	0	0	7.7	7.7	0	61.5	0	61.5	0	0	0	0	

Start Time	Indian Avenue Southbound				Perry Street Westbound				Indian Avenue Northbound				Perry Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
04:15 PM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
04:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	1	1	0	1	0	1	0	0	0	0	2
Total Volume	0	1	0	1	0	0	1	1	0	5	0	5	0	0	0	0	7
% App. Total	0	100	0		0	0	100		0	100	0		0	0	0		
PHF	.000	.250	.000	.250	.000	.000	.250	.250	.000	.625	.000	.625	.000	.000	.000	.000	.583

City of Perris  
 N/S: Indian Avenue  
 E/W: Perry Street  
 Weather: Clear

File Name : 03\_PER\_Indian\_Perry PM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 2



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

	04:00 PM				04:00 PM				04:00 PM				04:00 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0
+15 mins.	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0
+45 mins.	0	0	0	0	0	0	1	1	0	1	0	1	0	0	0	0
Total Volume	0	1	0	1	0	0	1	1	0	5	0	5	0	0	0	0
% App. Total	0	100	0	0	0	0	100	0	0	100	0	0	0	0	0	0
PHF	.000	.250	.000	.250	.000	.000	.250	.250	.000	.625	.000	.625	.000	.000	.000	.000

City of Perris  
 N/S: Indian Avenue  
 E/W: Perry Street  
 Weather: Clear

File Name : 03\_PER\_Indian\_Perry PM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 1

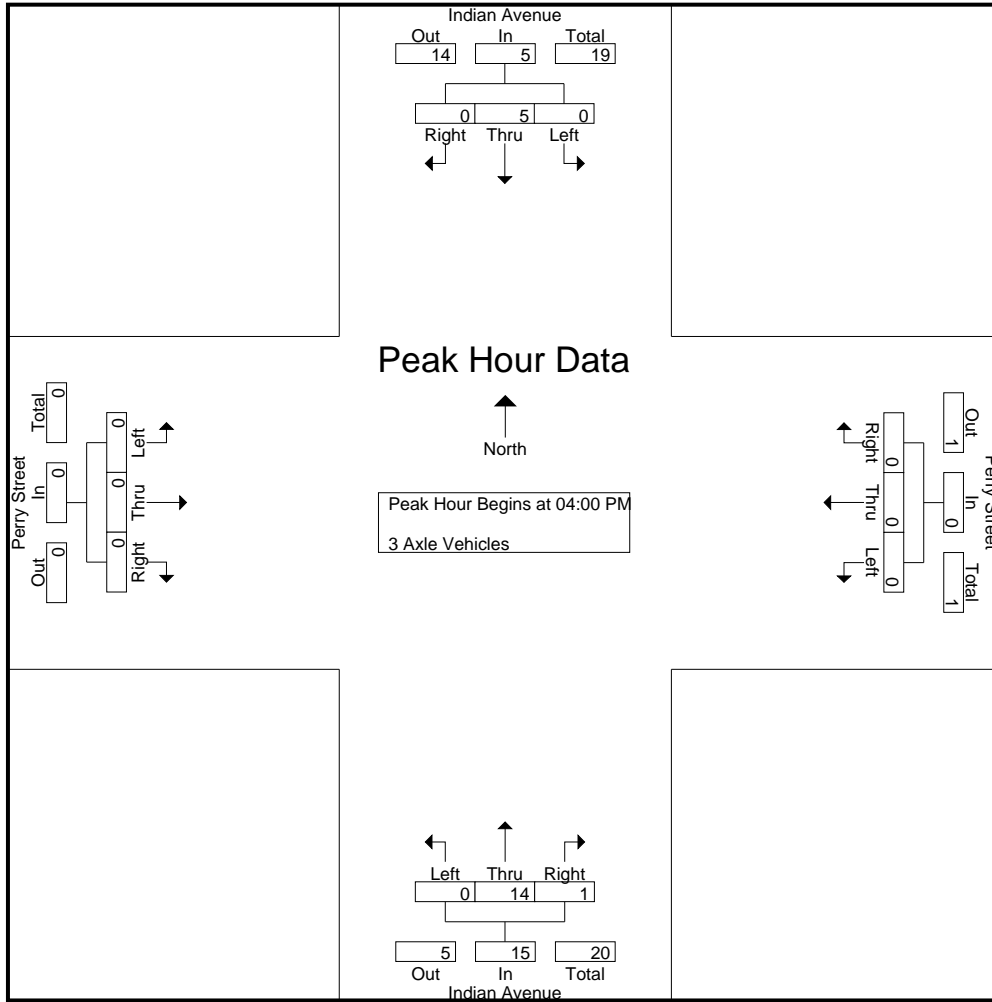
Groups Printed- 3 Axle Vehicles

Start Time	Indian Avenue Southbound				Perry Street Westbound				Indian Avenue Northbound				Perry Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	4	0	4	0	0	0	0	0	1	0	1	0	0	0	0	5
04:15 PM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
04:30 PM	0	0	0	0	0	0	0	0	0	4	0	4	0	0	0	0	4
04:45 PM	0	0	0	0	0	0	0	0	0	7	1	8	0	0	0	0	8
Total	0	5	0	5	0	0	0	0	0	14	1	15	0	0	0	0	20
05:00 PM	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	2
05:15 PM	0	1	0	1	0	0	0	0	0	0	1	1	0	0	0	0	2
05:30 PM	0	2	0	2	0	0	0	0	0	2	0	2	0	0	0	0	4
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	3	0	3	0	0	0	0	0	3	2	5	0	0	0	0	8
Grand Total	0	8	0	8	0	0	0	0	0	17	3	20	0	0	0	0	28
Apprch %	0	100	0		0	0	0		0	85	15		0	0	0		
Total %	0	28.6	0	28.6	0	0	0	0	0	60.7	10.7	71.4	0	0	0	0	

Start Time	Indian Avenue Southbound				Perry Street Westbound				Indian Avenue Northbound				Perry Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	4	0	4	0	0	0	0	0	1	0	1	0	0	0	0	5
04:15 PM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
04:30 PM	0	0	0	0	0	0	0	0	0	4	0	4	0	0	0	0	4
04:45 PM	0	0	0	0	0	0	0	0	0	7	1	8	0	0	0	0	8
Total Volume	0	5	0	5	0	0	0	0	0	14	1	15	0	0	0	0	20
% App. Total	0	100	0		0	0	0		0	93.3	6.7		0	0	0		
PHF	.000	.313	.000	.313	.000	.000	.000	.000	.000	.500	.250	.469	.000	.000	.000	.000	.625

City of Perris  
 N/S: Indian Avenue  
 E/W: Perry Street  
 Weather: Clear

File Name : 03\_PER\_Indian\_Perry PM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 2



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

	04:00 PM				04:00 PM				04:00 PM				04:00 PM			
+0 mins.	0	4	0	4	0	0	0	0	0	1	0	1	0	0	0	0
+15 mins.	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	4	0	4	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	7	1	8	0	0	0	0
Total Volume	0	5	0	5	0	0	0	0	0	14	1	15	0	0	0	0
% App. Total	0	100	0		0	0	0		0	93.3	6.7		0	0	0	
PHF	.000	.313	.000	.313	.000	.000	.000	.000	.000	.500	.250	.469	.000	.000	.000	.000

City of Perris  
 N/S: Indian Avenue  
 E/W: Perry Street  
 Weather: Clear

File Name : 03\_PER\_Indian\_Perry PM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 1

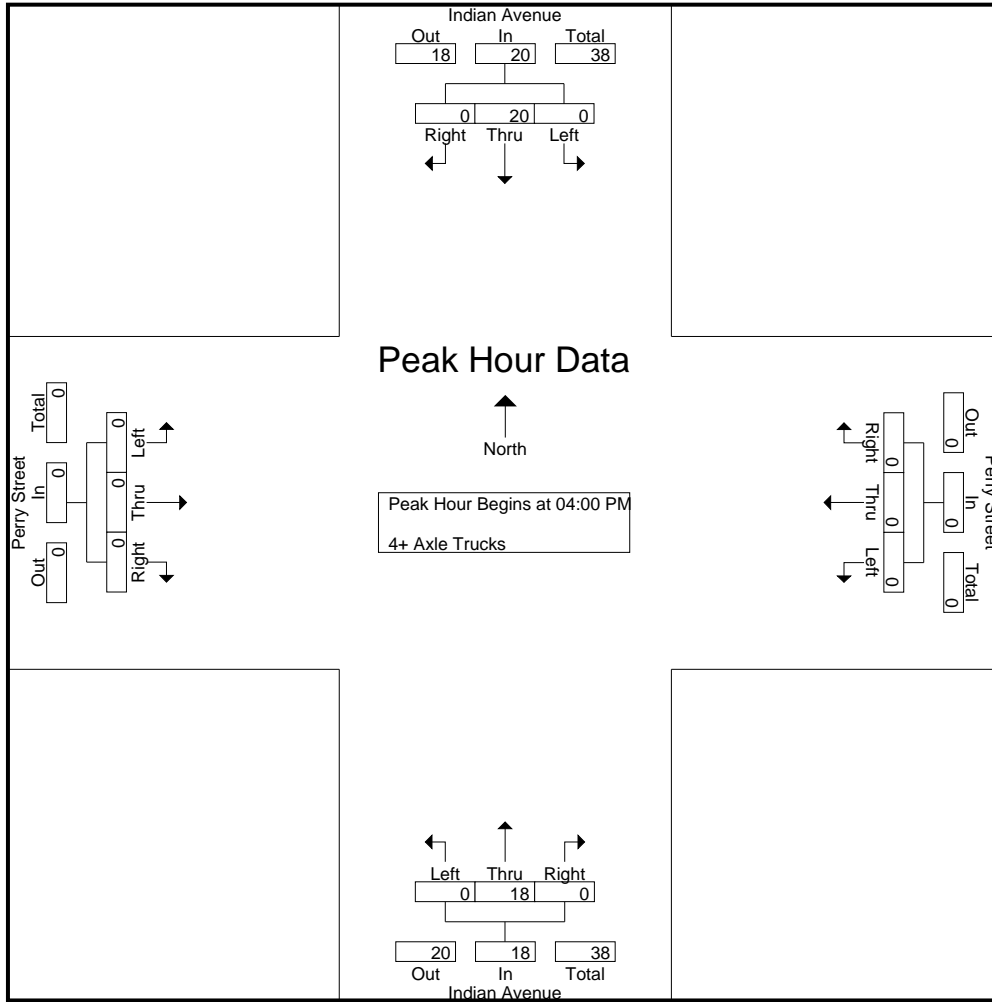
Groups Printed- 4+ Axle Trucks

Start Time	Indian Avenue Southbound				Perry Street Westbound				Indian Avenue Northbound				Perry Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	3	0	3	0	0	0	0	0	4	0	4	0	0	0	0	7
04:15 PM	0	7	0	7	0	0	0	0	0	3	0	3	0	0	0	0	10
04:30 PM	0	5	0	5	0	0	0	0	0	5	0	5	0	0	0	0	10
04:45 PM	0	5	0	5	0	0	0	0	0	6	0	6	0	0	0	0	11
Total	0	20	0	20	0	0	0	0	0	18	0	18	0	0	0	0	38
05:00 PM	0	4	0	4	0	0	0	0	0	4	0	4	0	0	0	0	8
05:15 PM	0	6	0	6	0	0	0	0	0	0	0	0	0	0	0	0	6
05:30 PM	0	2	0	2	0	0	0	0	0	6	0	6	0	0	0	0	8
05:45 PM	0	3	0	3	0	0	0	0	0	4	0	4	0	0	0	0	7
Total	0	15	0	15	0	0	0	0	0	14	0	14	0	0	0	0	29
Grand Total	0	35	0	35	0	0	0	0	0	32	0	32	0	0	0	0	67
Apprch %	0	100	0		0	0	0		0	100	0		0	0	0		
Total %	0	52.2	0	52.2	0	0	0	0	0	47.8	0	47.8	0	0	0	0	

Start Time	Indian Avenue Southbound				Perry Street Westbound				Indian Avenue Northbound				Perry Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	3	0	3	0	0	0	0	0	4	0	4	0	0	0	0	7
04:15 PM	0	7	0	7	0	0	0	0	0	3	0	3	0	0	0	0	10
04:30 PM	0	5	0	5	0	0	0	0	0	5	0	5	0	0	0	0	10
04:45 PM	0	5	0	5	0	0	0	0	0	6	0	6	0	0	0	0	11
Total Volume	0	20	0	20	0	0	0	0	0	18	0	18	0	0	0	0	38
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.714	.000	.714	.000	.000	.000	.000	.000	.750	.000	.750	.000	.000	.000	.000	.864

City of Perris  
 N/S: Indian Avenue  
 E/W: Perry Street  
 Weather: Clear

File Name : 03\_PER\_Indian\_Perry PM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 2



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

	04:00 PM				04:00 PM				04:00 PM				04:00 PM			
+0 mins.	0	3	0	3	0	0	0	0	0	4	0	4	0	0	0	0
+15 mins.	0	7	0	7	0	0	0	0	0	3	0	3	0	0	0	0
+30 mins.	0	5	0	5	0	0	0	0	0	5	0	5	0	0	0	0
+45 mins.	0	5	0	5	0	0	0	0	0	6	0	6	0	0	0	0
Total Volume	0	20	0	20	0	0	0	0	0	18	0	18	0	0	0	0
% App. Total	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0
PHF	.000	.714	.000	.714	.000	.000	.000	.000	.000	.750	.000	.750	.000	.000	.000	.000

Location: Perris  
 N/S: Indian Avenue  
 E/W: Perry Street



Date: 5/24/2018  
 Day: Thursday

PEDESTRIANS

	North Leg Indian Avenue	East Leg Perry Street	South Leg Indian Avenue	West Leg Perry Street	
	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	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

	North Leg Indian Avenue	East Leg Perry Street	South Leg Indian Avenue	West Leg Perry Street	
	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: Perris  
 N/S: Indian Avenue  
 E/W: Perry Street



Date: 5/24/2018  
 Day: Thursday

BICYCLES

	Southbound Indian Avenue			Westbound Perry Street			Northbound Indian Avenue			Eastbound Perry Street			
	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 Indian Avenue			Westbound Perry Street			Northbound Indian Avenue			Eastbound Perry Street			
	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	1	0	0	0	0	1
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	1	0	0	0	0	1

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

City of Perris  
 N/S: Indian Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 04\_PER\_Indian\_Ramona Expy AM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 1

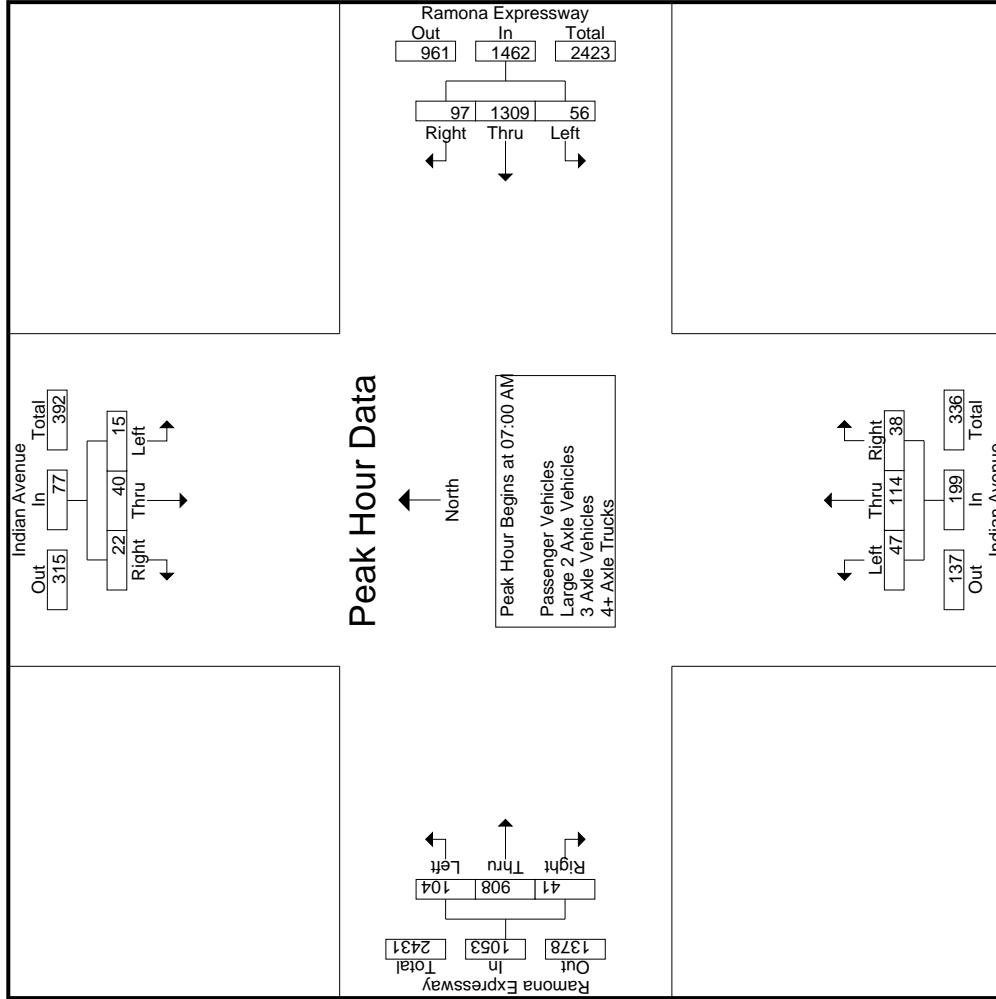
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Indian Avenue Southbound						Ramona Expressway Westbound						Indian Avenue Northbound						Ramona Expressway 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	3	5	6	1	14	7	340	31	5	378	14	28	10	7	52	28	208	11	0	247	13	691	704	
07:15 AM	4	9	4	2	17	10	296	22	4	328	9	31	8	6	48	24	223	10	2	257	14	650	664	
07:30 AM	5	8	7	2	20	14	344	24	12	382	11	37	9	4	57	30	246	10	3	286	21	745	766	
07:45 AM	3	18	5	3	26	25	329	20	7	374	13	18	11	5	42	22	231	10	6	263	21	705	726	
Total	15	40	22	8	77	56	1309	97	28	1462	47	114	38	22	199	104	908	41	11	1053	69	2791	2860	
08:00 AM	3	8	8	2	19	14	300	18	5	332	9	13	12	6	34	24	221	9	3	254	16	639	655	
08:15 AM	0	9	4	3	13	3	287	10	2	300	5	8	6	5	19	11	203	14	2	228	12	560	572	
08:30 AM	4	9	7	2	20	15	275	8	2	298	18	8	11	7	37	13	197	17	3	227	14	582	596	
08:45 AM	5	11	7	3	23	12	262	9	0	283	14	9	11	6	34	11	147	11	3	169	12	509	521	
Total	12	37	26	10	75	44	1124	45	9	1213	46	38	40	24	124	59	768	51	11	878	54	2290	2344	
Grand Total	27	77	48	18	152	100	2433	142	37	2675	93	152	78	46	323	163	1676	92	22	1931	123	5081	5204	
Approch %	17.8	50.7	31.6			3.7	91	5.3			28.8	47.1	24.1			8.4	86.8	4.8						
Total %	0.5	1.5	0.9		3	2	47.9	2.8		52.6	1.8	3	1.5		6.4	3.2	33	1.8		38	2.4	97.6		
Passenger Vehicles	24	66	18		117	84	2313	139		2572	52	124	70		291	129	1550	54		1749	0	0	4729	
Large 2 Axle Vehicles	88.9	85.7	37.5	50	68.8	84	95.1	97.9	97.3	94.8	55.9	81.6	89.7	97.8	78.9	79.1	92.5	58.7	72.7	89.6	0	0	90.9	
3 Axle Vehicles	0	2	4		9	12	70	2		85	7	17	1		25	4	79	6		90	0	0	209	
4+ Axle Trucks	0	2.6	8.3	16.7	5.3	12	2.9	1.4	2.7	3.1	7.5	11.2	1.3	0	6.8	2.5	4.7	6.5	4.5	4.6	0	0	4	
% 3 Axle Vehicles	0	1	5		8	2	9	0		11	2	3	1		7	2	13	3		19	0	0	45	
% 4+ Axle Trucks	0	1.3	10.4	11.1	4.7	2	0.4	0	0	0.4	2.2	2	1.3	2.2	1.9	1.2	0.8	3.3	4.5	1	0	0	0.9	
PHF	11.1	10.4	43.8	22.2	21.2	2	41	1		44	32	8	6		46	28	34	29		95	0	0	221	
										1.6	34.4	5.3	7.7	0	12.5	17.2	2	31.5	18.2	4.9	0	0	4.2	

Start Time	Indian Avenue Southbound						Ramona Expressway Westbound						Indian Avenue Northbound						Ramona Expressway 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	3	5	6	1	14	7	340	31	5	378	14	28	10	7	52	28	208	11	0	247	13	691	704	
07:15 AM	4	9	4	2	17	10	296	22	4	328	9	31	8	6	48	24	223	10	2	257	14	650	664	
07:30 AM	5	8	7	2	20	14	344	24	12	382	11	37	9	4	57	30	246	10	3	286	21	745	766	
07:45 AM	3	18	5	3	26	25	329	20	7	374	13	18	11	5	42	22	231	10	6	263	21	705	726	
Total	15	40	22	8	77	56	1309	97	28	1462	47	114	38	22	199	104	908	41	11	1053	69	2791	2860	
08:00 AM	3	8	8	2	19	14	300	18	5	332	9	13	12	6	34	24	221	9	3	254	16	639	655	
08:15 AM	0	9	4	3	13	3	287	10	2	300	5	8	6	5	19	11	203	14	2	228	12	560	572	
08:30 AM	4	9	7	2	20	15	275	8	2	298	18	8	11	7	37	13	197	17	3	227	14	582	596	
08:45 AM	5	11	7	3	23	12	262	9	0	283	14	9	11	6	34	11	147	11	3	169	12	509	521	
Total	12	37	26	10	75	44	1124	45	9	1213	46	38	40	24	124	59	768	51	11	878	54	2290	2344	
Grand Total	27	77	48	18	152	100	2433	142	37	2675	93	152	78	46	323	163	1676	92	22	1931	123	5081	5204	
Approch %	17.8	50.7	31.6			3.7	91	5.3			28.8	47.1	24.1			8.4	86.8	4.8						
Total %	0.5	1.5	0.9		3	2	47.9	2.8		52.6	1.8	3	1.5		6.4	3.2	33	1.8		38	2.4	97.6		
Passenger Vehicles	24	66	18		117	84	2313	139		2572	52	124	70		291	129	1550	54		1749	0	0	4729	
Large 2 Axle Vehicles	88.9	85.7	37.5	50	68.8	84	95.1	97.9	97.3	94.8	55.9	81.6	89.7	97.8	78.9	79.1	92.5	58.7	72.7	89.6	0	0	90.9	
3 Axle Vehicles	0	2	4		9	12	70	2		85	7	17	1		25	4	79	6		90	0	0	209	
4+ Axle Trucks	0	2.6	8.3	16.7	5.3	12	2.9	1.4	2.7	3.1	7.5	11.2	1.3	0	6.8	2.5	4.7	6.5	4.5	4.6	0	0	4	
% 3 Axle Vehicles	0	1	5		8	2	9	0		11	2	3	1		7	2	13	3		19	0	0	45	
% 4+ Axle Trucks	0	1.3	10.4	11.1	4.7	2	0.4	0	0	0.4	2.2	2	1.3	2.2	1.9	1.2	0.8	3.3	4.5	1	0	0	0.9	
PHF	11.1	10.4	43.8	22.2	21.2	2	41	1		44	32	8	6		46	28	34	29		95	0	0	221	
										1.6	34.4	5.3	7.7	0	12.5	17.2	2	31.5	18.2	4.9	0	0	4.2	

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

Start Time	Indian Avenue Southbound						Ramona Expressway Westbound						Indian Avenue Northbound						Ramona Expressway 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	3	5	6	1	14	7	340	31	5	378	14	28	10	7	52	28	208	11	0	247	13	691	704	
07:15 AM	4	9	4	2	17	10	296	22	4	328	9	31	8	6	48	24	223	10	2	257	14	650	664	
07:30 AM	5	8	7	2	20	14	344	24	12	382	11	37	9	4	57	30	246	10	3	286	21	745	766	
07:45 AM	3	18	5	3	26	25	329	20	7	374	13	18	11	5	42	22	231	10	6	263	21	705	726	
Total	15	40	22	8	77	56	1309	97	28	1462	47	114	38	22	199	104	908	41	11	1053	69	2791	2860	
% App. Total	19.5	51.9	28.6			3.8	89.5	6.6			5.6	7.7	19.1			9.9	86.2	3.9			9.9	86.2	3.9	
PHF	.750	.556	.786		.740	.951	.957	.782		.957	.839	.770	.864		.864	.873	.923	.932		.920	.920	.920	.937	



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

File Name : 04\_PER\_Indian\_Ramona Expy AM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 1

City of Perris  
 N/S: Indian Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

Groups Printed- Large 2 Axle Vehicles

Start Time	Indian Avenue Southbound				Ramona Expressway Westbound				Indian Avenue Northbound				Ramona Expressway 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	6	0	0	8	0	2	0	0	2	1	6	1	0	8	0	18	18
07:15 AM	0	0	0	0	0	3	8	1	0	12	0	2	0	0	2	0	11	1	0	12	0	26	26
07:30 AM	0	0	0	0	0	0	6	0	0	6	1	4	0	0	5	1	9	0	0	10	0	21	21
07:45 AM	0	0	1	1	1	2	8	0	0	10	0	3	0	0	3	0	14	0	0	14	1	28	29
<b>Total</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>7</b>	<b>28</b>	<b>1</b>	<b>0</b>	<b>36</b>	<b>1</b>	<b>11</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>2</b>	<b>40</b>	<b>2</b>	<b>0</b>	<b>44</b>	<b>1</b>	<b>93</b>	<b>94</b>
08:00 AM	0	1	1	0	2	3	13	0	0	16	3	2	0	0	5	1	7	0	0	8	0	31	31
08:15 AM	0	1	1	1	2	1	6	1	1	8	1	2	1	0	4	0	16	3	1	19	3	33	36
08:30 AM	0	0	0	0	0	1	15	0	0	16	2	1	0	0	3	1	8	0	0	9	0	28	28
08:45 AM	0	0	1	1	1	0	8	0	0	8	0	1	0	0	1	0	8	1	0	9	1	19	20
<b>Total</b>	<b>0</b>	<b>2</b>	<b>3</b>	<b>2</b>	<b>5</b>	<b>5</b>	<b>42</b>	<b>1</b>	<b>1</b>	<b>48</b>	<b>6</b>	<b>6</b>	<b>1</b>	<b>0</b>	<b>13</b>	<b>2</b>	<b>39</b>	<b>4</b>	<b>1</b>	<b>45</b>	<b>4</b>	<b>111</b>	<b>115</b>
<b>Grand Total</b>	<b>0</b>	<b>2</b>	<b>4</b>	<b>3</b>	<b>6</b>	<b>12</b>	<b>70</b>	<b>2</b>	<b>1</b>	<b>84</b>	<b>7</b>	<b>17</b>	<b>1</b>	<b>0</b>	<b>25</b>	<b>4</b>	<b>79</b>	<b>6</b>	<b>1</b>	<b>89</b>	<b>5</b>	<b>204</b>	<b>209</b>
Apprch %	0	33.3	66.7			14.3	83.3	2.4		41.2	28	68	4		12.3	4.5	88.8	6.7		43.6	2.4	97.6	
Total %	0	1	2		2.9	5.9	34.3	1			3.4	8.3	0.5			2	38.7	2.9					

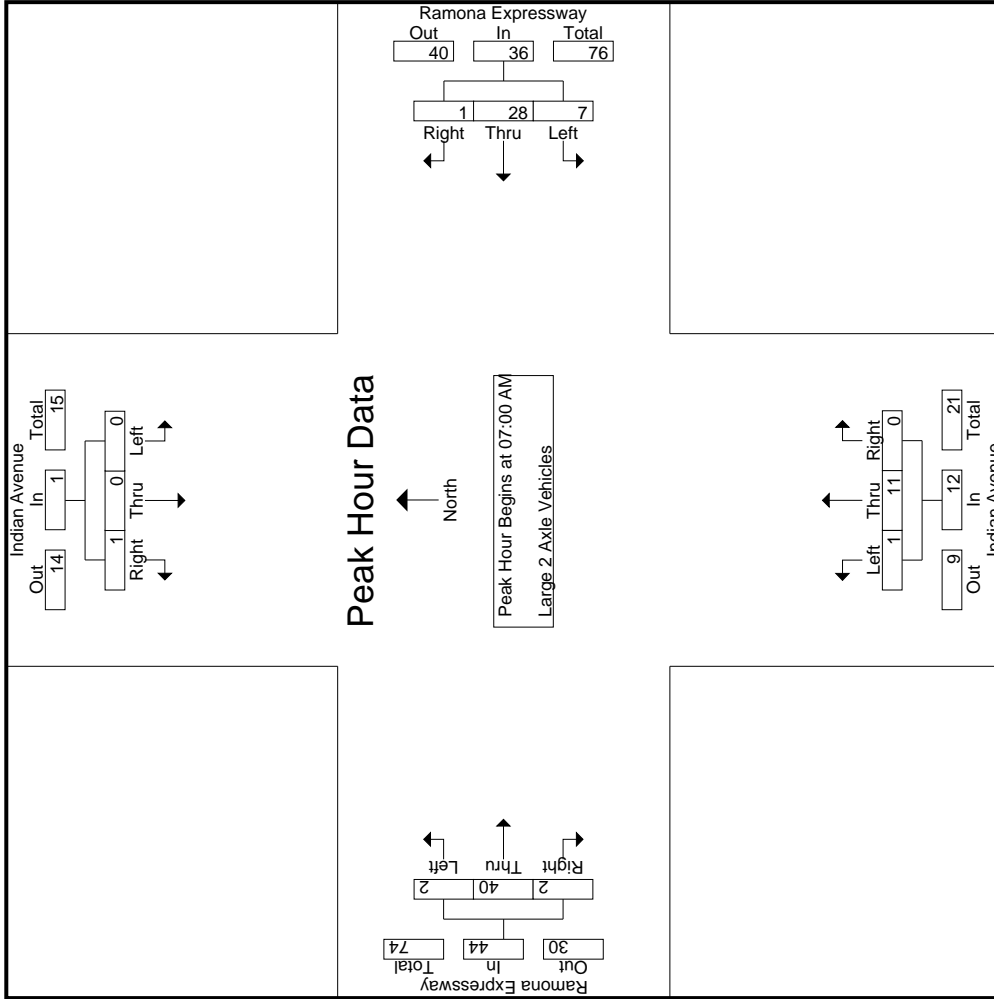
Start Time	Indian Avenue Southbound				Ramona Expressway Westbound				Indian Avenue Northbound				Ramona Expressway Eastbound										
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	0	0	2	6	0	0	8	0	2	0	0	2	1	6	1	0	8	0	18	18
07:15 AM	0	0	0	0	0	3	8	1	0	12	0	2	0	0	2	0	11	1	0	12	0	26	26
07:30 AM	0	0	0	0	0	0	6	0	0	6	1	4	0	0	5	1	9	0	0	10	0	21	21
07:45 AM	0	0	1	1	1	2	8	0	0	10	0	3	0	0	3	0	14	0	0	14	1	28	29
<b>Total Volume</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>7</b>	<b>28</b>	<b>1</b>	<b>0</b>	<b>36</b>	<b>1</b>	<b>11</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>2</b>	<b>40</b>	<b>2</b>	<b>0</b>	<b>44</b>	<b>1</b>	<b>93</b>	<b>94</b>
% App. Total	0.000	0.000	0.250	0.250	0.250	19.4	77.8	2.8		75.0	8.3	91.7	0.000		60.0	4.5	90.9	4.5		78.6	0.500	97.6	
PHF						.583	.875	.250		.750	.250	.688	.000		.600	.500	.714	.500		.786		.830	

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

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

City of Perris  
 N/S: Indian Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 04\_PER\_Indian\_Ramona Expy AM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 2



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

File Name : 04\_PER\_Indian\_Ramona Expy AM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 1

City of Perris  
 N/S: Indian Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

Groups Printed- 3 Axle Vehicles

Start Time	Indian Avenue Southbound				Ramona Expressway Westbound				Indian Avenue Northbound				Ramona Expressway Eastbound							
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Exclu. Total	Inclu. Total	Int. Total	
07:00 AM	0	0	1	1	1	4	0	0	5	0	0	0	2	1	1	0	4	1	10	11
07:15 AM	0	0	2	1	0	1	0	0	1	0	0	0	0	0	1	0	1	1	4	5
07:30 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1	0	3	3
07:45 AM	0	1	0	0	0	0	0	0	0	0	1	0	0	1	1	1	2	1	4	5
<b>Total</b>	<b>0</b>	<b>1</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>3</b>	<b>2</b>	<b>4</b>	<b>2</b>	<b>8</b>	<b>3</b>	<b>21</b>	<b>24</b>
08:00 AM	0	0	1	0	1	0	0	0	1	0	0	0	0	0	2	0	2	0	4	4
08:15 AM	0	0	0	0	0	1	0	0	1	0	1	1	2	0	0	1	1	1	4	5
08:30 AM	0	0	1	0	0	2	0	0	2	0	0	0	0	0	3	0	3	0	6	6
08:45 AM	0	0	0	0	0	1	0	0	1	1	0	0	1	0	4	0	4	0	6	6
<b>Total</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>9</b>	<b>1</b>	<b>10</b>	<b>1</b>	<b>20</b>	<b>21</b>
<b>Grand Total</b>	<b>0</b>	<b>1</b>	<b>5</b>	<b>2</b>	<b>6</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>11</b>	<b>2</b>	<b>3</b>	<b>1</b>	<b>6</b>	<b>2</b>	<b>13</b>	<b>3</b>	<b>18</b>	<b>4</b>	<b>41</b>	<b>45</b>
Approch %	0	16.7	83.3		18.2	81.8	0		26.8	33.3	50	16.7	14.6	11.1	72.2	16.7	43.9	8.9	91.1	
Total %	0	2.4	12.2		4.9	22	0		4.9	7.3	2.4			4.9	31.7	7.3				

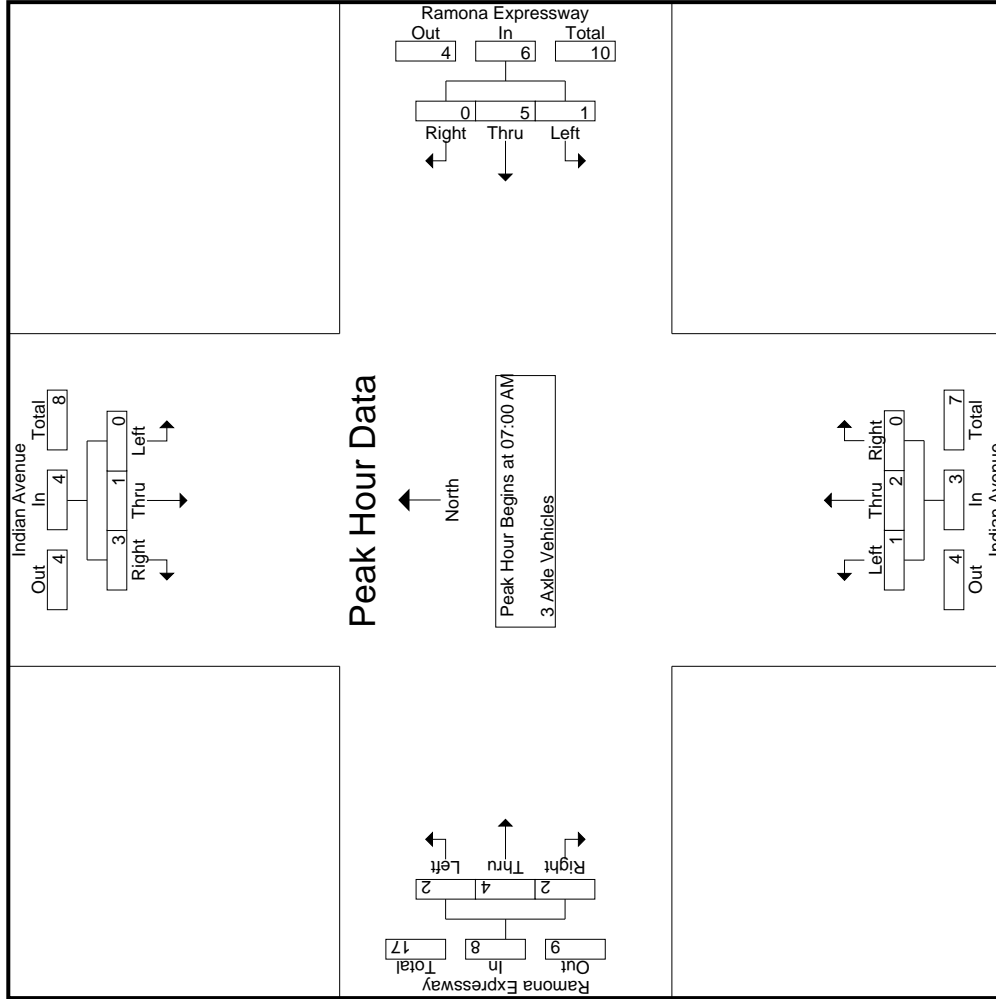
Start Time	Indian Avenue Southbound				Ramona Expressway Westbound				Indian Avenue Northbound				Ramona Expressway Eastbound							
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Exclu. Total	Inclu. Total	Int. Total	
07:00 AM	0	0	0	1	1	4	0	0	5	0	0	0	2	1	1	0	4	1	10	11
07:15 AM	0	0	2	1	0	1	0	0	1	0	0	0	0	0	1	0	1	1	4	5
07:30 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	1	0	3	3
07:45 AM	0	1	0	0	0	0	0	0	0	0	1	0	0	0	1	1	2	1	4	5
<b>Total Volume</b>	<b>0</b>	<b>1</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>3</b>	<b>2</b>	<b>4</b>	<b>2</b>	<b>8</b>	<b>3</b>	<b>21</b>	<b>24</b>
% App. Total	0	25	75		16.7	83.3	0		26.7	33.3	66.7	0	14.6	11.1	72.2	16.7	43.9	8.9	91.1	
PHF	.000	.250	.375	.500	.250	.313	.000	.300	.375	.250	.500	.000	.375	.250	1.00	.500	.500	.525		

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

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

City of Perris  
 N/S: Indian Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 04\_PER\_Indian\_Ramona Expy AM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 2



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

File Name : 04\_PER\_Indian\_Ramona Expy AM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 1

City of Perris  
 N/S: Indian Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

Groups Printed- 4+ Axle Trucks

Start Time	Indian Avenue Southbound				Ramona Expressway Westbound				Indian Avenue Northbound				Ramona Expressway Eastbound									
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Exclu. Total	Inclu. Total	Int. Total			
07:00 AM	0	0	2	0	0	7	0	0	0	5	3	0	0	8	4	2	3	0	9	0	26	26
07:15 AM	0	2	1	0	0	4	0	0	0	5	1	2	0	8	6	3	2	0	11	0	26	26
07:30 AM	1	1	2	0	0	9	0	0	0	4	1	0	0	5	3	7	2	1	12	1	30	31
07:45 AM	1	1	1	0	0	6	0	0	0	4	1	1	0	6	4	5	1	0	10	0	26	26
<b>Total</b>	<b>2</b>	<b>4</b>	<b>6</b>	<b>0</b>	<b>12</b>	<b>27</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>18</b>	<b>6</b>	<b>3</b>	<b>0</b>	<b>27</b>	<b>17</b>	<b>17</b>	<b>8</b>	<b>1</b>	<b>42</b>	<b>1</b>	<b>108</b>	<b>109</b>
08:00 AM	1	0	2	0	0	2	1	0	0	3	0	1	0	4	1	3	3	0	7	0	17	17
08:15 AM	0	1	2	1	3	0	0	0	0	2	1	0	0	3	4	5	5	1	14	2	25	27
08:30 AM	0	0	6	2	6	1	4	0	0	5	0	2	0	7	3	5	8	1	16	3	34	37
08:45 AM	0	3	5	1	8	0	4	0	0	4	1	0	0	5	3	4	5	1	12	2	29	31
<b>Total</b>	<b>1</b>	<b>4</b>	<b>15</b>	<b>4</b>	<b>20</b>	<b>17</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>2</b>	<b>3</b>	<b>0</b>	<b>19</b>	<b>11</b>	<b>17</b>	<b>21</b>	<b>3</b>	<b>49</b>	<b>7</b>	<b>105</b>	<b>112</b>
<b>Grand Total</b>	<b>3</b>	<b>8</b>	<b>21</b>	<b>4</b>	<b>32</b>	<b>44</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>32</b>	<b>8</b>	<b>6</b>	<b>0</b>	<b>46</b>	<b>28</b>	<b>34</b>	<b>29</b>	<b>4</b>	<b>91</b>	<b>8</b>	<b>213</b>	<b>221</b>
Apprch %	9.4	25	65.6		4.5	93.2	2.3			69.6	17.4	13		21.6	30.8	37.4	31.9		42.7	3.6	96.4	
Total %	1.4	3.8	9.9		15	0.9	19.2	0.5		20.7	3.8	2.8			13.1	16	13.6					

Start Time	Indian Avenue Southbound				Ramona Expressway Westbound				Indian Avenue Northbound				Ramona Expressway Eastbound									
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Exclu. Total	Inclu. Total	Int. Total			
07:00 AM	0	0	2	0	0	7	0	0	0	5	3	0	0	8	4	2	3	0	9	0	26	26
07:15 AM	0	2	1	0	0	4	0	0	0	5	1	2	0	8	6	3	2	0	11	0	26	26
07:30 AM	1	1	2	0	0	9	0	0	0	4	1	0	0	5	3	7	2	1	12	1	30	31
07:45 AM	1	1	1	0	0	6	0	0	0	4	1	1	0	6	4	5	1	0	10	0	26	26
<b>Total Volume</b>	<b>2</b>	<b>4</b>	<b>6</b>	<b>0</b>	<b>12</b>	<b>27</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>18</b>	<b>6</b>	<b>3</b>	<b>0</b>	<b>27</b>	<b>17</b>	<b>17</b>	<b>8</b>	<b>1</b>	<b>42</b>	<b>1</b>	<b>108</b>	<b>108</b>
% App. Total	16.7	33.3	50		3.7	96.3	0			66.7	22.2	11.1		40.5	40.5	40.5	19		66.7	.667	.875	.900
PHF	.500	.500	.750	.750	.250	.722	.000	.750	.844	.900	.500	.375	.708	.607	.667	.607	.875					

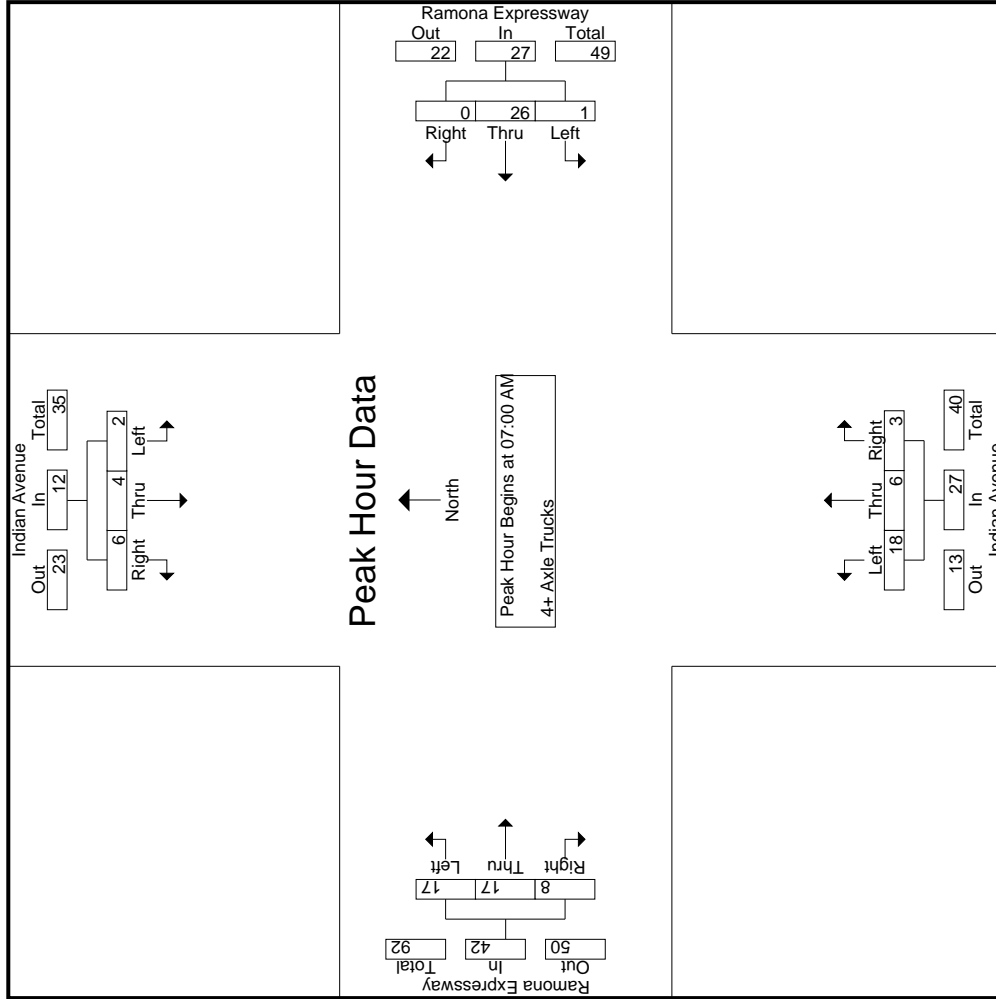
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:00 AM



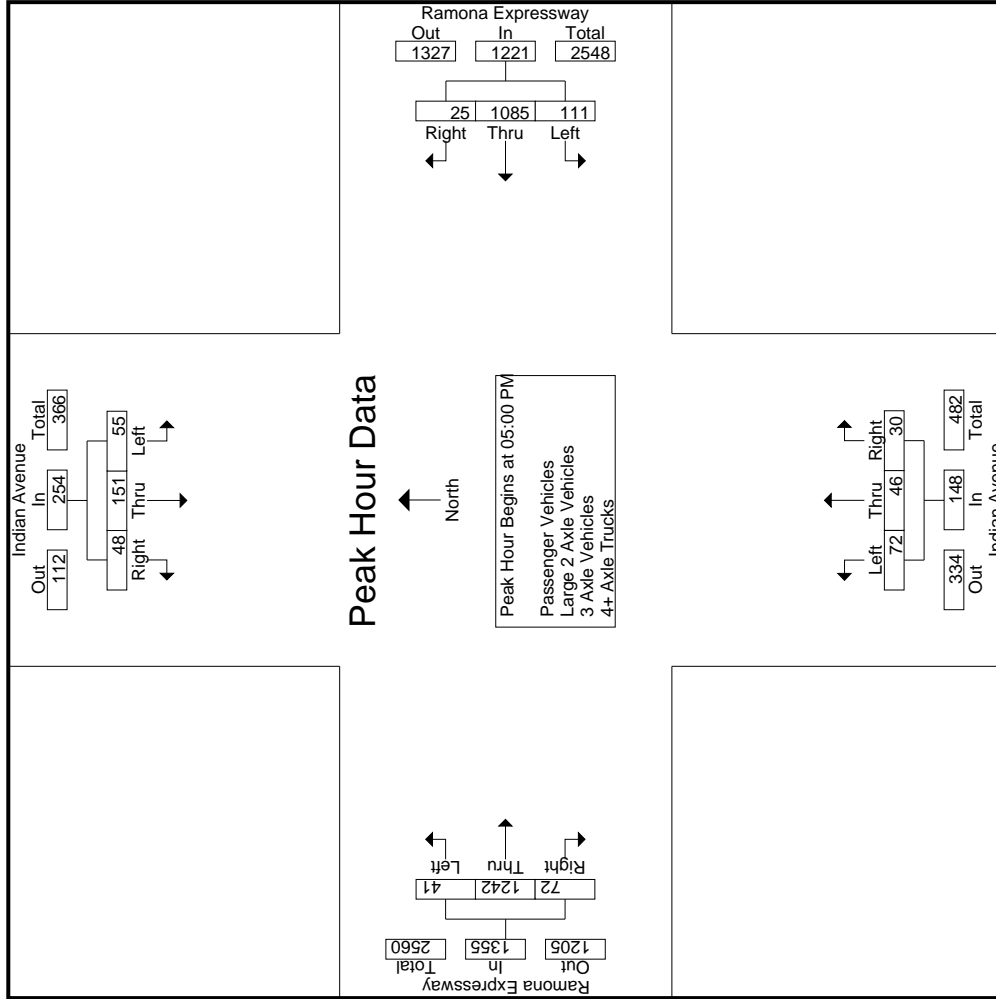
Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Indian Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 04\_PER\_Indian\_Ramona Expy AM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 2







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 Corona, CA 92878  
 (951) 268-6268

File Name : 04\_PER\_Indian\_Ramona Expy PM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 1

City of Perris  
 N/S: Indian Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

Groups Printed- Large 2 Axle Vehicles

Start Time	Indian Avenue Southbound				Ramona Expressway Westbound				Indian Avenue Northbound				Ramona Expressway 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	3	6	0	0	9	1	0	0	0	1	12	1	0	14
04:15 PM	0	2	0	0	2	2	8	0	0	10	0	1	0	0	1	9	1	0	11
04:30 PM	0	0	0	0	0	1	6	0	0	7	1	2	1	0	4	0	9	2	11
04:45 PM	0	0	0	0	0	2	6	1	1	9	0	0	0	0	0	7	0	0	7
<b>Total</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>8</b>	<b>26</b>	<b>1</b>	<b>1</b>	<b>35</b>	<b>2</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>6</b>	<b>2</b>	<b>37</b>	<b>4</b>	<b>43</b>
05:00 PM	0	0	0	0	0	2	6	0	0	8	0	1	0	0	1	0	8	1	9
05:15 PM	0	1	0	0	1	1	3	0	0	4	0	0	0	0	0	3	1	0	4
05:30 PM	0	0	0	0	0	3	2	0	0	5	0	1	0	0	1	0	10	0	10
05:45 PM	0	0	1	1	1	2	4	0	0	6	1	1	0	0	2	0	4	0	4
<b>Total</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>8</b>	<b>15</b>	<b>0</b>	<b>0</b>	<b>23</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>25</b>	<b>2</b>	<b>27</b>
<b>Grand Total</b>	<b>0</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>4</b>	<b>16</b>	<b>41</b>	<b>1</b>	<b>1</b>	<b>58</b>	<b>3</b>	<b>6</b>	<b>1</b>	<b>0</b>	<b>10</b>	<b>2</b>	<b>62</b>	<b>6</b>	<b>70</b>
Apprch %	0	75	25		27.6	70.7	1.7			40.8	30	60	10		7	2.9	88.6	8.6	99.3
Total %	0	2.1	0.7		2.8	11.3	28.9	0.7			2.1	4.2	0.7			1.4	43.7	4.2	49.3

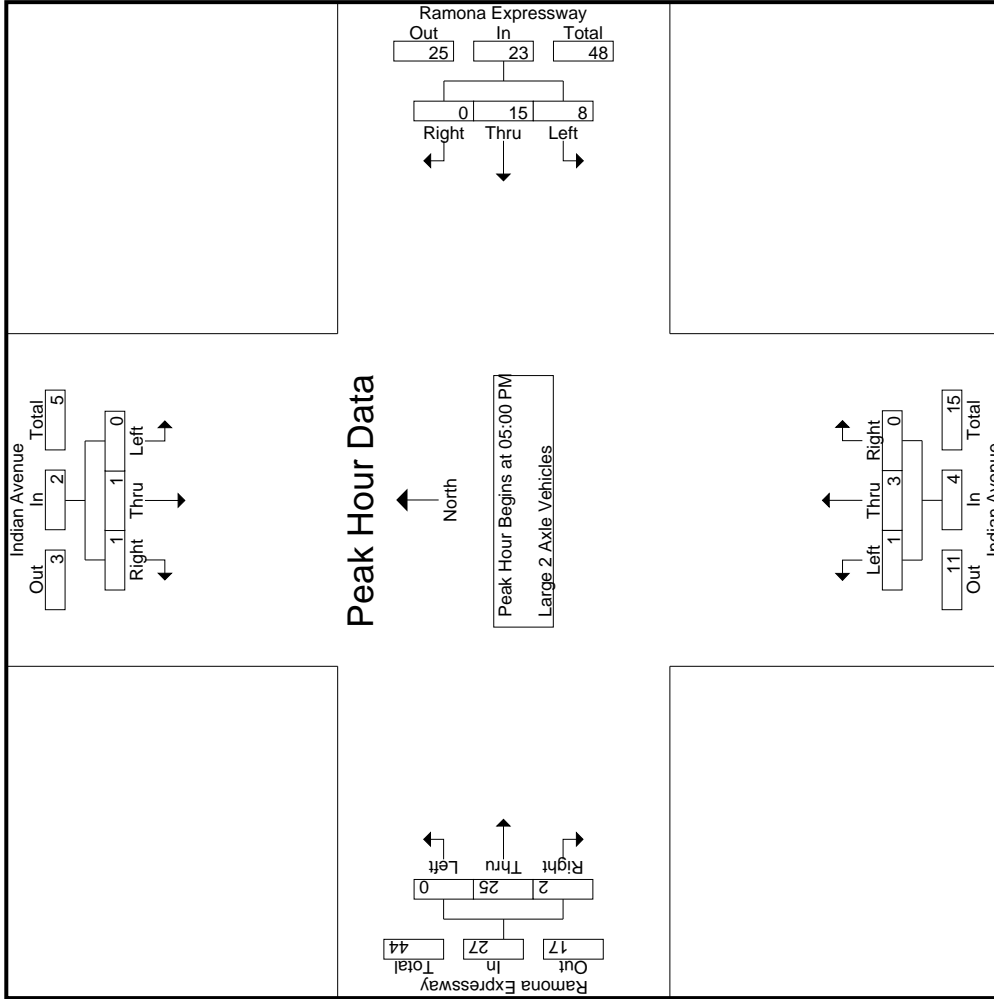
Start Time	Indian Avenue Southbound				Ramona Expressway Westbound				Indian Avenue Northbound				Ramona Expressway Eastbound						
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total	
05:00 PM	0	0	0	0	0	2	6	0	0	8	0	1	0	0	1	0	8	1	9
05:15 PM	0	1	0	0	1	1	3	0	0	4	0	0	0	0	0	0	3	1	4
05:30 PM	0	0	0	0	0	3	2	0	0	5	0	1	0	0	1	0	10	0	10
05:45 PM	0	0	0	0	0	2	4	0	0	6	1	1	0	0	2	0	4	0	4
<b>Total Volume</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>8</b>	<b>15</b>	<b>0</b>	<b>0</b>	<b>23</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>25</b>	<b>2</b>	<b>27</b>
% App. Total	.000	.250	.250		.500	.667	.625	.000		.719	.250	.750	.000		.500	.000	.625	.500	.675
PHF																			

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  
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 (951) 268-6268

City of Perris  
 N/S: Indian Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 04\_PER\_Indian\_Ramona Expy PM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 2



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

File Name : 04\_PER\_Indian\_Ramona Expy PM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 1

City of Perris  
 N/S: Indian Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

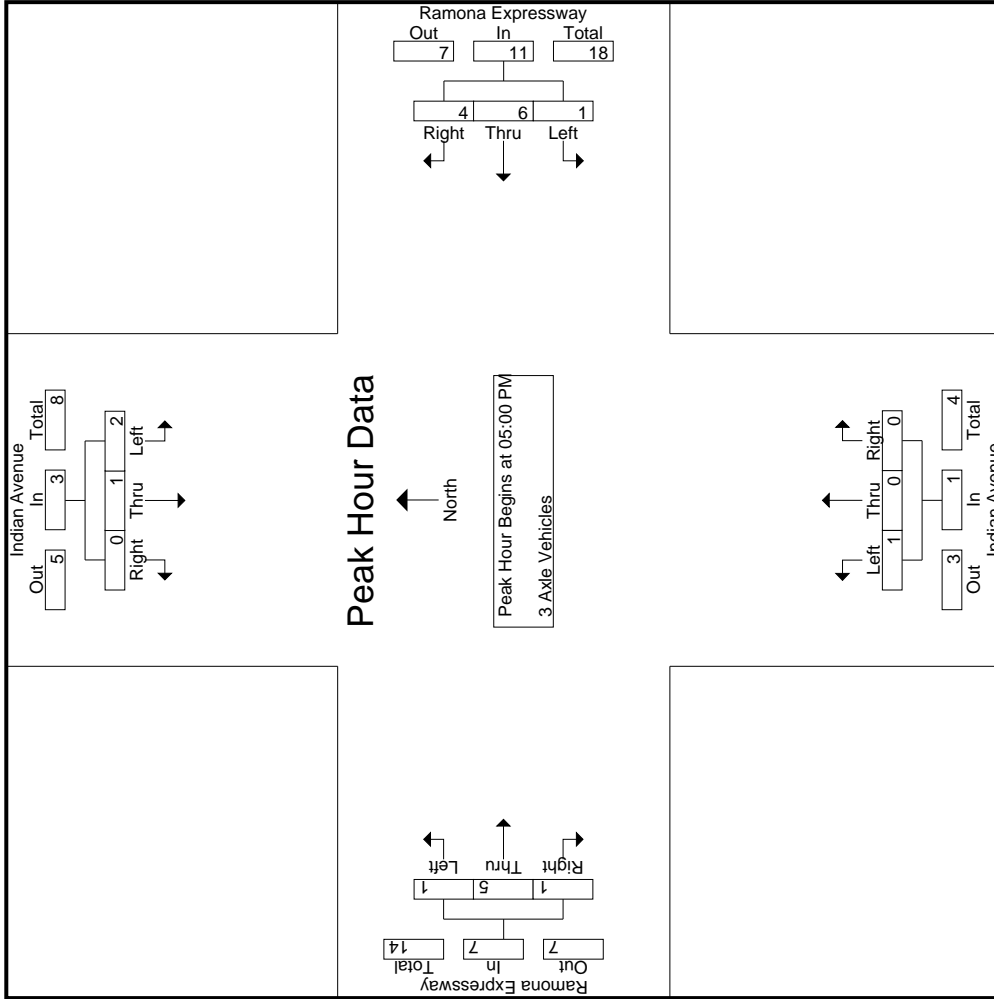
Groups Printed- 3 Axle Vehicles

Start Time	Indian Avenue Southbound				Ramona Expressway Westbound				Indian Avenue Northbound				Ramona Expressway Eastbound								
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total	
04:00 PM	0	0	4	1	1	1	0	0	2	1	0	0	1	1	1	0	0	2	1	9	10
04:15 PM	0	0	0	0	3	1	0	0	4	0	1	0	1	2	0	0	2	0	7	7	
04:30 PM	0	0	0	0	0	1	0	0	1	1	0	0	1	3	3	1	1	7	1	9	10
04:45 PM	0	0	0	0	0	1	1	0	2	1	4	0	5	3	1	2	0	6	0	13	13
<b>Total</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>1</b>	<b>5</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>9</b>	<b>3</b>	<b>5</b>	<b>0</b>	<b>8</b>	<b>7</b>	<b>7</b>	<b>3</b>	<b>1</b>	<b>17</b>	<b>2</b>	<b>38</b>	<b>40</b>
05:00 PM	0	0	0	0	0	1	0	0	1	0	0	0	0	1	1	1	0	3	0	4	4
05:15 PM	0	1	0	0	3	1	0	0	4	1	0	0	1	0	1	0	0	1	0	7	7
05:30 PM	2	0	0	0	2	1	2	1	4	0	0	0	0	0	1	0	0	1	1	7	8
05:45 PM	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2	0	0	2	0	4	4
<b>Total</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>4</b>	<b>1</b>	<b>1</b>	<b>11</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>5</b>	<b>1</b>	<b>0</b>	<b>7</b>	<b>1</b>	<b>22</b>	<b>23</b>
<b>Grand Total</b>	<b>2</b>	<b>1</b>	<b>4</b>	<b>1</b>	<b>2</b>	<b>11</b>	<b>7</b>	<b>1</b>	<b>20</b>	<b>4</b>	<b>5</b>	<b>0</b>	<b>9</b>	<b>8</b>	<b>12</b>	<b>4</b>	<b>1</b>	<b>24</b>	<b>3</b>	<b>60</b>	<b>63</b>
Apprch %	28.6	14.3	57.1		10	55	35		33.3	44.4	55.6	0	15	33.3	50	16.7	40	4.8	95.2		
Total %	3.3	1.7	6.7		3.3	18.3	11.7		33.3	6.7	8.3	0	15	13.3	20	6.7	40				

3.1-31

Start Time	Indian Avenue Southbound				Ramona Expressway Westbound				Indian Avenue Northbound				Ramona Expressway Eastbound								
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total	
05:00 PM	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	1	0	0	0	3	1	0	4	1	0	0	1	0	1	0	0	1	0	1	1
05:30 PM	2	0	0	0	1	1	2	1	4	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Volume</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>6</b>	<b>4</b>	<b>1</b>	<b>11</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>5</b>	<b>1</b>	<b>7</b>	<b>1</b>	<b>7</b>	<b>22</b>	
% App. Total	66.7	33.3	0		9.1	54.5	36.4		36.4	100	0	0	14.3	71.4	14.3						
PHF	.250	.250	.000		.250	.500	.500		.688	.250	.000	.000	.250	.625	.250			.583		.786	

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

File Name : 04\_PER\_Indian\_Ramona Expy PM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 1

City of Perris  
 N/S: Indian Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

Groups Printed- 4+ Axle Trucks

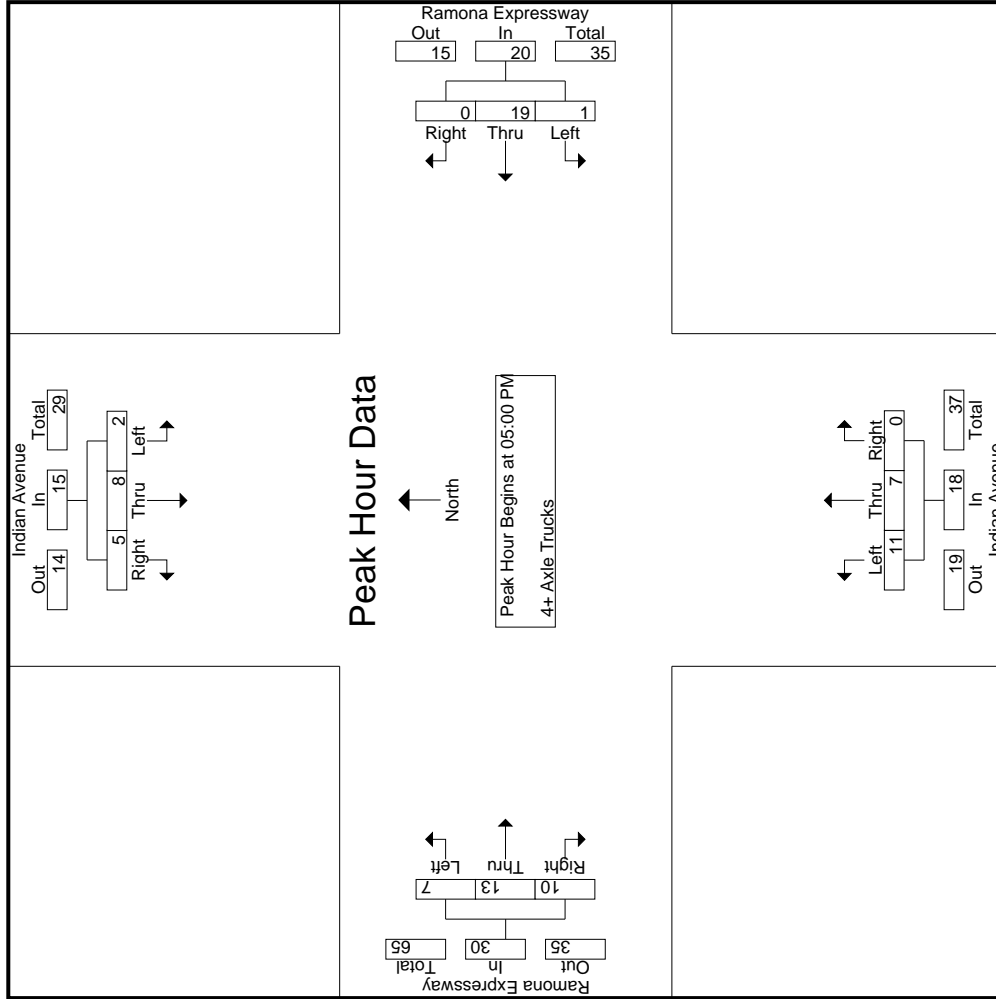
Start Time	Indian Avenue Southbound				Ramona Expressway Westbound				Indian Avenue Northbound				Ramona Expressway Eastbound									
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Exclu. Total	Inclu. Total	Int. Total			
04:00 PM	0	2	1	0	3	0	9	1	1	10	0	0	8	1	3	7	0	11	32	33		
04:15 PM	0	3	3	0	6	0	6	1	0	7	0	0	6	1	7	2	1	10	1	29	30	
04:30 PM	0	3	2	0	5	0	7	0	0	7	0	0	8	3	5	2	0	10	0	30	30	
04:45 PM	0	3	3	0	6	0	7	1	0	8	0	0	7	0	7	2	1	9	1	30	31	
<b>Total</b>	0	11	9	0	20	0	29	3	1	32	0	0	29	5	22	13	2	40	3	121	124	
05:00 PM	0	1	2	0	3	0	5	0	0	5	0	0	7	2	3	1	0	6	0	21	21	
05:15 PM	0	5	1	0	6	0	4	0	0	4	0	0	2	0	3	2	0	5	0	17	17	
05:30 PM	1	0	2	1	3	0	7	0	0	7	1	3	4	3	4	3	0	10	1	24	25	
05:45 PM	1	2	0	0	3	1	3	0	0	4	3	2	5	2	3	4	0	9	0	21	21	
<b>Total</b>	2	8	5	1	15	1	19	0	0	20	11	7	18	7	13	10	0	30	1	83	84	
<b>Grand Total</b>	2	19	14	1	35	1	48	3	1	52	30	17	0	47	12	35	23	2	70	4	204	208
Apprch %	5.7	54.3	40		17.2	1.9	92.3	5.8		25.5	63.8	36.2	0	17.1	50	32.9		34.3	1.9	98.1		
Total %	1	9.3	6.9			0.5	23.5	1.5			14.7	8.3	0	5.9	17.2	11.3						

3.1-33

Start Time	Indian Avenue Southbound				Ramona Expressway Westbound				Indian Avenue Northbound				Ramona Expressway Eastbound						
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Exclu. Total	Inclu. Total	Int. Total
05:00 PM	0	1	2		3	0	5		0	0	0		2	3	1		0	21	21
05:15 PM	0	5	1		6	0	4		0	0	0		2	0	3		0	17	17
05:30 PM	1	0	2		3	0	7		0	0	0		3	4	3		0	24	24
05:45 PM	1	2	0		3	1	3		0	0	0		2	3	4		0	21	21
<b>Total Volume</b>	2	8	5		15	1	19		0	0	0		7	13	10		0	83	83
% App. Total	13.3	53.3	33.3		17.2	1.9	92.3		0	0	0		23.3	43.3	33.3		0	98.1	98.1
PHF	.500	.400	.625		.625	.250	.679		.000	.714	.550	.583	.000	.643	.813	.625		.750	.865

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





Location: Perris  
 N/S: Indian Avenue  
 E/W: Ramona Expressway



Date: 5/24/2018  
 Day: Thursday

PEDESTRIANS

	North Leg Indian Avenue	East Leg Ramona Expressway	South Leg Indian Avenue	West Leg Ramona Expressway	
	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	0	0	0
8:15 AM	0	0	1	0	1
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	1	0	1

	North Leg Indian Avenue	East Leg Ramona Expressway	South Leg Indian Avenue	West Leg Ramona Expressway	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	1	1	0	0	2
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	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:	2	1	0	0	3

Location: Perris  
 N/S: Indian Avenue  
 E/W: Ramona Expressway



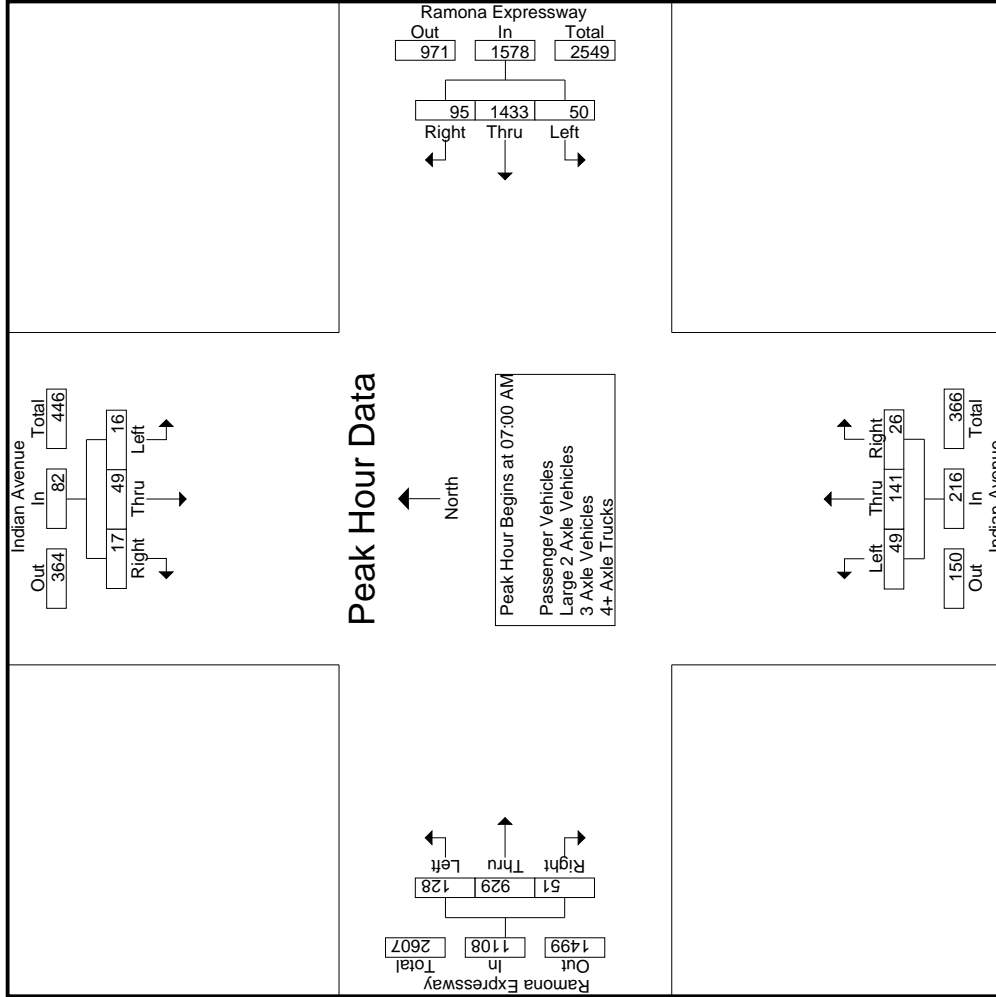
Date: 5/24/2018  
 Day: Thursday

BICYCLES

	Southbound Indian Avenue			Westbound Ramona Expressway			Northbound Indian Avenue			Eastbound Ramona Expressway			
	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 Indian Avenue			Westbound Ramona Expressway			Northbound Indian Avenue			Eastbound Ramona Expressway			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	1	1	0	0	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	1	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
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	2	1	0	0	0	0	1	0	4





Counts Unlimited  
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City of Perris  
 N/S: Indian Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 14\_PER\_Indian\_Ram AM  
 Site Code : 05120169  
 Start Date : 3/11/2020  
 Page No : 3

Start Time	Indian Avenue Southbound			Ramona Expressway Westbound			Indian Avenue Northbound			Ramona Expressway Eastbound				
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	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:														
	07:15 AM			07:00 AM			07:00 AM			07:15 AM				
+0 mins.	3	13	3	16	27	449	16	39	9	46	209	15	270	
+15 mins.	4	20	6	9	25	386	12	37	7	36	254	9	299	
+30 mins.	3	11	5	14	24	366	8	29	7	21	268	18	307	
+45 mins.	7	14	4	11	19	377	13	36	3	23	199	14	236	
Total Volume	17	58	18	50	1433	1578	49	141	26	126	930	56	1112	
% App. Total	18.3	62.4	19.4	3.2	90.8	6	22.7	65.3	12	11.3	83.6	5	77.8	
PHF	.607	.725	.750	.781	.882	.879	.766	.904	.722	.685	.868	.778	.906	

Groups Printed- Passenger Vehicles

Start Time	Indian Avenue Southbound				Ramona Expressway Westbound				Indian Avenue Northbound				Ramona Expressway 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	6	5	2	2	13	14	395	27	12	436	10	34	9	4	53	17	183	4	0	204	18	706	724
07:15 AM	3	12	2	2	17	7	338	25	7	370	9	36	6	4	51	45	196	6	1	247	14	685	699
07:30 AM	3	14	2	0	19	12	319	23	5	354	3	27	6	1	36	33	236	4	0	273	6	682	688
07:45 AM	3	10	2	1	15	9	340	19	4	368	6	34	3	1	43	18	252	12	1	282	7	708	715
<b>Total</b>	<b>15</b>	<b>41</b>	<b>8</b>	<b>5</b>	<b>64</b>	<b>42</b>	<b>1392</b>	<b>94</b>	<b>28</b>	<b>1528</b>	<b>28</b>	<b>131</b>	<b>24</b>	<b>10</b>	<b>183</b>	<b>113</b>	<b>867</b>	<b>26</b>	<b>2</b>	<b>1006</b>	<b>45</b>	<b>2781</b>	<b>2826</b>
08:00 AM	6	10	3	3	19	13	349	22	11	384	4	17	4	3	25	16	186	7	1	209	18	637	655
08:15 AM	6	7	3	2	16	13	335	11	3	359	9	6	3	3	18	13	196	6	1	215	9	608	617
08:30 AM	3	11	3	2	17	2	243	15	7	260	13	5	9	8	27	4	149	2	1	155	18	459	477
08:45 AM	7	5	2	0	14	5	253	9	5	267	9	11	5	3	25	5	190	3	1	198	9	504	513
<b>Total</b>	<b>22</b>	<b>33</b>	<b>11</b>	<b>7</b>	<b>66</b>	<b>33</b>	<b>1180</b>	<b>57</b>	<b>26</b>	<b>1270</b>	<b>35</b>	<b>39</b>	<b>21</b>	<b>17</b>	<b>95</b>	<b>38</b>	<b>721</b>	<b>18</b>	<b>4</b>	<b>777</b>	<b>54</b>	<b>2208</b>	<b>2262</b>
<b>Grand Total</b>	<b>37</b>	<b>74</b>	<b>19</b>	<b>12</b>	<b>130</b>	<b>75</b>	<b>2572</b>	<b>151</b>	<b>54</b>	<b>2798</b>	<b>63</b>	<b>170</b>	<b>45</b>	<b>27</b>	<b>278</b>	<b>151</b>	<b>1588</b>	<b>44</b>	<b>6</b>	<b>1783</b>	<b>99</b>	<b>4989</b>	<b>5088</b>
Approch %	28.5	56.9	14.6			2.7	91.9	5.4		56.1	22.7	61.2	16.2		5.6	8.5	89.1	2.5		35.7	1.9	98.1	
Total %	0.7	1.5	0.4		2.6	1.5	51.6	3			1.3	3.4	0.9			3	31.8	0.9					

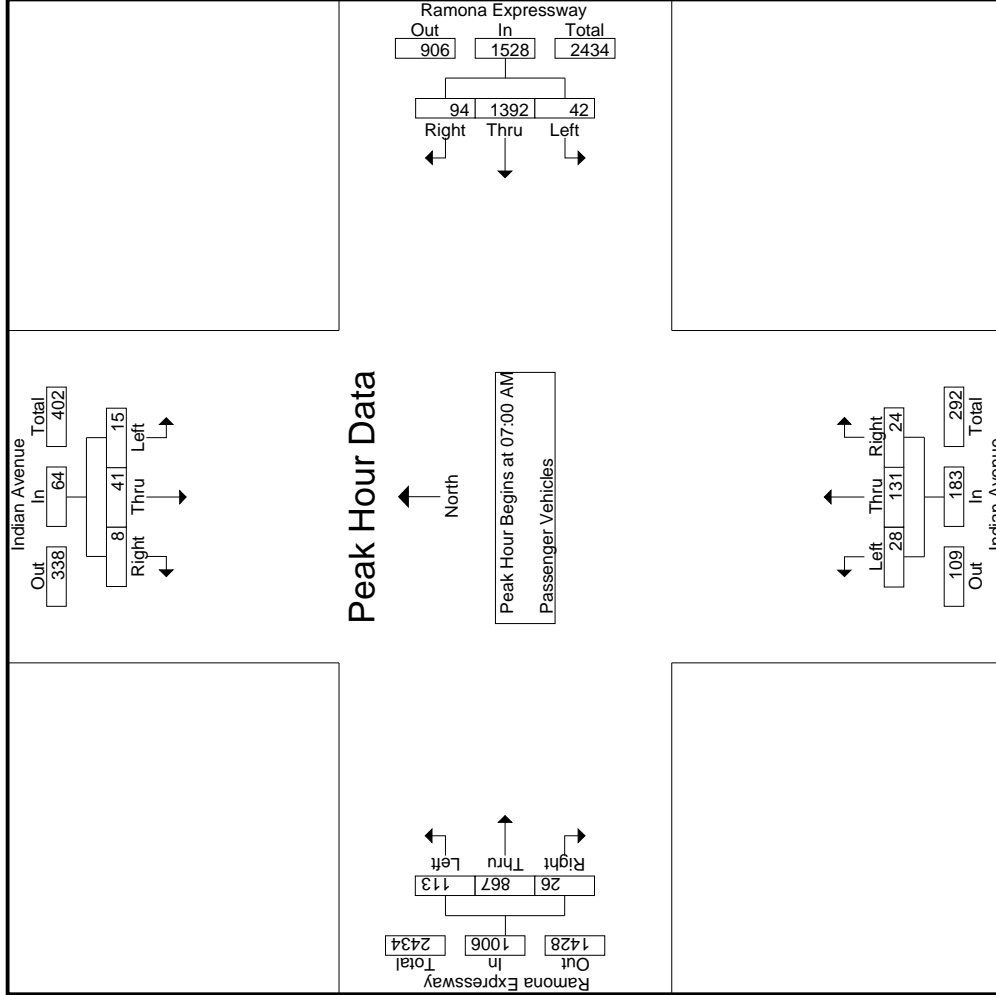
Start Time	Indian Avenue Southbound				Ramona Expressway Westbound				Indian Avenue Northbound				Ramona Expressway Eastbound												
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total
07:00 AM	6	5	2	2	13	14	395	27	12	436	10	34	9	4	53	17	183	4	0	204	18	706	724		
07:15 AM	3	12	2	2	17	7	338	25	7	370	9	36	6	4	51	45	196	6	1	247	14	685	699		
07:30 AM	3	14	2	0	19	12	319	23	5	354	3	27	6	1	36	33	236	4	0	273	6	682	688		
07:45 AM	3	10	2	1	15	9	340	19	4	368	6	34	3	1	43	18	252	12	1	282	7	708	715		
<b>Total Volume</b>	<b>15</b>	<b>41</b>	<b>8</b>	<b>5</b>	<b>64</b>	<b>42</b>	<b>1392</b>	<b>94</b>	<b>28</b>	<b>1528</b>	<b>28</b>	<b>131</b>	<b>24</b>	<b>10</b>	<b>183</b>	<b>113</b>	<b>867</b>	<b>26</b>	<b>2</b>	<b>1006</b>	<b>45</b>	<b>2781</b>	<b>2826</b>		
% App. Total	23.4	64.1	12.5			2.7	91.1	6.2		6.2	22.7	61.2	16.2		5.6	8.5	89.1	2.5		35.7	1.9	98.1			
PHF	.625	.732	1.00		.842	.750	.881	.870		.876	.863	.860	.542		.892	.860	.542	.892		.892					

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

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

City of Perris  
 N/S: Indian Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 14\_PER\_Indian\_Ram AM  
 Site Code : 05120169  
 Start Date : 3/11/2020  
 Page No : 2





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

City of Perris  
 N/S: Indian Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 14\_PER\_Indian\_Ram AM  
 Site Code : 05120169  
 Start Date : 3/11/2020  
 Page No : 3

Start Time	Indian Avenue Southbound			Ramona Expressway Westbound			Indian Avenue Northbound			Ramona Expressway Eastbound					
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	App. Total	Int. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1															
Peak Hour for Each Approach Begins at:															
	07:00 AM			07:00 AM			07:00 AM			07:00 AM			07:00 AM		
+0 mins.	6	5	2	14	395	27	436	10	34	9	53	17	183	4	204
+15 mins.	3	12	2	7	338	25	370	9	36	6	51	45	196	6	247
+30 mins.	3	14	2	12	319	23	354	3	27	6	36	33	236	4	273
+45 mins.	3	10	2	9	340	19	368	6	34	3	43	18	252	12	282
Total Volume	15	41	8	42	1392	94	1528	28	131	24	183	113	867	26	1006
% App. Total	23.4	64.1	12.5	2.7	91.1	6.2	15.3	71.6	13.1	11.2	86.2	2.6	86.2	2.6	89.2
PHF	.625	.732	1.000	.750	.881	.870	.876	.700	.910	.667	.863	.628	.860	.542	.892

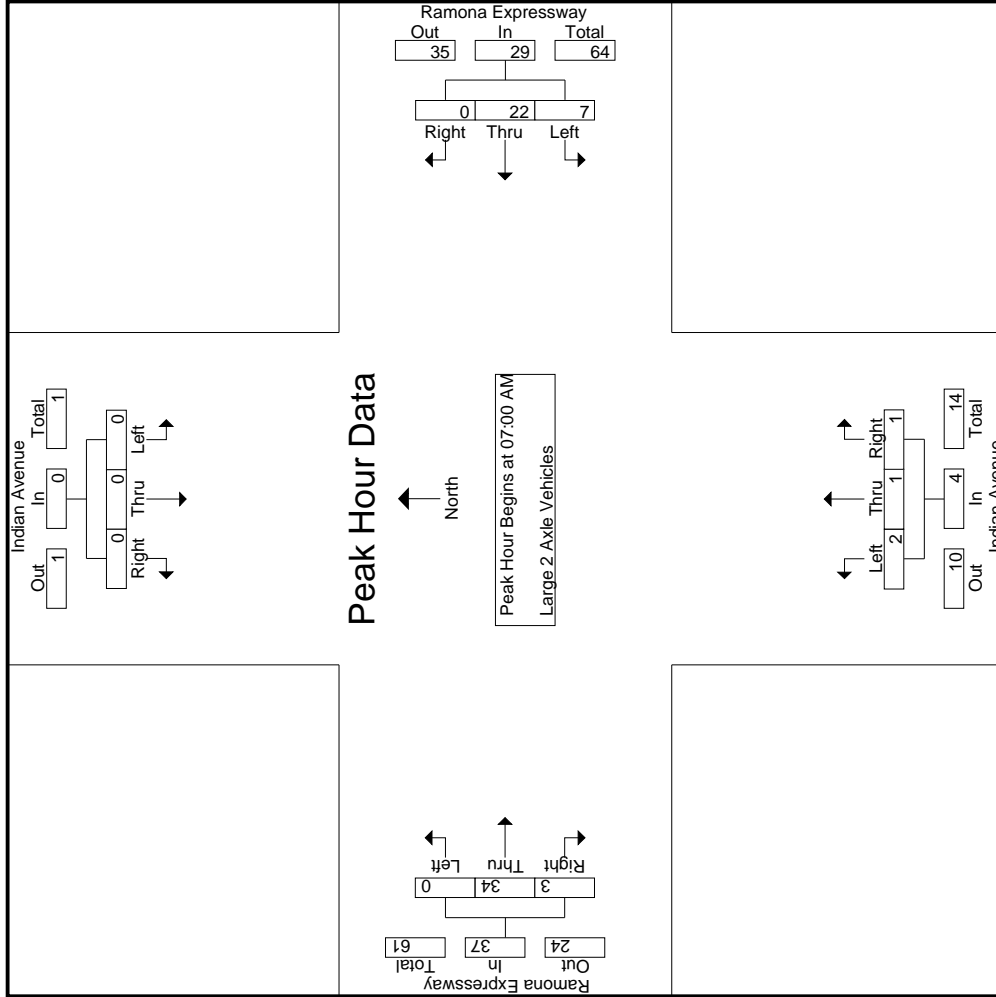
Groups Printed - Large 2 Axle Vehicles

Start Time	Indian Avenue Southbound				Ramona Expressway Westbound				Indian Avenue Northbound				Ramona Expressway Eastbound								
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total	
07:00 AM	0	0	0	0	2	3	0	0	5	0	0	0	0	0	11	1	0	12	0	17	17
07:15 AM	0	0	0	0	2	7	0	0	9	1	0	1	2	0	4	1	0	5	1	16	17
07:30 AM	0	0	0	0	1	6	0	0	7	1	1	0	2	0	9	0	0	9	0	18	18
07:45 AM	0	0	0	0	2	6	0	0	8	0	0	0	0	0	10	1	0	11	0	19	19
Total	0	0	0	0	7	22	0	0	29	2	1	1	4	0	34	3	0	37	1	70	71
08:00 AM	1	1	0	0	1	11	0	0	12	1	0	0	1	4	9	1	0	14	0	29	29
08:15 AM	0	0	0	0	0	8	0	0	8	1	0	0	1	0	10	0	0	10	0	19	19
08:30 AM	0	0	1	1	2	1	0	0	3	1	0	0	1	1	7	0	0	8	1	13	14
08:45 AM	1	1	0	0	2	5	0	0	5	0	0	0	0	2	7	0	0	9	0	16	16
Total	2	2	1	1	5	32	0	0	28	3	0	0	3	7	33	1	0	41	1	77	78
Grand Total	2	2	1	1	5	10	47	0	57	5	1	1	7	7	67	4	0	78	2	147	149
Approch %	40	40	20		17.5	82.5	0		71.4	14.3	14.3		4.8	85.9	5.1		53.1	1.3	98.7		
Total %	1.4	1.4	0.7		6.8	32	0		38.8	3.4	0.7	0.7	4.8	45.6	2.7						

Start Time	Indian Avenue Southbound				Ramona Expressway Westbound				Indian Avenue Northbound				Ramona Expressway Eastbound								
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total	
07:00 AM	0	0	0	0	2	3	0	0	5	0	0	0	0	0	11	1	0	12	0	17	17
07:15 AM	0	0	0	0	2	7	0	0	9	1	0	1	2	0	4	1	0	5	1	16	17
07:30 AM	0	0	0	0	1	6	0	0	7	1	1	0	2	0	9	0	0	9	0	18	18
07:45 AM	0	0	0	0	2	6	0	0	8	0	0	0	0	0	10	1	0	11	0	19	19
Total	0	0	0	0	7	22	0	0	29	2	1	1	4	0	34	3	0	37	1	70	71
08:00 AM	1	1	0	0	1	11	0	0	12	1	0	0	1	4	9	1	0	14	0	29	29
08:15 AM	0	0	0	0	0	8	0	0	8	1	0	0	1	0	10	0	0	10	0	19	19
08:30 AM	0	0	1	1	2	1	0	0	3	1	0	0	1	1	7	0	0	8	1	13	14
08:45 AM	1	1	0	0	2	5	0	0	5	0	0	0	0	2	7	0	0	9	0	16	16
Total	2	2	1	1	5	32	0	0	28	3	0	0	3	7	33	1	0	41	1	77	78
Grand Total	2	2	1	1	5	10	47	0	57	5	1	1	7	7	67	4	0	78	2	147	149
Approch %	40	40	20		17.5	82.5	0		71.4	14.3	14.3		4.8	85.9	5.1		53.1	1.3	98.7		
Total %	1.4	1.4	0.7		6.8	32	0		38.8	3.4	0.7	0.7	4.8	45.6	2.7						

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

Start Time	Indian Avenue Southbound				Ramona Expressway Westbound				Indian Avenue Northbound				Ramona Expressway Eastbound								
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total	
07:00 AM	0	0	0	0	2	3	0	0	5	0	0	0	0	0	11	1	0	12	0	17	17
07:15 AM	0	0	0	0	2	7	0	0	9	1	0	1	2	0	4	1	0	5	1	16	17
07:30 AM	0	0	0	0	1	6	0	0	7	1	1	0	2	0	9	0	0	9	0	18	18
07:45 AM	0	0	0	0	2	6	0	0	8	0	0	0	0	0	10	1	0	11	0	19	19
Total Volume	0	0	0	0	7	22	0	0	29	2	1	1	4	0	34	3	0	37	1	70	71
% App. Total	0	0	0	0	24.1	75.9	0		80.6	50	25	25		91.9	8.1						
PHF	.000	.000	.000	.000	.875	.786	.000		.806	.500	.250	.250		.773	.750			.771		.921	



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

City of Perris  
 N/S: Indian Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 14\_PER\_Indian\_Ram AM  
 Site Code : 05120169  
 Start Date : 3/11/2020  
 Page No : 3

Start Time	Indian Avenue Southbound			Ramona Expressway Westbound			Indian Avenue Northbound			Ramona Expressway Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Peak Hour Analysis From 07:00 AM to 07:45 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	0
+15 mins.	0	0	0	2	7	0	1	0	1	0	0	4	1
+30 mins.	0	0	0	1	6	0	1	1	0	0	0	9	0
+45 mins.	0	0	0	2	6	0	0	0	0	0	0	10	1
Total Volume	0	0	0	7	22	0	2	1	1	0	0	34	3
% App. Total	.000	.000	.000	.875	.786	.000	.500	.250	.250	.000	.000	.773	.750
PHF													

Groups Printed - 3 Axle Vehicles

Start Time	Indian Avenue Southbound				Ramona Expressway Westbound				Indian Avenue Northbound				Ramona Expressway Eastbound						
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	0	0	3	0	0	3	0	1	0	0	1	0	0	0	0	5
07:15 AM	0	0	0	0	0	2	0	0	2	0	0	0	0	3	0	0	3	0	5
07:30 AM	0	1	0	0	0	1	0	0	1	0	0	1	1	1	3	0	5	0	8
07:45 AM	0	0	0	0	0	0	0	0	3	0	0	0	0	2	1	0	3	0	6
<b>Total</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>5</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>24</b>	<b>24</b>
08:00 AM	0	1	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	4
08:15 AM	0	0	0	0	0	1	0	0	1	0	1	0	1	1	1	0	3	0	5
08:30 AM	0	2	1	0	0	2	0	0	2	0	0	0	2	1	1	0	2	0	9
08:45 AM	1	2	0	0	0	1	1	0	2	0	0	0	0	1	1	0	2	0	7
<b>Total</b>	<b>1</b>	<b>5</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>1</b>	<b>0</b>	<b>6</b>	<b>4</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>2</b>	<b>3</b>	<b>0</b>	<b>25</b>	<b>25</b>
<b>Grand Total</b>	<b>1</b>	<b>6</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>11</b>	<b>1</b>	<b>0</b>	<b>12</b>	<b>7</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>10</b>	<b>4</b>	<b>9</b>	<b>0</b>	<b>49</b>	<b>49</b>
Approch %	12.5	75	12.5		0	91.7	8.3		24.5	70	20	10		20.4	21.1	47.4	31.6		
Total %	2	12.2	2		0	22.4	2		24.5	14.3	4.1	2		20.4	8.2	18.4	12.2		100

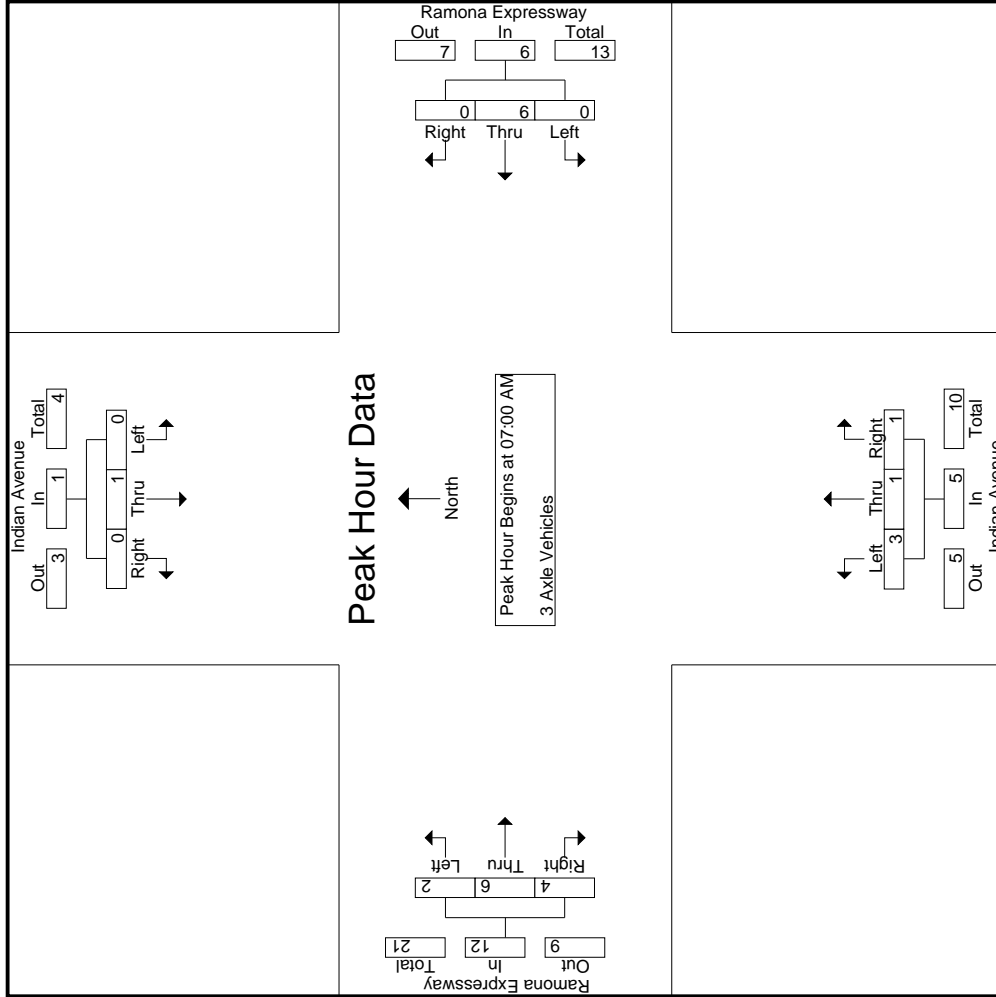
Start Time	Indian Avenue Southbound				Ramona Expressway Westbound				Indian Avenue Northbound				Ramona Expressway Eastbound						
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	0	0	3	0	0	3	0	1	0	0	1	0	0	0	0	5
07:15 AM	0	0	0	0	0	2	0	0	2	0	0	0	0	3	0	0	3	0	5
07:30 AM	0	1	0	0	0	1	0	0	1	0	0	1	1	1	3	0	5	0	8
07:45 AM	0	0	0	0	0	0	0	0	3	0	0	0	0	2	1	0	3	0	6
<b>Total Volume</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>5</b>	<b>2</b>	<b>4</b>	<b>0</b>	<b>24</b>	<b>24</b>
% App. Total	0	100	0		0	100	0		24.5	60	20	20		33.3	16.7	50	33.3		
PHF	.000	.250	.000		.000	.500	.000		.500	.250	.250	.250		.417	.500	.333	.600		.750

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

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

City of Perris  
 N/S: Indian Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 14\_PER\_Indian\_Ram AM  
 Site Code : 05120169  
 Start Date : 3/11/2020  
 Page No : 2



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

City of Perris  
 N/S: Indian Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 14\_PER\_Indian\_Ram AM  
 Site Code : 05120169  
 Start Date : 3/11/2020  
 Page No : 3

Start Time	Indian Avenue Southbound			Ramona Expressway Westbound			Indian Avenue Northbound			Ramona Expressway Eastbound			Int. Total		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		App. Total	App. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1															
Peak Hour for Each Approach Begins at:															
	07:00 AM			07:00 AM			07:00 AM			07:00 AM			07:00 AM		
+0 mins.	0	0	0	0	0	0	3	0	0	1	0	0	0	0	1
+15 mins.	0	0	0	0	0	2	2	0	0	0	0	0	3	0	3
+30 mins.	0	1	0	0	1	0	1	0	1	0	0	1	1	3	5
+45 mins.	0	0	0	0	0	0	0	0	0	3	0	0	2	1	3
Total Volume	0	1	0	0	6	0	6	0	1	3	1	1	6	4	12
% App. Total	0	100	0	0	100	0	100	0	60	20	20	20	50	33.3	60
PHF	.000	.250	.000	.000	.500	.000	.500	.000	.250	.250	.250	.250	.500	.333	.600

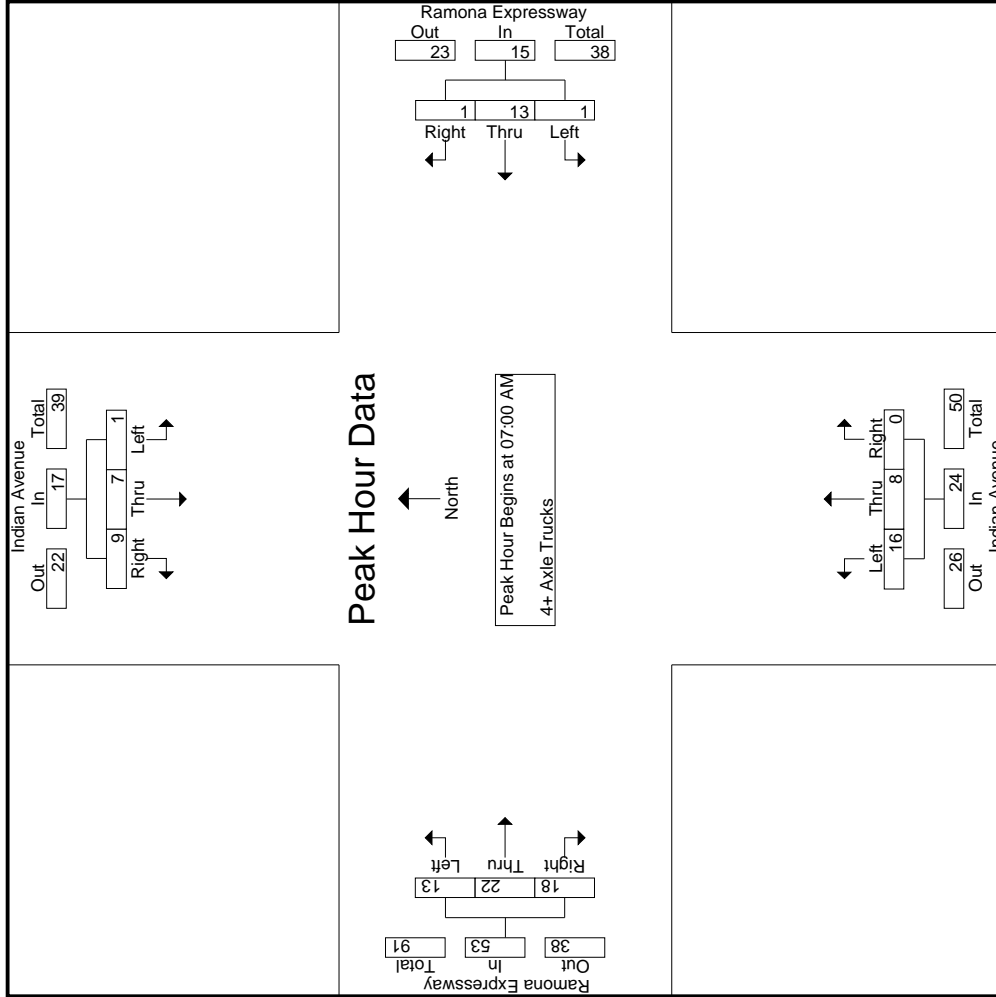
Groups Printed- 4+ Axle Trucks

Start Time	Indian Avenue Southbound				Ramona Expressway Westbound				Indian Avenue Northbound				Ramona Expressway Eastbound										
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	1	0	0	5	0	0	6	4	0	0	7	4	4	0	15	0	0	0	31	31	31
07:15 AM	0	1	1	1	0	5	0	0	2	1	0	0	1	6	8	0	15	1	25	26	26	26	26
07:30 AM	1	5	4	0	1	2	1	0	4	1	0	0	2	8	2	0	12	0	31	31	31	31	31
07:45 AM	0	1	3	1	4	0	1	0	4	2	0	0	3	4	4	0	11	1	22	23	23	23	23
<b>Total</b>	<b>1</b>	<b>7</b>	<b>9</b>	<b>2</b>	<b>17</b>	<b>13</b>	<b>1</b>	<b>0</b>	<b>15</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>13</b>	<b>22</b>	<b>18</b>	<b>0</b>	<b>53</b>	<b>2</b>	<b>109</b>	<b>111</b>	<b>111</b>	<b>111</b>	<b>111</b>
08:00 AM	0	2	1	0	3	0	2	0	2	4	1	0	3	4	6	0	13	0	29	29	29	29	29
08:15 AM	0	2	0	0	2	6	0	0	8	8	0	0	5	9	8	0	22	0	46	46	46	46	46
08:30 AM	0	1	2	1	3	1	14	0	15	4	1	0	2	5	15	2	22	3	45	48	48	48	48
08:45 AM	0	4	2	0	6	0	7	0	7	0	0	0	1	8	5	0	14	0	33	33	33	33	33
<b>Total</b>	<b>0</b>	<b>9</b>	<b>5</b>	<b>1</b>	<b>14</b>	<b>1</b>	<b>29</b>	<b>0</b>	<b>30</b>	<b>13</b>	<b>1</b>	<b>0</b>	<b>11</b>	<b>26</b>	<b>34</b>	<b>2</b>	<b>71</b>	<b>3</b>	<b>153</b>	<b>156</b>	<b>156</b>	<b>156</b>	<b>156</b>
<b>Grand Total</b>	<b>1</b>	<b>16</b>	<b>14</b>	<b>3</b>	<b>31</b>	<b>2</b>	<b>42</b>	<b>1</b>	<b>45</b>	<b>21</b>	<b>1</b>	<b>0</b>	<b>24</b>	<b>48</b>	<b>52</b>	<b>2</b>	<b>124</b>	<b>5</b>	<b>262</b>	<b>267</b>	<b>267</b>	<b>267</b>	<b>267</b>
Approch %	3.2	51.6	45.2			4.4	93.3	2.2		64.5	33.9	1.6	19.4	38.7	41.9		47.3	1.9	98.1				
Total %	0.4	6.1	5.3		11.8	0.8	16	0.4	17.2	8	0.4		9.2	18.3	19.8								

Start Time	Indian Avenue Southbound				Ramona Expressway Westbound				Indian Avenue Northbound				Ramona Expressway Eastbound										
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	1	0	1	0	0	0	5	0	0	0	6	4	0	0	10	0	0	0	31	31	31
07:15 AM	0	1	1	1	0	5	0	0	2	1	0	0	1	6	8	0	15	1	25	26	26	26	26
07:30 AM	1	5	4	0	1	2	1	0	4	1	0	0	2	8	2	0	12	0	31	31	31	31	31
07:45 AM	0	1	3	1	4	0	1	0	4	2	0	0	3	4	4	0	11	1	22	23	23	23	23
<b>Total Volume</b>	<b>1</b>	<b>7</b>	<b>9</b>	<b>2</b>	<b>17</b>	<b>13</b>	<b>1</b>	<b>0</b>	<b>15</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>13</b>	<b>22</b>	<b>18</b>	<b>0</b>	<b>53</b>	<b>2</b>	<b>109</b>	<b>111</b>	<b>111</b>	<b>111</b>	<b>111</b>
% App. Total	5.9	41.2	52.9			66.7	33.3	0		24.5	41.5	34	24.5	41.5	34		47.3	1.9	98.1				
PHF	.250	.350	.563		.425	.250	.650	.250	.750	.667	.500	.000	.600	.688	.563		.883		.879				

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





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

City of Perris  
 N/S: Indian Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 14\_PER\_Indian\_Ram AM  
 Site Code : 05120169  
 Start Date : 3/11/2020  
 Page No : 3

Start Time	Indian Avenue Southbound			Ramona Expressway Westbound			Indian Avenue Northbound			Ramona Expressway Eastbound					
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right			
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1															
Peak Hour for Each Approach Begins at:															
+0 mins.	0	0	1	0	0	5	0	0	0	4	0	0	7	4	4
+15 mins.	0	1	1	0	5	5	2	1	0	1	0	6	1	6	8
+30 mins.	1	5	4	1	2	4	4	1	0	4	0	8	2	8	2
+45 mins.	0	1	3	0	1	1	4	0	0	2	0	4	3	4	4
Total Volume	1	7	9	1	13	15	16	8	0	8	0	24	13	22	18
% App. Total	5.9	41.2	52.9	6.7	86.7	6.7	66.7	33.3	0	33.3	0	24.5	24.5	41.5	34
PHF	.250	.350	.563	.250	.650	.750	.667	.500	.000	.500	.000	.600	.464	.688	.563

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

City of Perris  
 N/S: Indian Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 14\_PER\_Indian\_Ram PM  
 Site Code : 05120169  
 Start Date : 3/11/2020  
 Page No : 1

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

Start Time	Indian Avenue Southbound						Ramona Expressway Westbound						Indian Avenue Northbound						Ramona Expressway 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					
04:00 PM	14	22	5	9	41	13	273	4	3	290	21	14	6	7	41	13	287	15	0	315	19	687	706			
04:15 PM	14	27	6	4	47	10	221	11	4	242	26	18	15	13	59	17	298	17	0	332	21	680	701			
04:30 PM	11	44	5	4	60	7	261	8	8	276	52	42	44	13	138	16	296	19	3	331	28	805	833			
04:45 PM	20	26	8	4	54	16	267	9	9	292	25	28	7	5	60	20	350	15	1	385	19	791	810			
<b>Total</b>	<b>59</b>	<b>119</b>	<b>24</b>	<b>21</b>	<b>202</b>	<b>46</b>	<b>1022</b>	<b>32</b>	<b>24</b>	<b>1100</b>	<b>124</b>	<b>102</b>	<b>72</b>	<b>38</b>	<b>298</b>	<b>66</b>	<b>1231</b>	<b>66</b>	<b>4</b>	<b>1363</b>	<b>87</b>	<b>2963</b>	<b>3050</b>			
05:00 PM	25	27	8	10	60	16	267	7	1	290	23	11	5	4	39	15	362	16	9	393	24	782	806			
05:15 PM	13	40	1	9	54	21	271	6	5	298	20	14	7	3	41	7	371	23	2	401	19	794	813			
05:30 PM	13	42	6	5	61	47	232	7	7	286	19	15	9	8	43	13	380	27	10	420	30	810	840			
05:45 PM	10	24	3	2	37	18	238	3	3	259	26	8	3	4	37	6	409	13	3	428	12	761	773			
<b>Total</b>	<b>61</b>	<b>133</b>	<b>18</b>	<b>26</b>	<b>212</b>	<b>102</b>	<b>1008</b>	<b>23</b>	<b>16</b>	<b>1133</b>	<b>88</b>	<b>48</b>	<b>24</b>	<b>19</b>	<b>160</b>	<b>41</b>	<b>1522</b>	<b>79</b>	<b>24</b>	<b>1642</b>	<b>85</b>	<b>3147</b>	<b>3232</b>			
<b>Grand Total</b>	<b>120</b>	<b>252</b>	<b>42</b>	<b>47</b>	<b>414</b>	<b>148</b>	<b>2030</b>	<b>55</b>	<b>40</b>	<b>2233</b>	<b>212</b>	<b>150</b>	<b>96</b>	<b>57</b>	<b>458</b>	<b>107</b>	<b>2753</b>	<b>145</b>	<b>28</b>	<b>3005</b>	<b>172</b>	<b>6110</b>	<b>6282</b>			
Approch %	29	60.9	10.1			6.6	90.9	2.5			46.3	32.8	21			3.6	91.6	4.8			2.7	97.3				
Total %	2	4.1	0.7		6.8	2.4	33.2	0.9		36.5	3.5	2.5	1.6		7.5	1.8	45.1	2.4		49.2	0	0	0			5922
Passenger Vehicles	114	234	28		416	124	1977	55		2194	166	133	87		441	83	2694	70		2871	0	0	0			94.3
Passenger Vehicles	95	92.9	66.7	85.1	90.2	83.8	97.4	100	95	96.5	78.3	88.7	90.6	96.5	85.6	77.6	97.9	48.3	85.7	94.7	0	0	0			109
Large 2 Axle Vehicles	0	8	0	0	8	18	24	0	0	44	4	3	2	2	10	4	38	5	0	47	0	0	0			1.7
Large 2 Axle Vehicles	0	3.2	0	0	1.7	12.2	1.2	0	5	1.9	1.9	2	2.1	1.8	1.9	3.7	1.4	3.4	0	1.5	0	0	0			52
3 Axle Vehicles	1	3	0	0	4	2	6	0	0	8	13	6	4		24	9	5	2		16	0	0	0			0.8
3 Axle Vehicles	0.8	1.2	0	0	0.9	1.4	0.3	0	0	0.4	6.1	4	4.2	1.8	4.7	8.4	0.2	1.4	0	0.5	0	0	0			199
4+ Axle Trucks	5	7	14		33	4	23	0	0	27	29	8	3		40	11	16	68		99	0	0	0			3.2
4+ Axle Trucks	4.2	2.8	33.3	14.9	7.2	2.7	1.1	0	0	1.2	13.7	5.3	3.1	0	7.8	10.3	0.6	46.9	14.3	3.3	0	0	0			

Start Time	Indian Avenue Southbound						Ramona Expressway Westbound						Indian Avenue Northbound						Ramona Expressway 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			
04:45 PM	20	26	8		54	16	267	9		292	25	28	7		41	60	350	15		385	15	385	791	
05:00 PM	25	27	8		60	16	267	7		290	23	11	5		39	39	362	16		393	16	393	782	
05:15 PM	13	40	1		54	47	232	7		286	19	15	9		43	41	371	23		401	23	401	794	
05:30 PM	13	42	6		61	21	271	6		298	20	14	7		41	7	371	23		401	27	420	810	
05:45 PM	10	24	3		37	18	238	3		259	26	8	3		37	6	409	13		428	12	761	773	
<b>Total Volume</b>	<b>71</b>	<b>135</b>	<b>23</b>		<b>229</b>	<b>100</b>	<b>1037</b>	<b>29</b>		<b>1166</b>	<b>87</b>	<b>68</b>	<b>28</b>		<b>183</b>	<b>55</b>	<b>1463</b>	<b>81</b>		<b>1599</b>	<b>81</b>	<b>3177</b>		
% App. Total	31	59	10		10	8.6	88.9	2.5		2.5	47.5	37.2	15.3		15.3	3.4	91.5	5.1		5.1	0	0	0	
PHF	.710	.804	.719		.939	.532	.957	.806		.978	.870	.607	.778		.763	.688	.963	.750		.952			.981	

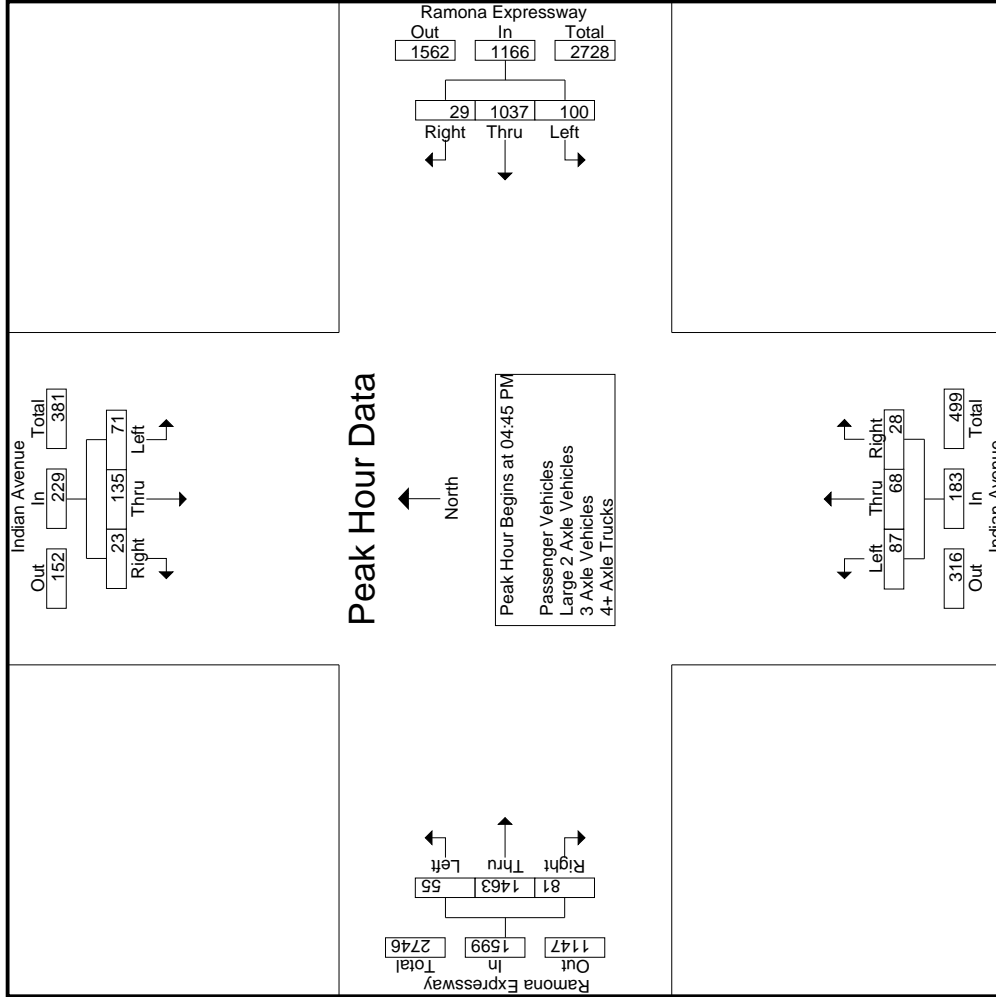
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:45 PM

Counts Unlimited  
 PO Box 1178  
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 (951) 268-6268

City of Perris  
 N/S: Indian Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 14\_PER\_Indian\_Ram PM  
 Site Code : 05120169  
 Start Date : 3/11/2020  
 Page No : 2



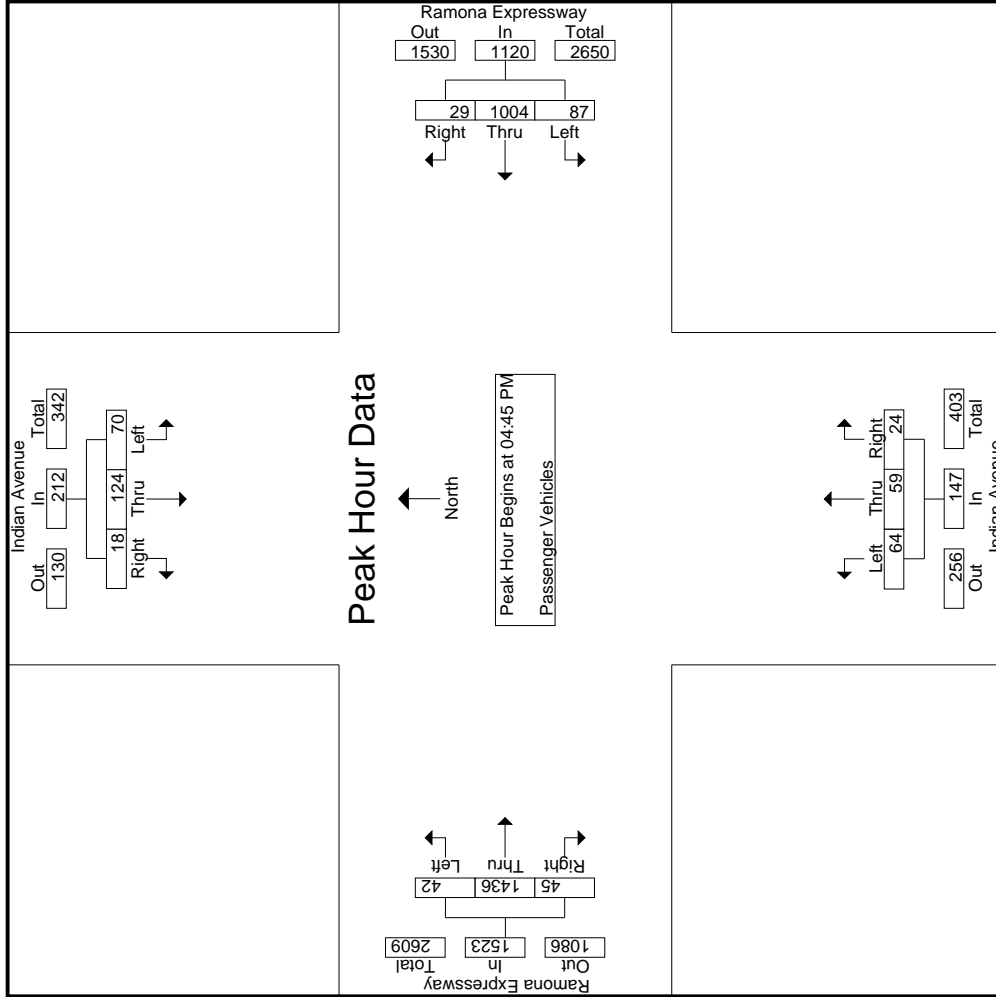


Groups Printed - Passenger Vehicles

Start Time	Indian Avenue Southbound					Ramona Expressway Westbound					Indian Avenue Northbound					Ramona Expressway 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	13	22	2	7	37	8	266	4	3	278	15	13	3	7	31	10	282	6	0	298	17	644	661
04:15 PM	13	25	2	3	40	7	217	11	4	235	19	14	15	13	48	12	294	5	0	311	20	634	654
04:30 PM	9	40	5	4	54	6	255	8	8	269	50	39	42	13	131	13	280	4	3	297	28	751	779
04:45 PM	19	24	7	3	50	13	261	9	7	283	19	26	7	5	52	14	341	7	0	362	15	747	762
<b>Total</b>	54	111	16	17	181	34	999	32	22	1065	103	92	67	38	262	49	1197	22	3	1268	80	2776	2856
05:00 PM	25	25	6	10	56	12	254	7	1	273	16	8	5	3	29	10	358	9	9	377	23	735	758
05:15 PM	13	37	0	8	50	18	263	6	5	287	14	12	5	3	31	6	364	8	0	378	16	746	762
05:30 PM	13	38	5	4	56	44	226	7	7	277	15	13	7	7	35	12	373	21	10	406	28	774	802
05:45 PM	9	23	1	1	33	16	235	3	3	254	18	8	3	4	29	6	402	10	2	418	10	734	744
<b>Total</b>	60	123	12	23	195	90	978	23	16	1091	63	41	20	17	124	34	1497	48	21	1579	77	2989	3066
<b>Grand Total</b>	114	234	28	40	376	124	1977	55	38	2156	166	133	87	55	386	83	2694	70	24	2847	157	5765	5922
Approch %	30.3	62.2	7.4	0.5	6.5	5.8	91.7	2.6	1	37.4	43	34.5	22.5	1.5	6.7	2.9	94.6	2.5	1.2	49.4	2.7	97.3	
Total %	2	4.1	0.5			2.2	34.3	1			2.9	2.3	1.5			1.4	46.7	1.2					

Start Time	Indian Avenue Southbound					Ramona Expressway Westbound					Indian Avenue Northbound					Ramona Expressway 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	Int. Total
04:45 PM	19	24	7		50	13	261	9		283	19	26	7		52	14	341	7		362	747
05:00 PM	25	25	6		56	12	254	7		273	16	8	5		29	10	358	9		377	735
05:15 PM	13	37	0		50	18	263	6		287	14	12	5		31	6	364	8		378	746
05:30 PM	13	38	5		56	44	226	7		277	15	13	7		35	12	373	21		406	774
<b>Total Volume</b>	70	124	18		212	87	1004	29		1120	64	59	24		147	42	1436	45		1523	3002
% App. Total	33	58.5	8.5		6.5	7.8	89.6	2.6		37.4	43.5	40.1	16.3		6.7	2.9	94.3	3		49.4	97.3
PHF	.700	.816	.643		.946	.494	.954	.806		.976	.842	.567	.857		.707	.750	.962	.536		.938	

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



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City of Perris  
 N/S: Indian Avenue  
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 Weather: Clear

File Name : 14\_PER\_Indian\_Ram PM  
 Site Code : 05120169  
 Start Date : 3/11/2020  
 Page No : 3

Start Time	Indian Avenue Southbound				Ramona Expressway Westbound				Indian Avenue Northbound				Ramona Expressway Eastbound			
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total
	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	19	24	7	50	13	261	9	283	19	26	7	52	14	341	7	362
+15 mins.	25	25	6	56	12	254	7	273	16	8	5	29	10	358	9	377
+30 mins.	13	37	0	50	18	263	6	287	14	12	5	31	6	364	8	378
+45 mins.	13	38	5	56	44	226	7	277	15	13	7	35	12	373	21	406
Total Volume	70	124	18	212	87	1004	29	1120	64	59	24	147	42	1436	45	1523
% App. Total	33	58.5	8.5	94.6	7.8	89.6	2.6	97.6	43.5	40.1	16.3	70.7	2.8	94.3	3	93.8
PHF	.700	.816	.643	.946	.494	.954	.806	.976	.842	.567	.857	.707	.750	.962	.536	.938

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:



Groups Printed - Large 2 Axle Vehicles

Start Time	Indian Avenue Southbound				Ramona Expressway Westbound				Indian Avenue Northbound				Ramona Expressway Eastbound						
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	0	0	0	4	4	0	0	1	1	0	0	2	3	0	0	0	15	15
04:15 PM	0	1	0	0	3	1	0	0	0	1	0	0	1	2	1	0	0	9	9
04:30 PM	0	2	0	0	1	3	0	0	0	0	2	0	2	0	3	0	0	24	24
04:45 PM	0	1	0	0	2	3	0	2	1	0	0	0	1	0	5	0	2	12	14
<b>Total</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>11</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>6</b>	<b>2</b>	<b>23</b>	<b>4</b>	<b>2</b>	<b>60</b>	<b>62</b>
05:00 PM	0	1	0	0	2	5	0	0	0	0	0	1	0	1	2	0	0	11	12
05:15 PM	0	1	0	0	2	4	0	0	1	1	0	0	2	0	6	1	0	16	16
05:30 PM	0	2	0	0	2	3	0	0	0	0	0	0	1	1	4	0	0	13	13
05:45 PM	0	0	0	0	2	1	0	0	0	0	0	0	0	0	3	0	0	6	6
<b>Total</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>13</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>3</b>	<b>2</b>	<b>15</b>	<b>1</b>	<b>1</b>	<b>46</b>	<b>47</b>
<b>Grand Total</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>18</b>	<b>24</b>	<b>0</b>	<b>2</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>9</b>	<b>4</b>	<b>38</b>	<b>5</b>	<b>0</b>	<b>106</b>	<b>109</b>
Approch %	0	100	0	0	42.9	57.1	0	0	44.4	33.3	22.2	0	8.5	8.5	80.9	10.6	0	44.3	97.2
Total %	0	7.5	0	0	17	22.6	0	0	3.8	2.8	1.9	0	8.5	3.8	35.8	4.7	0	2.8	97.2

3.1-58

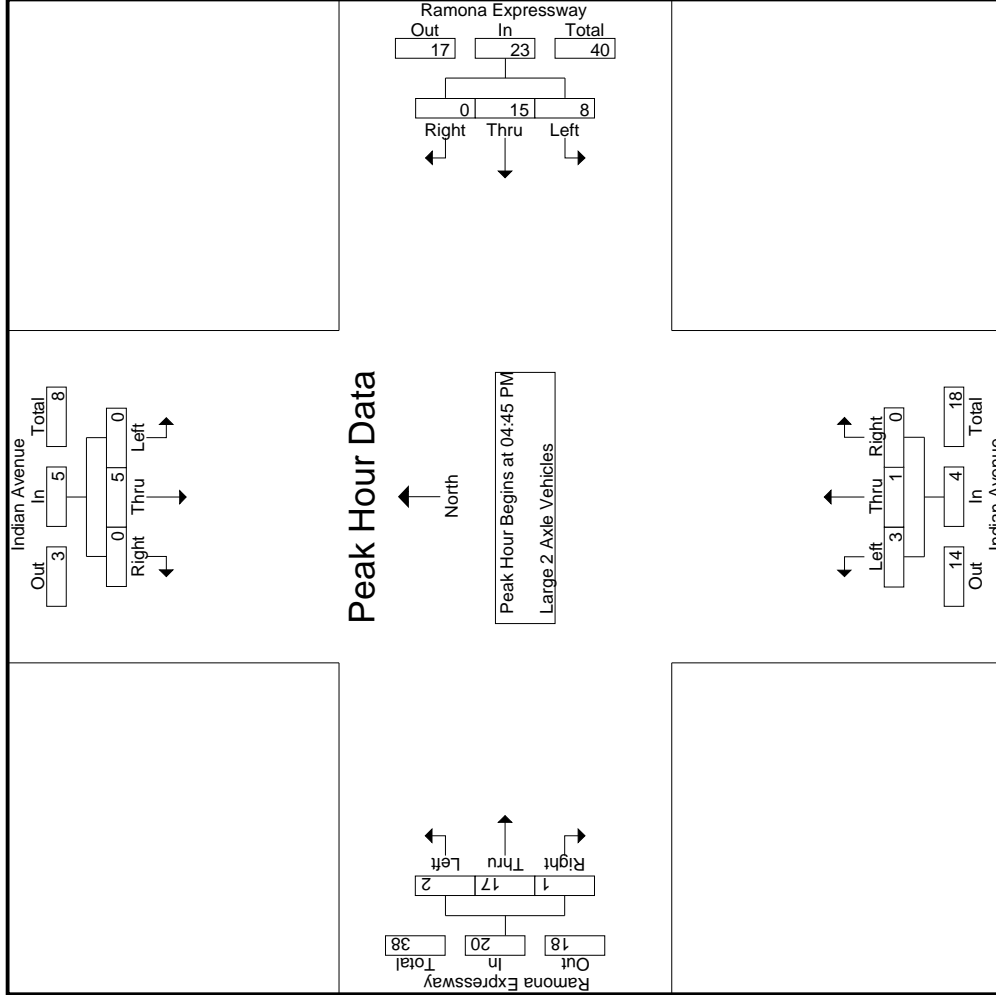
Start Time	Indian Avenue Southbound				Ramona Expressway Westbound				Indian Avenue Northbound				Ramona Expressway Eastbound						
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Exclu. Total	Inclu. Total	Int. Total
04:45 PM	0	1	0	0	2	3	0	0	1	0	0	0	0	0	5	0	0	5	12
05:00 PM	0	1	0	0	2	5	0	0	7	0	0	0	0	0	2	0	0	3	11
05:15 PM	0	1	0	0	1	2	0	0	6	1	0	0	0	0	6	1	0	7	16
05:30 PM	0	2	0	0	2	4	0	0	5	1	0	0	0	2	0	0	0	13	13
<b>Total Volume</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>15</b>	<b>0</b>	<b>0</b>	<b>23</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>4</b>	<b>2</b>	<b>17</b>	<b>1</b>	<b>0</b>	<b>20</b>	<b>52</b>
% App. Total	0	100	0	0	34.8	65.2	0	0	75	25	0	0	10	85	5	0	0	250	714
PHF	.000	.625	.000	.000	.821	.750	.000	.000	.500	.500	.000	.000	.500	.708	.250	.714	.000	.813	.813

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

City of Perris  
 N/S: Indian Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 14\_PER\_Indian\_Ram\_PM  
 Site Code : 05120169  
 Start Date : 3/11/2020  
 Page No : 2





Groups Printed - 3 Axle Vehicles

Start Time	Indian Avenue Southbound				Ramona Expressway Westbound				Indian Avenue Northbound				Ramona Expressway Eastbound				
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	
04:00 PM	0	0	0	0	0	0	0	0	1	0	2	0	3	1	0	0	1
04:15 PM	0	1	0	0	0	1	0	0	3	1	0	0	4	3	0	1	4
04:30 PM	1	0	0	0	0	0	0	0	1	1	0	0	2	1	1	0	3
04:45 PM	0	0	0	0	0	0	0	0	1	1	0	0	2	3	1	0	4
<b>Total</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>3</b>	<b>2</b>	<b>0</b>	<b>11</b>	<b>8</b>	<b>2</b>	<b>2</b>	<b>12</b>
05:00 PM	0	1	0	0	0	2	0	0	2	1	0	0	3	1	0	0	1
05:15 PM	0	0	0	0	1	0	0	0	1	1	1	0	3	0	0	0	0
05:30 PM	0	1	0	0	1	1	1	1	3	1	1	1	3	0	1	0	1
05:45 PM	0	0	0	0	0	1	0	0	1	3	0	0	3	0	2	0	2
<b>Total</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>7</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>12</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>4</b>
<b>Grand Total</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>13</b>	<b>6</b>	<b>4</b>	<b>23</b>	<b>9</b>	<b>5</b>	<b>2</b>	<b>0</b>
Apprch %	25	75	0	0	25	75	0	0	56.5	26.1	17.4	1	45.1	56.2	31.2	12.5	16
Total %	2	5.9	0	0	3.9	11.8	0	0	15.7	11.8	7.8	0	45.1	17.6	9.8	3.9	31.4

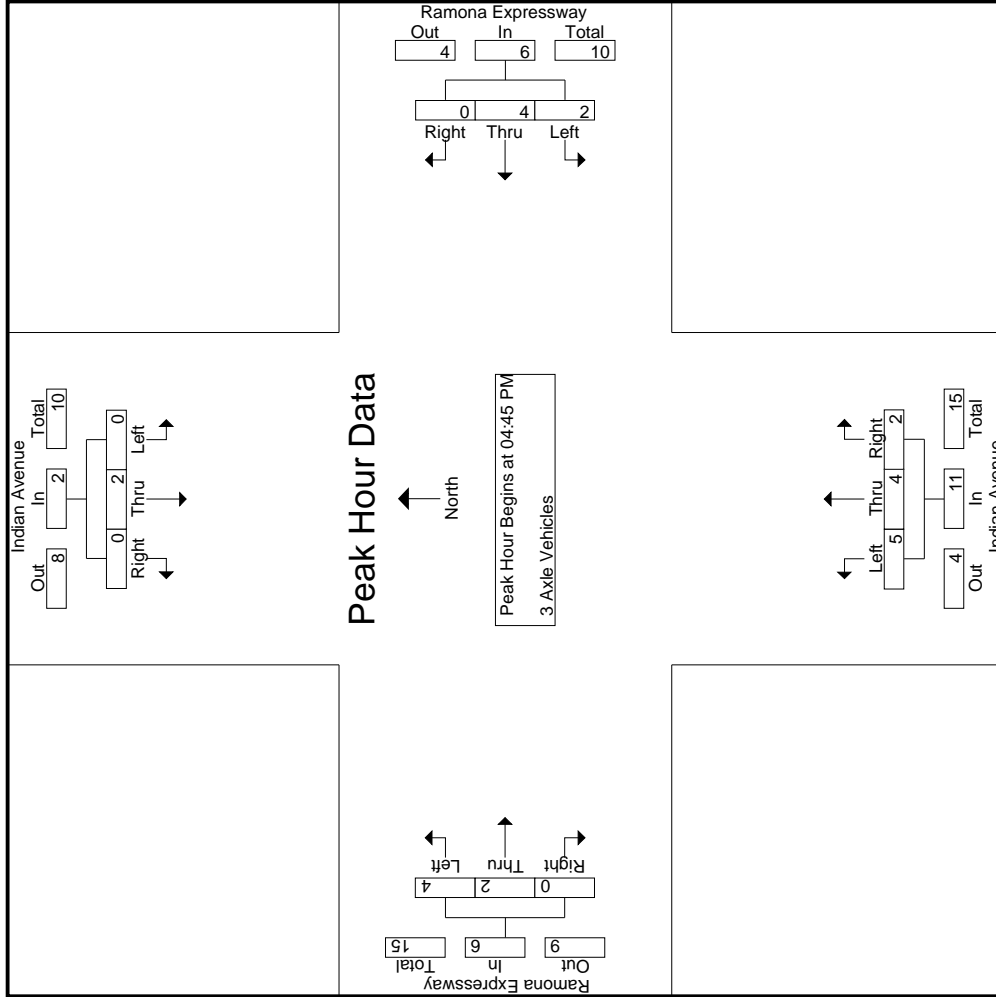
Start Time	Indian Avenue Southbound				Ramona Expressway Westbound				Indian Avenue Northbound				Ramona Expressway Eastbound				
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	4
05:00 PM	0	1	0	0	0	0	0	0	2	1	0	0	3	1	0	0	1
05:15 PM	0	0	0	0	1	0	0	0	1	1	1	1	3	0	0	0	0
05:30 PM	0	1	0	0	1	1	0	0	3	1	1	1	3	0	1	0	1
<b>Total Volume</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>5</b>	<b>4</b>	<b>2</b>	<b>11</b>	<b>4</b>	<b>2</b>	<b>0</b>	<b>6</b>
% App. Total	0	100	0	0	33.3	66.7	0	0	66.7	33.3	33.3	0	66.7	33.3	0	0	0
PHF	.000	.500	.000	.000	.500	.500	.000	.500	.500	.625	1.000	.500	.917	.333	.500	.000	.375

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

City of Perris  
 N/S: Indian Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 14\_PER\_Indian\_Ram\_PM  
 Site Code : 05120169  
 Start Date : 3/11/2020  
 Page No : 2



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

City of Perris  
 N/S: Indian Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 14\_PER\_Indian\_Ram\_PM  
 Site Code : 05120169  
 Start Date : 3/11/2020  
 Page No : 3

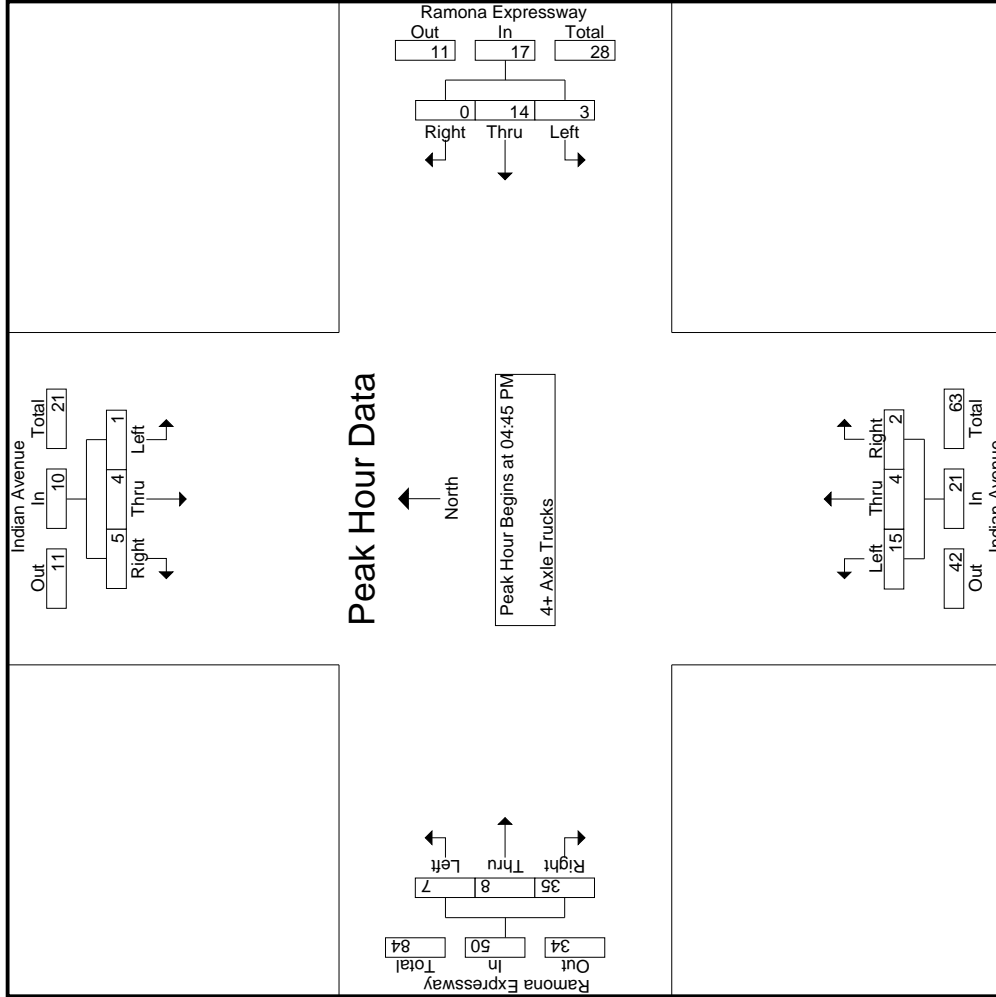
Start Time	Indian Avenue Southbound			Ramona Expressway Westbound			Indian Avenue Northbound			Ramona Expressway Eastbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1												
Peak Hour for Each Approach Begins at:												
	04:45 PM			04:45 PM			04:45 PM			04:45 PM		
+0 mins.	0	0	0	0	0	0	1	0	2	3	1	0
+15 mins.	0	1	0	0	2	0	2	0	3	1	0	0
+30 mins.	0	0	0	1	0	1	1	1	3	0	0	0
+45 mins.	0	1	0	1	2	3	1	1	3	0	1	0
Total Volume	0	2	0	2	4	6	5	4	11	4	2	0
% App. Total	0	100	0	33.3	66.7	0	45.5	36.4	18.2	66.7	33.3	0
PHF	.000	.500	.000	.500	.500	.000	.625	1.000	.500	.333	.500	.000
									.917			.375



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 PO Box 1178  
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City of Perris  
 N/S: Indian Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 14\_PER\_Indian\_Ram\_PM  
 Site Code : 05120169  
 Start Date : 3/11/2020  
 Page No : 2







Location: Perris  
 N/S: Indian Avenue  
 E/W: Ramona Expressway



Date: 3/11/2020  
 Day: Wednesday

PEDESTRIANS

	North Leg Indian Avenue	East Leg Ramona Expressway	South Leg Indian Avenue	West Leg Ramona Expressway	
	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	2	0	0	2
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	1	0	3

	North Leg Indian Avenue	East Leg Ramona Expressway	South Leg Indian Avenue	West Leg Ramona Expressway	
	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: Perris  
 N/S: Indian Avenue  
 E/W: Ramona Expressway



Date: 3/11/2020  
 Day: Wednesday

BICYCLES

	Southbound Indian Avenue			Westbound Ramona Expressway			Northbound Indian Avenue			Eastbound Ramona Expressway			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	1	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	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	1	0	0	1

	Southbound Indian Avenue			Westbound Ramona Expressway			Northbound Indian Avenue			Eastbound Ramona Expressway			
	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	2	0	0	0	0	0	0	0	0	0	0	2
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	2	0	0	0	0	0	0	0	0	0	0	2

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

City of Perris  
 N/S: Perris Boulevard  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 22\_PER\_Perris\_Ram AM  
 Site Code : 05120169  
 Start Date : 3/11/2020  
 Page No : 1

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

Start Time	Perris Boulevard Southbound						Ramona Expressway Westbound						Perris Boulevard Northbound						Ramona Expressway 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	30	53	37	11	120	15	306	23	0	344	77	210	13	7	300	63	118	28	15	209	33	973	706			
07:15 AM	25	65	43	18	133	21	290	35	5	346	76	195	19	16	290	72	123	10	4	205	43	974	1017			
07:30 AM	17	90	47	20	154	20	246	40	6	306	54	189	31	11	274	59	165	24	13	248	50	982	1032			
07:45 AM	24	98	45	9	167	28	277	31	8	336	61	136	24	13	221	81	167	25	12	273	42	997	1039			
<b>Total</b>	<b>96</b>	<b>306</b>	<b>172</b>	<b>58</b>	<b>574</b>	<b>84</b>	<b>1119</b>	<b>129</b>	<b>19</b>	<b>1332</b>	<b>268</b>	<b>730</b>	<b>87</b>	<b>47</b>	<b>1085</b>	<b>275</b>	<b>573</b>	<b>87</b>	<b>44</b>	<b>935</b>	<b>168</b>	<b>3926</b>	<b>4094</b>			
08:00 AM	27	59	39	16	125	25	320	26	5	371	55	96	16	10	167	56	133	33	12	222	43	885	928			
08:15 AM	35	74	45	20	154	20	238	28	3	286	69	118	8	2	195	46	141	26	9	213	34	848	882			
08:30 AM	16	63	43	21	122	36	190	14	3	240	54	73	14	9	141	47	111	27	15	185	48	688	736			
08:45 AM	20	67	34	13	121	22	203	22	2	247	53	68	17	10	138	40	152	25	13	217	38	723	761			
<b>Total</b>	<b>98</b>	<b>263</b>	<b>161</b>	<b>70</b>	<b>522</b>	<b>103</b>	<b>951</b>	<b>90</b>	<b>13</b>	<b>1144</b>	<b>231</b>	<b>355</b>	<b>55</b>	<b>31</b>	<b>641</b>	<b>189</b>	<b>537</b>	<b>111</b>	<b>49</b>	<b>837</b>	<b>163</b>	<b>3144</b>	<b>3307</b>			
<b>Grand Total</b>	<b>194</b>	<b>569</b>	<b>333</b>	<b>128</b>	<b>1096</b>	<b>187</b>	<b>2070</b>	<b>219</b>	<b>32</b>	<b>2476</b>	<b>499</b>	<b>1085</b>	<b>142</b>	<b>78</b>	<b>1726</b>	<b>464</b>	<b>1110</b>	<b>198</b>	<b>93</b>	<b>1772</b>	<b>331</b>	<b>7070</b>	<b>7401</b>			
<b>Approch %</b>	<b>17.7</b>	<b>51.9</b>	<b>30.4</b>			<b>7.6</b>	<b>83.6</b>	<b>8.8</b>			<b>28.9</b>	<b>62.9</b>	<b>8.2</b>			<b>26.2</b>	<b>62.6</b>	<b>11.2</b>			<b>4.5</b>	<b>95.5</b>				
<b>Total %</b>	<b>2.7</b>	<b>8</b>	<b>4.7</b>			<b>2.6</b>	<b>29.3</b>	<b>3.1</b>			<b>35</b>	<b>7.1</b>	<b>15.3</b>	<b>2</b>	<b>24.4</b>	<b>6.6</b>	<b>15.7</b>	<b>2.8</b>			<b>25.1</b>	<b>25.1</b>				
<b>Passenger Vehicles</b>	<b>189</b>	<b>546</b>	<b>310</b>		<b>1169</b>	<b>182</b>	<b>2022</b>	<b>213</b>		<b>2449</b>	<b>472</b>	<b>1055</b>	<b>140</b>		<b>1744</b>	<b>433</b>	<b>1052</b>	<b>173</b>		<b>1743</b>	<b>0</b>	<b>0</b>	<b>7105</b>			
<b>Passenger Vehicles</b>	<b>97.4</b>	<b>96</b>	<b>93.1</b>	<b>96.9</b>	<b>95.5</b>	<b>97.3</b>	<b>97.7</b>	<b>97.3</b>	<b>100</b>	<b>97.6</b>	<b>94.6</b>	<b>97.2</b>	<b>98.6</b>	<b>98.7</b>	<b>96.7</b>	<b>93.3</b>	<b>94.8</b>	<b>87.4</b>	<b>91.4</b>	<b>93.5</b>	<b>0</b>	<b>0</b>	<b>0</b>			
<b>Large 2 Axle Vehicles</b>	<b>3</b>	<b>18</b>	<b>10</b>		<b>34</b>	<b>2</b>	<b>13</b>	<b>4</b>		<b>19</b>	<b>14</b>	<b>25</b>	<b>2</b>		<b>42</b>	<b>8</b>	<b>32</b>	<b>14</b>		<b>58</b>	<b>0</b>	<b>0</b>	<b>153</b>			
<b>Large 2 Axle Vehicles</b>	<b>1.5</b>	<b>3.2</b>	<b>3</b>	<b>2.3</b>	<b>2.8</b>	<b>1.1</b>	<b>0.6</b>	<b>1.8</b>	<b>0</b>	<b>0.8</b>	<b>2.8</b>	<b>2.3</b>	<b>1.4</b>	<b>1.3</b>	<b>2.3</b>	<b>1.7</b>	<b>2.9</b>	<b>7.1</b>	<b>4.3</b>	<b>3.1</b>	<b>0</b>	<b>0</b>	<b>2.1</b>			
<b>3 Axle Vehicles</b>	<b>1</b>	<b>0</b>	<b>3</b>		<b>5</b>	<b>0</b>	<b>8</b>	<b>1</b>		<b>9</b>	<b>2</b>	<b>3</b>	<b>0</b>		<b>5</b>	<b>5</b>	<b>8</b>	<b>1</b>		<b>15</b>	<b>0</b>	<b>0</b>	<b>34</b>			
<b>3 Axle Vehicles</b>	<b>0.5</b>	<b>0</b>	<b>0.9</b>	<b>0.8</b>	<b>0.4</b>	<b>0</b>	<b>0.4</b>	<b>0.5</b>	<b>0</b>	<b>0.4</b>	<b>0.4</b>	<b>0.3</b>	<b>0</b>	<b>0</b>	<b>0.3</b>	<b>1.1</b>	<b>0.7</b>	<b>0.5</b>	<b>1.1</b>	<b>0.8</b>	<b>0</b>	<b>0</b>	<b>0.5</b>			
<b>4+ Axle Trucks</b>	<b>1</b>	<b>5</b>	<b>10</b>		<b>16</b>	<b>3</b>	<b>27</b>	<b>1</b>		<b>31</b>	<b>11</b>	<b>2</b>	<b>0</b>		<b>13</b>	<b>18</b>	<b>18</b>	<b>10</b>		<b>49</b>	<b>0</b>	<b>0</b>	<b>109</b>			
<b>4+ Axle Trucks</b>	<b>0.5</b>	<b>0.9</b>	<b>3</b>	<b>0</b>	<b>1.3</b>	<b>1.6</b>	<b>1.3</b>	<b>0.5</b>	<b>0</b>	<b>1.2</b>	<b>2.2</b>	<b>0.2</b>	<b>0</b>	<b>0</b>	<b>0.7</b>	<b>3.9</b>	<b>1.6</b>	<b>5.1</b>	<b>3.2</b>	<b>2.6</b>	<b>0</b>	<b>0</b>	<b>1.5</b>			
<b>PHF</b>	<b>.800</b>	<b>.781</b>	<b>.915</b>		<b>.859</b>	<b>.750</b>	<b>.914</b>	<b>.806</b>		<b>.962</b>	<b>.870</b>	<b>.869</b>	<b>.702</b>		<b>.702</b>	<b>.904</b>	<b>.858</b>	<b>.777</b>		<b>.856</b>	<b>.856</b>	<b>.858</b>	<b>.777</b>			

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

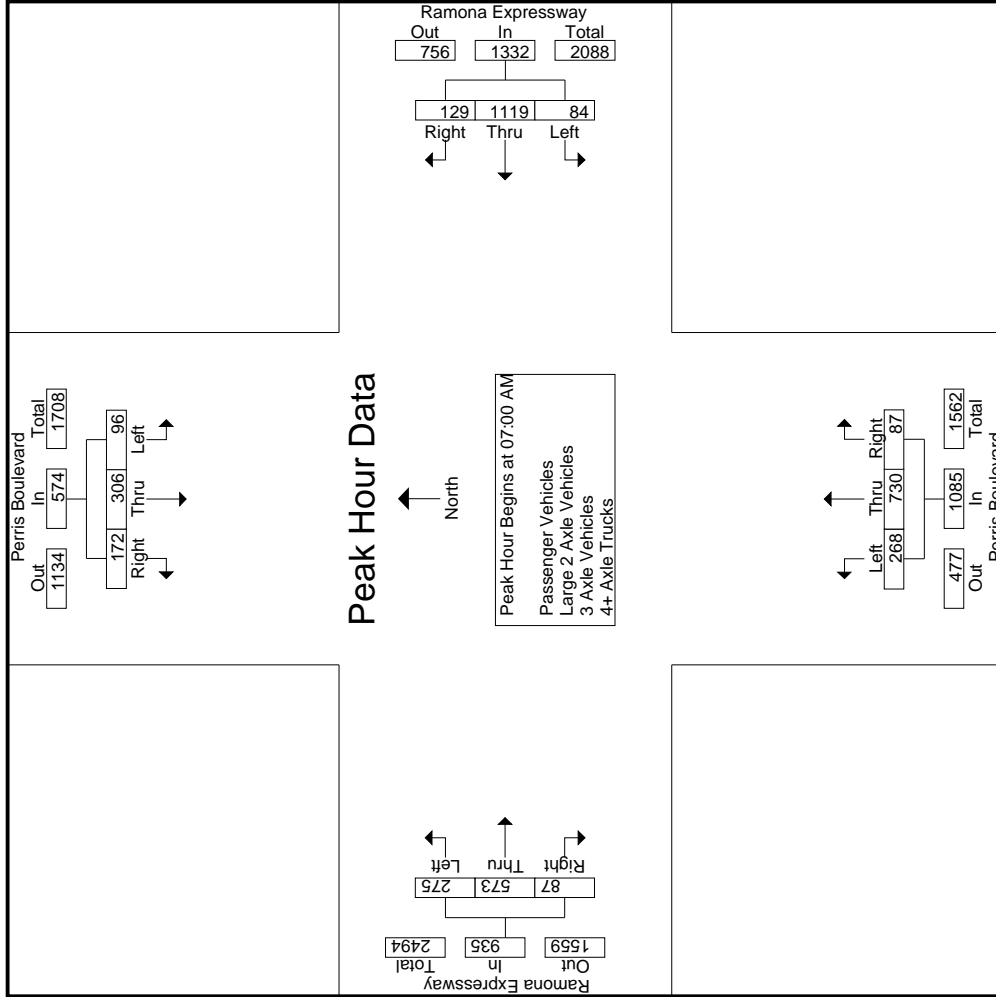
Peak Hour for Entire Intersection Begins at 07:00 AM

Start Time	Perris Boulevard Southbound						Ramona Expressway Westbound						Perris Boulevard Northbound						Ramona Expressway 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	30	53	37	11	120	15	306	23	0	344	77	210	13	7	300	63	118	28	15	209	33	973	706			
07:15 AM	25	65	43	18	133	21	290	35	5	346	76	195	19	16	290	72	123	10	4	205	43	974	1017			
07:30 AM	17	90	47	20	154	20	246	40	6	306	54	189	31	11	274	59	165	24	13	248	50	982	1032			
07:45 AM	24	98	45	9	167	28	277	31	8	336	61	136	24	13	221	81	167	25	12	273	42	997	1039			
<b>Total Volume</b>	<b>96</b>	<b>306</b>	<b>172</b>	<b>58</b>	<b>574</b>	<b>84</b>	<b>1119</b>	<b>129</b>	<b>19</b>	<b>1332</b>	<b>268</b>	<b>730</b>	<b>87</b>	<b>47</b>	<b>1085</b>	<b>275</b>	<b>573</b>	<b>87</b>	<b>44</b>	<b>935</b>	<b>168</b>	<b>3926</b>	<b>4094</b>			
<b>% App. Total</b>	<b>16.7</b>	<b>53.3</b>	<b>30</b>		<b>30</b>	<b>6.3</b>	<b>84</b>	<b>9.7</b>		<b>9.7</b>	<b>24.7</b>	<b>67.3</b>	<b>8</b>		<b>8</b>	<b>29.4</b>	<b>61.3</b>	<b>9.3</b>		<b>9.3</b>	<b>.856</b>	<b>.858</b>	<b>.777</b>			

Counts Unlimited  
 PO Box 1178  
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City of Perris  
 N/S: Perris Boulevard  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 22\_PER\_Perris\_Ram AM  
 Site Code : 05120169  
 Start Date : 3/11/2020  
 Page No : 2



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City of Perris  
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File Name : 22\_PER\_Perris\_Ram AM  
 Site Code : 05120169  
 Start Date : 3/11/2020  
 Page No : 3

Start Time	Perris Boulevard Southbound			Ramona Expressway Westbound			Perris Boulevard Northbound			Ramona Expressway Eastbound			Int. Total	
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		App. Total
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			07:15 AM			07:00 AM			07:30 AM				
+0 mins.	17	90	47	21	290	35	346	77	210	13	59	165	24	248
+15 mins.	24	98	45	20	246	40	306	76	195	19	81	167	25	273
+30 mins.	27	59	39	28	277	31	336	54	189	31	56	133	33	222
+45 mins.	35	74	45	25	320	26	371	61	136	24	46	141	26	213
Total Volume	103	321	176	94	1133	132	1359	268	730	87	242	606	108	956
% App. Total	17.2	53.5	29.3	6.9	83.4	9.7	91.6	24.7	67.3	8	25.3	63.4	11.3	87.5
PHF	.736	.819	.936	.839	.885	.825	.916	.870	.869	.702	.747	.907	.818	.875

Groups Printed- Passenger Vehicles

Start Time	Perris Boulevard Southbound					Ramona Expressway Westbound					Perris Boulevard Northbound					Ramona Expressway 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	30	52	35	11	117	13	303	23	0	339	73	203	13	7	289	59	115	22	11	196	29	941	970
07:15 AM	25	64	39	17	128	21	284	35	5	340	70	192	18	15	280	70	116	8	3	194	40	942	982
07:30 AM	17	88	44	19	149	19	242	39	6	300	52	186	31	11	269	50	160	21	11	231	47	949	996
07:45 AM	24	96	42	9	162	27	274	30	8	331	59	132	23	13	214	79	159	24	12	262	42	969	1011
<b>Total</b>	<b>96</b>	<b>300</b>	<b>160</b>	<b>56</b>	<b>556</b>	<b>80</b>	<b>1103</b>	<b>127</b>	<b>19</b>	<b>1310</b>	<b>254</b>	<b>713</b>	<b>85</b>	<b>46</b>	<b>1052</b>	<b>258</b>	<b>550</b>	<b>75</b>	<b>37</b>	<b>883</b>	<b>158</b>	<b>3801</b>	<b>3959</b>
08:00 AM	27	54	38	16	119	25	313	26	5	364	53	96	16	10	165	50	129	28	12	207	43	855	898
08:15 AM	34	73	42	19	149	20	231	26	3	277	67	109	8	2	184	44	130	21	8	195	32	805	837
08:30 AM	14	58	40	20	112	36	179	14	3	229	48	71	14	9	133	43	103	25	15	171	47	645	692
08:45 AM	18	61	30	13	109	21	196	20	2	237	50	66	17	10	133	38	140	24	13	202	38	681	719
<b>Total</b>	<b>93</b>	<b>246</b>	<b>150</b>	<b>68</b>	<b>489</b>	<b>102</b>	<b>919</b>	<b>86</b>	<b>13</b>	<b>1107</b>	<b>218</b>	<b>342</b>	<b>55</b>	<b>31</b>	<b>615</b>	<b>175</b>	<b>502</b>	<b>98</b>	<b>48</b>	<b>775</b>	<b>160</b>	<b>2986</b>	<b>3146</b>
<b>Grand Total</b>	<b>189</b>	<b>546</b>	<b>310</b>	<b>124</b>	<b>1045</b>	<b>182</b>	<b>2022</b>	<b>213</b>	<b>32</b>	<b>2417</b>	<b>472</b>	<b>1055</b>	<b>140</b>	<b>77</b>	<b>1667</b>	<b>433</b>	<b>1052</b>	<b>173</b>	<b>85</b>	<b>1658</b>	<b>318</b>	<b>6787</b>	<b>7105</b>
Approch %	18.1	52.2	29.7		15.4	7.5	83.7	8.8		35.6	28.3	63.3	8.4		24.6	26.1	63.4	10.4		24.4	4.5	95.5	
Total %	2.8	8	4.6			2.7	29.8	3.1			7	15.5	2.1			6.4	15.5	2.5					

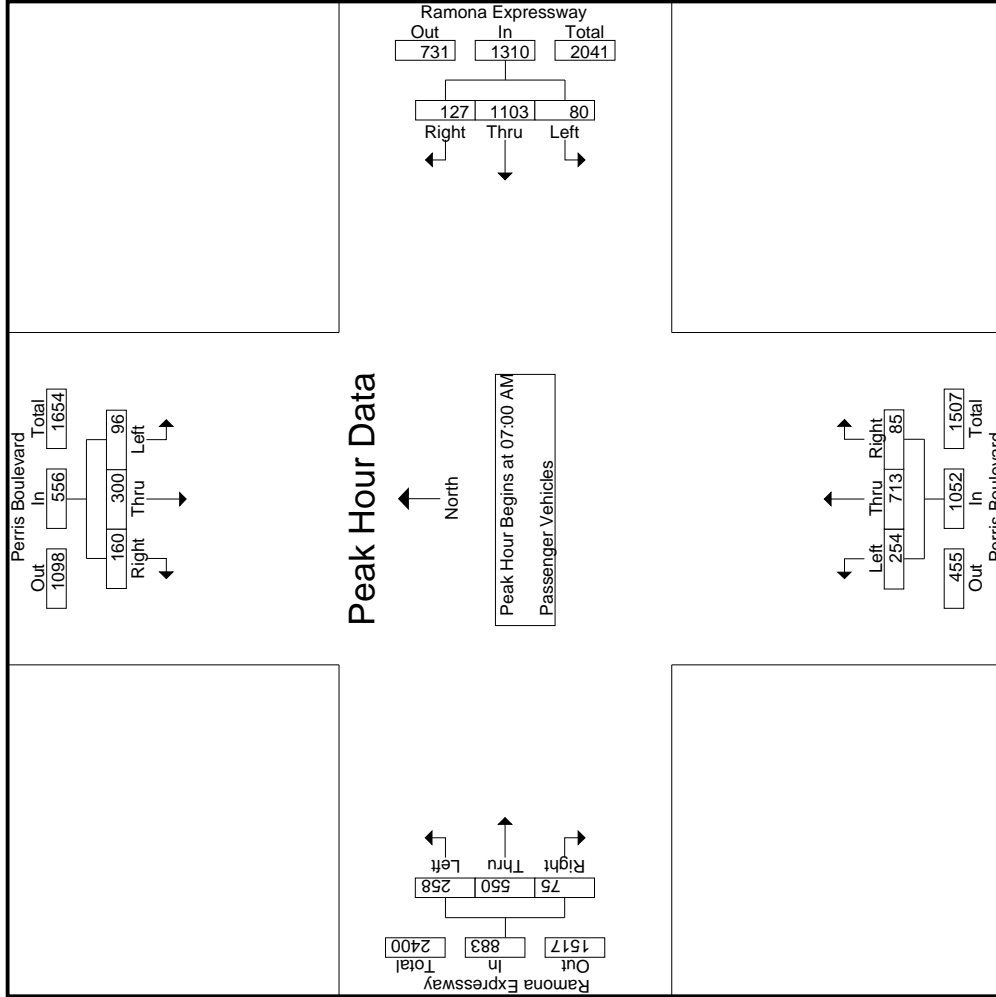
Start Time	Perris Boulevard Southbound					Ramona Expressway Westbound					Perris Boulevard Northbound					Ramona Expressway Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	30	52	35	11	117	13	303	23	0	339	73	203	13	7	289	59	115	22	11	196	29	941	970
07:15 AM	25	64	39	17	128	21	284	35	5	340	70	192	18	15	280	70	116	8	3	194	40	942	982
07:30 AM	17	88	44	19	149	19	242	39	6	300	52	186	31	11	269	50	160	21	11	231	47	949	996
07:45 AM	24	96	42	9	162	27	274	30	8	331	59	132	23	13	214	79	159	24	12	262	42	969	1011
<b>Total Volume</b>	<b>96</b>	<b>300</b>	<b>160</b>	<b>56</b>	<b>556</b>	<b>80</b>	<b>1103</b>	<b>127</b>	<b>19</b>	<b>1310</b>	<b>254</b>	<b>713</b>	<b>85</b>	<b>46</b>	<b>1052</b>	<b>258</b>	<b>550</b>	<b>75</b>	<b>37</b>	<b>883</b>	<b>158</b>	<b>3801</b>	<b>3959</b>
% App. Total	17.3	54	28.8		15.4	7.5	83.7	8.8		35.6	28.3	63.3	8.4		24.6	26.1	63.4	10.4		24.4	4.5	95.5	
PHF	.800	.781	.909		.858	.741	.910	.814		.963	.870	.878	.685		.910	.816	.859	.781		.843		.843	.981

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

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City of Perris  
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 Weather: Clear

File Name : 22\_PER\_Perris\_Ram AM  
 Site Code : 05120169  
 Start Date : 3/11/2020  
 Page No : 2





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 Page No : 3

Start Time	Perris Boulevard Southbound			Ramona Expressway Westbound			Perris Boulevard Northbound			Ramona Expressway Eastbound			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1													
Peak Hour for Each Approach Begins at:													
	07:00 AM			07:00 AM			07:00 AM			07:00 AM			
+0 mins.	30	52	35	13	339	23	73	13	289	59	115	22	196
+15 mins.	25	64	39	21	340	35	70	18	280	70	116	8	194
+30 mins.	17	88	44	19	300	39	52	31	269	50	160	21	231
+45 mins.	24	96	42	27	331	30	59	23	214	79	159	24	262
Total Volume	96	300	160	80	1310	127	254	85	1052	258	550	75	883
% App. Total	17.3	54	28.8	6.1	84.2	9.7	24.1	8.1	67.8	29.2	62.3	8.5	84.3
PHF	.800	.781	.909	.741	.963	.814	.870	.685	.910	.816	.859	.781	.843

Groups Printed - Large 2 Axle Vehicles

Start Time	Perris Boulevard Southbound					Ramona Expressway Westbound					Perris Boulevard Northbound					Ramona Expressway 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	1	1	0	2	2	0	0	0	2	2	6	0	0	8	2	2	4	2	8	2	20	22
07:15 AM	0	0	1	1	1	0	2	0	0	2	5	3	1	1	9	0	4	0	0	4	2	16	18
07:30 AM	0	0	2	1	2	0	1	0	0	1	2	2	0	0	4	1	2	2	1	5	2	12	14
07:45 AM	0	2	2	0	4	0	2	1	0	3	2	3	1	0	6	1	5	1	0	7	0	20	20
Total	0	3	6	2	9	2	5	1	0	8	11	14	2	1	27	4	13	7	3	24	6	68	74
08:00 AM	0	5	1	0	6	0	3	0	0	3	1	0	0	0	1	4	1	4	0	9	0	19	19
08:15 AM	1	0	1	0	2	0	4	2	0	6	0	7	0	0	7	0	6	2	1	8	1	23	24
08:30 AM	1	5	1	1	7	0	0	0	0	1	2	0	0	3	3	0	6	1	0	7	1	17	18
08:45 AM	1	5	1	0	7	0	1	1	0	2	1	2	0	0	3	0	6	0	0	6	0	18	18
Total	3	15	4	1	22	0	8	3	0	11	3	11	0	0	14	4	19	7	1	30	2	77	79
Grand Total	3	18	10	3	31	2	13	4	0	19	14	25	2	1	41	8	32	14	4	54	8	145	153
Approch %	9.7	58.1	32.3			10.5	68.4	21.1		13.1	34.1	61	4.9		28.3	14.8	59.3	25.9		37.2	5.2	94.8	
Total %	2.1	12.4	6.9		21.4	1.4	9	2.8		13.1	9.7	17.2	1.4		28.3	5.5	22.1	9.7		37.2	5.2	94.8	

3.1-75

Start Time	Perris Boulevard Southbound					Ramona Expressway Westbound					Perris Boulevard Northbound					Ramona Expressway 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	1	1	0	2	2	0	0	0	2	2	6	0	0	8	2	2	4	2	8	2	20	22
07:15 AM	0	0	1	1	1	0	2	0	0	2	5	3	1	1	9	0	4	0	0	4	2	16	18
07:30 AM	0	0	2	1	2	0	1	0	0	1	2	2	0	0	4	1	2	2	1	5	2	12	14
07:45 AM	0	2	2	0	4	0	2	1	0	3	2	3	1	0	6	1	5	1	0	7	0	20	20
Total	0	3	6	2	9	2	5	1	0	8	11	14	2	1	27	4	13	7	3	24	6	68	74
08:00 AM	0	5	1	0	6	0	3	0	0	3	1	0	0	0	1	4	1	4	0	9	0	19	19
08:15 AM	1	0	1	0	2	0	4	2	0	6	0	7	0	0	7	0	6	2	1	8	1	23	24
08:30 AM	1	5	1	1	7	0	0	0	0	1	2	0	0	3	3	0	6	1	0	7	1	17	18
08:45 AM	1	5	1	0	7	0	1	1	0	2	1	2	0	0	3	0	6	0	0	6	0	18	18
Total	3	15	4	1	22	0	8	3	0	11	3	11	0	0	14	4	19	7	1	30	2	77	79
Grand Total	3	18	10	3	31	2	13	4	0	19	14	25	2	1	41	8	32	14	4	54	8	145	153
Approch %	9.7	58.1	32.3			10.5	68.4	21.1		13.1	34.1	61	4.9		28.3	14.8	59.3	25.9		37.2	5.2	94.8	
Total %	2.1	12.4	6.9		21.4	1.4	9	2.8		13.1	9.7	17.2	1.4		28.3	5.5	22.1	9.7		37.2	5.2	94.8	

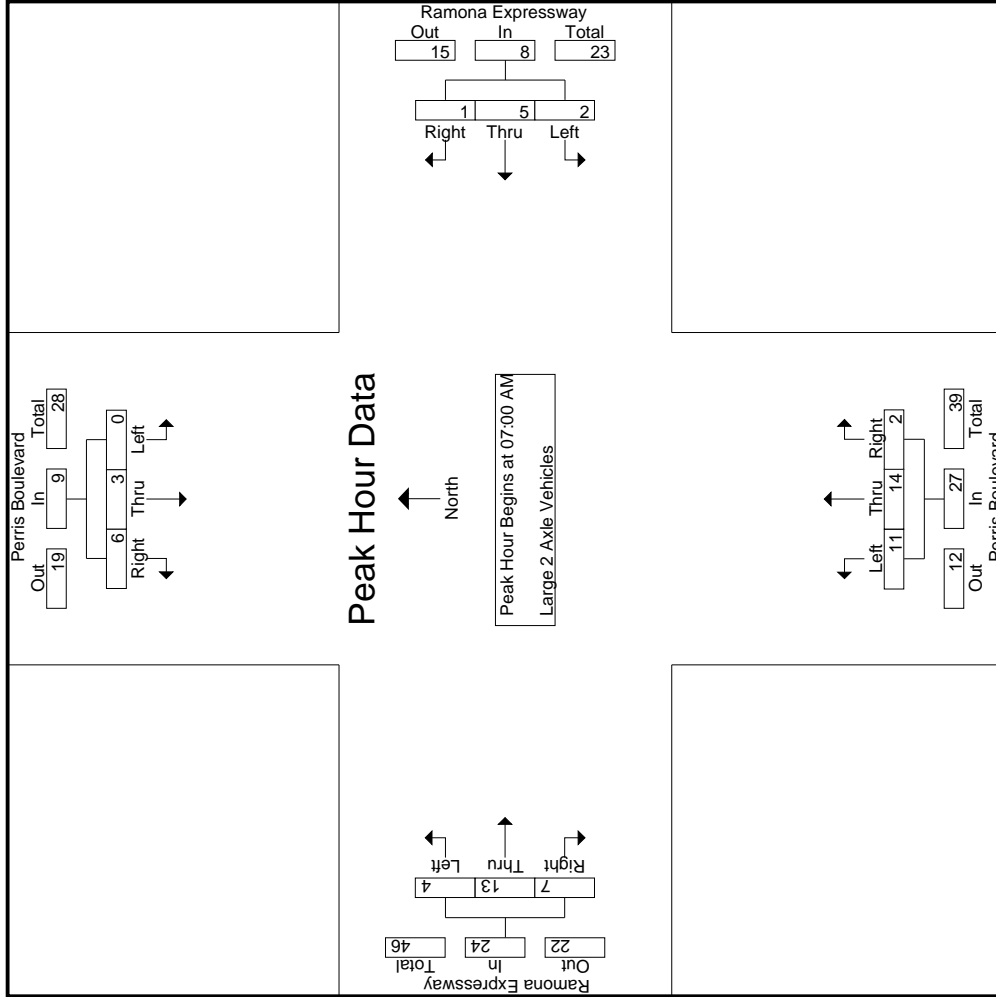
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:00 AM

Start Time	Perris Boulevard Southbound					Ramona Expressway Westbound					Perris Boulevard Northbound					Ramona Expressway 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	1	1	0	2	2	0	0	0	2	2	6	0	0	8	2	2	4	2	8	2	20	22
07:15 AM	0	0	1	1	1	0	2	0	0	2	5	3	1	1	9	0	4	0	0	4	2	16	18
07:30 AM	0	0	2	1	2	0	1	0	0	1	2	2	0	0	4	1	2	2	1	5	2	12	14
07:45 AM	0	2	2	0	4	0	2	1	0	3	2	3	1	0	6	1	5	1	0	7	0	20	20
Total Volume	0	3	6	2	9	2	5	1	0	8	11	14	2	1	27	4	13	7	3	24	6	68	74
% App. Total	0	33.3	66.7			25	62.5	12.5		7.4	40.7	51.9	7.4		29.2	16.7	54.2	29.2		29.2	5.2	94.8	
PHF	.000	.375	.750		.563	.250	.625	.250		.667	.550	.583	.500		.750	.500	.650	.438		.750	.750	.850	

Counts Unlimited  
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File Name : 22\_PER\_Perris\_Ram AM  
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Start Time	Perris Boulevard Southbound			Ramona Expressway Westbound			Perris Boulevard Northbound			Ramona Expressway Eastbound				
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1														
Peak Hour for Each Approach Begins at:														
	07:00 AM			07:00 AM			07:00 AM			07:00 AM				
+0 mins.	0	1	1	2	2	0	2	2	6	0	2	2	4	8
+15 mins.	0	0	1	1	0	2	2	5	3	1	3	4	0	4
+30 mins.	0	0	2	2	0	1	1	2	2	0	2	2	2	5
+45 mins.	0	2	2	4	0	2	3	2	3	1	2	5	1	7
Total Volume	0	3	6	9	8	5	1	11	14	2	4	13	7	24
% App. Total	0	33.3	66.7	25	62.5	12.5	8	40.7	51.9	7.4	16.7	54.2	29.2	75.0
PHF	.000	.375	.750	.250	.625	.250	.667	.550	.583	.500	.500	.650	.438	.750

Groups Printed - 3 Axle Vehicles

Start Time	Perris Boulevard Southbound				Ramona Expressway Westbound				Perris Boulevard Northbound				Ramona Expressway Eastbound				Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR			
07:00 AM	0	0	0	0	0	0	0	0	1	1	0	0	2	1	0	0	1	0	3
07:15 AM	0	0	1	0	0	2	0	0	0	0	0	0	2	0	1	1	2	1	5
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	2
07:45 AM	0	0	0	0	0	0	0	0	0	1	0	0	1	0	2	0	2	0	3
Total	0	0	1	0	2	2	0	0	2	1	2	0	3	3	3	1	7	1	13
08:00 AM	0	0	0	0	0	2	0	0	1	0	0	0	1	0	0	0	0	0	3
08:15 AM	0	0	1	1	0	0	0	0	1	1	0	0	1	2	0	0	3	1	5
08:30 AM	1	0	0	0	1	0	0	0	0	0	0	0	1	1	1	0	2	0	4
08:45 AM	0	0	1	0	0	3	1	0	4	0	0	0	0	2	0	0	2	0	7
Total	1	0	2	1	3	6	1	0	7	1	1	0	2	2	5	0	7	1	19
Grand Total	1	0	3	1	4	8	1	0	9	2	3	0	5	5	8	1	14	2	32
Approch %	25	0	75		0	88.9	11.1			40	60	0	15.6	35.7	57.1	7.1			
Total %	3.1	0	9.4		0	25	3.1		28.1	6.2	9.4	0	15.6	15.6	25	3.1	43.8	5.9	94.1

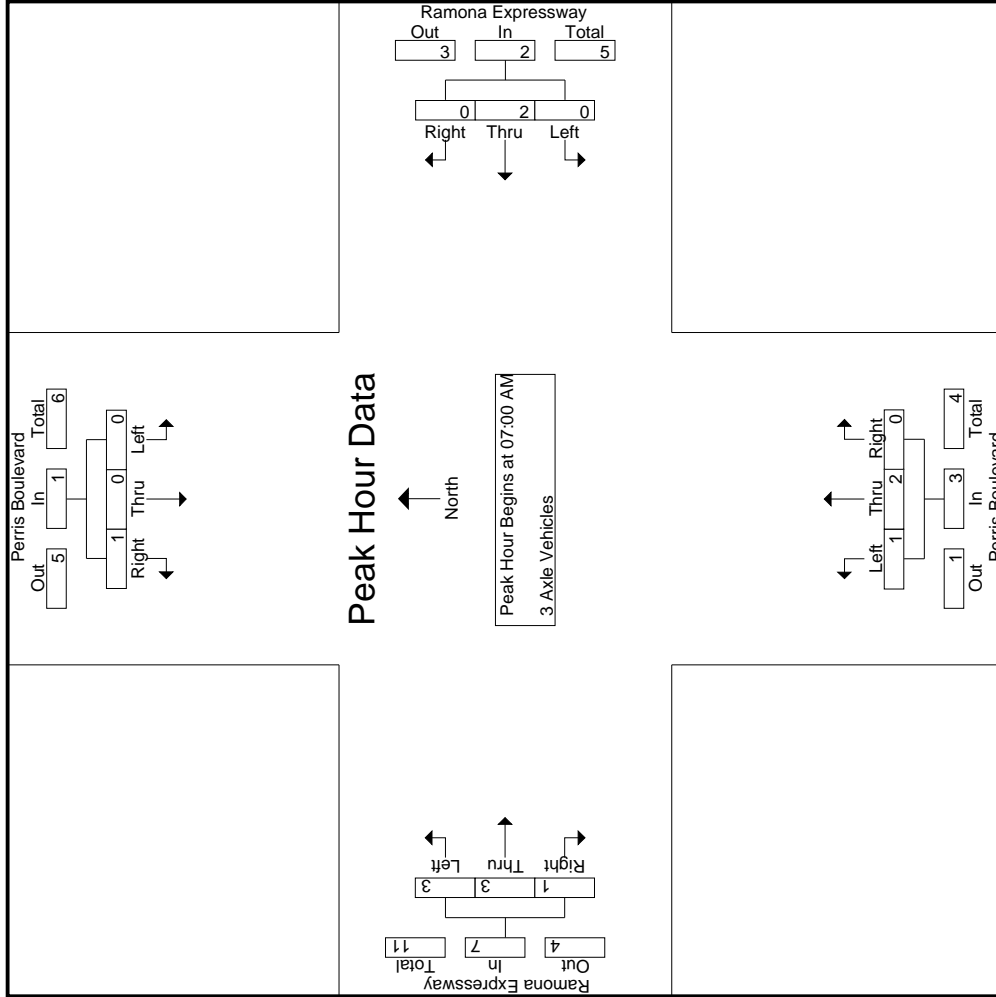
Start Time	Perris Boulevard Southbound				Ramona Expressway Westbound				Perris Boulevard Northbound				Ramona Expressway Eastbound				Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR			
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	1	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
07:45 AM	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	0	0	0	0	0	1	2	0	0	3	3	1	7	1	13
% App. Total	0	0	0	100	0	100	0	0	0	33.3	66.7	0	0	42.9	42.9	14.3			
PHF	.000	.000	.000	.250	.000	.250	.000	.000	.250	.250	.500	.000	.375	.375	.375	.250	.875	.250	.650

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

Counts Unlimited  
 PO Box 1178  
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 (951) 268-6268

City of Perris  
 N/S: Perris Boulevard  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 22\_PER\_Perris\_Ram AM  
 Site Code : 05120169  
 Start Date : 3/11/2020  
 Page No : 2



Counts Unlimited  
 PO Box 1178  
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 (951) 268-6268

City of Perris  
 N/S: Perris Boulevard  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 22\_PER\_Perris\_Ram AM  
 Site Code : 05120169  
 Start Date : 3/11/2020  
 Page No : 3

Start Time	Perris Boulevard Southbound			Ramona Expressway Westbound			Perris Boulevard Northbound			Ramona Expressway Eastbound			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1													
Peak Hour for Each Approach Begins at:													
	07:00 AM			07:00 AM			07:00 AM			07:00 AM			
+0 mins.	0	0	0	0	0	0	1	0	0	0	0	0	1
+15 mins.	0	0	1	0	2	0	0	0	0	0	1	1	2
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	2
+45 mins.	0	0	0	0	0	0	0	1	0	0	2	0	2
Total Volume	0	0	1	0	2	0	1	2	0	3	3	3	7
% App. Total	.000	.000	.250	.000	.250	.000	.250	.500	.000	.375	.375	.250	.875
PHF													

Groups Printed- 4+ Axle Trucks

Start Time	Perris Boulevard Southbound				Ramona Expressway Westbound				Perris Boulevard Northbound				Ramona Expressway Eastbound							
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	1	0	0	3	0	0	3	1	0	0	1	1	2	2	4	2	9	11
07:15 AM	0	1	2	0	2	0	0	0	2	1	0	0	1	2	2	1	5	0	11	11
07:30 AM	0	2	1	0	3	1	0	0	5	0	1	0	1	6	3	1	10	1	19	20
07:45 AM	0	0	1	0	1	1	0	0	2	0	0	0	0	1	1	0	2	0	5	5
<b>Total</b>	<b>0</b>	<b>3</b>	<b>5</b>	<b>0</b>	<b>8</b>	<b>2</b>	<b>9</b>	<b>1</b>	<b>12</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>3</b>	<b>10</b>	<b>7</b>	<b>4</b>	<b>3</b>	<b>3</b>	<b>44</b>	<b>47</b>
08:00 AM	0	0	0	0	0	2	0	0	2	0	0	0	0	2	3	1	6	0	8	8
08:15 AM	0	1	1	0	2	0	3	0	3	2	1	0	3	1	3	3	7	0	15	15
08:30 AM	0	0	2	0	2	0	10	0	10	5	0	0	5	3	1	1	5	0	22	22
08:45 AM	1	1	2	0	4	1	3	0	4	2	0	0	2	2	4	1	7	0	17	17
<b>Total</b>	<b>1</b>	<b>2</b>	<b>5</b>	<b>0</b>	<b>8</b>	<b>1</b>	<b>18</b>	<b>0</b>	<b>19</b>	<b>9</b>	<b>1</b>	<b>0</b>	<b>10</b>	<b>8</b>	<b>11</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>62</b>	<b>62</b>
<b>Grand Total</b>	<b>1</b>	<b>5</b>	<b>10</b>	<b>0</b>	<b>16</b>	<b>3</b>	<b>27</b>	<b>1</b>	<b>31</b>	<b>11</b>	<b>2</b>	<b>0</b>	<b>13</b>	<b>18</b>	<b>18</b>	<b>10</b>	<b>3</b>	<b>3</b>	<b>106</b>	<b>109</b>
<b>Approch %</b>	<b>6.2</b>	<b>31.2</b>	<b>62.5</b>		<b>9.7</b>	<b>87.1</b>	<b>3.2</b>		<b>29.2</b>	<b>84.6</b>	<b>15.4</b>	<b>0</b>	<b>12.3</b>	<b>39.1</b>	<b>21.7</b>	<b>9.4</b>	<b>43.4</b>	<b>2.8</b>	<b>97.2</b>	
<b>Total %</b>	<b>0.9</b>	<b>4.7</b>	<b>9.4</b>		<b>15.1</b>	<b>2.8</b>	<b>25.5</b>	<b>0.9</b>	<b>29.2</b>	<b>10.4</b>	<b>1.9</b>	<b>0</b>	<b>12.3</b>	<b>17</b>	<b>17</b>	<b>9.4</b>	<b>43.4</b>	<b>2.8</b>	<b>97.2</b>	

Start Time	Perris Boulevard Southbound				Ramona Expressway Westbound				Perris Boulevard Northbound				Ramona Expressway Eastbound							
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	0	1	0	0	0	0	3	0	0	0	1	0	0	0	0	0	0
07:15 AM	0	1	2	0	3	0	0	0	2	1	0	0	0	2	2	1	0	0	0	0
07:30 AM	0	2	1	0	3	1	0	0	5	0	1	0	1	6	3	1	1	1	1	1
07:45 AM	0	0	1	0	1	1	0	0	2	0	0	0	0	1	1	0	2	0	0	0
<b>Total</b>	<b>0</b>	<b>3</b>	<b>5</b>	<b>0</b>	<b>8</b>	<b>2</b>	<b>9</b>	<b>1</b>	<b>12</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>3</b>	<b>10</b>	<b>7</b>	<b>4</b>	<b>3</b>	<b>3</b>	<b>44</b>	<b>47</b>
08:00 AM	0	0	0	0	0	2	0	0	2	0	0	0	0	2	3	1	0	0	0	0
08:15 AM	0	1	1	0	2	0	3	0	3	2	1	0	3	1	3	3	0	0	0	0
08:30 AM	0	0	2	0	2	0	10	0	10	5	0	0	5	3	1	1	0	0	0	0
08:45 AM	1	1	2	0	4	1	3	0	4	2	0	0	2	2	4	1	0	0	0	0
<b>Total</b>	<b>1</b>	<b>2</b>	<b>5</b>	<b>0</b>	<b>8</b>	<b>1</b>	<b>18</b>	<b>0</b>	<b>19</b>	<b>9</b>	<b>1</b>	<b>0</b>	<b>10</b>	<b>8</b>	<b>11</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>62</b>	<b>62</b>
<b>Grand Total</b>	<b>1</b>	<b>5</b>	<b>10</b>	<b>0</b>	<b>16</b>	<b>3</b>	<b>27</b>	<b>1</b>	<b>31</b>	<b>11</b>	<b>2</b>	<b>0</b>	<b>13</b>	<b>18</b>	<b>18</b>	<b>10</b>	<b>3</b>	<b>3</b>	<b>106</b>	<b>109</b>
<b>Approch %</b>	<b>6.2</b>	<b>31.2</b>	<b>62.5</b>		<b>9.7</b>	<b>87.1</b>	<b>3.2</b>		<b>29.2</b>	<b>84.6</b>	<b>15.4</b>	<b>0</b>	<b>12.3</b>	<b>39.1</b>	<b>21.7</b>	<b>9.4</b>	<b>43.4</b>	<b>2.8</b>	<b>97.2</b>	
<b>Total %</b>	<b>0.9</b>	<b>4.7</b>	<b>9.4</b>		<b>15.1</b>	<b>2.8</b>	<b>25.5</b>	<b>0.9</b>	<b>29.2</b>	<b>10.4</b>	<b>1.9</b>	<b>0</b>	<b>12.3</b>	<b>17</b>	<b>17</b>	<b>9.4</b>	<b>43.4</b>	<b>2.8</b>	<b>97.2</b>	

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

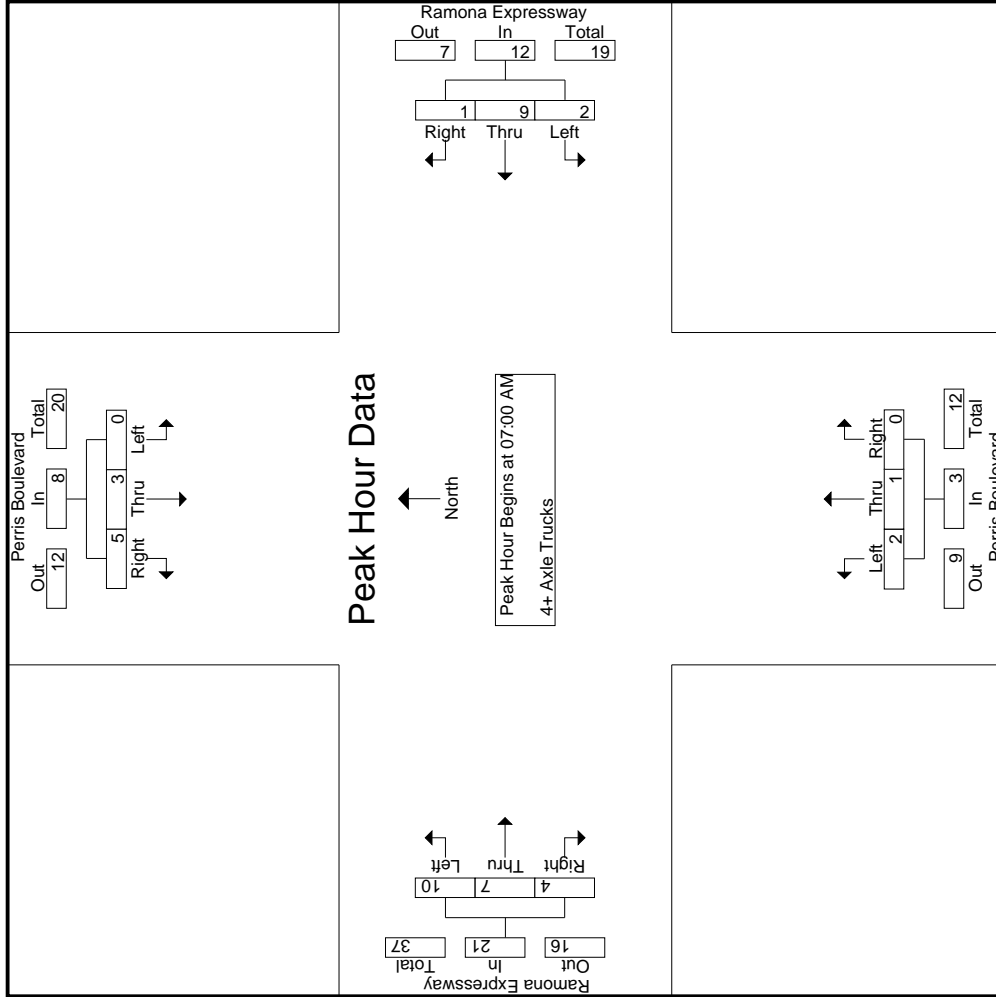
Start Time	Perris Boulevard Southbound				Ramona Expressway Westbound				Perris Boulevard Northbound				Ramona Expressway Eastbound							
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	0	1	0	0	0	0	3	0	0	0	1	0	0	0	0	0	0
07:15 AM	0	1	2	0	3	0	0	0	2	1	0	0	0	2	2	1	0	0	0	0
07:30 AM	0	2	1	0	3	1	0	0	5	0	1	0	1	6	3	1	1	1	1	1
07:45 AM	0	0	1	0	1	1	0	0	2	0	0	0	0	1	1	0	2	0	0	0
<b>Total</b>	<b>0</b>	<b>3</b>	<b>5</b>	<b>0</b>	<b>8</b>	<b>2</b>	<b>9</b>	<b>1</b>	<b>12</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>3</b>	<b>10</b>	<b>7</b>	<b>4</b>	<b>3</b>	<b>3</b>	<b>44</b>	<b>47</b>
<b>% App. Total</b>	<b>0</b>	<b>37.5</b>	<b>62.5</b>		<b>16.7</b>	<b>75</b>	<b>8.3</b>		<b>8.3</b>	<b>66.7</b>	<b>33.3</b>	<b>0</b>	<b>0</b>	<b>47.6</b>	<b>33.3</b>	<b>19</b>	<b>33.3</b>	<b>19</b>	<b>500</b>	<b>525</b>
<b>PHF</b>	<b>.000</b>	<b>.375</b>	<b>.625</b>		<b>.667</b>	<b>.500</b>	<b>.250</b>		<b>.600</b>	<b>.500</b>	<b>.250</b>	<b>.000</b>	<b>.000</b>	<b>.417</b>	<b>.583</b>	<b>.500</b>	<b>.583</b>	<b>.500</b>	<b>.500</b>	<b>.579</b>



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City of Perris  
 N/S: Perris Boulevard  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 22\_PER\_Perris\_Ram AM  
 Site Code : 05120169  
 Start Date : 3/11/2020  
 Page No : 2



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City of Perris  
 N/S: Perris Boulevard  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 22\_PER\_Perris\_Ram AM  
 Site Code : 05120169  
 Start Date : 3/11/2020  
 Page No : 3

Start Time	Perris Boulevard Southbound			Ramona Expressway Westbound			Perris Boulevard Northbound			Ramona Expressway Eastbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1												
Peak Hour for Each Approach Begins at:												
+0 mins.	0	0	1	0	0	3	0	0	0	1	1	2
+15 mins.	0	1	2	0	2	2	0	0	0	2	2	1
+30 mins.	0	2	1	1	3	1	0	1	0	6	3	1
+45 mins.	0	0	1	1	1	2	0	0	0	1	1	0
Total Volume	0	3	5	2	9	12	2	1	0	10	7	4
% App. Total	0	37.5	62.5	16.7	75	83.3	66.7	33.3	0	47.6	33.3	19
PHF	.000	.375	.625	.500	.750	.600	.500	.250	.000	.417	.583	.500

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City of Perris  
 N/S: Perris Boulevard  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 22\_PER\_Perris\_Ram PM  
 Site Code : 05120169  
 Start Date : 3/11/2020  
 Page No : 1

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

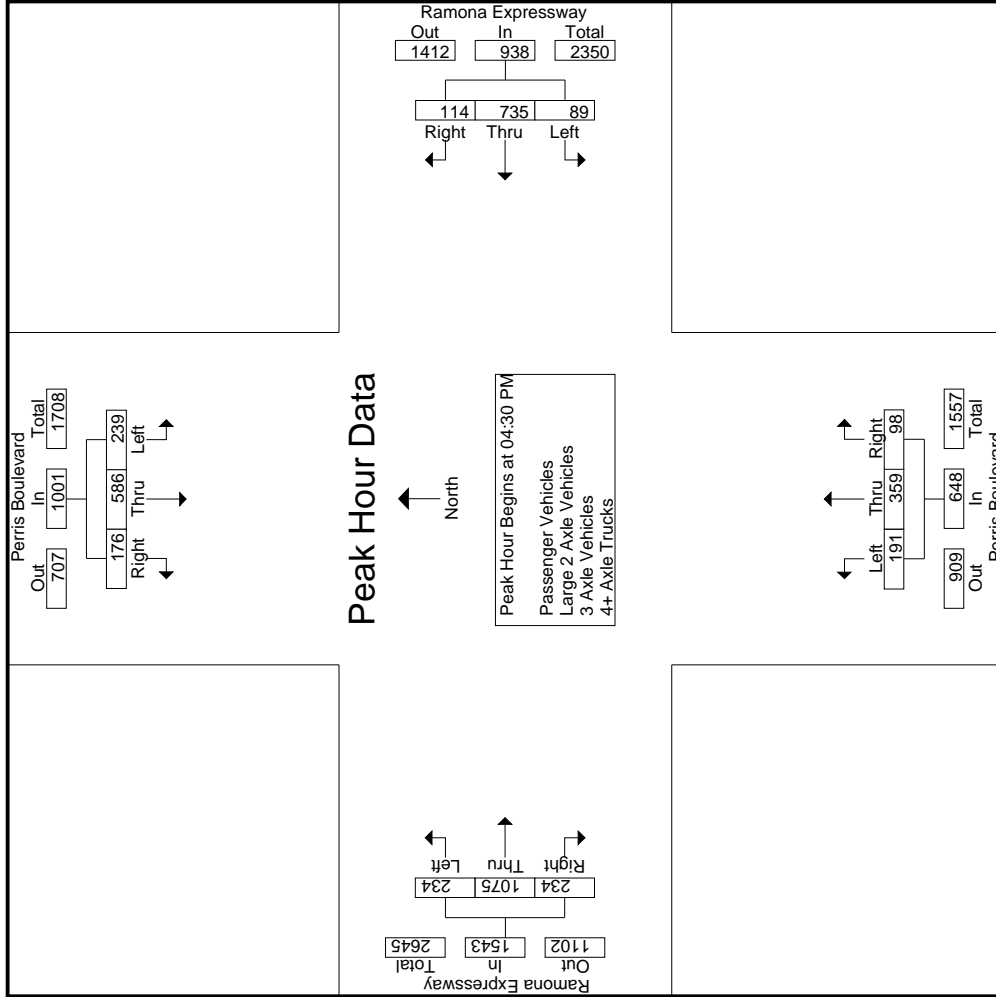
Start Time	Perris Boulevard Southbound						Ramona Expressway Westbound						Perris Boulevard Northbound						Ramona Expressway Eastbound							
	Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total			
04:00 PM	53	90	43	21	186	34	182	18	6	234	58	84	26	12	168	53	227	40	11	320	50	908	58	11	958	
04:15 PM	51	122	44	19	217	26	159	29	8	214	48	85	21	13	154	59	237	46	25	342	65	927	65	25	992	
04:30 PM	43	156	46	7	245	27	168	35	4	230	48	106	29	13	183	60	240	63	26	363	50	1021	50	26	1071	
04:45 PM	74	142	42	18	258	25	190	33	4	248	46	106	14	8	166	50	278	60	27	388	57	1060	57	27	1117	
<b>Total</b>	221	510	175	65	906	112	699	115	22	926	200	381	90	46	671	222	982	209	89	1413	222	3916	222	89	4138	
05:00 PM	78	133	42	21	253	25	187	26	2	238	52	79	33	14	164	57	279	55	24	391	61	1046	61	24	1107	
05:15 PM	44	155	46	26	245	12	190	20	3	222	45	68	22	14	135	67	278	56	20	401	63	1003	63	20	1066	
05:30 PM	50	106	36	18	192	29	199	26	5	254	38	90	30	14	158	60	291	47	25	398	62	1002	62	25	1064	
05:45 PM	61	100	28	21	189	31	180	26	5	237	35	67	22	19	124	58	307	47	21	412	66	962	66	21	1028	
<b>Total</b>	233	494	152	86	879	97	756	98	15	951	170	304	107	61	581	242	1155	205	90	1602	252	4013	252	90	4265	
<b>Grand Total</b>	454	1004	327	151	1785	209	1455	213	37	1877	370	685	197	107	1252	464	2137	414	179	3015	474	7929	474	179	8403	
Approch %	25.4	56.2	18.3			11.1	77.5	11.3			29.6	54.7	15.7			15.4	70.9	13.7			15.4	70.9	13.7			
Total %	5.7	12.7	4.1			2.6	18.4	2.7			4.7	8.6	2.5			5.9	27	5.2			5.6	27	5.2			
Passenger Vehicles	449	984	306		1883	197	1396	201		1829	354	671	193		1323	443	2082	400			3100	0	0	8135		
Passenger Vehicles	98.9	98	93.6	95.4	97.3	94.3	95.9	94.4	94.6	95.6	95.7	98	98.1	97.4	97.4	95.5	97.4	96.6	97.8	97.1	0	0	0	96.8		
Large 2 Axle Vehicles	2	18	10	2	33	9	23	4	0	36	11	8	4	2	25	8	28	12	1.7	51	0	0	0	1.7	0	145
Large 2 Axle Vehicles	0.4	1.8	3.1	2	1.7	4.3	1.6	1.9	0	1.9	3	1.2	2	1.9	1.8	1.7	1.3	2.9	1.7	1.6	0	0	0	1.7	0	1.7
3 Axle Vehicles	2	1	1	1	4	1	9	1	1	11	2	4	0	0	6	7	8	0	0	15	0	0	0	0	0	36
3 Axle Vehicles	0.4	0.1	0.3	0	0.2	0.5	0.6	0.5	0	0.6	0.5	0.6	0	0	0.4	1.5	0.4	0	0	0.5	0	0	0	0	0	0.4
4+ Axle Trucks	1	1	10		16	2	27	7	3.3	38	3	2	0	0	5	6	19	2	0.6	28	0	0	0	0.6	0	87
4+ Axle Trucks	0.2	0.1	3.1	2.6	0.8	1	1.9	3.3	5.4	2	0.8	0.3	0	0	0.4	1.3	0.9	0.5	0.6	0.9	0	0	0	0.6	0	1

Start Time	Perris Boulevard Southbound						Ramona Expressway Westbound						Perris Boulevard Northbound						Ramona Expressway 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			
04:30 PM	43	156	46	7	245	27	168	35	4	248	48	106	29	13	183	60	240	63	26	363	50	1021	50	26	1071	
04:45 PM	74	142	42	18	258	25	190	33	4	248	46	106	14	8	166	50	278	60	27	388	57	1060	57	27	1117	
05:00 PM	78	133	42	21	253	25	187	26	2	238	52	79	33	14	164	57	279	55	24	391	61	1046	61	24	1107	
05:15 PM	44	155	46	26	245	12	190	20	3	222	45	68	22	14	135	67	278	56	20	401	63	1003	63	20	1066	
05:30 PM	50	106	36	18	192	29	199	26	5	254	38	90	30	14	158	60	291	47	25	398	62	1002	62	25	1064	
05:45 PM	61	100	28	21	189	31	180	26	5	237	35	67	22	19	124	58	307	47	21	412	66	962	66	21	1028	
<b>Total</b>	233	494	152	86	879	97	756	98	15	951	170	304	107	61	581	242	1155	205	90	1602	252	4013	252	90	4265	
<b>Grand Total</b>	454	1004	327	151	1785	209	1455	213	37	1877	370	685	197	107	1252	464	2137	414	179	3015	474	7929	474	179	8403	
Approch %	25.4	56.2	18.3			11.1	77.5	11.3			29.6	54.7	15.7			15.4	70.9	13.7			15.4	70.9	13.7			
Total %	5.7	12.7	4.1			2.6	18.4	2.7			4.7	8.6	2.5			5.9	27	5.2			5.6	27	5.2			
Passenger Vehicles	449	984	306		1883	197	1396	201		1829	354	671	193		1323	443	2082	400			3100	0	0	8135		
Passenger Vehicles	98.9	98	93.6	95.4	97.3	94.3	95.9	94.4	94.6	95.6	95.7	98	98.1	97.4	97.4	95.5	97.4	96.6	97.8	97.1	0	0	0	96.8		
Large 2 Axle Vehicles	2	18	10	2	33	9	23	4	0	36	11	8	4	2	25	8	28	12	1.7	51	0	0	0	1.7	0	145
Large 2 Axle Vehicles	0.4	1.8	3.1	2	1.7	4.3	1.6	1.9	0	1.9	3	1.2	2	1.9	1.8	1.7	1.3	2.9	1.7	1.6	0	0	0	1.7	0	1.7
3 Axle Vehicles	2	1	1	1	4	1	9	1	1	11	2	4	0	0	6	7	8	0	0	15	0	0	0	0	0	36
3 Axle Vehicles	0.4	0.1	0.3	0	0.2	0.5	0.6	0.5	0	0.6	0.5	0.6	0	0	0.4	1.5	0.4	0	0	0.5	0	0	0	0	0	0.4
4+ Axle Trucks	1	1	10		16	2	27	7	3.3	38	3	2	0	0	5	6	19	2	0.6	28	0	0	0	0.6	0	87
4+ Axle Trucks	0.2	0.1	3.1	2.6	0.8	1	1.9	3.3	5.4	2	0.8	0.3	0	0	0.4	1.3	0.9	0.5	0.6	0.9	0	0	0	0.6	0	1

Start Time	Perris Boulevard Southbound						Ramona Expressway Westbound						Perris Boulevard Northbound						Ramona Expressway 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			
04:30 PM	43	156	46	7	245	27	168	35	4	248	48	106	29	13	183	60	240	63	26	363	50	1021	50	26	1071	
04:45 PM	74	142	42	18	258	25	190	33	4	248	46	106	14	8	166	50	278	60	27	388	57	1060	57	27	1117	
05:00 PM	78	133	42	21	253	25	187	26	2	238	52	79	33	14	164	57	279	55	24	391	61	1046	61	24	1107	
05:15 PM	44	155	46	26	245	12	190	20	3	222	45	68	22	14	135	67	278	56	20	401	63	1003	63	20	1066	
05:30 PM	50	106	36	18	192	29	199	26	5	254	38	90	30	14	158	60	291	47	25	398	62	1002	62	25	1064	
05:45 PM	61	100	28	21	189	31	180	26	5	237	35	67	22	19	124	58	307	47	21	412	66	962	66	21	1028	
<b>Total</b>	233	494	152	86	879	97	756	98	15	951	170	304	107	61	581	242	1155	205	90	1602	252	4013	252	90	4265	
<b>Grand Total</b>	454	1004	327	151	1785	209	1455	213	37	1877	370	685	197	107	1252	464	2137	414	179	3015	474	7929	474	179	8403	
Approch %	25.4	56.2	18.3			11.1	77.5	11.3			29.6	54.7	15.7			15.4	70.9	13.7			15.4	70.9	13.7			
Total %	5.7	12.7	4.1			2.6	18.4	2.7			4.7	8.6	2.5			5.9	27	5.2			5.6	27	5.2			
Passenger Vehicles	449	984	306		1883	197	1396	201		1829	354	671	193		1323	443	2082	400			3100	0	0	8135		
Passenger Vehicles	98.9	98	93.6	95.4	97.3	94.3	95.9	94.4	94.6	95.6	95.7	98	98.1	97.4	97.4	95.5	97.4	96.6	97.8	97.1	0	0	0	96.8		
Large 2 Axle Vehicles	2	18	10	2	33	9	23	4	0	36	11	8	4	2	25	8	28	12	1.7	51	0	0	0	1.7	0	145
Large 2 Axle Vehicles	0.4	1.8	3.1	2	1.7	4.3	1.6	1.9	0	1.9	3	1.2	2	1.9	1.8	1.7	1.3									



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

City of Perris  
 N/S: Perris Boulevard  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 22\_PER\_Perris\_Ram PM  
 Site Code : 05120169  
 Start Date : 3/11/2020  
 Page No : 3

Start Time	Perris Boulevard Southbound			Ramona Expressway Westbound			Perris Boulevard Northbound			Ramona Expressway 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:																
	04:30 PM				04:45 PM				04:00 PM				05:00 PM			
+0 mins.	43	156	46	245	25	190	33	248	58	84	26	168	57	279	55	391
+15 mins.	74	142	42	258	25	187	26	238	48	85	21	154	67	278	56	401
+30 mins.	78	133	42	253	12	190	20	222	48	106	29	183	60	291	47	398
+45 mins.	44	155	46	245	29	199	26	254	46	106	14	166	58	307	47	412
Total Volume	239	586	176	1001	91	766	105	962	200	381	90	671	242	1155	205	1602
% App. Total	23.9	58.5	17.6	970	9.5	79.6	10.9	947	29.8	56.8	13.4	671	15.1	72.1	12.8	1602
PHF	.766	.939	.957	.970	.784	.962	.795	.947	.862	.899	.776	.917	.903	.941	.915	.972

Groups Printed- Passenger Vehicles

Start Time	Perris Boulevard Southbound					Ramona Expressway Westbound					Perris Boulevard Northbound					Ramona Expressway 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	53	83	36	20	172	29	171	17	6	217	54	82	24	12	160	53	221	38	10	312	48	861	909
04:15 PM	50	119	41	18	210	24	150	28	8	202	46	83	21	13	150	53	234	45	24	332	63	894	957
04:30 PM	43	153	45	7	241	26	164	35	4	225	44	101	28	12	173	57	231	61	26	349	49	988	1037
04:45 PM	73	140	40	18	253	23	182	32	4	237	46	105	14	8	165	47	269	56	26	372	56	1027	1083
<b>Total</b>	219	495	162	63	876	102	667	112	22	881	190	371	87	45	648	210	955	200	86	1365	216	3770	3986
05:00 PM	76	133	39	19	248	25	178	23	1	226	50	77	33	14	160	56	274	53	24	383	58	1017	1075
05:15 PM	44	154	45	25	243	12	182	17	2	211	45	67	21	13	133	65	272	54	20	391	60	978	1038
05:30 PM	50	102	34	18	186	28	191	24	5	243	36	89	30	14	155	58	280	46	24	384	61	968	1029
05:45 PM	60	100	26	19	186	30	178	25	5	233	33	67	22	19	122	54	301	47	21	402	64	943	1007
<b>Total</b>	230	489	144	81	863	95	729	89	13	913	164	300	106	60	570	233	1127	200	89	1560	243	3906	4149
<b>Grand Total</b>	449	984	306	144	1739	197	1396	201	35	1794	354	671	193	105	1218	443	2082	400	175	2925	459	7676	8135
Approch %	25.8	56.6	17.6			11	77.8	11.2		23.4	29.1	55.1	15.8		15.9	15.1	71.2	13.7		38.1	5.6	94.4	
Total %	5.8	12.8	4		22.7	2.6	18.2	2.6			4.6	8.7	2.5			5.8	27.1	5.2					

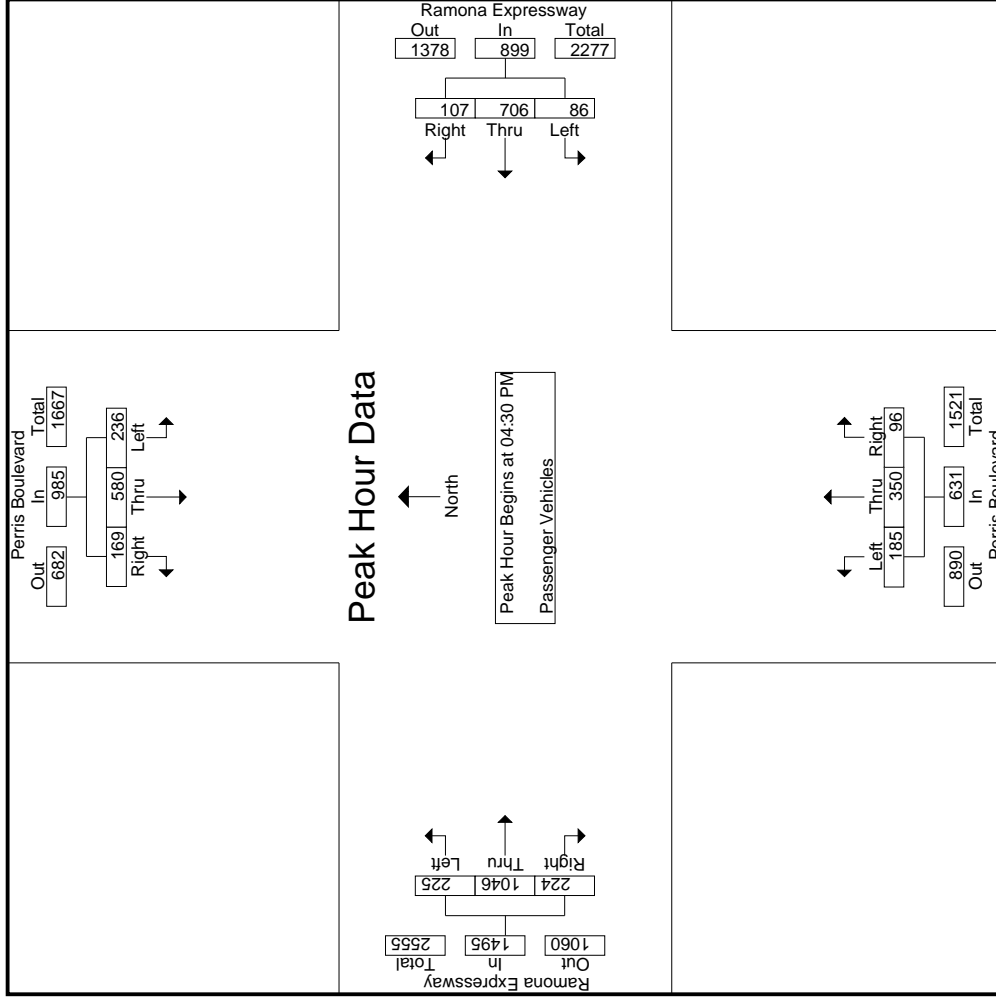
Start Time	Perris Boulevard Southbound					Ramona Expressway Westbound					Perris Boulevard Northbound					Ramona Expressway Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:30 PM	43	153	45		241	26	164	35		225	44	101	28		173	57	231	61		349	61	349	988
04:45 PM	73	140	40		253	23	182	32		237	46	105	14		165	47	269	56		372	56	372	1027
05:00 PM	76	133	39		248	25	178	23		226	50	77	33		160	56	274	53		383	58	383	1017
05:15 PM	44	154	45		243	12	182	17		211	45	67	21		133	65	272	54		391	60	391	1038
<b>Total Volume</b>	236	580	169		985	86	706	107		899	185	350	96		631	225	1046	224		1495	224	1495	4010
% App. Total	24	58.9	17.2		17.2	9.6	78.5	11.9		11.9	29.3	55.5	15.2		15.2	15.1	70	15		70	15	15	4010
PHF	.776	.942	.939		.973	.827	.970	.764		.948	.925	.833	.727		.912	.865	.954	.918		.956	.918	.956	.976

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

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 PO Box 1178  
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City of Perris  
 N/S: Perris Boulevard  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 22\_PER\_Perris\_Ram PM  
 Site Code : 05120169  
 Start Date : 3/11/2020  
 Page No : 2



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City of Perris  
 N/S: Perris Boulevard  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 22\_PER\_Perris\_Ram PM  
 Site Code : 05120169  
 Start Date : 3/11/2020  
 Page No : 3

Start Time	Perris Boulevard Southbound			Ramona Expressway Westbound			Perris Boulevard Northbound			Ramona Expressway 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.	43	153	45	241	26	164	35	225	44	101	28	173	57	231	61	349
+15 mins.	73	140	40	253	23	182	32	237	46	105	14	165	47	269	56	372
+30 mins.	76	133	39	248	25	178	23	226	50	77	33	160	56	274	53	383
+45 mins.	44	154	45	243	12	182	17	211	45	67	21	133	65	272	54	391
Total Volume	236	580	169	985	86	706	107	899	185	350	96	631	225	1046	224	1495
% App. Total	24	58.9	17.2	97.3	9.6	78.5	11.9	94.8	29.3	55.5	15.2	91.2	15.1	70	15	956
PHF	.776	.942	.939	.973	.827	.970	.764	.948	.925	.833	.727	.912	.865	.954	.918	.956



Groups Printed - Large 2 Axle Vehicles

Start Time	Perris Boulevard Southbound				Ramona Expressway Westbound				Perris Boulevard Northbound				Ramona Expressway 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	7	3	0	10	3	2	1	0	6	3	1	2	0	6	0	2	2	1	1	26	27	
04:15 PM	0	1	2	1	3	2	3	0	0	5	1	2	0	0	3	1	1	1	1	3	2	14	16
04:30 PM	0	3	1	0	4	1	0	0	0	1	3	3	1	1	7	2	6	2	0	10	1	22	23
04:45 PM	1	2	1	0	4	2	3	1	0	6	0	1	0	0	1	1	8	3	0	12	0	23	23
<b>Total</b>	<b>1</b>	<b>13</b>	<b>7</b>	<b>1</b>	<b>21</b>	<b>8</b>	<b>8</b>	<b>2</b>	<b>0</b>	<b>18</b>	<b>7</b>	<b>7</b>	<b>3</b>	<b>1</b>	<b>17</b>	<b>4</b>	<b>17</b>	<b>8</b>	<b>2</b>	<b>29</b>	<b>4</b>	<b>85</b>	<b>89</b>
05:00 PM	1	0	1	1	2	0	5	0	0	5	2	0	0	0	2	0	2	2	0	4	1	13	14
05:15 PM	0	1	0	0	1	0	6	1	0	7	0	0	1	1	1	1	2	1	0	4	1	13	14
05:30 PM	0	4	1	0	5	0	3	1	0	4	1	1	0	0	2	1	4	1	1	6	1	17	18
05:45 PM	0	0	1	1	1	1	1	0	0	2	1	0	0	0	1	2	3	0	0	5	1	9	10
<b>Total</b>	<b>1</b>	<b>5</b>	<b>3</b>	<b>2</b>	<b>9</b>	<b>1</b>	<b>15</b>	<b>2</b>	<b>0</b>	<b>18</b>	<b>4</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>6</b>	<b>4</b>	<b>11</b>	<b>4</b>	<b>1</b>	<b>19</b>	<b>4</b>	<b>52</b>	<b>56</b>
<b>Grand Total</b>	<b>2</b>	<b>18</b>	<b>10</b>	<b>3</b>	<b>30</b>	<b>9</b>	<b>23</b>	<b>4</b>	<b>0</b>	<b>36</b>	<b>11</b>	<b>8</b>	<b>4</b>	<b>2</b>	<b>23</b>	<b>8</b>	<b>28</b>	<b>12</b>	<b>3</b>	<b>48</b>	<b>8</b>	<b>137</b>	<b>145</b>
Approch %	6.7	60	33.3			25	63.9	11.1		26.3	8	5.8	2.9		16.8	16.7	58.3	25		35	5.5	94.5	
Total %	1.5	13.1	7.3		21.9	6.6	16.8	2.9		26.3	8	5.8	2.9		16.8	5.8	20.4	8.8					

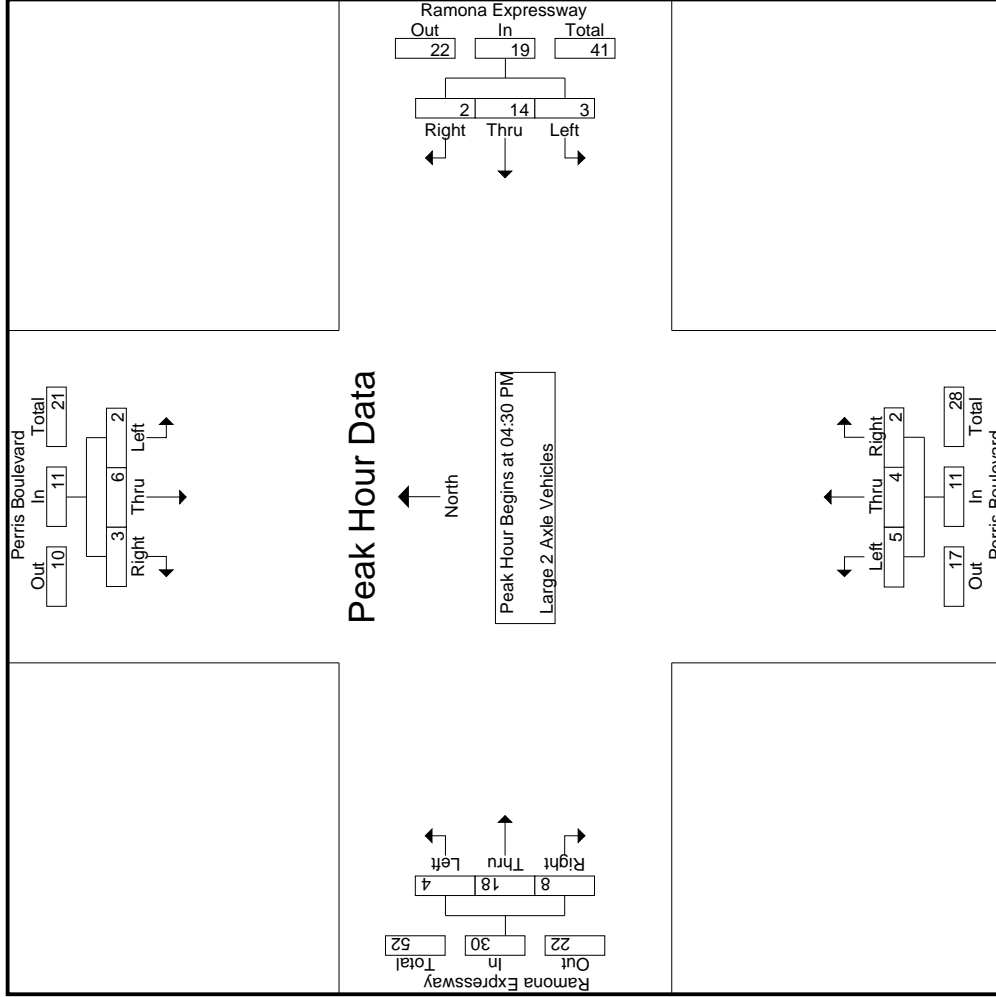
Start Time	Perris Boulevard Southbound				Ramona Expressway Westbound				Perris Boulevard Northbound				Ramona Expressway Eastbound												
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total
04:30 PM	0	3	1		4	1	0	0		1	3	3	1		7	2	6	2		10	2	10			22
04:45 PM	1	2	1		4	2	3	1		6	0	1	0		1	1	8	3		12	3	12			23
05:00 PM	1	0	0		2	0	5	0		5	2	0	0		2	0	2	2		4	2	4			13
05:15 PM	0	1	1		2	0	6	1		7	0	0	0		1	1	2	1		4	1	4			13
<b>Total Volume</b>	<b>2</b>	<b>6</b>	<b>3</b>		<b>11</b>	<b>3</b>	<b>14</b>	<b>2</b>		<b>19</b>	<b>5</b>	<b>4</b>	<b>2</b>		<b>11</b>	<b>4</b>	<b>18</b>	<b>8</b>		<b>30</b>	<b>8</b>	<b>30</b>			<b>71</b>
% App. Total	18.2	54.5	27.3			15.8	73.7	10.5			45.5	36.4	18.2			13.3	60	26.7							
PHF	.500	.500	.750		.688	.375	.583	.500		.679	.417	.333	.500		.393	.500	.563	.667		.625					.772

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

City of Perris  
 N/S: Perris Boulevard  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 22\_PER\_Perris\_Ram PM  
 Site Code : 05120169  
 Start Date : 3/11/2020  
 Page No : 2



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City of Perris  
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File Name : 22\_PER\_Perris\_Ram PM  
 Site Code : 05120169  
 Start Date : 3/11/2020  
 Page No : 3

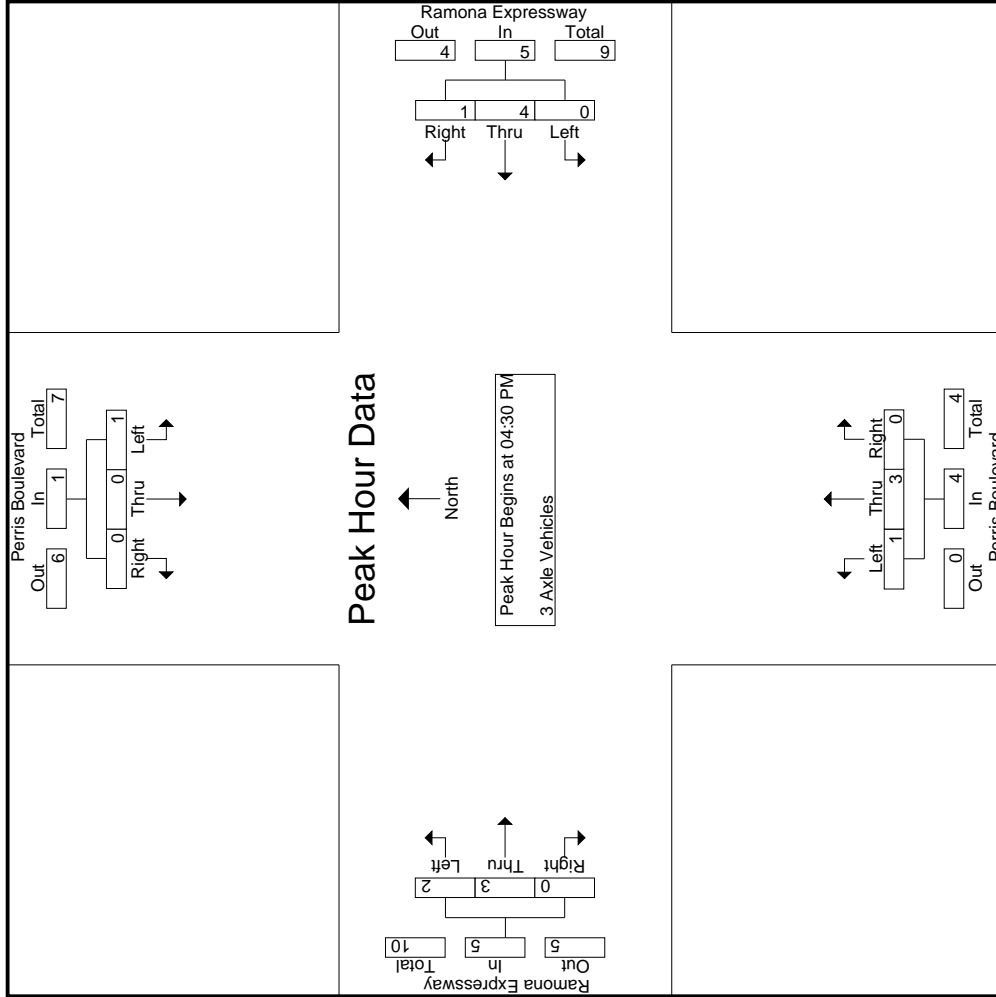
Start Time	Perris Boulevard Southbound				Ramona Expressway Westbound				Perris Boulevard Northbound				Ramona Expressway Eastbound				
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:30 PM				04:30 PM				04:30 PM				04:30 PM				
+0 mins.	0	3	1	4	1	0	0	1	3	1	7	3	3	6	2	10	
+15 mins.	1	2	1	4	2	3	1	6	0	1	1	0	1	8	3	12	
+30 mins.	1	0	1	2	0	5	0	5	2	0	2	0	2	2	2	4	
+45 mins.	0	1	0	1	0	6	1	7	0	0	1	0	1	2	1	4	
Total Volume	2	6	3	11	3	14	2	19	5	4	2	11	4	18	8	30	
% App. Total	18.2	54.5	27.3		15.8	73.7	10.5		45.5	36.4	18.2		13.3	60	26.7		
PHF	.500	.500	.750	.688	.375	.583	.500	.679	.417	.333	.500	.393	.500	.563	.667	.625	

Groups Printed - 3 Axle Vehicles

Start Time	Perris Boulevard Southbound				Ramona Expressway Westbound				Perris Boulevard Northbound				Ramona Expressway Eastbound							
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Exclu. Total	Inclu. Total	Int. Total	
04:00 PM	0	0	1	0	0	3	0	0	0	1	0	0	0	1	0	0	0	0	6	6
04:15 PM	0	1	0	0	0	0	0	0	0	1	0	0	1	4	0	0	4	0	6	6
04:30 PM	0	0	0	0	0	0	0	0	0	3	0	0	3	1	0	0	1	0	4	4
04:45 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	1	0	1	0	2	2
Total	0	1	1	0	2	4	0	0	4	2	3	0	5	5	2	0	7	0	18	18
05:00 PM	1	0	0	0	1	2	1	0	3	0	0	0	0	0	0	0	0	0	4	4
05:15 PM	0	0	0	0	0	1	0	0	1	0	1	0	1	2	0	0	3	0	5	5
05:30 PM	0	0	0	0	0	2	0	0	3	0	0	0	0	4	0	0	4	0	7	7
05:45 PM	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	2	2
Total	2	0	0	0	2	5	1	0	7	0	1	0	1	2	6	0	8	0	18	18
Grand Total	2	1	1	0	4	1	9	1	11	2	4	0	6	7	8	0	15	0	36	36
Approch %	50	25	25		9.1	81.8	9.1		30.6	33.3	66.7	0	16.7	46.7	53.3	0	41.7	0	100	100
Total %	5.6	2.8	2.8		11.1	2.8	25	2.8		5.6	11.1	0		19.4	22.2	0				

Start Time	Perris Boulevard Southbound				Ramona Expressway Westbound				Perris Boulevard Northbound				Ramona Expressway Eastbound							
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	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	1	1
04:45 PM	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0	0	0	1	1
05:00 PM	1	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	1	0	1	0	1	0	1	1	0	0	2	0	3	5
Total Volume	1	0	0	0	1	0	4	1	5	1	3	0	4	2	3	0	5	0	15	15
% App. Total	100	0	0	0	20	80	20	0	20	75	75	0	60	40	60	0	0	0	0	0
PHF	.250	.000	.000	.250	.000	.500	.250	.417	.250	.375	.375	.000	.333	.500	.375	.000	.417	.000	.750	.750

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  
 PO Box 1178  
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City of Perris  
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 Weather: Clear

File Name : 22\_PER\_Perris\_Ram PM  
 Site Code : 05120169  
 Start Date : 3/11/2020  
 Page No : 3

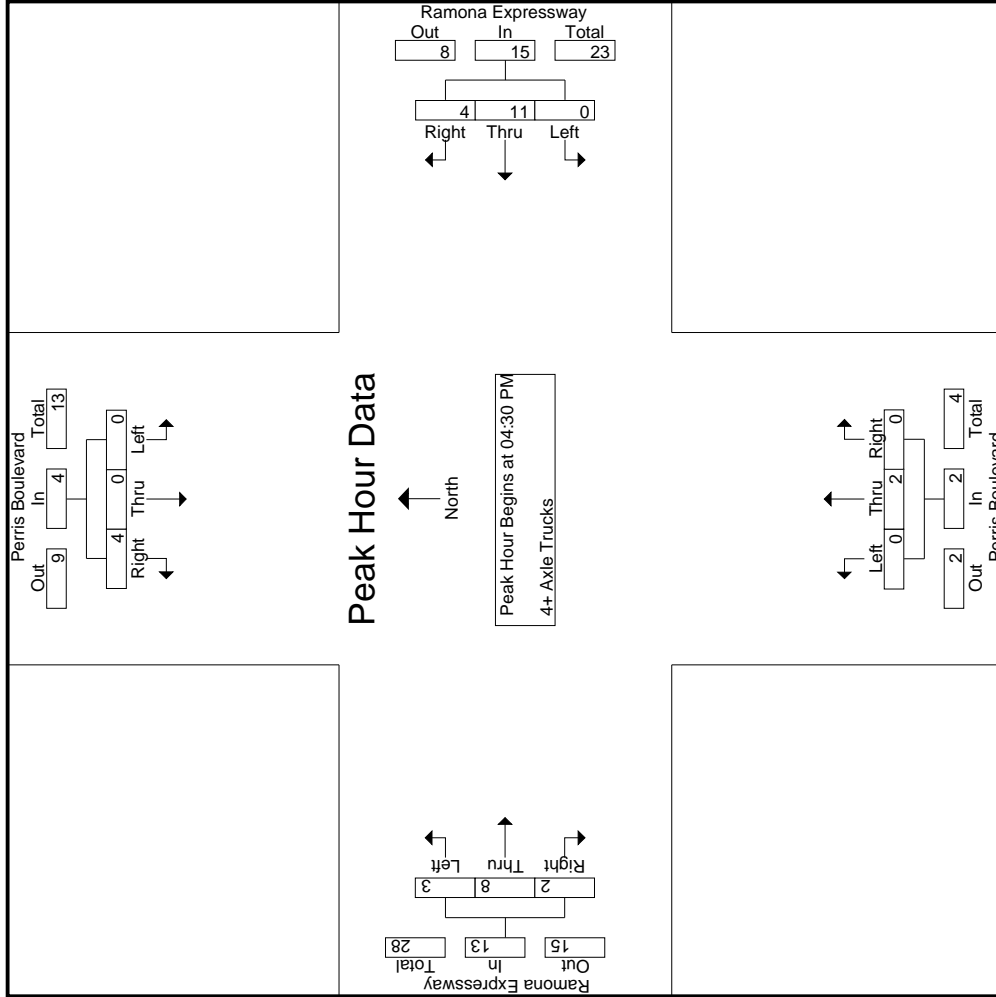
Start Time	Perris Boulevard Southbound			Ramona Expressway Westbound			Perris Boulevard Northbound			Ramona Expressway Eastbound					
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total		
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1															
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	0	0	2	0	0	0	0	1	
+15 mins.	0	0	0	0	0	1	0	1	0	0	0	0	1	0	
+30 mins.	1	0	0	1	0	2	1	3	0	0	0	0	0	0	
+45 mins.	0	0	0	0	0	1	0	1	0	1	0	0	2	0	
Total Volume	1	0	0	1	0	4	1	5	3	0	0	4	3	0	
% App. Total	100	0	0	250	0	80	20	250	75	0	0	40	60	0	
PHF	.250	.000	.000	.250	.000	.500	.250	.417	.375	.000	.000	.333	.375	.000	



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

City of Perris  
 N/S: Perris Boulevard  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 22\_PER\_Perris\_Ram PM  
 Site Code : 05120169  
 Start Date : 3/11/2020  
 Page No : 2





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 PO Box 1178  
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City of Perris  
 N/S: Perris Boulevard  
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 Weather: Clear

File Name : 22\_PER\_Perris\_Ram PM  
 Site Code : 05120169  
 Start Date : 3/11/2020  
 Page No : 3

Start Time	Perris Boulevard Southbound			Ramona Expressway Westbound			Perris Boulevard Northbound			Ramona Expressway 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	4	0	0	4	0	0	0	0	0	3	0	0	3
+15 mins.	0	0	1	4	4	0	0	4	0	0	0	0	2	0	1	0	3
+30 mins.	0	0	2	2	2	2	4	4	0	2	0	2	1	3	0	4	4
+45 mins.	0	0	1	1	1	2	3	3	0	0	0	0	0	2	1	1	3
Total Volume	0	0	4	4	11	4	15	15	0	2	0	2	3	8	2	13	13
% App. Total	0	0	100	.500	0	73.3	26.7	.938	0	100	0	.250	23.1	61.5	15.4	.813	.813
PHF	.000	.000	.500	.500	.000	.688	.500	.938	.000	.250	.000	.250	.375	.667	.500	.813	.813

Location: Perris  
 N/S: Perris Boulevard  
 E/W: Ramona Expressway



Date: 3/11/2020  
 Day: Wednesday

PEDESTRIANS

	North Leg Perris Boulevard Pedestrians	East Leg Ramona Expressway Pedestrians	South Leg Perris Boulevard Pedestrians	West Leg Ramona Expressway Pedestrians	
7:00 AM	3	0	1	0	4
7:15 AM	0	0	0	0	0
7:30 AM	0	0	1	0	1
7:45 AM	1	1	1	0	3
8:00 AM	0	0	1	0	1
8:15 AM	0	1	0	0	1
8:30 AM	0	0	0	1	1
8:45 AM	0	1	0	0	1
TOTAL VOLUMES:	4	3	4	1	12

	North Leg Perris Boulevard Pedestrians	East Leg Ramona Expressway Pedestrians	South Leg Perris Boulevard Pedestrians	West Leg Ramona Expressway Pedestrians	
4:00 PM	0	2	1	1	4
4:15 PM	0	1	2	1	4
4:30 PM	2	1	2	0	5
4:45 PM	0	0	0	3	3
5:00 PM	0	0	0	0	0
5:15 PM	3	0	0	0	3
5:30 PM	2	1	0	2	5
5:45 PM	1	2	0	0	3
TOTAL VOLUMES:	8	7	5	7	27

Location: Perris  
 N/S: Perris Boulevard  
 E/W: Ramona Expressway



Date: 3/11/2020  
 Day: Wednesday

BICYCLES

	Southbound Perris Boulevard			Westbound Ramona Expressway			Northbound Perris Boulevard			Eastbound Ramona Expressway			
	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	1	0	1	0	0	0	0	0	0	0	0	2
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	1	0	0	0	0	0	0	0	1
TOTAL VOLUMES:	0	1	0	1	1	0	0	0	0	0	0	0	3

	Southbound Perris Boulevard			Westbound Ramona Expressway			Northbound Perris Boulevard			Eastbound Ramona Expressway			
	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	1	0	0	0	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	1	0	0	0	0	0	0	0	0	0	0	1

# Counts Unlimited, Inc.

PO Box 1178  
Corona, CA 92878  
Phone: (951) 268-6268  
email: counts@countsunlimited.com

City of Perris  
Indian Avenue  
N/ Ramona Expressway  
24 Hour Directional Classification Count

PER002  
Site Code: 051-18430

## Northbound, Southbound

Start Time	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/24/18	24	7	2	2	6	0	6	5	0	0	0	0	60
01:00	13	5	0	3	6	0	<b>17</b>	4	0	0	0	0	54
02:00	17	6	0	3	10	0	15	7	0	0	0	0	60
03:00	111	20	0	1	9	0	15	13	0	0	0	0	173
04:00	186	27	0	8	8	0	9	11	0	0	0	0	255
05:00	214	<b>61</b>	1	16	5	0	12	4	0	0	0	0	319
06:00	199	52	4	21	10	0	7	14	0	<b>9</b>	0	0	320
07:00	<b>255</b>	56	1	20	16	0	3	11	0	4	0	0	<b>381</b>
08:00	111	44	3	18	9	0	3	18	0	6	0	0	221
09:00	92	38	<b>7</b>	15	14	1	6	12	0	2	0	<b>1</b>	202
10:00	111	43	1	27	13	0	13	14	0	4	0	0	237
11:00	136	30	6	<b>31</b>	<b>19</b>	<b>4</b>	13	<b>31</b>	0	2	0	0	287
12 PM	143	41	2	<b>28</b>	15	1	<b>15</b>	<b>28</b>	0	<b>1</b>	0	0	285
13:00	272	57	3	19	13	0	11	17	0	0	0	0	406
14:00	<b>283</b>	74	1	21	11	0	10	18	0	0	0	0	434
15:00	204	62	<b>5</b>	21	23	0	7	5	0	0	0	0	348
16:00	282	<b>78</b>	2	22	<b>29</b>	<b>4</b>	10	10	<b>1</b>	0	0	0	<b>454</b>
17:00	230	66	1	20	15	2	8	6	0	0	0	<b>1</b>	368
18:00	148	29	0	12	12	0	7	6	0	1	0	0	232
19:00	90	25	0	9	8	0	7	5	0	0	0	0	153
20:00	6	16	1	6	7	0	3	8	0	0	0	0	109
21:00	6	4	0	4	8	0	2	7	0	0	0	0	90
22:00	15	14	0	7	9	0	1	6	0	0	0	0	133
23:00	8	16	1	6	4	0	2	5	0	1	0	0	133
<b>Total</b>	258	871	41	340	279	12	202	265	1	30	0	2	5714
<b>Percent</b>	4.5%	15.2%	0.7%	6.0%	4.9%	0.2%	3.5%	4.6%	0.0%	0.5%	0.0%	0.0%	
<b>AM Peak</b>	07:00	07:00	09:00	11:00	11:00	11:00	01:00	11:00	06:00	06:00	09:00	09:00	07:00
Vol.	15	255	7	31	19	4	17	31	9	9	1	1	381
<b>PM Peak</b>	15:00	14:00	15:00	12:00	16:00	16:00	12:00	12:00	16:00	12:00	17:00	17:00	16:00
Vol.	21	283	5	28	29	4	15	28	1	1	1	1	454
<b>Grand Total</b>	258	3413	41	340	279	12	202	265	1	30	0	2	5714
<b>Percent</b>	4.5%	59.7%	0.7%	6.0%	4.9%	0.2%	3.5%	4.6%	0.0%	0.5%	0.0%	0.0%	

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City of Perris  
Ramona Expressway  
W/ Indian Avenue  
24 Hour Directional Classification Count

PER001  
Site Code: 051-18430

**Eastbound, Westbound**

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/24/18	12	461	70	8	14	19	0	3	15	0	1	0	1	604
01:00	15	271	47	2	9	25	0	2	31	0	1	0	0	403
02:00	14	320	63	5	16	26	1	14	33	0	2	1	0	495
03:00	16	590	139	7	34	38	0	22	31	1	1	0	0	879
04:00	16	1107	304	8	92	30	1	35	23	3	1	1	1	1622
05:00	30	1373	363	10	152	39	0	49	25	3	2	2	0	2048
06:00	34	1540	<b>412</b>	24	<b>173</b>	44	4	<b>51</b>	45	3	<b>10</b>	0	1	2341
07:00	35	<b>1739</b>	384	21	148	29	2	34	50	1	5	1	0	<b>2449</b>
08:00	28	1347	349	<b>28</b>	147	44	1	37	51	1	4	1	1	2039
09:00	32	1217	320	28	131	41	2	41	72	2	3	0	0	1889
10:00	<b>36</b>	1134	298	17	121	44	1	25	71	<b>4</b>	5	1	1	1758
11:00	34	1302	370	27	142	<b>54</b>	<b>7</b>	40	<b>101</b>	4	5	0	<b>3</b>	2089
12 PM	33	1324	347	14	136	<b>50</b>	3	34	<b>90</b>	2	1	0	3	2037
13:00	31	1645	367	<b>27</b>	127	45	2	<b>44</b>	85	1	2	0	1	2377
14:00	36	1764	388	21	130	49	2	37	70	<b>6</b>	<b>4</b>	1	<b>5</b>	2513
15:00	36	1787	<b>467</b>	20	<b>160</b>	36	1	38	56	3	4	1	1	<b>2610</b>
16:00	<b>42</b>	1774	440	19	142	50	<b>5</b>	31	57	2	1	<b>2</b>	2	2567
17:00	37	<b>1867</b>	424	14	120	36	4	30	30	4	1	1	0	2568
18:00	29	1587	331	16	94	41	1	40	40	1	2	0	3	2185
19:00	26	1465	315	11	93	27	0	18	34	4	2	1	0	1996
20:00	24	1185	234	2	64	27	1	16	38	0	0	0	0	1591
21:00	23	1091	167	2	63	35	1	11	33	0	0	1	0	1427
22:00	21	850	170	2	37	19	1	3	35	0	2	0	0	1140
23:00	17	592	94	2	25	26	1	2	21	0	2	0	1	783
<b>Total</b>	657	29332	6863	335	2370	874	41	657	1137	45	61	14	24	42410
<b>Percent</b>	1.5%	69.2%	16.2%	0.8%	5.6%	2.1%	0.1%	1.5%	2.7%	0.1%	0.1%	0.0%	0.1%	
<b>AM Peak</b>	10:00	07:00	06:00	08:00	06:00	11:00	11:00	06:00	11:00	10:00	06:00	05:00	11:00	07:00
<b>Vol.</b>	36	1739	412	28	173	54	7	51	101	4	10	2	3	2449
<b>PM Peak</b>	16:00	17:00	15:00	13:00	15:00	12:00	16:00	13:00	12:00	14:00	14:00	16:00	14:00	15:00
<b>Vol.</b>	42	1867	467	27	160	50	5	44	90	6	4	2	5	2610
<b>Grand Total</b>	657	29332	6863	335	2370	874	41	657	1137	45	61	14	24	42410
<b>Percent</b>	1.5%	69.2%	16.2%	0.8%	5.6%	2.1%	0.1%	1.5%	2.7%	0.1%	0.1%	0.0%	0.1%	

**APPENDIX 3.2:**

**EXISTING (2021) CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS**

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Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↕			↕
Traffic Vol, veh/h	0	3	413	21	0	123
Future Vol, veh/h	0	3	413	21	0	123
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	84	84	84	84	84	84
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	4	492	25	0	146

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	-	259	0	0	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-
Pot Cap-1 Maneuver	0	746	-	-	0
Stage 1	0	-	-	-	0
Stage 2	0	-	-	-	0
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	-	746	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.8	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	746
HCM Lane V/C Ratio	-	-	0.005
HCM Control Delay (s)	-	-	9.8
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	0



Timings  
3: Indian Av. & Ramona Exwy.

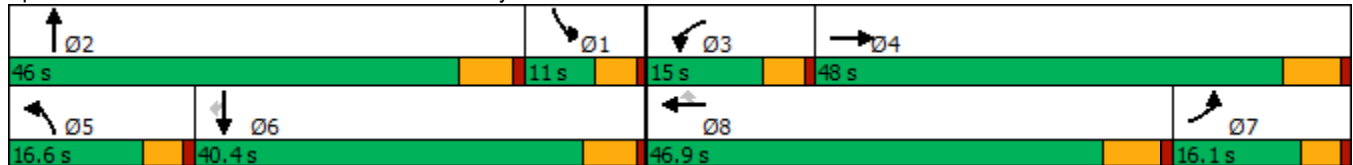


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↖	↕↕↕	↖	↕↕↕	↖	↖	↕↕	↖	↕↕	↖
Traffic Volume (vph)	165	1025	58	1519	100	86	169	18	69	36
Future Volume (vph)	165	1025	58	1519	100	86	169	18	69	36
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2	1	6	
Permitted Phases					8					6
Detector Phase	7	4	3	8	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	46.2	9.6	40.2	40.2	9.6	43.8	9.6	34.8	34.8
Total Split (s)	16.1	48.0	15.0	46.9	46.9	16.6	46.0	11.0	40.4	40.4
Total Split (%)	13.4%	40.0%	12.5%	39.1%	39.1%	13.8%	38.3%	9.2%	33.7%	33.7%
Yellow Time (s)	3.6	5.2	3.6	5.2	5.2	3.6	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
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	6.2	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 89.5  
 Natural Cycle: 110  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 3: Indian Av. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
3: Indian Av. & Ramona Exwy.

Ramona-Indian Warehouse Project (JN 13758)

05/20/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↗↗↗		↗	↗↗↗	↗	↗	↗↗		↗	↗↗	↗
Traffic Volume (veh/h)	165	1025	95	58	1519	100	86	169	29	18	69	36
Future Volume (veh/h)	165	1025	95	58	1519	100	86	169	29	18	69	36
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	168	1046	95	59	1550	73	88	172	19	18	70	30
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	206	2388	217	83	2104	653	114	438	48	82	473	211
Arrive On Green	0.11	0.49	0.49	0.05	0.41	0.41	0.06	0.13	0.13	0.05	0.13	0.13
Sat Flow, veh/h	1810	4840	439	1810	5187	1610	1810	3281	358	1810	3610	1610
Grp Volume(v), veh/h	168	747	394	59	1550	73	88	94	97	18	70	30
Grp Sat Flow(s),veh/h/ln	1810	1729	1821	1810	1729	1610	1810	1805	1834	1810	1805	1610
Q Serve(g_s), s	7.2	11.1	11.1	2.6	20.1	2.2	3.8	3.8	3.9	0.8	1.4	0.9
Cycle Q Clear(g_c), s	7.2	11.1	11.1	2.6	20.1	2.2	3.8	3.8	3.9	0.8	1.4	0.9
Prop In Lane	1.00		0.24	1.00		1.00	1.00		0.20	1.00		1.00
Lane Grp Cap(c), veh/h	206	1706	898	83	2104	653	114	241	245	82	473	211
V/C Ratio(X)	0.82	0.44	0.44	0.71	0.74	0.11	0.77	0.39	0.40	0.22	0.15	0.14
Avail Cap(c_a), veh/h	262	1818	957	237	2656	824	273	913	927	146	1571	701
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.4	13.0	13.0	37.4	20.0	14.7	36.7	31.5	31.5	36.6	30.6	14.8
Incr Delay (d2), s/veh	11.7	0.2	0.3	4.2	0.8	0.1	4.1	1.0	1.0	0.5	0.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	3.6	3.8	1.1	7.0	0.7	1.7	1.6	1.7	0.3	0.6	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.1	13.2	13.4	41.6	20.9	14.8	40.8	32.5	32.5	37.1	30.8	15.1
LnGrp LOS	D	B	B	D	C	B	D	C	C	D	C	B
Approach Vol, veh/h		1309			1682			279			118	
Approach Delay, s/veh		17.5			21.3			35.1			27.7	
Approach LOS		B			C			D			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.4	16.4	8.2	45.4	9.6	16.2	15.2	38.4				
Change Period (Y+Rc), s	5.8	* 5.8	4.6	6.2	4.6	5.8	6.2	* 6.2				
Max Green Setting (Gmax), s	6.4	* 40	10.4	41.8	12.0	34.6	11.5	* 41				
Max Q Clear Time (g_c+I1), s	2.8	5.9	4.6	13.1	5.8	3.4	9.2	22.1				
Green Ext Time (p_c), s	0.0	1.0	0.0	7.7	0.0	0.4	0.0	10.1				

Intersection Summary

HCM 6th Ctrl Delay	21.2
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
6: Perris Bl. & Ramona Exwy.

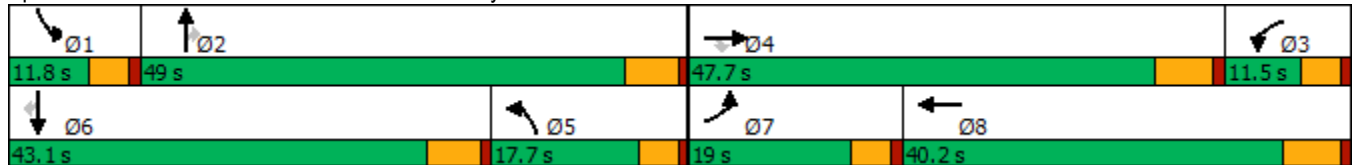


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑↑	↗	↔↔	↑↑↑	↔↔	↑↑	↗	↔↔	↑↑	↗
Traffic Volume (vph)	323	642	107	92	1176	287	763	91	99	323	191
Future Volume (vph)	323	642	107	92	1176	287	763	91	99	323	191
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8	5	2		1	6	
Permitted Phases			4					2			6
Detector Phase	7	4	4	3	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	36.2	36.2	9.6	34.2	9.6	38.8	38.8	9.6	41.8	41.8
Total Split (s)	19.0	47.7	47.7	11.5	40.2	17.7	49.0	49.0	11.8	43.1	43.1
Total Split (%)	15.8%	39.8%	39.8%	9.6%	33.5%	14.8%	40.8%	40.8%	9.8%	35.9%	35.9%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	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
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 103.7  
 Natural Cycle: 100  
 Control Type: Actuated-Uncoordinated


































Splits and Phases: 6: Perris Bl. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
6: Perris Bl. & Ramona Exwy.

Ramona-Indian Warehouse Project (JN 13758)

05/20/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  		 	  		 	 		 	 	
Traffic Volume (veh/h)	323	642	107	92	1176	136	287	763	91	99	323	191
Future Volume (veh/h)	323	642	107	92	1176	136	287	763	91	99	323	191
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	330	655	64	94	1200	120	293	779	45	101	330	136
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	410	1036	320	758	1517	152	627	1010	450	180	501	224
Arrive On Green	0.12	0.20	0.20	0.22	0.32	0.32	0.18	0.28	0.28	0.05	0.14	0.14
Sat Flow, veh/h	3510	5187	1603	3510	4791	479	3510	3610	1608	3510	3610	1610
Grp Volume(v), veh/h	330	655	64	94	866	454	293	779	45	101	330	136
Grp Sat Flow(s),veh/h/ln	1755	1729	1603	1755	1729	1812	1755	1805	1608	1755	1805	1610
Q Serve(g_s), s	8.2	10.4	3.0	1.9	20.5	20.5	6.7	17.8	1.0	2.5	7.8	5.2
Cycle Q Clear(g_c), s	8.2	10.4	3.0	1.9	20.5	20.5	6.7	17.8	1.0	2.5	7.8	5.2
Prop In Lane	1.00		1.00	1.00		0.26	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	410	1036	320	758	1095	574	627	1010	450	180	501	224
V/C Ratio(X)	0.81	0.63	0.20	0.12	0.79	0.79	0.47	0.77	0.10	0.56	0.66	0.61
Avail Cap(c_a), veh/h	562	2394	740	758	1308	685	627	1735	773	281	1498	668
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	38.7	33.0	30.0	28.4	28.0	28.0	33.1	29.7	6.4	41.7	36.7	19.4
Incr Delay (d2), s/veh	4.2	0.6	0.3	0.0	2.8	5.3	0.2	1.3	0.1	1.0	1.5	2.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	4.1	1.1	0.8	8.1	8.9	2.7	7.3	0.7	1.1	3.4	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.9	33.6	30.3	28.4	30.8	33.3	33.3	31.0	6.5	42.7	38.2	22.1
LnGrp LOS	D	C	C	C	C	C	C	C	A	D	D	C
Approach Vol, veh/h		1049			1414			1117			567	
Approach Delay, s/veh		36.3			31.5			30.6			35.1	
Approach LOS		D			C			C			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.2	30.9	25.6	24.2	21.9	18.3	15.1	34.7				
Change Period (Y+Rc), s	4.6	5.8	6.2	* 6.2	5.8	* 5.8	4.6	6.2				
Max Green Setting (Gmax), s	7.2	43.2	6.9	* 42	13.1	* 37	14.4	34.0				
Max Q Clear Time (g_c+I1), s	4.5	19.8	3.9	12.4	8.7	9.8	10.2	22.5				
Green Ext Time (p_c), s	0.0	5.2	0.0	4.4	0.2	2.4	0.3	5.9				

Intersection Summary

HCM 6th Ctrl Delay	33.0
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↕			↕
Traffic Vol, veh/h	0	6	184	5	0	261
Future Vol, veh/h	0	6	184	5	0	261
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	89	89	89	89	89	89
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	7	207	6	0	293

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	-	107	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	933	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	-	933	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.9	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	933
HCM Lane V/C Ratio	-	-	0.007
HCM Control Delay (s)	-	-	8.9
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	0

Timings  
3: Indian Av. & Ramona Exwy.

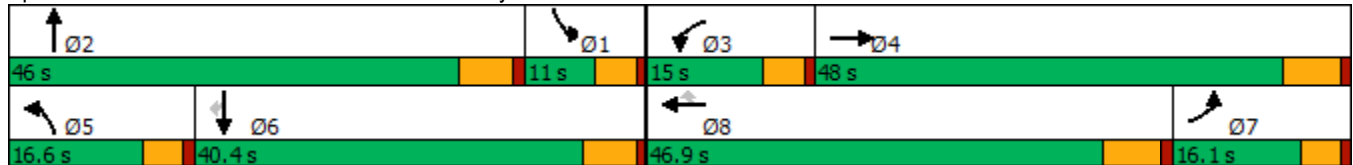


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↖	↕↕↕	↖	↕↕↕	↖	↖	↕↕	↖	↕↕	↖
Traffic Volume (vph)	76	1545	115	1108	30	127	83	75	152	34
Future Volume (vph)	76	1545	115	1108	30	127	83	75	152	34
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2	1	6	
Permitted Phases					8					6
Detector Phase	7	4	3	8	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	46.2	9.6	40.2	40.2	9.6	43.8	9.6	34.8	34.8
Total Split (s)	16.1	48.0	15.0	46.9	46.9	16.6	46.0	11.0	40.4	40.4
Total Split (%)	13.4%	40.0%	12.5%	39.1%	39.1%	13.8%	38.3%	9.2%	33.7%	33.7%
Yellow Time (s)	3.6	5.2	3.6	5.2	5.2	3.6	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
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	6.2	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 96.5  
 Natural Cycle: 110  
 Control Type: Actuated-Uncoordinated

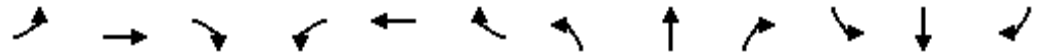
Splits and Phases: 3: Indian Av. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
 3: Indian Av. & Ramona Exwy.

Ramona-Indian Warehouse Project (JN 13758)

05/20/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑		↘	↑↑↑	↗	↘	↑↑		↘	↑↑	↗
Traffic Volume (veh/h)	76	1545	154	115	1108	30	127	83	35	75	152	34
Future Volume (veh/h)	76	1545	154	115	1108	30	127	83	35	75	152	34
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	78	1577	135	117	1131	9	130	85	16	77	155	6
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	323	2095	179	149	1630	506	164	387	71	137	458	204
Arrive On Green	0.18	0.43	0.43	0.08	0.31	0.31	0.09	0.13	0.13	0.08	0.13	0.13
Sat Flow, veh/h	1810	4867	416	1810	5187	1610	1810	3046	559	1810	3610	1610
Grp Volume(v), veh/h	78	1120	592	117	1131	9	130	49	52	77	155	6
Grp Sat Flow(s),veh/h/ln	1810	1729	1825	1810	1729	1610	1810	1805	1799	1810	1805	1610
Q Serve(g_s), s	2.9	21.5	21.5	5.0	15.1	0.3	5.5	1.9	2.0	3.2	3.1	0.2
Cycle Q Clear(g_c), s	2.9	21.5	21.5	5.0	15.1	0.3	5.5	1.9	2.0	3.2	3.1	0.2
Prop In Lane	1.00		0.23	1.00		1.00	1.00		0.31	1.00		1.00
Lane Grp Cap(c), veh/h	323	1489	786	149	1630	506	164	229	228	137	458	204
V/C Ratio(X)	0.24	0.75	0.75	0.78	0.69	0.02	0.79	0.22	0.23	0.56	0.34	0.03
Avail Cap(c_a), veh/h	323	1836	969	239	2681	832	276	922	919	147	1586	708
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.8	18.9	18.9	35.4	23.7	18.6	35.1	30.8	30.9	35.1	31.4	11.6
Incr Delay (d2), s/veh	0.1	1.4	2.7	3.4	0.5	0.0	3.2	0.5	0.5	2.1	0.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	7.5	8.2	2.2	5.5	0.1	2.5	0.8	0.9	1.4	1.3	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.9	20.3	21.6	38.9	24.2	18.6	38.3	31.3	31.4	37.2	31.8	11.7
LnGrp LOS	C	C	C	D	C	B	D	C	C	D	C	B
Approach Vol, veh/h		1790			1257			231			238	
Approach Delay, s/veh		21.0			25.5			35.2			33.0	
Approach LOS		C			C			D			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.8	15.8	11.1	40.1	11.8	15.8	20.3	30.9				
Change Period (Y+Rc), s	5.8	* 5.8	4.6	6.2	4.6	5.8	6.2	* 6.2				
Max Green Setting (Gmax), s	6.4	* 40	10.4	41.8	12.0	34.6	11.5	* 41				
Max Q Clear Time (g_c+I1), s	5.2	4.0	7.0	23.5	7.5	5.1	4.9	17.1				
Green Ext Time (p_c), s	0.0	0.5	0.0	10.4	0.1	0.9	0.0	7.7				

Intersection Summary

HCM 6th Ctrl Delay	24.4
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
6: Perris Bl. & Ramona Exwy.

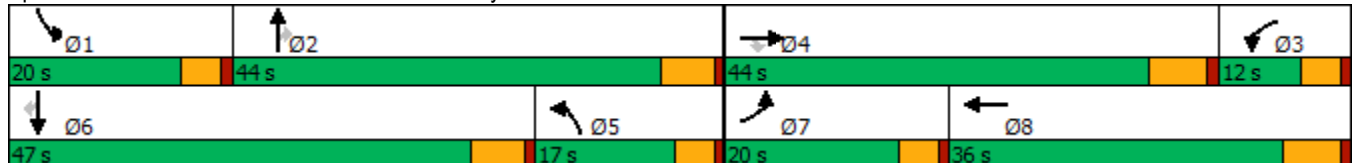


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑↑	↗	↔↔	↑↑↑	↔↔	↑↑	↗	↔↔	↑↑	↗
Traffic Volume (vph)	254	1149	252	94	790	201	379	102	248	607	191
Future Volume (vph)	254	1149	252	94	790	201	379	102	248	607	191
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8	5	2		1	6	
Permitted Phases			4					2			6
Detector Phase	7	4	4	3	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	36.2	36.2	9.6	34.2	9.6	38.8	38.8	9.6	41.8	41.8
Total Split (s)	20.0	44.0	44.0	12.0	36.0	17.0	44.0	44.0	20.0	47.0	47.0
Total Split (%)	16.7%	36.7%	36.7%	10.0%	30.0%	14.2%	36.7%	36.7%	16.7%	39.2%	39.2%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	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
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 92.7  
 Natural Cycle: 100  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 6: Perris Bl. & Ramona Exwy.






































HCM 6th Signalized Intersection Summary  
6: Perris Bl. & Ramona Exwy.

Ramona-Indian Warehouse Project (JN 13758)

05/20/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  		 	  		 	 		 	 	
Traffic Volume (veh/h)	254	1149	252	94	790	127	201	379	102	248	607	191
Future Volume (veh/h)	254	1149	252	94	790	127	201	379	102	248	607	191
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		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	262	1185	160	97	814	118	207	391	54	256	626	123
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	351	1686	522	190	1367	197	292	885	394	345	887	394
Arrive On Green	0.10	0.33	0.33	0.05	0.30	0.30	0.08	0.25	0.25	0.10	0.25	0.25
Sat Flow, veh/h	3510	5187	1607	3510	4576	659	3510	3610	1608	3510	3610	1604
Grp Volume(v), veh/h	262	1185	160	97	614	318	207	391	54	256	626	123
Grp Sat Flow(s),veh/h/ln	1755	1729	1607	1755	1729	1777	1755	1805	1608	1755	1805	1604
Q Serve(g_s), s	6.0	16.4	6.1	2.2	12.4	12.6	4.7	7.5	1.6	5.8	13.0	3.6
Cycle Q Clear(g_c), s	6.0	16.4	6.1	2.2	12.4	12.6	4.7	7.5	1.6	5.8	13.0	3.6
Prop In Lane	1.00		1.00	1.00		0.37	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	351	1686	522	190	1033	531	292	885	394	345	887	394
V/C Ratio(X)	0.75	0.70	0.31	0.51	0.59	0.60	0.71	0.44	0.14	0.74	0.71	0.31
Avail Cap(c_a), veh/h	658	2385	739	316	1253	644	529	1677	747	658	1809	804
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	36.0	24.3	20.8	37.8	24.6	24.6	36.7	26.3	13.1	36.1	28.3	12.4
Incr Delay (d2), s/veh	1.2	0.5	0.3	0.8	0.6	1.1	1.2	0.3	0.2	1.2	1.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	6.0	2.1	0.9	4.6	4.9	2.0	3.0	0.8	2.4	5.3	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.2	24.8	21.1	38.6	25.1	25.7	37.9	26.6	13.2	37.2	29.3	12.8
LnGrp LOS	D	C	C	D	C	C	D	C	B	D	C	B
Approach Vol, veh/h		1607			1029			652			1005	
Approach Delay, s/veh		26.5			26.6			29.1			29.3	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.7	26.0	10.7	32.9	12.6	26.0	12.8	30.8				
Change Period (Y+Rc), s	4.6	5.8	6.2	* 6.2	5.8	* 5.8	4.6	6.2				
Max Green Setting (Gmax), s	15.4	38.2	7.4	* 38	12.4	* 41	15.4	29.8				
Max Q Clear Time (g_c+I1), s	7.8	9.5	4.2	18.4	6.7	15.0	8.0	14.6				
Green Ext Time (p_c), s	0.3	2.6	0.0	8.0	0.2	4.4	0.3	4.8				

Intersection Summary

HCM 6th Ctrl Delay	27.6
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

**APPENDIX 4.1:**  
**POST-PROCESSING WORKSHEETS**

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Project: Ramona-Indian Warehouse Project  
 Scenario: 2040

Job #: 13758  
 Analyst: RV  
 Date: 6/30/21

LOCATION: Indian & Ramona  
 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	DIFF-ERENCE	% CHANGE	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE
NORTH BOUND	Left	1	131	130	13000%	1	252	251	25100%
	Through	2	127	125	6250%	2	249	247	12350%
	Right	1	51	50	5000%	1	200	199	19900%
	<b>NB Total</b>	<b>4</b>	<b>309</b>	<b>305</b>	<b>7625%</b>	<b>4</b>	<b>701</b>	<b>697</b>	<b>17425%</b>
SOUTH BOUND	Left	1	58	57	5700%	1	292	291	29100%
	Through	2	143	141	7050%	2	341	339	16950%
	Right	1	149	148	14800%	1	368	367	36700%
	<b>SB Total</b>	<b>4</b>	<b>350</b>	<b>346</b>	<b>8650%</b>	<b>4</b>	<b>1,001</b>	<b>997</b>	<b>24925%</b>
EAST BOUND	Left	1	195	194	19400%	1	236	235	23500%
	Through	2	703	701	35050%	2	1,698	1,696	84800%
	Right	1	192	191	19100%	1	220	219	21900%
	<b>EB Total</b>	<b>4</b>	<b>1,090</b>	<b>1,086</b>	<b>27150%</b>	<b>4</b>	<b>2,154</b>	<b>2,150</b>	<b>53750%</b>
WEST BOUND	Left	1	177	176	17600%	1	89	88	8800%
	Through	2	1,664	1,662	83100%	2	861	859	42950%
	Right	1	179	178	17800%	1	95	94	9400%
	<b>WB Total</b>	<b>4</b>	<b>2,020</b>	<b>2,016</b>	<b>50400%</b>	<b>4</b>	<b>1,045</b>	<b>1,041</b>	<b>26025%</b>
<b>TOTAL ENTERING VOLUME</b>		<b>16</b>	<b>3,769</b>	<b>3753</b>	<b>23456%</b>	<b>16</b>	<b>4,901</b>	<b>4885</b>	<b>30531%</b>

FORECAST PEAK HOUR TO ADT COMPARISON						
		VOLUMES		PERCENT OF ADT		ADT
		AM	PM	AM	PM	
North Leg	Inbound	350	1,001			
North Leg	Outbound	501	580			
<b>North Leg</b>	<b>TOTAL</b>	<b>851</b>	<b>1,581</b>	<b>8%</b>	<b>14%</b>	<b>11,045</b>
South Leg	Inbound	309	701			
South Leg	Outbound	512	650			
<b>South Leg</b>	<b>TOTAL</b>	<b>821</b>	<b>1,351</b>	<b>6%</b>	<b>10%</b>	<b>13,392</b>
East Leg	Inbound	2,020	1,045			
East Leg	Outbound	812	2,190			
<b>East Leg</b>	<b>TOTAL</b>	<b>2,832</b>	<b>3,235</b>	<b>7%</b>	<b>8%</b>	<b>38,073</b>
West Leg	Inbound	1,090	2,154			
West Leg	Outbound	1,944	1,481			
<b>West Leg</b>	<b>TOTAL</b>	<b>3,034</b>	<b>3,635</b>	<b>8%</b>	<b>9%</b>	<b>40,338</b>
<b>OVERALL TOTAL</b>		<b>7,538</b>	<b>9,802</b>	<b>7%</b>	<b>10%</b>	<b>102,848</b>

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Project: Ramona-Indian Warehouse Project  
 Scenario: 2040

Job #: 13758  
 Analyst: RV  
 Date: 6/30/21

LOCATION: Perris & Ramona  
 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	DIFF-ERENCE	% CHANGE	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE
NORTH BOUND	Left	1	304	303	30300%	1	195	194	19400%
	Through	2	760	758	37900%	2	649	647	32350%
	Right	1	116	115	11500%	1	246	245	24500%
	<b>NB Total</b>	<b>4</b>	<b>1,180</b>	<b>1,176</b>	<b>29400%</b>	<b>4</b>	<b>1,090</b>	<b>1,086</b>	<b>27150%</b>
SOUTH BOUND	Left	1	143	142	14200%	1	355	354	35400%
	Through	2	513	511	25550%	2	835	833	41650%
	Right	1	374	373	37300%	1	281	280	28000%
	<b>SB Total</b>	<b>4</b>	<b>1,030</b>	<b>1,026</b>	<b>25650%</b>	<b>4</b>	<b>1,471</b>	<b>1,467</b>	<b>36675%</b>
EAST BOUND	Left	1	277	276	27600%	1	412	411	41100%
	Through	2	381	379	18950%	2	1,409	1,407	70350%
	Right	1	152	151	15100%	1	368	367	36700%
	<b>EB Total</b>	<b>4</b>	<b>810</b>	<b>806</b>	<b>20150%</b>	<b>4</b>	<b>2,189</b>	<b>2,185</b>	<b>54625%</b>
WEST BOUND	Left	1	205	204	20400%	1	187	186	18600%
	Through	2	1,342	1,340	67000%	2	565	563	28150%
	Right	1	373	372	37200%	1	209	208	20800%
	<b>WB Total</b>	<b>4</b>	<b>1,920</b>	<b>1,916</b>	<b>47900%</b>	<b>4</b>	<b>961</b>	<b>957</b>	<b>23925%</b>
<b>TOTAL ENTERING VOLUME</b>		<b>16</b>	<b>4,940</b>	<b>4924</b>	<b>30775%</b>	<b>16</b>	<b>5,711</b>	<b>5695</b>	<b>35594%</b>

FORECAST PEAK HOUR TO ADT COMPARISON						
		VOLUMES		PERCENT OF ADT		ADT
		AM	PM	AM	PM	
North Leg	Inbound	1,030	1,471			
North Leg	Outbound	1,410	1,270			
<b>North Leg</b>	<b>TOTAL</b>	<b>2,440</b>	<b>2,741</b>	<b>7%</b>	<b>8%</b>	<b>32,687</b>
South Leg	Inbound	1,180	1,090			
South Leg	Outbound	870	1,390			
<b>South Leg</b>	<b>TOTAL</b>	<b>2,050</b>	<b>2,480</b>	<b>8%</b>	<b>9%</b>	<b>26,493</b>
East Leg	Inbound	1,920	961			
East Leg	Outbound	640	2,010			
<b>East Leg</b>	<b>TOTAL</b>	<b>2,560</b>	<b>2,971</b>	<b>7%</b>	<b>8%</b>	<b>34,987</b>
West Leg	Inbound	810	2,189			
West Leg	Outbound	2,020	1,041			
<b>West Leg</b>	<b>TOTAL</b>	<b>2,830</b>	<b>3,230</b>	<b>7%</b>	<b>8%</b>	<b>38,073</b>
<b>OVERALL TOTAL</b>		<b>9,880</b>	<b>11,422</b>	<b>7%</b>	<b>9%</b>	<b>132,240</b>

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**APPENDIX 5.1:**

**E+P CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS**

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Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↕			↕
Traffic Vol, veh/h	0	3	429	41	0	133
Future Vol, veh/h	0	3	429	41	0	133
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	84	84	84	84	84	84
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	4	511	49	0	158

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	-	280	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	723	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	-	723	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	723
HCM Lane V/C Ratio	-	-	0.005
HCM Control Delay (s)	-	-	10
HCM Lane LOS	-	-	B
HCM 95th %tile Q(veh)	-	-	0



Intersection						
Int Delay, s/veh	0.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↕		↖	↕
Traffic Vol, veh/h	0	6	463	14	10	123
Future Vol, veh/h	0	6	463	14	10	123
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	200	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	7	503	15	11	134

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	-	259	0	0	518
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	4.1
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	2.2
Pot Cap-1 Maneuver	0	746	-	-	1058
Stage 1	0	-	-	-	-
Stage 2	0	-	-	-	-
Platoon blocked, %					
Mov Cap-1 Maneuver	-	746	-	-	1058
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.9	0	0.6
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	746	1058
HCM Lane V/C Ratio	-	-	0.009	0.01
HCM Control Delay (s)	-	-	9.9	8.4
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0

Timings  
3: Indian Av. & Ramona Exwy.

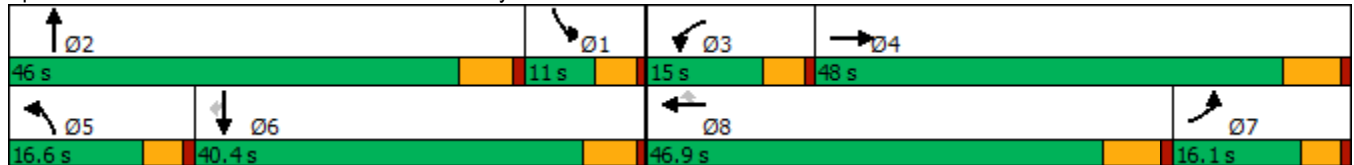


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↖	↕↕↕	↖	↕↕↕	↖	↖	↕↕	↖	↕↕	↖
Traffic Volume (vph)	185	1025	60	1531	118	86	175	18	69	36
Future Volume (vph)	185	1025	60	1531	118	86	175	18	69	36
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2	1	6	
Permitted Phases					8					6
Detector Phase	7	4	3	8	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	46.2	9.6	40.2	40.2	9.6	43.8	9.6	34.8	34.8
Total Split (s)	16.1	48.0	15.0	46.9	46.9	16.6	46.0	11.0	40.4	40.4
Total Split (%)	13.4%	40.0%	12.5%	39.1%	39.1%	13.8%	38.3%	9.2%	33.7%	33.7%
Yellow Time (s)	3.6	5.2	3.6	5.2	5.2	3.6	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
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	6.2	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 90.1  
 Natural Cycle: 110  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 3: Indian Av. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
3: Indian Av. & Ramona Exwy.

Ramona-Indian Warehouse Project (JN 13758)

05/20/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↖	↑↑↑	↗	↖	↑↑		↖	↑↑	↗
Traffic Volume (veh/h)	185	1025	95	60	1531	118	86	175	29	18	69	36
Future Volume (veh/h)	185	1025	95	60	1531	118	86	175	29	18	69	36
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	189	1046	95	61	1562	91	88	179	19	18	70	30
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	227	2433	221	83	2095	650	114	430	45	83	462	206
Arrive On Green	0.13	0.50	0.50	0.05	0.40	0.40	0.06	0.13	0.13	0.05	0.13	0.13
Sat Flow, veh/h	1810	4840	439	1810	5187	1610	1810	3295	346	1810	3610	1610
Grp Volume(v), veh/h	189	747	394	61	1562	91	88	97	101	18	70	30
Grp Sat Flow(s),veh/h/ln	1810	1729	1821	1810	1729	1610	1810	1805	1836	1810	1805	1610
Q Serve(g_s), s	8.3	11.2	11.2	2.7	20.9	2.9	3.9	4.0	4.1	0.8	1.4	0.9
Cycle Q Clear(g_c), s	8.3	11.2	11.2	2.7	20.9	2.9	3.9	4.0	4.1	0.8	1.4	0.9
Prop In Lane	1.00		0.24	1.00		1.00	1.00		0.19	1.00		1.00
Lane Grp Cap(c), veh/h	227	1738	915	83	2095	650	114	236	240	83	462	206
V/C Ratio(X)	0.83	0.43	0.43	0.73	0.75	0.14	0.77	0.41	0.42	0.22	0.15	0.15
Avail Cap(c_a), veh/h	256	1775	934	231	2592	805	267	891	906	142	1534	684
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.8	12.8	12.9	38.4	20.7	15.3	37.6	32.5	32.6	37.5	31.6	14.9
Incr Delay (d2), s/veh	17.0	0.2	0.3	4.6	0.9	0.1	4.1	1.1	1.2	0.5	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	4.4	3.6	3.8	1.2	7.4	1.0	1.8	1.8	1.8	0.3	0.6	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.8	13.0	13.2	43.0	21.7	15.4	41.7	33.7	33.7	37.9	31.7	15.2
LnGrp LOS	D	B	B	D	C	B	D	C	C	D	C	B
Approach Vol, veh/h		1330			1714			286			118	
Approach Delay, s/veh		18.6			22.1			36.2			28.5	
Approach LOS		B			C			D			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.5	16.4	8.3	47.1	9.7	16.2	16.4	39.1				
Change Period (Y+Rc), s	5.8	* 5.8	4.6	6.2	4.6	5.8	6.2	* 6.2				
Max Green Setting (Gmax), s	6.4	* 40	10.4	41.8	12.0	34.6	11.5	* 41				
Max Q Clear Time (g_c+I1), s	2.8	6.1	4.7	13.2	5.9	3.4	10.3	22.9				
Green Ext Time (p_c), s	0.0	1.1	0.0	7.7	0.0	0.4	0.0	10.0				

Intersection Summary

HCM 6th Ctrl Delay	22.1
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑	↑		↑
Traffic Vol, veh/h	0	1072	1705	10	0	3
Future Vol, veh/h	0	1072	1705	10	0	3
Conflicting Peds, #/hr	0	0	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	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	1165	1853	11	0	3

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	-	0	-	0	- 927
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	-	-	-	0 235
Stage 1	0	-	-	-	0 -
Stage 2	0	-	-	-	0 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	- 235
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	20.5
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	235
HCM Lane V/C Ratio	-	-	-	0.014
HCM Control Delay (s)	-	-	-	20.5
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	0

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↑↑	↑↑↑	
Traffic Vol, veh/h	0	28	0	1221	613	34
Future Vol, veh/h	0	28	0	1221	613	34
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	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	30	0	1327	666	37

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	-	352	-	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	555	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	555	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.9	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	555	-	-
HCM Lane V/C Ratio	-	0.055	-	-
HCM Control Delay (s)	-	11.9	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0.2	-	-

Timings  
6: Perris Bl. & Ramona Exwy.

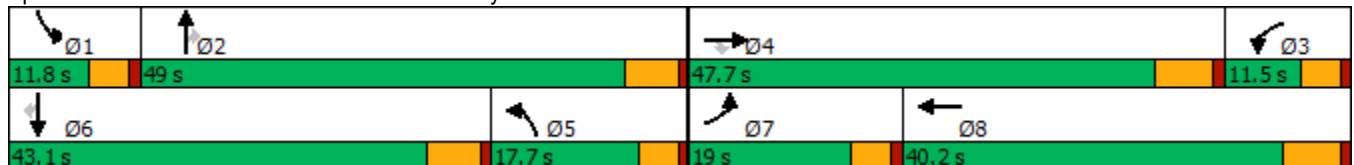


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↖	↑↑↑	↗	↖↖	↑↑↑	↖↖	↑↑	↗	↖↖	↑↑	↗
Traffic Volume (vph)	323	642	107	92	1182	299	763	91	102	327	212
Future Volume (vph)	323	642	107	92	1182	299	763	91	102	327	212
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8	5	2		1	6	
Permitted Phases			4					2			6
Detector Phase	7	4	4	3	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	36.2	36.2	9.6	34.2	9.6	38.8	38.8	9.6	41.8	41.8
Total Split (s)	19.0	47.7	47.7	11.5	40.2	17.7	49.0	49.0	11.8	43.1	43.1
Total Split (%)	15.8%	39.8%	39.8%	9.6%	33.5%	14.8%	40.8%	40.8%	9.8%	35.9%	35.9%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	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
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 103.9  
 Natural Cycle: 100  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 6: Perris Bl. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
6: Perris Bl. & Ramona Exwy.

Ramona-Indian Warehouse Project (JN 13758)

05/20/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑↑	↗	↔↔	↑↑↑		↔↔	↑↑	↗	↔↔	↑↑	↗
Traffic Volume (veh/h)	323	642	107	92	1182	136	299	763	91	102	327	212
Future Volume (veh/h)	323	642	107	92	1182	136	299	763	91	102	327	212
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	330	655	64	94	1206	120	305	779	45	104	334	157
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	409	1035	320	760	1521	151	621	1009	450	180	508	227
Arrive On Green	0.12	0.20	0.20	0.22	0.32	0.32	0.18	0.28	0.28	0.05	0.14	0.14
Sat Flow, veh/h	3510	5187	1603	3510	4793	477	3510	3610	1608	3510	3610	1610
Grp Volume(v), veh/h	330	655	64	94	870	456	305	779	45	104	334	157
Grp Sat Flow(s),veh/h/ln	1755	1729	1603	1755	1729	1812	1755	1805	1608	1755	1805	1610
Q Serve(g_s), s	8.3	10.4	3.0	1.9	20.7	20.7	7.1	17.9	1.0	2.6	7.9	6.1
Cycle Q Clear(g_c), s	8.3	10.4	3.0	1.9	20.7	20.7	7.1	17.9	1.0	2.6	7.9	6.1
Prop In Lane	1.00		1.00	1.00		0.26	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	409	1035	320	760	1097	575	621	1009	450	180	508	227
V/C Ratio(X)	0.81	0.63	0.20	0.12	0.79	0.79	0.49	0.77	0.10	0.58	0.66	0.69
Avail Cap(c_a), veh/h	561	2388	738	760	1304	684	621	1730	771	280	1494	666
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	38.8	33.1	30.1	28.4	28.1	28.1	33.4	29.8	6.4	41.8	36.7	19.6
Incr Delay (d2), s/veh	4.2	0.6	0.3	0.0	2.9	5.4	0.2	1.3	0.1	1.1	1.5	3.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	4.1	1.1	0.8	8.2	9.0	2.9	7.4	0.7	1.1	3.4	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.0	33.7	30.4	28.4	31.0	33.5	33.7	31.1	6.5	42.9	38.1	23.4
LnGrp LOS	D	C	C	C	C	C	C	C	A	D	D	C
Approach Vol, veh/h		1049			1420			1129			595	
Approach Delay, s/veh		36.4			31.6			30.8			35.1	
Approach LOS		D			C			C			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.2	31.0	25.7	24.2	21.7	18.5	15.1	34.8				
Change Period (Y+Rc), s	4.6	5.8	6.2	* 6.2	5.8	* 5.8	4.6	6.2				
Max Green Setting (Gmax), s	7.2	43.2	6.9	* 42	13.1	* 37	14.4	34.0				
Max Q Clear Time (g_c+11), s	4.6	19.9	3.9	12.4	9.1	9.9	10.3	22.7				
Green Ext Time (p_c), s	0.0	5.2	0.0	4.4	0.2	2.5	0.3	5.9				

Intersection Summary

HCM 6th Ctrl Delay	33.1
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↕			↕
Traffic Vol, veh/h	0	6	210	28	0	271
Future Vol, veh/h	0	6	210	28	0	271
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	89	89	89	89	89	89
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	7	236	31	0	304

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	-	134	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	897	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	-	897	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	897
HCM Lane V/C Ratio	-	-	0.008
HCM Control Delay (s)	-	-	9
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	0



Intersection						
Int Delay, s/veh	0.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↕		↖	↕
Traffic Vol, veh/h	0	11	228	4	10	261
Future Vol, veh/h	0	11	228	4	10	261
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	200	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	12	248	4	11	284

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	-	126	0	0	252
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	4.1
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	2.2
Pot Cap-1 Maneuver	0	907	-	-	1325
Stage 1	0	-	-	-	-
Stage 2	0	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	-	907	-	-	1325
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9	0	0.3
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	907	1325
HCM Lane V/C Ratio	-	-	0.013	0.008
HCM Control Delay (s)	-	-	9	7.7
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0

Timings  
3: Indian Av. & Ramona Exwy.

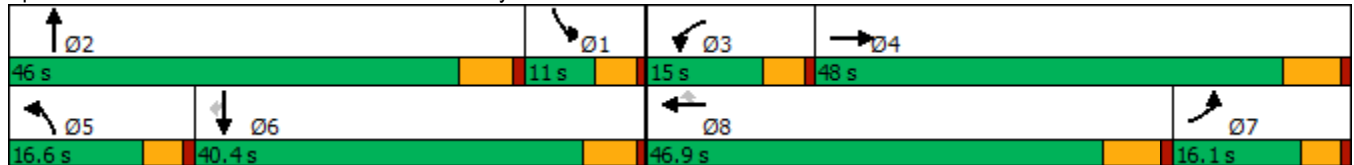


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↖	↕↕↕	↖	↕↕↕	↖	↖	↕↕	↖	↕↕	↖
Traffic Volume (vph)	93	1545	122	1129	54	127	85	75	152	34
Future Volume (vph)	93	1545	122	1129	54	127	85	75	152	34
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2	1	6	
Permitted Phases					8					6
Detector Phase	7	4	3	8	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	46.2	9.6	40.2	40.2	9.6	43.8	9.6	34.8	34.8
Total Split (s)	16.1	48.0	15.0	46.9	46.9	16.6	46.0	11.0	40.4	40.4
Total Split (%)	13.4%	40.0%	12.5%	39.1%	39.1%	13.8%	38.3%	9.2%	33.7%	33.7%
Yellow Time (s)	3.6	5.2	3.6	5.2	5.2	3.6	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
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	6.2	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 96.8  
 Natural Cycle: 110  
 Control Type: Actuated-Uncoordinated























Splits and Phases: 3: Indian Av. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
3: Indian Av. & Ramona Exwy.

Ramona-Indian Warehouse Project (JN 13758)

05/20/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	93	1545	154	122	1129	54	127	85	35	75	152	34
Future Volume (veh/h)	93	1545	154	122	1129	54	127	85	35	75	152	34
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	95	1577	135	124	1152	33	130	87	16	77	155	6
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	320	2088	179	157	1655	514	164	385	69	137	455	203
Arrive On Green	0.18	0.43	0.43	0.09	0.32	0.32	0.09	0.13	0.13	0.08	0.13	0.13
Sat Flow, veh/h	1810	4867	416	1810	5187	1610	1810	3058	549	1810	3610	1610
Grp Volume(v), veh/h	95	1120	592	124	1152	33	130	50	53	77	155	6
Grp Sat Flow(s),veh/h/ln	1810	1729	1825	1810	1729	1610	1810	1805	1801	1810	1805	1610
Q Serve(g_s), s	3.6	21.7	21.7	5.3	15.4	1.1	5.6	2.0	2.1	3.3	3.1	0.2
Cycle Q Clear(g_c), s	3.6	21.7	21.7	5.3	15.4	1.1	5.6	2.0	2.1	3.3	3.1	0.2
Prop In Lane	1.00		0.23	1.00		1.00	1.00		0.30	1.00		1.00
Lane Grp Cap(c), veh/h	320	1484	783	157	1655	514	164	228	227	137	455	203
V/C Ratio(X)	0.30	0.75	0.76	0.79	0.70	0.06	0.79	0.22	0.23	0.56	0.34	0.03
Avail Cap(c_a), veh/h	320	1822	962	237	2661	826	274	915	913	146	1575	702
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.4	19.1	19.1	35.5	23.6	18.8	35.3	31.2	31.2	35.4	31.7	11.9
Incr Delay (d2), s/veh	0.2	1.5	2.8	5.0	0.5	0.1	3.2	0.5	0.5	2.2	0.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	7.6	8.3	2.4	5.6	0.4	2.5	0.9	0.9	1.5	1.3	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.6	20.6	21.9	40.5	24.2	18.8	38.5	31.7	31.7	37.6	32.1	11.9
LnGrp LOS	C	C	C	D	C	B	D	C	C	D	C	B
Approach Vol, veh/h		1807			1309			233			238	
Approach Delay, s/veh		21.4			25.6			35.5			33.4	
Approach LOS		C			C			D			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.8	15.8	11.5	40.2	11.8	15.8	20.2	31.5				
Change Period (Y+Rc), s	5.8	* 5.8	4.6	6.2	4.6	5.8	6.2	* 6.2				
Max Green Setting (Gmax), s	6.4	* 40	10.4	41.8	12.0	34.6	11.5	* 41				
Max Q Clear Time (g_c+I1), s	5.3	4.1	7.3	23.7	7.6	5.1	5.6	17.4				
Green Ext Time (p_c), s	0.0	0.5	0.0	10.3	0.1	0.9	0.0	7.9				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				24.6								
HCM 6th LOS				C								
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑	↑		↑
Traffic Vol, veh/h	0	1655	1293	3	0	12
Future Vol, veh/h	0	1655	1293	3	0	12
Conflicting Peds, #/hr	0	0	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	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	1799	1405	3	0	13

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	-	0	-	0	703
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	-	-	-	330
Stage 1	0	-	-	-	-
Stage 2	0	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	330
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

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

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	330
HCM Lane V/C Ratio	-	-	-	0.04
HCM Control Delay (s)	-	-	-	16.4
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	0.1

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↑↑	↑↑↑	
Traffic Vol, veh/h	0	48	0	760	1046	38
Future Vol, veh/h	0	48	0	760	1046	38
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	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	52	0	826	1137	41

Major/Minor	Minor2	Major1	Major2		
Conflicting Flow All	-	589	-	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	391	0	-	-
Stage 1	0	-	0	-	-
Stage 2	0	-	0	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	-	391	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15.6	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	391	-	-
HCM Lane V/C Ratio	-	0.133	-	-
HCM Control Delay (s)	-	15.6	-	-
HCM Lane LOS	-	C	-	-
HCM 95th %tile Q(veh)	-	0.5	-	-

Timings  
6: Perris Bl. & Ramona Exwy.

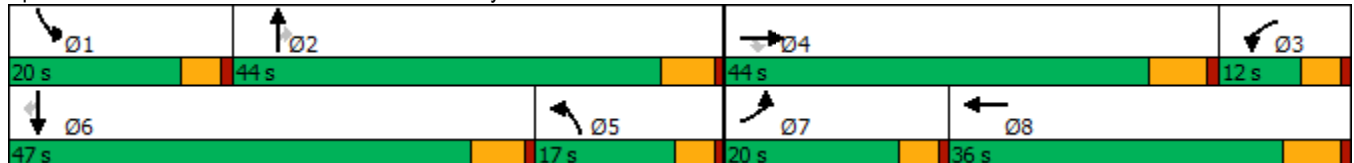


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑↑	↗	↔↔	↑↑↑	↔↔	↑↑	↗	↔↔	↑↑	↗
Traffic Volume (vph)	254	1149	252	94	795	207	379	102	254	617	223
Future Volume (vph)	254	1149	252	94	795	207	379	102	254	617	223
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8	5	2		1	6	
Permitted Phases			4					2			6
Detector Phase	7	4	4	3	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	36.2	36.2	9.6	34.2	9.6	38.8	38.8	9.6	41.8	41.8
Total Split (s)	20.0	44.0	44.0	12.0	36.0	17.0	44.0	44.0	20.0	47.0	47.0
Total Split (%)	16.7%	36.7%	36.7%	10.0%	30.0%	14.2%	36.7%	36.7%	16.7%	39.2%	39.2%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	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
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 93.5  
 Natural Cycle: 100  
 Control Type: Actuated-Uncoordinated


































Splits and Phases: 6: Perris Bl. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
6: Perris Bl. & Ramona Exwy.

Ramona-Indian Warehouse Project (JN 13758)

05/20/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  		 	  		 	 		 	 	
Traffic Volume (veh/h)	254	1149	252	94	795	127	207	379	102	254	617	223
Future Volume (veh/h)	254	1149	252	94	795	127	207	379	102	254	617	223
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		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	262	1185	160	97	820	118	213	391	54	262	636	156
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	350	1678	520	189	1360	194	297	897	400	350	900	400
Arrive On Green	0.10	0.32	0.32	0.05	0.30	0.30	0.08	0.25	0.25	0.10	0.25	0.25
Sat Flow, veh/h	3510	5187	1607	3510	4581	655	3510	3610	1608	3510	3610	1604
Grp Volume(v), veh/h	262	1185	160	97	618	320	213	391	54	262	636	156
Grp Sat Flow(s),veh/h/ln	1755	1729	1607	1755	1729	1778	1755	1805	1608	1755	1805	1604
Q Serve(g_s), s	6.0	16.6	6.2	2.2	12.7	12.8	4.9	7.6	1.6	6.0	13.3	4.7
Cycle Q Clear(g_c), s	6.0	16.6	6.2	2.2	12.7	12.8	4.9	7.6	1.6	6.0	13.3	4.7
Prop In Lane	1.00		1.00	1.00		0.37	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	350	1678	520	189	1026	528	297	897	400	350	900	400
V/C Ratio(X)	0.75	0.71	0.31	0.51	0.60	0.61	0.72	0.44	0.14	0.75	0.71	0.39
Avail Cap(c_a), veh/h	651	2359	731	313	1240	638	524	1659	739	651	1790	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	36.4	24.6	21.1	38.3	25.0	25.1	37.1	26.3	13.2	36.4	28.4	12.7
Incr Delay (d2), s/veh	1.2	0.6	0.3	0.8	0.6	1.1	1.2	0.3	0.2	1.2	1.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	6.1	2.2	0.9	4.8	5.0	2.0	3.1	0.8	2.5	5.4	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.6	25.2	21.5	39.1	25.6	26.2	38.3	26.6	13.3	37.6	29.5	13.3
LnGrp LOS	D	C	C	D	C	C	D	C	B	D	C	B
Approach Vol, veh/h		1607			1035			658			1054	
Approach Delay, s/veh		26.9			27.0			29.3			29.1	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.9	26.5	10.7	33.1	12.8	26.5	12.9	30.9				
Change Period (Y+Rc), s	4.6	5.8	6.2	* 6.2	5.8	* 5.8	4.6	6.2				
Max Green Setting (Gmax), s	15.4	38.2	7.4	* 38	12.4	* 41	15.4	29.8				
Max Q Clear Time (g_c+I1), s	8.0	9.6	4.2	18.6	6.9	15.3	8.0	14.8				
Green Ext Time (p_c), s	0.3	2.6	0.0	8.0	0.2	4.6	0.3	4.8				

Intersection Summary

HCM 6th Ctrl Delay	27.8
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

**APPENDIX 6.1:**

**EAC (2023) CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS**



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Intersection												
Int Delay, s/veh	0.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	5	0	2	0	0	3	5	652	22	0	258	15
Future Vol, veh/h	5	0	2	0	0	3	5	652	22	0	258	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	150	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	5	0	2	0	0	3	5	709	24	0	280	16

Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	653	1031	148	871	1027	367	296	0	0	733	0	0
Stage 1	288	288	-	731	731	-	-	-	-	-	-	-
Stage 2	365	743	-	140	296	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	356	235	878	248	236	636	1277	-	-	881	-	-
Stage 1	701	677	-	384	430	-	-	-	-	-	-	-
Stage 2	632	425	-	854	672	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	353	234	878	247	235	636	1277	-	-	881	-	-
Mov Cap-2 Maneuver	353	234	-	247	235	-	-	-	-	-	-	-
Stage 1	698	677	-	382	428	-	-	-	-	-	-	-
Stage 2	626	423	-	852	672	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.6	10.7	0.1	0
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1277	-	-	426	636	881	-
HCM Lane V/C Ratio	0.004	-	-	0.018	0.005	-	-
HCM Control Delay (s)	7.8	-	-	13.6	10.7	0	-
HCM Lane LOS	A	-	-	B	B	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0	0	-

Timings  
3: Indian Av. & Ramona Exwy.

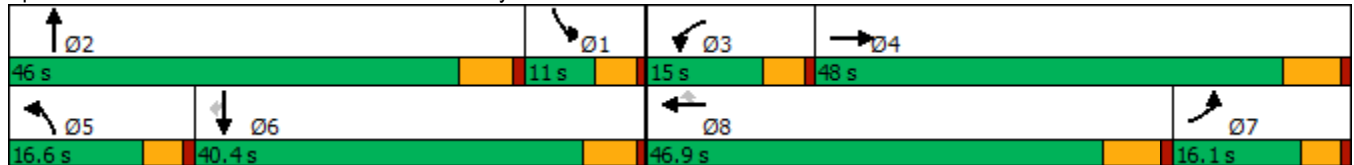


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↖	↕↕↕	↖	↕↕↕	↖	↖	↕↕	↖	↕↕	↖
Traffic Volume (vph)	335	1406	62	2476	156	108	188	20	99	141
Future Volume (vph)	335	1406	62	2476	156	108	188	20	99	141
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2	1	6	
Permitted Phases					8					6
Detector Phase	7	4	3	8	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	46.2	9.6	40.2	40.2	9.6	43.8	9.6	34.8	34.8
Total Split (s)	16.1	48.0	15.0	46.9	46.9	16.6	46.0	11.0	40.4	40.4
Total Split (%)	13.4%	40.0%	12.5%	39.1%	39.1%	13.8%	38.3%	9.2%	33.7%	33.7%
Yellow Time (s)	3.6	5.2	3.6	5.2	5.2	3.6	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
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	6.2	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 97.6  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated























Splits and Phases: 3: Indian Av. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
3: Indian Av. & Ramona Exwy.

Ramona-Indian Warehouse Project (JN 13758)

05/20/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	335	1406	121	62	2476	156	108	188	31	20	99	141
Future Volume (veh/h)	335	1406	121	62	2476	156	108	188	31	20	99	141
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	342	1435	121	63	2527	130	110	192	21	20	101	137
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	225	2611	220	82	2279	708	139	380	41	111	409	182
Arrive On Green	0.12	0.54	0.54	0.05	0.44	0.44	0.08	0.12	0.12	0.06	0.11	0.11
Sat Flow, veh/h	1810	4873	411	1810	5187	1610	1810	3284	355	1810	3610	1610
Grp Volume(v), veh/h	342	1018	538	63	2527	130	110	105	108	20	101	137
Grp Sat Flow(s),veh/h/ln	1810	1729	1826	1810	1729	1610	1810	1805	1834	1810	1805	1610
Q Serve(g_s), s	11.5	17.9	18.0	3.2	40.7	4.6	5.5	5.0	5.1	1.0	2.4	5.5
Cycle Q Clear(g_c), s	11.5	17.9	18.0	3.2	40.7	4.6	5.5	5.0	5.1	1.0	2.4	5.5
Prop In Lane	1.00		0.23	1.00		1.00	1.00		0.19	1.00		1.00
Lane Grp Cap(c), veh/h	225	1853	978	82	2279	708	139	209	212	111	409	182
V/C Ratio(X)	1.52	0.55	0.55	0.77	1.11	0.18	0.79	0.50	0.51	0.18	0.25	0.75
Avail Cap(c_a), veh/h	225	1853	978	203	2279	708	234	783	796	125	1349	601
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	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	40.6	14.1	14.2	43.7	26.0	15.8	42.0	38.4	38.5	41.2	37.5	20.3
Incr Delay (d2), s/veh	256.4	0.3	0.7	5.7	56.0	0.1	3.7	1.8	1.9	0.3	0.3	6.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	20.8	6.0	6.4	1.5	26.2	1.5	2.5	2.3	2.3	0.4	1.0	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	297.0	14.5	14.8	49.4	81.9	16.0	45.8	40.3	40.4	41.5	37.8	26.4
LnGrp LOS	F	B	B	D	F	B	D	D	D	D	D	C
Approach Vol, veh/h		1898			2720			323			258	
Approach Delay, s/veh		65.5			78.0			42.2			32.0	
Approach LOS		E			E			D			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.5	16.5	8.8	55.8	11.7	16.3	17.7	46.9				
Change Period (Y+Rc), s	5.8	* 5.8	4.6	6.2	4.6	5.8	6.2	* 6.2				
Max Green Setting (Gmax), s	6.4	* 40	10.4	41.8	12.0	34.6	11.5	* 41				
Max Q Clear Time (g_c+I1), s	3.0	7.1	5.2	20.0	7.5	7.5	13.5	42.7				
Green Ext Time (p_c), s	0.0	1.1	0.0	10.3	0.0	1.0	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	68.9
HCM 6th LOS	E

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
6: Perris Bl. & Ramona Exwy.

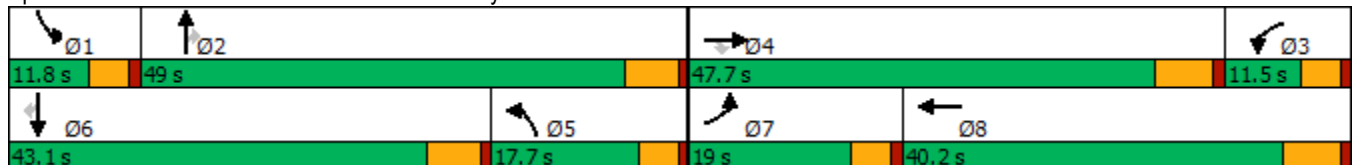


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑↑	↗	↔↔	↑↑↑	↔↔	↑↑	↗	↔↔	↑↑	↗
Traffic Volume (vph)	348	911	201	168	2101	369	850	119	143	395	218
Future Volume (vph)	348	911	201	168	2101	369	850	119	143	395	218
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8	5	2		1	6	
Permitted Phases			4					2			6
Detector Phase	7	4	4	3	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	36.2	36.2	9.6	34.2	9.6	38.8	38.8	9.6	41.8	41.8
Total Split (s)	19.0	47.7	47.7	11.5	40.2	17.7	49.0	49.0	11.8	43.1	43.1
Total Split (%)	15.8%	39.8%	39.8%	9.6%	33.5%	14.8%	40.8%	40.8%	9.8%	35.9%	35.9%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	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
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 109.4  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated


































Splits and Phases: 6: Perris Bl. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
6: Perris Bl. & Ramona Exwy.

Ramona-Indian Warehouse Project (JN 13758)

05/20/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  		 	  		 	 		 	 	
Traffic Volume (veh/h)	348	911	201	168	2101	291	369	850	119	143	395	218
Future Volume (veh/h)	348	911	201	168	2101	291	369	850	119	143	395	218
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	355	930	160	171	2144	278	377	867	73	146	403	163
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	420	1293	400	630	1510	192	655	1063	474	208	563	251
Arrive On Green	0.12	0.25	0.25	0.18	0.32	0.32	0.19	0.29	0.29	0.06	0.16	0.16
Sat Flow, veh/h	3510	5187	1604	3510	4656	593	3510	3610	1609	3510	3610	1610
Grp Volume(v), veh/h	355	930	160	171	1582	840	377	867	73	146	403	163
Grp Sat Flow(s),veh/h/ln	1755	1729	1604	1755	1729	1791	1755	1805	1609	1755	1805	1610
Q Serve(g_s), s	10.4	17.2	8.7	4.4	34.0	34.0	10.3	23.4	2.1	4.3	11.1	7.4
Cycle Q Clear(g_c), s	10.4	17.2	8.7	4.4	34.0	34.0	10.3	23.4	2.1	4.3	11.1	7.4
Prop In Lane	1.00		1.00	1.00		0.33	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	420	1293	400	630	1122	581	655	1063	474	208	563	251
V/C Ratio(X)	0.85	0.72	0.40	0.27	1.41	1.45	0.58	0.82	0.15	0.70	0.72	0.65
Avail Cap(c_a), veh/h	482	2053	635	630	1122	581	655	1488	663	241	1284	573
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.2	36.0	32.8	37.1	35.4	35.4	38.9	34.3	9.3	48.4	42.0	22.8
Incr Delay (d2), s/veh	10.5	0.8	0.6	0.1	190.1	210.6	0.8	2.5	0.1	5.4	1.7	2.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	6.9	3.3	1.8	42.8	47.6	4.3	10.1	1.3	2.0	4.9	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.7	36.8	33.5	37.2	225.5	246.0	39.7	36.8	9.5	53.8	43.8	25.6
LnGrp LOS	E	D	C	D	F	F	D	D	A	D	D	C
Approach Vol, veh/h		1445			2593			1317			712	
Approach Delay, s/veh		41.0			219.7			36.1			41.7	
Approach LOS		D			F			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.8	36.7	25.0	32.3	25.4	22.1	17.1	40.2				
Change Period (Y+Rc), s	4.6	5.8	6.2	* 6.2	5.8	* 5.8	4.6	6.2				
Max Green Setting (Gmax), s	7.2	43.2	6.9	* 42	13.1	* 37	14.4	34.0				
Max Q Clear Time (g_c+I1), s	6.3	25.4	6.4	19.2	12.3	13.1	12.4	36.0				
Green Ext Time (p_c), s	0.0	5.5	0.0	6.5	0.1	2.9	0.2	0.0				

Intersection Summary

HCM 6th Ctrl Delay	116.4
HCM 6th LOS	F

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection												
Int Delay, s/veh	0.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	14	0	5	0	0	6	2	730	5	0	513	5
Future Vol, veh/h	14	0	5	0	0	6	2	730	5	0	513	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	150	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	15	0	5	0	0	7	2	793	5	0	558	5

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	962	1363	282	1079	1363	399	563	0	0	798	0	0
Stage 1	561	561	-	800	800	-	-	-	-	-	-	-
Stage 2	401	802	-	279	563	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	213	149	721	175	149	606	1019	-	-	833	-	-
Stage 1	485	513	-	349	400	-	-	-	-	-	-	-
Stage 2	602	399	-	710	512	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	210	149	721	173	149	606	1019	-	-	833	-	-
Mov Cap-2 Maneuver	210	149	-	173	149	-	-	-	-	-	-	-
Stage 1	484	513	-	348	399	-	-	-	-	-	-	-
Stage 2	594	398	-	705	512	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	20.2	11	0	0
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1019	-	-	258	606	833	-
HCM Lane V/C Ratio	0.002	-	-	0.08	0.011	-	-
HCM Control Delay (s)	8.5	-	-	20.2	11	0	-
HCM Lane LOS	A	-	-	C	B	A	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0	0	-

Timings  
3: Indian Av. & Ramona Exwy.

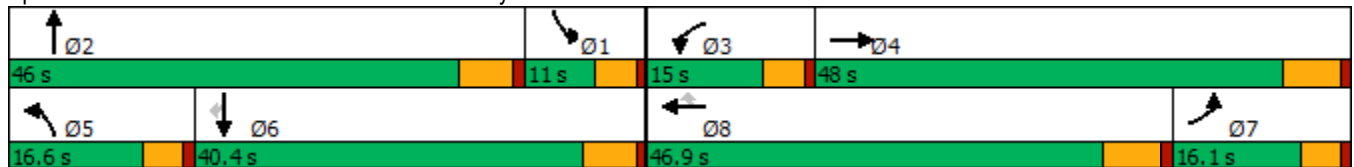


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↖	↕↕↕	↖	↕↕↕	↖	↖	↕↕	↖	↕↕	↖
Traffic Volume (vph)	389	2648	122	1757	132	180	217	184	171	164
Future Volume (vph)	389	2648	122	1757	132	180	217	184	171	164
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2	1	6	
Permitted Phases					8					6
Detector Phase	7	4	3	8	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	46.2	9.6	40.2	40.2	9.6	43.8	9.6	34.8	34.8
Total Split (s)	16.1	48.0	15.0	46.9	46.9	16.6	46.0	11.0	40.4	40.4
Total Split (%)	13.4%	40.0%	12.5%	39.1%	39.1%	13.8%	38.3%	9.2%	33.7%	33.7%
Yellow Time (s)	3.6	5.2	3.6	5.2	5.2	3.6	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
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	6.2	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 100.1  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 3: Indian Av. & Ramona Exwy.



























HCM 6th Signalized Intersection Summary  
3: Indian Av. & Ramona Exwy.

Ramona-Indian Warehouse Project (JN 13758)

05/20/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	389	2648	178	122	1757	132	180	217	39	184	171	164
Future Volume (veh/h)	389	2648	178	122	1757	132	180	217	39	184	171	164
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	397	2702	160	124	1793	113	184	221	20	188	174	138
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	221	2319	135	154	2118	658	217	357	32	194	384	171
Arrive On Green	0.12	0.46	0.46	0.09	0.41	0.41	0.12	0.11	0.11	0.11	0.11	0.11
Sat Flow, veh/h	1810	5014	292	1810	5187	1610	1810	3350	301	1810	3610	1610
Grp Volume(v), veh/h	397	1849	1013	124	1793	113	184	118	123	188	174	138
Grp Sat Flow(s),veh/h/ln	1810	1729	1847	1810	1729	1610	1810	1805	1846	1810	1805	1610
Q Serve(g_s), s	11.5	43.4	43.4	6.3	29.4	4.2	9.4	5.9	6.0	9.7	4.3	5.7
Cycle Q Clear(g_c), s	11.5	43.4	43.4	6.3	29.4	4.2	9.4	5.9	6.0	9.7	4.3	5.7
Prop In Lane	1.00		0.16	1.00		1.00	1.00		0.16	1.00		1.00
Lane Grp Cap(c), veh/h	221	1599	854	154	2118	658	217	192	196	194	384	171
V/C Ratio(X)	1.79	1.16	1.19	0.80	0.85	0.17	0.85	0.62	0.63	0.97	0.45	0.81
Avail Cap(c_a), veh/h	221	1599	854	200	2247	698	231	772	790	194	1330	593
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	41.2	25.3	25.3	42.2	25.1	17.7	40.5	40.1	40.2	41.8	39.4	21.3
Incr Delay (d2), s/veh	374.1	77.7	95.5	12.4	3.1	0.1	21.8	3.2	3.2	54.9	0.8	8.5
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	27.8	32.5	39.0	3.2	11.2	1.4	5.3	2.7	2.8	7.1	1.9	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	415.3	102.9	120.8	54.6	28.2	17.8	62.2	43.3	43.4	96.7	40.2	29.8
LnGrp LOS	F	F	F	D	C	B	E	D	D	F	D	C
Approach Vol, veh/h		3259			2030			425			500	
Approach Delay, s/veh		146.5			29.2			51.5			58.6	
Approach LOS		F			C			D			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.9	15.8	12.6	49.6	15.9	15.8	17.7	44.6				
Change Period (Y+Rc), s	5.8	* 5.8	4.6	6.2	4.6	5.8	6.2	* 6.2				
Max Green Setting (Gmax), s	6.4	* 40	10.4	41.8	12.0	34.6	11.5	* 41				
Max Q Clear Time (g_c+I1), s	11.7	8.0	8.3	45.4	11.4	7.7	13.5	31.4				
Green Ext Time (p_c), s	0.0	1.3	0.0	0.0	0.0	1.4	0.0	7.0				

Intersection Summary

HCM 6th Ctrl Delay	94.6
HCM 6th LOS	F

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
6: Perris Bl. & Ramona Exwy.

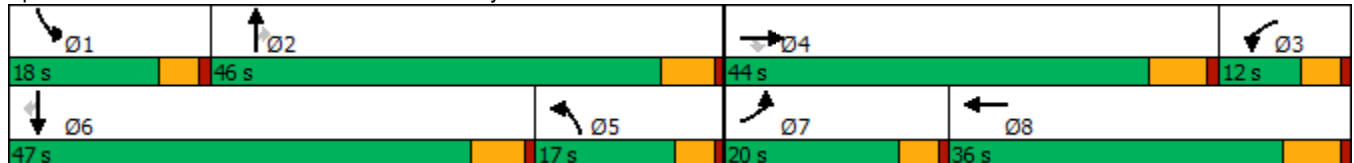


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑↑	↗	↔↔	↑↑↑	↔↔	↑↑	↗	↔↔	↑↑	↗
Traffic Volume (vph)	287	2228	355	141	1414	327	463	182	427	698	209
Future Volume (vph)	287	2228	355	141	1414	327	463	182	427	698	209
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8	5	2		1	6	
Permitted Phases			4					2			6
Detector Phase	7	4	4	3	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	36.2	36.2	9.6	34.2	9.6	38.8	38.8	9.6	41.8	41.8
Total Split (s)	20.0	44.0	44.0	12.0	36.0	17.0	46.0	46.0	18.0	47.0	47.0
Total Split (%)	16.7%	36.7%	36.7%	10.0%	30.0%	14.2%	38.3%	38.3%	15.0%	39.2%	39.2%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	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
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 107.2  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated




































Splits and Phases: 6: Perris Bl. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
6: Perris Bl. & Ramona Exwy.

Ramona-Indian Warehouse Project (JN 13758)

05/20/2022

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	  	  		  	  			 	 		 	 	
Traffic Volume (veh/h)	287	2228	355	141	1414	225	327	463	182	427	698	209	
Future Volume (veh/h)	287	2228	355	141	1414	225	327	463	182	427	698	209	
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adj Flow Rate, veh/h	296	2297	266	145	1458	219	337	477	137	440	720	141	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0	
Cap, veh/h	363	1822	565	206	1462	219	397	916	408	437	918	408	
Arrive On Green	0.10	0.35	0.35	0.06	0.32	0.32	0.11	0.25	0.25	0.12	0.25	0.25	
Sat Flow, veh/h	3510	5187	1607	3510	4549	682	3510	3610	1608	3510	3610	1604	
Grp Volume(v), veh/h	296	2297	266	145	1108	569	337	477	137	440	720	141	
Grp Sat Flow(s),veh/h/ln	1755	1729	1607	1755	1729	1773	1755	1805	1608	1755	1805	1604	
Q Serve(g_s), s	8.9	37.8	13.8	4.4	34.4	34.5	10.1	12.2	5.8	13.4	20.0	5.7	
Cycle Q Clear(g_c), s	8.9	37.8	13.8	4.4	34.4	34.5	10.1	12.2	5.8	13.4	20.0	5.7	
Prop In Lane	1.00		1.00	1.00		0.38	1.00		1.00	1.00		1.00	
Lane Grp Cap(c), veh/h	363	1822	565	206	1111	570	397	916	408	437	918	408	
V/C Ratio(X)	0.82	1.26	0.47	0.71	1.00	1.00	0.85	0.52	0.34	1.01	0.78	0.35	
Avail Cap(c_a), veh/h	502	1822	565	241	1111	570	404	1348	601	437	1382	614	
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	47.2	34.9	27.1	49.7	36.5	36.5	46.8	34.5	19.5	47.1	37.4	17.6	
Incr Delay (d2), s/veh	5.1	121.9	0.6	5.3	26.2	37.3	14.6	0.5	0.5	44.7	1.7	0.5	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	4.0	35.2	5.1	2.0	17.5	19.7	5.1	5.2	2.8	8.4	8.6	2.8	
Unsig. Movement Delay, s/veh													
LnGrp Delay(d),s/veh	52.3	156.9	27.8	55.1	62.7	73.8	61.5	35.0	20.0	91.8	39.1	18.1	
LnGrp LOS	D	F	C	E	E	E	E	C	C	F	D	B	
Approach Vol, veh/h		2859			1822			951			1301		
Approach Delay, s/veh		134.0			65.5			42.2			54.7		
Approach LOS		F			E			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8					
Phs Duration (G+Y+Rc), s	18.0	33.1	12.5	44.0	18.0	33.2	15.7	40.8					
Change Period (Y+Rc), s	4.6	5.8	6.2	* 6.2	5.8	* 5.8	4.6	6.2					
Max Green Setting (Gmax), s	13.4	40.2	7.4	* 38	12.4	* 41	15.4	29.8					
Max Q Clear Time (g_c+I1), s	15.4	14.2	6.4	39.8	12.1	22.0	10.9	36.5					
Green Ext Time (p_c), s	0.0	3.4	0.0	0.0	0.0	4.8	0.2	0.0					

Intersection Summary

HCM 6th Ctrl Delay	88.5
HCM 6th LOS	F

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

**APPENDIX 6.2:**

**EAPC (2023) CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS**

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Intersection												
Int Delay, s/veh	0.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	5	0	2	0	0	3	5	658	22	0	268	15
Future Vol, veh/h	5	0	2	0	0	3	5	658	22	0	268	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	150	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	5	0	2	0	0	3	5	715	24	0	291	16

Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	667	1048	154	883	1044	370	307	0	0	739	0	0
Stage 1	299	299	-	737	737	-	-	-	-	-	-	-
Stage 2	368	749	-	146	307	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	348	230	871	243	231	633	1265	-	-	876	-	-
Stage 1	691	670	-	381	428	-	-	-	-	-	-	-
Stage 2	630	422	-	848	665	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	345	229	871	242	230	633	1265	-	-	876	-	-
Mov Cap-2 Maneuver	345	229	-	242	230	-	-	-	-	-	-	-
Stage 1	688	670	-	379	426	-	-	-	-	-	-	-
Stage 2	624	420	-	846	665	-	-	-	-	-	-	-

Approach	EB		WB			NB			SB		
HCM Control Delay, s	13.8		10.7			0.1			0		
HCM LOS	B		B								

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1265	-	-	417	633	876	-
HCM Lane V/C Ratio	0.004	-	-	0.018	0.005	-	-
HCM Control Delay (s)	7.9	-	-	13.8	10.7	0	-
HCM Lane LOS	A	-	-	B	B	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0	0	-

Intersection						
Int Delay, s/veh	0.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↕		↖	↕
Traffic Vol, veh/h	0	6	678	14	10	260
Future Vol, veh/h	0	6	678	14	10	260
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	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	7	737	15	11	283

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	-	376	0	0	752
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	4.1
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	2.2
Pot Cap-1 Maneuver	0	627	-	-	867
Stage 1	0	-	-	-	-
Stage 2	0	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	-	627	-	-	867
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.8	0	0.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	627	867
HCM Lane V/C Ratio	-	-	0.01	0.013
HCM Control Delay (s)	-	-	10.8	9.2
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0	0

Timings  
3: Indian Av. & Ramona Exwy.

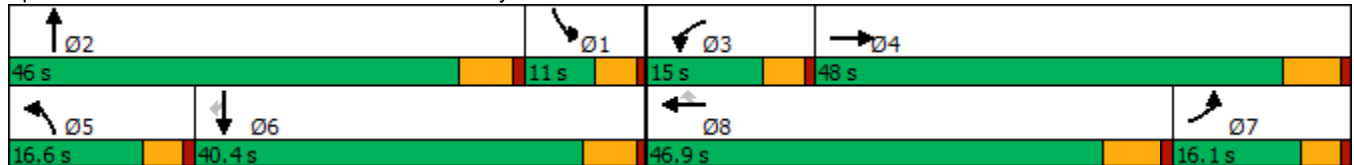


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↗	↕↕↕	↖	↕↕↕	↖	↖	↕↕	↖	↕↕	↖
Traffic Volume (vph)	342	1406	64	2478	158	108	194	20	99	141
Future Volume (vph)	342	1406	64	2478	158	108	194	20	99	141
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2	1	6	
Permitted Phases					8					6
Detector Phase	7	4	3	8	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	46.2	9.6	40.2	40.2	9.6	43.8	9.6	34.8	34.8
Total Split (s)	16.1	48.0	15.0	46.9	46.9	16.6	46.0	11.0	40.4	40.4
Total Split (%)	13.4%	40.0%	12.5%	39.1%	39.1%	13.8%	38.3%	9.2%	33.7%	33.7%
Yellow Time (s)	3.6	5.2	3.6	5.2	5.2	3.6	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
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	6.2	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 97.6  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 3: Indian Av. & Ramona Exwy.



























HCM 6th Signalized Intersection Summary  
3: Indian Av. & Ramona Exwy.

Ramona-Indian Warehouse Project (JN 13758)

05/20/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	342	1406	121	64	2478	158	108	194	31	20	99	141
Future Volume (veh/h)	342	1406	121	64	2478	158	108	194	31	20	99	141
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	349	1435	121	65	2529	132	110	198	21	20	101	137
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	225	2604	220	84	2279	708	139	382	40	111	409	182
Arrive On Green	0.12	0.53	0.53	0.05	0.44	0.44	0.08	0.12	0.12	0.06	0.11	0.11
Sat Flow, veh/h	1810	4873	411	1810	5187	1610	1810	3295	346	1810	3610	1610
Grp Volume(v), veh/h	349	1018	538	65	2529	132	110	107	112	20	101	137
Grp Sat Flow(s),veh/h/ln	1810	1729	1826	1810	1729	1610	1810	1805	1836	1810	1805	1610
Q Serve(g_s), s	11.5	18.0	18.0	3.3	40.7	4.6	5.5	5.2	5.3	1.0	2.4	5.5
Cycle Q Clear(g_c), s	11.5	18.0	18.0	3.3	40.7	4.6	5.5	5.2	5.3	1.0	2.4	5.5
Prop In Lane	1.00		0.23	1.00		1.00	1.00		0.19	1.00		1.00
Lane Grp Cap(c), veh/h	225	1848	975	84	2279	708	139	209	213	111	409	182
V/C Ratio(X)	1.55	0.55	0.55	0.77	1.11	0.19	0.79	0.51	0.52	0.18	0.25	0.75
Avail Cap(c_a), veh/h	225	1848	975	203	2279	708	234	783	797	125	1349	601
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	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	40.6	14.2	14.2	43.7	26.0	15.9	42.0	38.5	38.5	41.2	37.5	20.3
Incr Delay (d2), s/veh	269.8	0.4	0.7	5.5	56.3	0.1	3.7	2.0	2.0	0.3	0.3	6.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	21.6	6.0	6.4	1.5	26.3	1.6	2.5	2.3	2.4	0.4	1.0	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	310.3	14.6	14.9	49.2	82.3	16.0	45.8	40.5	40.6	41.5	37.8	26.4
LnGrp LOS	F	B	B	D	F	B	D	D	D	D	D	C
Approach Vol, veh/h		1905			2726			329			258	
Approach Delay, s/veh		68.9			78.3			42.3			32.0	
Approach LOS		E			E			D			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.5	16.5	8.9	55.7	11.7	16.3	17.7	46.9				
Change Period (Y+Rc), s	5.8	* 5.8	4.6	6.2	4.6	5.8	6.2	* 6.2				
Max Green Setting (Gmax), s	6.4	* 40	10.4	41.8	12.0	34.6	11.5	* 41				
Max Q Clear Time (g_c+I1), s	3.0	7.3	5.3	20.0	7.5	7.5	13.5	42.7				
Green Ext Time (p_c), s	0.0	1.2	0.0	10.3	0.0	1.0	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	70.3
HCM 6th LOS	E

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑	↑		↑
Traffic Vol, veh/h	0	1458	2696	10	0	3
Future Vol, veh/h	0	1458	2696	10	0	3
Conflicting Peds, #/hr	0	0	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	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	1585	2930	11	0	3

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	-	0	-	0	1465
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	-	-	-	102
Stage 1	0	-	-	-	-
Stage 2	0	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	102
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	41.5
HCM LOS			E

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	102
HCM Lane V/C Ratio	-	-	-	0.032
HCM Control Delay (s)	-	-	-	41.5
HCM Lane LOS	-	-	-	E
HCM 95th %tile Q(veh)	-	-	-	0.1

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↑↑	↑↑↑	
Traffic Vol, veh/h	0	3	0	1489	756	1
Future Vol, veh/h	0	3	0	1489	756	1
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	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	3	0	1618	822	1

Major/Minor	Minor2	Major1	Major2		
Conflicting Flow All	-	412	-	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	508	0	-	-
Stage 1	0	-	0	-	-
Stage 2	0	-	0	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	-	508	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.1	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	508	-	-
HCM Lane V/C Ratio	-	0.006	-	-
HCM Control Delay (s)	-	12.1	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0	-	-

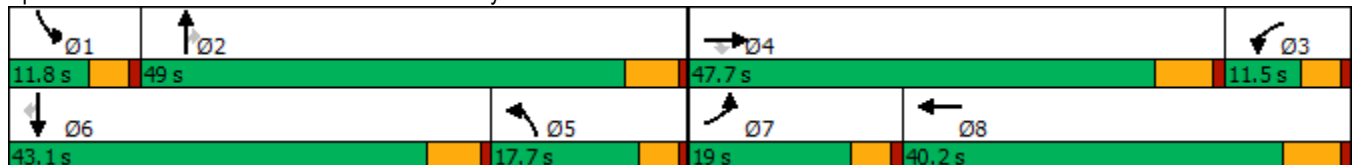
Timings  
6: Perris Bl. & Ramona Exwy.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	348	911	201	168	2104	377	850	119	144	397	219
Future Volume (vph)	348	911	201	168	2104	377	850	119	144	397	219
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8	5	2		1	6	
Permitted Phases			4					2			6
Detector Phase	7	4	4	3	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	36.2	36.2	9.6	34.2	9.6	38.8	38.8	9.6	41.8	41.8
Total Split (s)	19.0	47.7	47.7	11.5	40.2	17.7	49.0	49.0	11.8	43.1	43.1
Total Split (%)	15.8%	39.8%	39.8%	9.6%	33.5%	14.8%	40.8%	40.8%	9.8%	35.9%	35.9%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	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
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 109.4  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated


































Splits and Phases: 6: Perris Bl. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
6: Perris Bl. & Ramona Exwy.

Ramona-Indian Warehouse Project (JN 13758)

05/20/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  		 	  		 	 		 	 	
Traffic Volume (veh/h)	348	911	201	168	2104	291	377	850	119	144	397	219
Future Volume (veh/h)	348	911	201	168	2104	291	377	850	119	144	397	219
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	355	930	160	171	2147	278	385	867	73	147	405	164
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	420	1293	400	629	1510	192	654	1063	474	209	565	252
Arrive On Green	0.12	0.25	0.25	0.18	0.32	0.32	0.19	0.29	0.29	0.06	0.16	0.16
Sat Flow, veh/h	3510	5187	1604	3510	4657	592	3510	3610	1609	3510	3610	1610
Grp Volume(v), veh/h	355	930	160	171	1584	841	385	867	73	147	405	164
Grp Sat Flow(s),veh/h/ln	1755	1729	1604	1755	1729	1791	1755	1805	1609	1755	1805	1610
Q Serve(g_s), s	10.4	17.2	8.7	4.4	34.0	34.0	10.5	23.4	2.1	4.3	11.2	7.4
Cycle Q Clear(g_c), s	10.4	17.2	8.7	4.4	34.0	34.0	10.5	23.4	2.1	4.3	11.2	7.4
Prop In Lane	1.00		1.00	1.00		0.33	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	420	1293	400	629	1121	581	654	1063	474	209	565	252
V/C Ratio(X)	0.85	0.72	0.40	0.27	1.41	1.45	0.59	0.82	0.15	0.70	0.72	0.65
Avail Cap(c_a), veh/h	482	2052	635	629	1121	581	654	1487	663	241	1284	573
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.2	36.0	32.8	37.1	35.4	35.4	39.0	34.3	9.3	48.4	42.0	22.8
Incr Delay (d2), s/veh	10.5	0.8	0.6	0.1	191.1	211.7	1.0	2.5	0.1	5.5	1.7	2.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	6.9	3.3	1.8	42.9	47.8	4.4	10.1	1.3	2.0	4.9	3.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.7	36.8	33.5	37.2	226.5	247.1	40.0	36.9	9.5	54.0	43.7	25.6
LnGrp LOS	E	D	C	D	F	F	D	D	A	D	D	C
Approach Vol, veh/h		1445			2596			1325			716	
Approach Delay, s/veh		41.1			220.7			36.3			41.7	
Approach LOS		D			F			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.8	36.7	25.0	32.3	25.3	22.2	17.1	40.2				
Change Period (Y+Rc), s	4.6	5.8	6.2	* 6.2	5.8	* 5.8	4.6	6.2				
Max Green Setting (Gmax), s	7.2	43.2	6.9	* 42	13.1	* 37	14.4	34.0				
Max Q Clear Time (g_c+I1), s	6.3	25.4	6.4	19.2	12.5	13.2	12.4	36.0				
Green Ext Time (p_c), s	0.0	5.5	0.0	6.5	0.1	2.9	0.2	0.0				

Intersection Summary

HCM 6th Ctrl Delay	116.8
HCM 6th LOS	F

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection												
Int Delay, s/veh	0.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	14	0	5	0	0	6	2	742	5	0	523	5
Future Vol, veh/h	14	0	5	0	0	6	2	742	5	0	523	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	150	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	15	0	5	0	0	7	2	807	5	0	568	5

Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	979	1387	287	1098	1387	406	573	0	0	812	0	0
Stage 1	571	571	-	814	814	-	-	-	-	-	-	-
Stage 2	408	816	-	284	573	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	207	144	716	170	144	600	1010	-	-	823	-	-
Stage 1	478	508	-	342	394	-	-	-	-	-	-	-
Stage 2	596	393	-	705	507	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	205	144	716	168	144	600	1010	-	-	823	-	-
Mov Cap-2 Maneuver	205	144	-	168	144	-	-	-	-	-	-	-
Stage 1	477	508	-	341	393	-	-	-	-	-	-	-
Stage 2	588	392	-	700	507	-	-	-	-	-	-	-

Approach	EB		WB			NB			SB		
HCM Control Delay, s	20.6		11.1			0			0		
HCM LOS	C		B								

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1010	-	-	252	600	823	-	-
HCM Lane V/C Ratio	0.002	-	-	0.082	0.011	-	-	-
HCM Control Delay (s)	8.6	-	-	20.6	11.1	0	-	-
HCM Lane LOS	A	-	-	C	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0	0	-	-

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↕		↖	↕
Traffic Vol, veh/h	0	6	737	14	10	518
Future Vol, veh/h	0	6	737	14	10	518
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	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	7	801	15	11	563

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	-	408	0	0	816
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	4.1
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	2.2
Pot Cap-1 Maneuver	0	598	-	-	820
Stage 1	0	-	-	-	-
Stage 2	0	-	-	-	-
Platoon blocked, %					
Mov Cap-1 Maneuver	-	598	-	-	820
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.1	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	598	820
HCM Lane V/C Ratio	-	-	0.011	0.013
HCM Control Delay (s)	-	-	11.1	9.4
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0	0

Timings  
3: Indian Av. & Ramona Exwy.

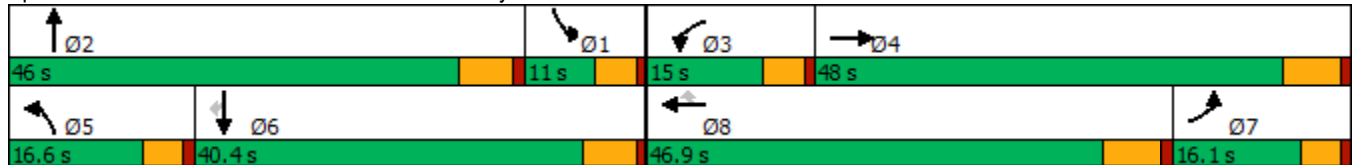


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↗	↕↕↕	↖	↕↕↕	↗	↖	↕↕	↖	↕↕	↗
Traffic Volume (vph)	396	2648	124	1759	134	180	223	184	171	164
Future Volume (vph)	396	2648	124	1759	134	180	223	184	171	164
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2	1	6	
Permitted Phases					8					6
Detector Phase	7	4	3	8	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	46.2	9.6	40.2	40.2	9.6	43.8	9.6	34.8	34.8
Total Split (s)	16.1	48.0	15.0	46.9	46.9	16.6	46.0	11.0	40.4	40.4
Total Split (%)	13.4%	40.0%	12.5%	39.1%	39.1%	13.8%	38.3%	9.2%	33.7%	33.7%
Yellow Time (s)	3.6	5.2	3.6	5.2	5.2	3.6	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
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	6.2	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 100.1  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 3: Indian Av. & Ramona Exwy.



























HCM 6th Signalized Intersection Summary  
3: Indian Av. & Ramona Exwy.

Ramona-Indian Warehouse Project (JN 13758)

05/20/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	396	2648	178	124	1759	134	180	223	39	184	171	164
Future Volume (veh/h)	396	2648	178	124	1759	134	180	223	39	184	171	164
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	404	2702	160	127	1795	115	184	228	20	188	174	138
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	221	2310	134	158	2119	658	217	358	31	194	384	171
Arrive On Green	0.12	0.46	0.46	0.09	0.41	0.41	0.12	0.11	0.11	0.11	0.11	0.11
Sat Flow, veh/h	1810	5014	292	1810	5187	1610	1810	3360	292	1810	3610	1610
Grp Volume(v), veh/h	404	1849	1013	127	1795	115	184	122	126	188	174	138
Grp Sat Flow(s),veh/h/ln	1810	1729	1847	1810	1729	1610	1810	1805	1847	1810	1805	1610
Q Serve(g_s), s	11.5	43.3	43.3	6.5	29.4	4.3	9.4	6.1	6.2	9.7	4.3	5.7
Cycle Q Clear(g_c), s	11.5	43.3	43.3	6.5	29.4	4.3	9.4	6.1	6.2	9.7	4.3	5.7
Prop In Lane	1.00		0.16	1.00		1.00	1.00		0.16	1.00		1.00
Lane Grp Cap(c), veh/h	221	1593	851	158	2119	658	217	192	197	194	384	171
V/C Ratio(X)	1.82	1.16	1.19	0.81	0.85	0.17	0.85	0.63	0.64	0.97	0.45	0.81
Avail Cap(c_a), veh/h	221	1593	851	200	2246	697	231	772	790	194	1329	593
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	41.2	25.3	25.3	42.1	25.1	17.7	40.5	40.2	40.3	41.8	39.4	21.3
Incr Delay (d2), s/veh	388.2	79.5	97.4	13.4	3.1	0.1	21.8	3.4	3.5	54.9	0.8	8.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	28.7	32.8	39.3	3.3	11.3	1.5	5.3	2.8	2.9	7.1	1.9	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	429.5	104.8	122.7	55.5	28.2	17.8	62.3	43.7	43.8	96.7	40.3	29.8
LnGrp LOS	F	F	F	E	C	B	E	D	D	F	D	C
Approach Vol, veh/h		3266			2037			432			500	
Approach Delay, s/veh		150.5			29.3			51.6			58.6	
Approach LOS		F			C			D			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.9	15.8	12.8	49.5	15.9	15.8	17.7	44.6				
Change Period (Y+Rc), s	5.8	* 5.8	4.6	6.2	4.6	5.8	6.2	* 6.2				
Max Green Setting (Gmax), s	6.4	* 40	10.4	41.8	12.0	34.6	11.5	* 41				
Max Q Clear Time (g_c+I1), s	11.7	8.2	8.5	45.3	11.4	7.7	13.5	31.4				
Green Ext Time (p_c), s	0.0	1.3	0.0	0.0	0.0	1.4	0.0	7.0				

Intersection Summary

HCM 6th Ctrl Delay	96.7
HCM 6th LOS	F

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑	↑		↑
Traffic Vol, veh/h	0	2871	2013	10	0	3
Future Vol, veh/h	0	2871	2013	10	0	3
Conflicting Peds, #/hr	0	0	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	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	3121	2188	11	0	3

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	-	0	- 0 - 1094
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	-	- 0 182
Stage 1	0	-	- 0 -
Stage 2	0	-	- 0 -
Platoon blocked, %	-	-	- - -
Mov Cap-1 Maneuver	-	-	- - 182
Mov Cap-2 Maneuver	-	-	- - -
Stage 1	-	-	- - -
Stage 2	-	-	- - -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	25.1
HCM LOS			D

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	182
HCM Lane V/C Ratio	-	-	-	0.018
HCM Control Delay (s)	-	-	-	25.1
HCM Lane LOS	-	-	-	D
HCM 95th %tile Q(veh)	-	-	-	0.1

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↑↑	↑↑↑	
Traffic Vol, veh/h	0	3	0	975	1334	1
Future Vol, veh/h	0	3	0	975	1334	1
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	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	3	0	1060	1450	1

Major/Minor	Minor2	Major1	Major2		
Conflicting Flow All	-	726	-	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	318	0	-	-
Stage 1	0	-	0	-	-
Stage 2	0	-	0	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	-	318	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	318	-	-
HCM Lane V/C Ratio	-	0.01	-	-
HCM Control Delay (s)	-	16.4	-	-
HCM Lane LOS	-	C	-	-
HCM 95th %tile Q(veh)	-	0	-	-

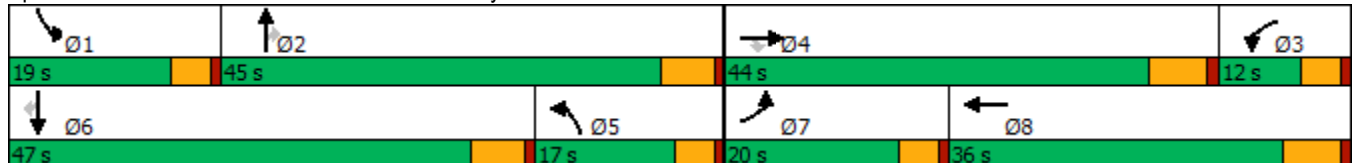
Timings  
6: Perris Bl. & Ramona Exwy.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations												
Traffic Volume (vph)	287	2228	355	141	1417	335	463	182	428	700	210	
Future Volume (vph)	287	2228	355	141	1417	335	463	182	428	700	210	
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	
Protected Phases	7	4		3	8	5	2		1	6		
Permitted Phases			4					2			6	
Detector Phase	7	4	4	3	8	5	2	2	1	6	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	
Minimum Split (s)	9.6	36.2	36.2	9.6	34.2	9.6	38.8	38.8	9.6	41.8	41.8	
Total Split (s)	20.0	44.0	44.0	12.0	36.0	17.0	45.0	45.0	19.0	47.0	47.0	
Total Split (%)	16.7%	36.7%	36.7%	10.0%	30.0%	14.2%	37.5%	37.5%	15.8%	39.2%	39.2%	
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	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	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	5.8	5.8	4.6	5.8	5.8	
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 107.3  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated






































Splits and Phases: 6: Perris Bl. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
6: Perris Bl. & Ramona Exwy.

Ramona-Indian Warehouse Project (JN 13758)

05/20/2022

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	  	  		  	  			  	 		  	 	
Traffic Volume (veh/h)	287	2228	355	141	1417	225	335	463	182	428	700	210	
Future Volume (veh/h)	287	2228	355	141	1417	225	335	463	182	428	700	210	
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adj Flow Rate, veh/h	296	2297	266	145	1461	219	345	477	137	441	722	142	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0	
Cap, veh/h	362	1815	563	205	1456	218	403	892	397	468	919	408	
Arrive On Green	0.10	0.35	0.35	0.06	0.32	0.32	0.11	0.25	0.25	0.13	0.25	0.25	
Sat Flow, veh/h	3510	5187	1607	3510	4550	681	3510	3610	1608	3510	3610	1604	
Grp Volume(v), veh/h	296	2297	266	145	1110	570	345	477	137	441	722	142	
Grp Sat Flow(s),veh/h/ln	1755	1729	1607	1755	1729	1774	1755	1805	1608	1755	1805	1604	
Q Serve(g_s), s	8.9	37.8	13.9	4.4	34.6	34.6	10.4	12.4	5.9	13.4	20.1	5.7	
Cycle Q Clear(g_c), s	8.9	37.8	13.9	4.4	34.6	34.6	10.4	12.4	5.9	13.4	20.1	5.7	
Prop In Lane	1.00		1.00	1.00		0.38	1.00		1.00	1.00		1.00	
Lane Grp Cap(c), veh/h	362	1815	563	205	1107	568	403	892	397	468	919	408	
V/C Ratio(X)	0.82	1.27	0.47	0.71	1.00	1.00	0.86	0.53	0.34	0.94	0.79	0.35	
Avail Cap(c_a), veh/h	501	1815	563	241	1107	568	403	1310	584	468	1377	612	
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	47.4	35.1	27.3	49.9	36.7	36.7	46.9	35.3	20.1	46.4	37.5	17.7	
Incr Delay (d2), s/veh	5.2	124.0	0.6	5.4	27.7	38.8	15.7	0.5	0.5	27.3	1.8	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	4.0	35.5	5.1	2.0	17.8	20.0	5.3	5.3	2.8	7.4	8.7	2.9	
Unsig. Movement Delay, s/veh													
LnGrp Delay(d),s/veh	52.6	159.1	28.0	55.4	64.4	75.6	62.6	35.8	20.6	73.7	39.3	18.2	
LnGrp LOS	D	F	C	E	F	F	E	D	C	E	D	B	
Approach Vol, veh/h		2859			1825			959			1305		
Approach Delay, s/veh		135.8			67.2			43.3			48.6		
Approach LOS		F			E			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8					
Phs Duration (G+Y+Rc), s	19.0	32.5	12.5	44.0	18.2	33.3	15.8	40.8					
Change Period (Y+Rc), s	4.6	5.8	6.2	* 6.2	5.8	* 5.8	4.6	6.2					
Max Green Setting (Gmax), s	14.4	39.2	7.4	* 38	12.4	* 41	15.4	29.8					
Max Q Clear Time (g_c+I1), s	15.4	14.4	6.4	39.8	12.4	22.1	10.9	36.6					
Green Ext Time (p_c), s	0.0	3.4	0.0	0.0	0.0	4.8	0.2	0.0					

Intersection Summary

HCM 6th Ctrl Delay	88.7
HCM 6th LOS	F

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

**APPENDIX 6.3:**

**EAC (2023) CONDITIONS TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS**

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### Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

<u>DIST</u>	<u>CO</u>	<u>RTE</u>	<u>PM</u>	CALC <u>RV</u>	TRAFFIC CONDITIONS	<b>EAC 2023</b>	
Jurisdiction: <u>City of Perris</u>				CHK <u>RV</u>		DATE <u>06/30/21</u>	
Major Street: <u>Indian Avenue</u>					Critical Approach Speed (Major)	<u>40</u> mph	
Minor Street: <u>Perry Street</u>					Critical Approach Speed (Minor)	<u>25</u> mph	
Major Street Approach Lanes =		<u>2</u>	lane	Minor Street Approach Lanes:	<u>1</u>	lane	
Major Street Future ADT =		<u>6,485</u>	vpd	Minor Street Future ADT =	<u>245</u>	vpd	
Speed limit or critical speed on major street traffic > 64 km/h (40 mph); .....						<input type="checkbox"/>	
						or	<b>RURAL (R)</b>
In built up area of isolated community of < 10,000 population .....						<input type="checkbox"/>	

**(Based on Estimated Average Daily Traffic - See Note)**

<u>URBAN</u>		<u>RURAL</u>		Minimum Requirements			
<b>XX</b>				EADT			
<b>CONDITION A - Minimum Vehicular Volume</b>				Vehicles Per Day on Major Street		Vehicles Per Day on Higher-Volume Minor Street Approach	
<u>Satisfied</u>		<u>Not Satisfied</u>		(Total of Both Approaches)		(One Direction Only)	
		<b>XX</b>		Urban	Rural	Urban	Rural
Number of lanes for moving traffic on each approach		Minor Street					
<u>Major Street</u>		<u>Minor Street</u>					
1		1		8,000	5,600	2,400	1,680
2 + <b>6,485</b>		1 <b>245</b>		9,600	6,720	2,400	1,680
2 +		2 +		9,600	6,720	3,200	2,240
1		2 +		8,000	5,600	3,200	2,240
<b>CONDITION B - Interruption of Continuous Traffic</b>				Vehicles Per Day on Major Street		Vehicles Per Day on Higher-Volume Minor Street Approach	
<u>Satisfied</u>		<u>Not Satisfied</u>		(Total of Both Approaches)		(One Direction Only)	
		<b>XX</b>		Urban	Rural	Urban	Rural
Number of lanes for moving traffic on each approach		Minor Street					
<u>Major Street</u>		<u>Minor Street</u>					
1		1		12,000	8,400	1,200	850
2 + <b>6,485</b>		1 <b>245</b>		14,400	10,080	1,200	850
2 +		2 +		14,400	10,080	1,600	1,120
1		2 +		12,000	8,400	1,600	1,120
<b>Combination of CONDITIONS A + B</b>				2 CONDITIONS		2 CONDITIONS	
<u>Satisfied</u>		<u>Not Satisfied</u>		80%		80%	
		<b>XX</b>					
No one condition satisfied, but following conditions fulfilled 80% of more .....							
		<b>A</b>		<b>B</b>			
		<b>10%</b>		<b>20%</b>			

**Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.**

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.





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**APPENDIX 6.4:**

**EAPC (2023) CONDITIONS TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS**

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### Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

<u>DIST</u>	<u>CO</u>	<u>RTE</u>	<u>PM</u>	CALC <u>RV</u>	TRAFFIC CONDITIONS	<u>EAPC 2023</u>
Jurisdiction: <u>City of Perris</u>				CHK <u>RV</u>		DATE <u>06/30/21</u>
Major Street: <u>Indian Avenue</u>					Critical Approach Speed (Major) <u>40</u> mph	DATE <u>06/30/21</u>
Minor Street: <u>Perry Street</u>					Critical Approach Speed (Minor) <u>25</u> mph	
Major Street Approach Lanes = <u>2</u>	lane	Minor Street Approach Lanes: <u>1</u>	lane			
Major Street Future ADT = <u>6,660</u>	vpd	Minor Street Future ADT = <u>245</u>	vpd			
Speed limit or critical speed on major street traffic > 64 km/h (40 mph); .....						<input type="checkbox"/>
						or
In built up area of isolated community of < 10,000 population .....						<input type="checkbox"/>
						<b>RURAL (R)</b>

**(Based on Estimated Average Daily Traffic - See Note)**

<u>URBAN</u> <b>XX</b>	<u>RURAL</u>	Minimum Requirements EADT			
<b>CONDITION A - Minimum Vehicular Volume</b>		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
<u>Satisfied</u>	<u>Not Satisfied</u> <b>XX</b>				
Number of lanes for moving traffic on each approach	Number of lanes for moving traffic on each approach	Urban	Rural	Urban	Rural
<u>Major Street</u>	<u>Minor Street</u>				
1	1	8,000	5,600	2,400	1,680
2 + <b>6,660</b>	1 <b>245</b>	9,600	6,720	2,400	1,680
2 +	2 +	9,600	6,720	3,200	2,240
1	2 +	8,000	5,600	3,200	2,240
<b>CONDITION B - Interruption of Continuous Traffic</b>		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
<u>Satisfied</u>	<u>Not Satisfied</u> <b>XX</b>				
Number of lanes for moving traffic on each approach	Number of lanes for moving traffic on each approach	Urban	Rural	Urban	Rural
<u>Major Street</u>	<u>Minor Street</u>				
1	1	12,000	8,400	1,200	850
2 + <b>6,660</b>	1 <b>245</b>	14,400	10,080	1,200	850
2 +	2 +	14,400	10,080	1,600	1,120
1	2 +	12,000	8,400	1,600	1,120
<b>Combination of CONDITIONS A + B</b>		2 CONDITIONS 80%		2 CONDITIONS 80%	
<u>Satisfied</u>	<u>Not Satisfied</u> <b>XX</b>				
No one condition satisfied, but following conditions fulfilled 80% of more .....					
	<b>A</b> <b>10%</b>	<b>B</b> <b>20%</b>			

**Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.**

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.



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**APPENDIX 6.5:**

**EAPC (2023) CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS  
WITH IMPROVEMENTS**

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Timings  
3: Indian Av. & Ramona Exwy.

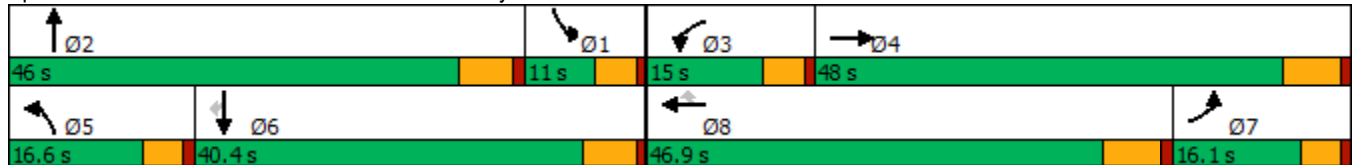


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↔↔	↕↕↕	↔	↕↕↕	↔	↔	↕↕	↔	↕↕	↔
Traffic Volume (vph)	342	1406	64	2478	158	108	194	20	99	141
Future Volume (vph)	342	1406	64	2478	158	108	194	20	99	141
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2	1	6	
Permitted Phases					8					6
Detector Phase	7	4	3	8	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	46.2	9.6	40.2	40.2	9.6	43.8	9.6	34.8	34.8
Total Split (s)	16.1	48.0	15.0	46.9	46.9	16.6	46.0	11.0	40.4	40.4
Total Split (%)	13.4%	40.0%	12.5%	39.1%	39.1%	13.8%	38.3%	9.2%	33.7%	33.7%
Yellow Time (s)	3.6	5.2	3.6	5.2	5.2	3.6	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
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	6.2	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 97.6  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 3: Indian Av. & Ramona Exwy.





































HCM 6th Signalized Intersection Summary  
3: Indian Av. & Ramona Exwy.

Ramona-Indian Warehouse Project (JN 13758)

05/20/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	 		 	 	 	 	 		 	 	 
Traffic Volume (veh/h)	342	1406	121	64	2478	158	108	194	31	20	99	141
Future Volume (veh/h)	342	1406	121	64	2478	158	108	194	31	20	99	141
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	349	1435	121	65	2529	132	110	198	21	20	101	137
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	419	2594	219	84	2293	712	139	384	40	111	411	183
Arrive On Green	0.12	0.53	0.53	0.05	0.44	0.44	0.08	0.12	0.12	0.06	0.11	0.11
Sat Flow, veh/h	3510	4873	411	1810	5187	1610	1810	3295	346	1810	3610	1610
Grp Volume(v), veh/h	349	1018	538	65	2529	132	110	107	112	20	101	137
Grp Sat Flow(s),veh/h/ln	1755	1729	1826	1810	1729	1610	1810	1805	1836	1810	1805	1610
Q Serve(g_s), s	9.0	18.0	18.0	3.3	40.7	4.6	5.5	5.1	5.3	1.0	2.3	5.4
Cycle Q Clear(g_c), s	9.0	18.0	18.0	3.3	40.7	4.6	5.5	5.1	5.3	1.0	2.3	5.4
Prop In Lane	1.00		0.23	1.00		1.00	1.00		0.19	1.00		1.00
Lane Grp Cap(c), veh/h	419	1841	972	84	2293	712	139	210	214	111	411	183
V/C Ratio(X)	0.83	0.55	0.55	0.77	1.10	0.19	0.79	0.51	0.52	0.18	0.25	0.75
Avail Cap(c_a), veh/h	438	1841	972	204	2293	712	236	788	801	126	1357	605
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.6	14.3	14.3	43.4	25.7	15.6	41.8	38.2	38.3	41.0	37.2	20.4
Incr Delay (d2), s/veh	11.6	0.4	0.7	5.5	53.6	0.1	3.7	1.9	2.0	0.3	0.3	5.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	6.0	6.4	1.5	25.8	1.5	2.5	2.3	2.4	0.4	1.0	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.2	14.6	15.0	48.9	79.3	15.7	45.5	40.1	40.2	41.3	37.5	26.3
LnGrp LOS	D	B	B	D	F	B	D	D	D	D	D	C
Approach Vol, veh/h		1905			2726			329			258	
Approach Delay, s/veh		21.4			75.5			42.0			31.9	
Approach LOS		C			E			D			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.5	16.5	8.9	55.2	11.7	16.3	17.2	46.9				
Change Period (Y+Rc), s	5.8	* 5.8	4.6	6.2	4.6	5.8	6.2	* 6.2				
Max Green Setting (Gmax), s	6.4	* 40	10.4	41.8	12.0	34.6	11.5	* 41				
Max Q Clear Time (g_c+I1), s	3.0	7.3	5.3	20.0	7.5	7.4	11.0	42.7				
Green Ext Time (p_c), s	0.0	1.2	0.0	10.3	0.0	1.0	0.0	0.0				

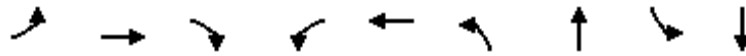
Intersection Summary

HCM 6th Ctrl Delay	51.5
HCM 6th LOS	D

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
6: Perris Bl. & Ramona Exwy.

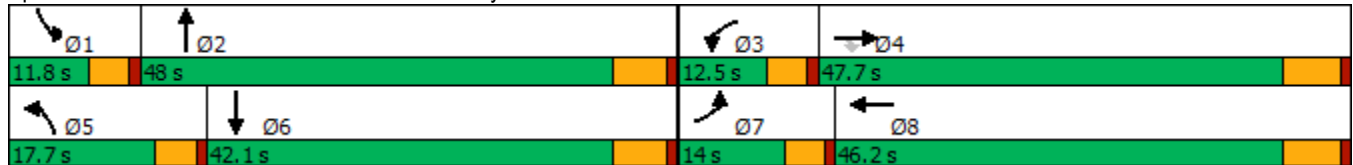


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖↖	↗↗↗	↖	↖↖	↗↗↗	↖↖	↗↗↗	↖↖	↗↗↗
Traffic Volume (vph)	348	911	201	168	2104	377	850	144	397
Future Volume (vph)	348	911	201	168	2104	377	850	144	397
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4		3	8	5	2	1	6
Permitted Phases			4						
Detector Phase	7	4	4	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	36.2	36.2	9.6	34.2	9.6	38.8	9.6	41.8
Total Split (s)	14.0	47.7	47.7	12.5	46.2	17.7	48.0	11.8	42.1
Total Split (%)	11.7%	39.8%	39.8%	10.4%	38.5%	14.8%	40.0%	9.8%	35.1%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	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	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 106.7  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated


































Splits and Phases: 6: Perris Bl. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
6: Perris Bl. & Ramona Exwy.

Ramona-Indian Warehouse Project (JN 13758)

05/20/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  		 	  		 	  		 	  	
Traffic Volume (veh/h)	348	911	201	168	2104	291	377	850	119	144	397	219
Future Volume (veh/h)	348	911	201	168	2104	291	377	850	119	144	397	219
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	355	930	160	171	2147	278	385	867	73	147	405	164
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	325	2179	675	236	1838	234	447	1187	100	211	649	250
Arrive On Green	0.09	0.42	0.42	0.07	0.39	0.39	0.13	0.24	0.24	0.06	0.18	0.18
Sat Flow, veh/h	3510	5187	1607	3510	4657	592	3510	4875	409	3510	3682	1421
Grp Volume(v), veh/h	355	930	160	171	1584	841	385	614	326	147	379	190
Grp Sat Flow(s),veh/h/ln	1755	1729	1607	1755	1729	1791	1755	1729	1826	1755	1729	1644
Q Serve(g_s), s	9.4	12.8	6.5	4.8	40.0	40.0	10.9	16.6	16.7	4.2	10.3	10.9
Cycle Q Clear(g_c), s	9.4	12.8	6.5	4.8	40.0	40.0	10.9	16.6	16.7	4.2	10.3	10.9
Prop In Lane	1.00		1.00	1.00		0.33	1.00		0.22	1.00		0.86
Lane Grp Cap(c), veh/h	325	2179	675	236	1364	707	447	842	445	211	609	290
V/C Ratio(X)	1.09	0.43	0.24	0.72	1.16	1.19	0.86	0.73	0.73	0.70	0.62	0.66
Avail Cap(c_a), veh/h	325	2179	675	274	1364	707	454	1439	760	249	1238	589
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	46.0	20.8	18.9	46.4	30.7	30.7	43.3	35.3	35.3	46.7	38.6	38.9
Incr Delay (d2), s/veh	76.3	0.1	0.2	5.9	80.8	99.4	14.6	1.2	2.4	4.7	1.0	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.4	4.8	2.3	2.2	30.3	35.0	5.4	6.8	7.3	1.9	4.3	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	122.3	20.9	19.1	52.3	111.5	130.1	57.9	36.5	37.7	51.4	39.7	41.4
LnGrp LOS	F	C	B	D	F	F	E	D	D	D	D	D
Approach Vol, veh/h		1445			2596			1325			716	
Approach Delay, s/veh		45.6			113.6			43.0			42.5	
Approach LOS		D			F			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.7	30.5	11.4	48.8	17.5	23.7	14.0	46.2				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	4.6	5.8	4.6	6.2				
Max Green Setting (Gmax), s	7.2	42.2	7.9	41.5	13.1	36.3	9.4	40.0				
Max Q Clear Time (g_c+I1), s	6.2	18.7	6.8	14.8	12.9	12.9	11.4	42.0				
Green Ext Time (p_c), s	0.0	5.9	0.0	6.9	0.0	3.4	0.0	0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				73.7								
HCM 6th LOS				E								

Timings  
3: Indian Av. & Ramona Exwy.

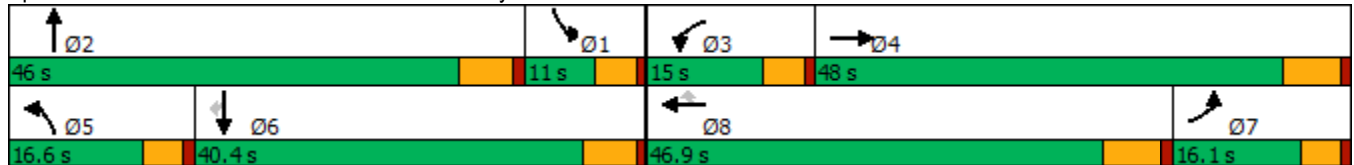


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	396	2648	124	1759	134	180	223	184	171	164
Future Volume (vph)	396	2648	124	1759	134	180	223	184	171	164
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2	1	6	
Permitted Phases					8					6
Detector Phase	7	4	3	8	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	46.2	9.6	40.2	40.2	9.6	43.8	9.6	34.8	34.8
Total Split (s)	16.1	48.0	15.0	46.9	46.9	16.6	46.0	11.0	40.4	40.4
Total Split (%)	13.4%	40.0%	12.5%	39.1%	39.1%	13.8%	38.3%	9.2%	33.7%	33.7%
Yellow Time (s)	3.6	5.2	3.6	5.2	5.2	3.6	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
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	6.2	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 100.1  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated































Splits and Phases: 3: Indian Av. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
3: Indian Av. & Ramona Exwy.

Ramona-Indian Warehouse Project (JN 13758)

05/20/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  			  			 		 	 	
Traffic Volume (veh/h)	396	2648	178	124	1759	134	180	223	39	184	171	164
Future Volume (veh/h)	396	2648	178	124	1759	134	180	223	39	184	171	164
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	404	2702	160	127	1795	115	184	228	20	188	174	138
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	430	2310	134	158	2119	658	217	358	31	194	384	171
Arrive On Green	0.12	0.46	0.46	0.09	0.41	0.41	0.12	0.11	0.11	0.11	0.11	0.11
Sat Flow, veh/h	3510	5014	292	1810	5187	1610	1810	3360	292	1810	3610	1610
Grp Volume(v), veh/h	404	1849	1013	127	1795	115	184	122	126	188	174	138
Grp Sat Flow(s),veh/h/ln	1755	1729	1847	1810	1729	1610	1810	1805	1847	1810	1805	1610
Q Serve(g_s), s	10.7	43.3	43.3	6.5	29.4	4.3	9.4	6.1	6.2	9.7	4.3	5.7
Cycle Q Clear(g_c), s	10.7	43.3	43.3	6.5	29.4	4.3	9.4	6.1	6.2	9.7	4.3	5.7
Prop In Lane	1.00		0.16	1.00		1.00	1.00		0.16	1.00		1.00
Lane Grp Cap(c), veh/h	430	1593	851	158	2119	658	217	192	197	194	384	171
V/C Ratio(X)	0.94	1.16	1.19	0.81	0.85	0.17	0.85	0.63	0.64	0.97	0.45	0.81
Avail Cap(c_a), veh/h	430	1593	851	200	2246	697	231	772	790	194	1329	593
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	40.9	25.3	25.3	42.1	25.1	17.7	40.5	40.2	40.3	41.8	39.4	21.3
Incr Delay (d2), s/veh	28.5	79.5	97.4	13.4	3.1	0.1	21.8	3.4	3.5	54.9	0.8	8.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	32.8	39.3	3.3	11.3	1.5	5.3	2.8	2.9	7.1	1.9	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	69.4	104.8	122.7	55.5	28.2	17.8	62.3	43.7	43.8	96.7	40.3	29.8
LnGrp LOS	E	F	F	E	C	B	E	D	D	F	D	C
Approach Vol, veh/h		3266			2037			432			500	
Approach Delay, s/veh		106.0			29.3			51.6			58.6	
Approach LOS		F			C			D			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.9	15.8	12.8	49.5	15.9	15.8	17.7	44.6				
Change Period (Y+Rc), s	5.8	* 5.8	4.6	6.2	4.6	5.8	6.2	* 6.2				
Max Green Setting (Gmax), s	6.4	* 40	10.4	41.8	12.0	34.6	11.5	* 41				
Max Q Clear Time (g_c+I1), s	11.7	8.2	8.5	45.3	11.4	7.7	12.7	31.4				
Green Ext Time (p_c), s	0.0	1.3	0.0	0.0	0.0	1.4	0.0	7.0				

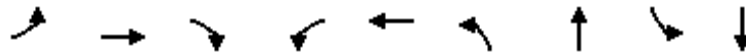
Intersection Summary

HCM 6th Ctrl Delay	73.4
HCM 6th LOS	E

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
6: Perris Bl. & Ramona Exwy.

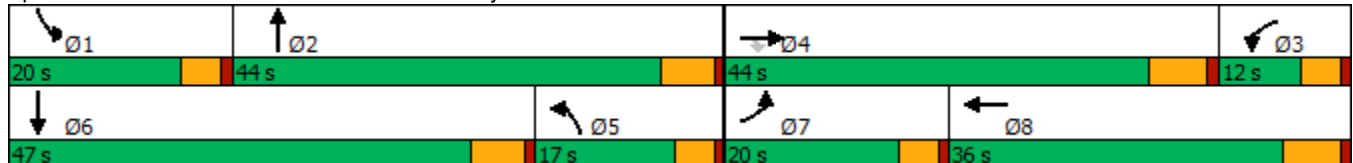


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↔↔	↑↑↑	↔	↔↔	↑↑↑	↔↔	↑↑↑	↔↔	↑↑↑
Traffic Volume (vph)	287	2228	355	141	1417	335	463	428	700
Future Volume (vph)	287	2228	355	141	1417	335	463	428	700
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4		3	8	5	2	1	6
Permitted Phases			4						
Detector Phase	7	4	4	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	36.2	36.2	9.6	34.2	9.6	38.8	9.6	41.8
Total Split (s)	20.0	44.0	44.0	12.0	36.0	17.0	44.0	20.0	47.0
Total Split (%)	16.7%	36.7%	36.7%	10.0%	30.0%	14.2%	36.7%	16.7%	39.2%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	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	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 104.9  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 6: Perris Bl. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
6: Perris Bl. & Ramona Exwy.

Ramona-Indian Warehouse Project (JN 13758)

05/20/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	287	2228	355	141	1417	225	335	463	182	428	700	210
Future Volume (veh/h)	287	2228	355	141	1417	225	335	463	182	428	700	210
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	296	2297	266	145	1461	219	345	477	137	441	722	142
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	365	1881	583	207	1515	227	407	874	243	502	1012	197
Arrive On Green	0.10	0.36	0.36	0.06	0.33	0.33	0.12	0.22	0.22	0.14	0.23	0.23
Sat Flow, veh/h	3510	5187	1608	3510	4550	681	3510	4032	1122	3510	4355	847
Grp Volume(v), veh/h	296	2297	266	145	1110	570	345	407	207	441	572	292
Grp Sat Flow(s),veh/h/ln	1755	1729	1608	1755	1729	1774	1755	1729	1696	1755	1729	1744
Q Serve(g_s), s	8.6	37.8	13.2	4.2	32.9	32.9	10.0	10.9	11.4	12.8	15.9	16.1
Cycle Q Clear(g_c), s	8.6	37.8	13.2	4.2	32.9	32.9	10.0	10.9	11.4	12.8	15.9	16.1
Prop In Lane	1.00		1.00	1.00		0.38	1.00		0.66	1.00		0.49
Lane Grp Cap(c), veh/h	365	1881	583	207	1151	591	407	749	368	502	803	405
V/C Ratio(X)	0.81	1.22	0.46	0.70	0.96	0.97	0.85	0.54	0.56	0.88	0.71	0.72
Avail Cap(c_a), veh/h	519	1881	583	249	1151	591	418	1267	622	519	1367	689
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.7	33.2	25.4	48.1	34.2	34.2	45.2	36.3	36.4	43.8	36.8	36.9
Incr Delay (d2), s/veh	4.2	104.6	0.6	4.5	18.4	28.4	14.0	0.6	1.4	14.8	1.2	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	32.6	4.8	1.9	15.6	17.7	5.0	4.5	4.6	6.4	6.5	6.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.9	137.9	25.9	52.6	52.6	62.6	59.2	36.9	37.8	58.6	38.0	39.3
LnGrp LOS	D	F	C	D	D	E	E	D	D	E	D	D
Approach Vol, veh/h		2859			1825			959			1305	
Approach Delay, s/veh		118.3			55.7			45.1			45.3	
Approach LOS		F			E			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	19.5	28.4	12.4	44.0	17.9	30.0	15.4	40.9				
Change Period (Y+Rc), s	4.6	5.8	6.2	* 6.2	5.8	* 5.8	4.6	6.2				
Max Green Setting (Gmax), s	15.4	38.2	7.4	* 38	12.4	* 41	15.4	29.8				
Max Q Clear Time (g_c+I1), s	14.8	13.4	6.2	39.8	12.0	18.1	10.6	34.9				
Green Ext Time (p_c), s	0.1	3.7	0.0	0.0	0.0	5.4	0.2	0.0				

Intersection Summary

HCM 6th Ctrl Delay	78.1
HCM 6th LOS	E

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

**APPENDIX 7.1:**

**EAC (2025) CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS**



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Intersection												
Int Delay, s/veh	0.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	5	0	2	0	0	3	5	683	23	0	274	15
Future Vol, veh/h	5	0	2	0	0	3	5	683	23	0	274	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	150	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	5	0	2	0	0	3	5	742	25	0	298	16

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	687	1083	157	914	1079	384	314	0	0	767	0	0
Stage 1	306	306	-	765	765	-	-	-	-	-	-	-
Stage 2	381	777	-	149	314	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	337	219	867	231	220	620	1258	-	-	856	-	-
Stage 1	684	665	-	366	415	-	-	-	-	-	-	-
Stage 2	619	410	-	844	660	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	334	218	867	230	219	620	1258	-	-	856	-	-
Mov Cap-2 Maneuver	334	218	-	230	219	-	-	-	-	-	-	-
Stage 1	681	665	-	365	413	-	-	-	-	-	-	-
Stage 2	613	408	-	842	660	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	14.1		10.8		0.1		0	
HCM LOS	B		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1258	-	-	405	620	856	-
HCM Lane V/C Ratio	0.004	-	-	0.019	0.005	-	-
HCM Control Delay (s)	7.9	-	-	14.1	10.8	0	-
HCM Lane LOS	A	-	-	B	B	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0	0	-

Timings  
3: Indian Av. & Ramona Exwy.

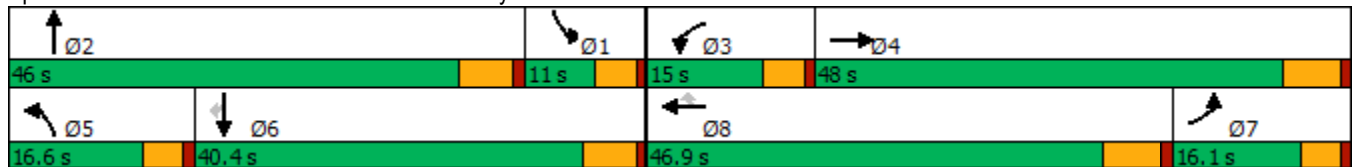


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↖	↕↕↕	↖	↕↕↕	↖	↖	↕↕	↖	↕↕	↖
Traffic Volume (vph)	345	1545	72	2615	168	114	199	29	104	144
Future Volume (vph)	345	1545	72	2615	168	114	199	29	104	144
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2	1	6	
Permitted Phases					8					6
Detector Phase	7	4	3	8	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	46.2	9.6	40.2	40.2	9.6	43.8	9.6	34.8	34.8
Total Split (s)	16.1	48.0	15.0	46.9	46.9	16.6	46.0	11.0	40.4	40.4
Total Split (%)	13.4%	40.0%	12.5%	39.1%	39.1%	13.8%	38.3%	9.2%	33.7%	33.7%
Yellow Time (s)	3.6	5.2	3.6	5.2	5.2	3.6	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
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	6.2	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 97.9  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated























Splits and Phases: 3: Indian Av. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
3: Indian Av. & Ramona Exwy.

Ramona-Indian Warehouse Project (JN 13758)

05/20/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	345	1545	127	72	2615	168	114	199	43	29	104	144
Future Volume (veh/h)	345	1545	127	72	2615	168	114	199	43	29	104	144
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	352	1577	128	73	2668	142	116	203	33	30	106	140
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	224	2573	209	95	2270	705	146	359	57	118	407	182
Arrive On Green	0.12	0.53	0.53	0.05	0.44	0.44	0.08	0.12	0.12	0.07	0.11	0.11
Sat Flow, veh/h	1810	4890	397	1810	5187	1610	1810	3114	498	1810	3610	1610
Grp Volume(v), veh/h	352	1115	590	73	2668	142	116	116	120	30	106	140
Grp Sat Flow(s),veh/h/ln	1810	1729	1828	1810	1729	1610	1810	1805	1807	1810	1805	1610
Q Serve(g_s), s	11.5	21.0	21.0	3.7	40.7	5.1	5.9	5.7	5.8	1.5	2.5	5.6
Cycle Q Clear(g_c), s	11.5	21.0	21.0	3.7	40.7	5.1	5.9	5.7	5.8	1.5	2.5	5.6
Prop In Lane	1.00		0.22	1.00		1.00	1.00		0.28	1.00		1.00
Lane Grp Cap(c), veh/h	224	1820	962	95	2270	705	146	208	208	118	407	182
V/C Ratio(X)	1.57	0.61	0.61	0.77	1.18	0.20	0.79	0.56	0.57	0.25	0.26	0.77
Avail Cap(c_a), veh/h	224	1820	962	202	2270	705	233	780	781	125	1343	599
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	40.8	15.4	15.4	43.5	26.2	16.1	42.0	38.9	39.0	41.3	37.7	20.5
Incr Delay (d2), s/veh	278.4	0.6	1.2	4.9	83.9	0.1	3.7	2.3	2.5	0.4	0.3	6.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	22.1	7.1	7.7	1.7	32.1	1.7	2.7	2.6	2.6	0.6	1.1	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	319.1	16.0	16.6	48.5	110.0	16.3	45.7	41.2	41.5	41.7	38.0	27.2
LnGrp LOS	F	B	B	D	F	B	D	D	D	D	D	C
Approach Vol, veh/h		2057			2883			352			276	
Approach Delay, s/veh		68.0			103.9			42.8			33.0	
Approach LOS		E			F			D			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.9	16.5	9.5	55.1	12.1	16.3	17.7	46.9				
Change Period (Y+Rc), s	5.8	* 5.8	4.6	6.2	4.6	5.8	6.2	* 6.2				
Max Green Setting (Gmax), s	6.4	* 40	10.4	41.8	12.0	34.6	11.5	* 41				
Max Q Clear Time (g_c+I1), s	3.5	7.8	5.7	23.0	7.9	7.6	13.5	42.7				
Green Ext Time (p_c), s	0.0	1.3	0.0	10.5	0.0	1.0	0.0	0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			83.3									
HCM 6th LOS			F									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Timings  
6: Perris Bl. & Ramona Exwy.

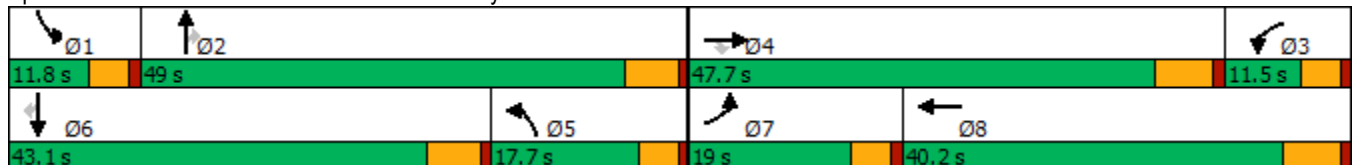


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑↑	↗	↔↔	↑↑↑	↔↔	↑↑	↗	↔↔	↑↑	↗
Traffic Volume (vph)	385	952	207	206	2224	387	904	149	166	417	235
Future Volume (vph)	385	952	207	206	2224	387	904	149	166	417	235
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8	5	2		1	6	
Permitted Phases			4					2			6
Detector Phase	7	4	4	3	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	36.2	36.2	9.6	34.2	9.6	38.8	38.8	9.6	41.8	41.8
Total Split (s)	19.0	47.7	47.7	11.5	40.2	17.7	49.0	49.0	11.8	43.1	43.1
Total Split (%)	15.8%	39.8%	39.8%	9.6%	33.5%	14.8%	40.8%	40.8%	9.8%	35.9%	35.9%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	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
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 112.7  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated


































Splits and Phases: 6: Perris Bl. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
6: Perris Bl. & Ramona Exwy.

Ramona-Indian Warehouse Project (JN 13758)

05/20/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  		 	  		 	 		 	 	
Traffic Volume (veh/h)	385	952	207	206	2224	311	387	904	149	166	417	235
Future Volume (veh/h)	385	952	207	206	2224	311	387	904	149	166	417	235
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	393	971	166	210	2269	298	395	922	104	169	426	181
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	450	1311	406	594	1434	184	699	1105	492	228	582	260
Arrive On Green	0.13	0.25	0.25	0.17	0.31	0.31	0.20	0.31	0.31	0.07	0.16	0.16
Sat Flow, veh/h	3510	5187	1604	3510	4652	596	3510	3610	1609	3510	3610	1610
Grp Volume(v), veh/h	393	971	166	210	1672	895	395	922	104	169	426	181
Grp Sat Flow(s),veh/h/ln	1755	1729	1604	1755	1729	1790	1755	1805	1609	1755	1805	1610
Q Serve(g_s), s	12.1	19.0	9.5	5.8	34.0	34.0	11.2	26.2	3.2	5.2	12.4	8.6
Cycle Q Clear(g_c), s	12.1	19.0	9.5	5.8	34.0	34.0	11.2	26.2	3.2	5.2	12.4	8.6
Prop In Lane	1.00		1.00	1.00		0.33	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	450	1311	406	594	1066	552	699	1105	492	228	582	260
V/C Ratio(X)	0.87	0.74	0.41	0.35	1.57	1.62	0.57	0.83	0.21	0.74	0.73	0.70
Avail Cap(c_a), veh/h	458	1952	604	594	1066	552	699	1414	630	229	1221	545
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	47.2	37.9	34.3	40.5	38.1	38.1	39.9	35.7	10.2	50.6	44.0	23.6
Incr Delay (d2), s/veh	15.8	0.8	0.7	0.1	260.1	288.1	0.7	3.6	0.2	10.6	1.8	3.4
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	6.1	7.7	3.6	2.4	51.9	58.1	4.7	11.5	1.9	2.6	5.5	4.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.0	38.7	35.0	40.6	298.3	326.3	40.5	39.2	10.4	61.3	45.8	27.0
LnGrp LOS	E	D	C	D	F	F	D	D	B	E	D	C
Approach Vol, veh/h		1530			2777			1421			776	
Approach Delay, s/veh		44.5			287.8			37.5			44.8	
Approach LOS		D			F			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.8	39.5	24.9	34.1	27.7	23.6	18.7	40.2				
Change Period (Y+Rc), s	4.6	5.8	6.2	* 6.2	5.8	* 5.8	4.6	6.2				
Max Green Setting (Gmax), s	7.2	43.2	6.9	* 42	13.1	* 37	14.4	34.0				
Max Q Clear Time (g_c+I1), s	7.2	28.2	7.8	21.0	13.2	14.4	14.1	36.0				
Green Ext Time (p_c), s	0.0	5.5	0.0	6.7	0.0	3.1	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	146.9
HCM 6th LOS	F

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection												
Int Delay, s/veh	0.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	14	0	5	0	0	6	2	746	6	0	534	5
Future Vol, veh/h	14	0	5	0	0	6	2	746	6	0	534	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	150	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	15	0	5	0	0	7	2	811	7	0	580	5

Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	993	1405	293	1109	1404	409	585	0	0	818	0	0
Stage 1	583	583	-	819	819	-	-	-	-	-	-	-
Stage 2	410	822	-	290	585	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	203	141	709	167	141	597	1000	-	-	819	-	-
Stage 1	470	502	-	340	392	-	-	-	-	-	-	-
Stage 2	595	391	-	699	501	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	201	141	709	165	141	597	1000	-	-	819	-	-
Mov Cap-2 Maneuver	201	141	-	165	141	-	-	-	-	-	-	-
Stage 1	469	502	-	339	391	-	-	-	-	-	-	-
Stage 2	587	390	-	694	501	-	-	-	-	-	-	-

Approach	EB		WB			NB			SB		
HCM Control Delay, s	20.8		11.1			0			0		
HCM LOS	C		B								

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1000	-	-	248	597	819	-	-
HCM Lane V/C Ratio	0.002	-	-	0.083	0.011	-	-	-
HCM Control Delay (s)	8.6	-	-	20.8	11.1	0	-	-
HCM Lane LOS	A	-	-	C	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0	0	-	-

Timings  
3: Indian Av. & Ramona Exwy.

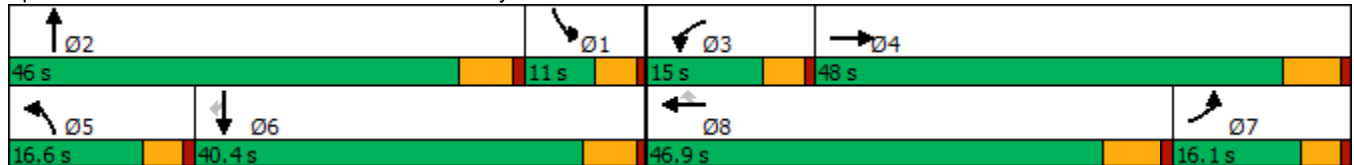


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↖	↕↕↕	↖	↕↕↕	↖	↖	↕↕	↖	↕↕	↖
Traffic Volume (vph)	394	2785	135	1875	138	188	222	192	181	166
Future Volume (vph)	394	2785	135	1875	138	188	222	192	181	166
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2	1	6	
Permitted Phases					8					6
Detector Phase	7	4	3	8	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	46.2	9.6	40.2	40.2	9.6	43.8	9.6	34.8	34.8
Total Split (s)	16.1	48.0	15.0	46.9	46.9	16.6	46.0	11.0	40.4	40.4
Total Split (%)	13.4%	40.0%	12.5%	39.1%	39.1%	13.8%	38.3%	9.2%	33.7%	33.7%
Yellow Time (s)	3.6	5.2	3.6	5.2	5.2	3.6	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
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	6.2	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 100.2  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 3: Indian Av. & Ramona Exwy.



























HCM 6th Signalized Intersection Summary  
 3: Indian Av. & Ramona Exwy.

Ramona-Indian Warehouse Project (JN 13758)

05/20/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	394	2785	188	135	1875	138	188	222	46	192	181	166
Future Volume (veh/h)	394	2785	188	135	1875	138	188	222	46	192	181	166
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	402	2842	170	138	1913	119	192	227	27	196	185	140
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	217	2291	134	169	2147	667	225	339	40	202	376	168
Arrive On Green	0.12	0.46	0.46	0.09	0.41	0.41	0.12	0.10	0.10	0.11	0.10	0.10
Sat Flow, veh/h	1810	5011	294	1810	5187	1610	1810	3253	383	1810	3610	1610
Grp Volume(v), veh/h	402	1944	1068	138	1913	119	192	125	129	196	185	140
Grp Sat Flow(s),veh/h/ln	1810	1729	1847	1810	1729	1610	1810	1805	1831	1810	1805	1610
Q Serve(g_s), s	11.5	43.8	43.8	7.2	32.8	4.5	10.0	6.4	6.5	10.3	4.6	5.9
Cycle Q Clear(g_c), s	11.5	43.8	43.8	7.2	32.8	4.5	10.0	6.4	6.5	10.3	4.6	5.9
Prop In Lane	1.00		0.16	1.00		1.00	1.00		0.21	1.00		1.00
Lane Grp Cap(c), veh/h	217	1581	844	169	2147	667	225	188	191	202	376	168
V/C Ratio(X)	1.85	1.23	1.27	0.82	0.89	0.18	0.86	0.66	0.68	0.97	0.49	0.83
Avail Cap(c_a), veh/h	217	1581	844	196	2201	683	226	757	768	202	1303	581
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	42.2	26.0	26.0	42.7	26.1	17.8	41.2	41.3	41.4	42.4	40.5	22.2
Incr Delay (d2), s/veh	400.9	109.2	128.7	17.7	4.9	0.1	24.7	4.0	4.1	54.5	1.0	10.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	29.0	39.5	46.8	3.9	12.9	1.5	5.8	3.0	3.1	7.5	2.1	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	443.1	135.2	154.7	60.3	31.0	17.9	65.9	45.3	45.5	96.9	41.5	32.5
LnGrp LOS	F	F	F	E	C	B	E	D	D	F	D	C
Approach Vol, veh/h		3414			2170			446			521	
Approach Delay, s/veh		177.6			32.2			54.2			59.9	
Approach LOS		F			C			D			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.5	15.8	13.6	50.0	16.5	15.8	17.7	45.9				
Change Period (Y+Rc), s	5.8	* 5.8	4.6	6.2	4.6	5.8	6.2	* 6.2				
Max Green Setting (Gmax), s	6.4	* 40	10.4	41.8	12.0	34.6	11.5	* 41				
Max Q Clear Time (g_c+I1), s	12.3	8.5	9.2	45.8	12.0	7.9	13.5	34.8				
Green Ext Time (p_c), s	0.0	1.4	0.0	0.0	0.0	1.5	0.0	4.9				

Intersection Summary

HCM 6th Ctrl Delay	111.7
HCM 6th LOS	F

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
6: Perris Bl. & Ramona Exwy.

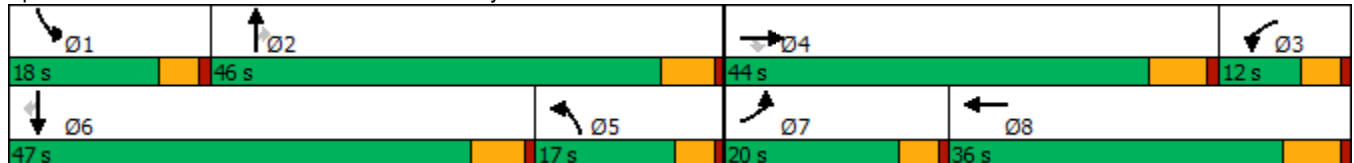


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑↑	↗	↔↔	↑↑↑	↔↔	↑↑	↗	↔↔	↑↑	↗
Traffic Volume (vph)	312	2302	372	171	1501	340	490	202	452	742	242
Future Volume (vph)	312	2302	372	171	1501	340	490	202	452	742	242
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8	5	2		1	6	
Permitted Phases			4					2			6
Detector Phase	7	4	4	3	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	36.2	36.2	9.6	34.2	9.6	38.8	38.8	9.6	41.8	41.8
Total Split (s)	20.0	44.0	44.0	12.0	36.0	17.0	46.0	46.0	18.0	47.0	47.0
Total Split (%)	16.7%	36.7%	36.7%	10.0%	30.0%	14.2%	38.3%	38.3%	15.0%	39.2%	39.2%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	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
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 109.5  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated


































Splits and Phases: 6: Perris Bl. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
6: Perris Bl. & Ramona Exwy.

Ramona-Indian Warehouse Project (JN 13758)

05/20/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  		 	  		 	 		 	 	
Traffic Volume (veh/h)	312	2302	372	171	1501	241	340	490	202	452	742	242
Future Volume (veh/h)	312	2302	372	171	1501	241	340	490	202	452	742	242
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	322	2373	284	176	1547	235	351	505	157	466	765	175
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	386	1766	547	234	1416	215	392	963	429	424	957	425
Arrive On Green	0.11	0.34	0.34	0.07	0.31	0.31	0.11	0.27	0.27	0.12	0.26	0.26
Sat Flow, veh/h	3510	5187	1607	3510	4542	688	3510	3610	1608	3510	3610	1605
Grp Volume(v), veh/h	322	2373	284	176	1177	605	351	505	157	466	765	175
Grp Sat Flow(s),veh/h/ln	1755	1729	1607	1755	1729	1772	1755	1805	1608	1755	1805	1605
Q Serve(g_s), s	10.0	37.8	15.7	5.5	34.6	34.6	11.0	13.2	6.7	13.4	21.9	7.2
Cycle Q Clear(g_c), s	10.0	37.8	15.7	5.5	34.6	34.6	11.0	13.2	6.7	13.4	21.9	7.2
Prop In Lane	1.00		1.00	1.00		0.39	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	386	1766	547	234	1078	552	392	963	429	424	957	425
V/C Ratio(X)	0.84	1.34	0.52	0.75	1.09	1.10	0.90	0.52	0.37	1.10	0.80	0.41
Avail Cap(c_a), veh/h	487	1766	547	234	1078	552	392	1307	582	424	1340	596
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	48.4	36.6	29.3	50.9	38.2	38.2	48.7	34.7	19.2	48.8	38.1	17.6
Incr Delay (d2), s/veh	8.0	158.5	0.9	11.5	56.0	66.9	21.7	0.4	0.5	73.5	2.4	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	40.7	5.8	2.7	22.0	24.3	5.8	5.6	3.2	10.0	9.6	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.5	195.1	30.2	62.4	94.2	105.1	70.3	35.1	19.7	122.3	40.4	18.2
LnGrp LOS	E	F	C	E	F	F	E	D	B	F	D	B
Approach Vol, veh/h		2979			1958			1013			1406	
Approach Delay, s/veh		164.4			94.7			44.9			64.8	
Approach LOS		F			F			D			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.0	35.4	13.6	44.0	18.2	35.2	16.8	40.8				
Change Period (Y+Rc), s	4.6	5.8	6.2	* 6.2	5.8	* 5.8	4.6	6.2				
Max Green Setting (Gmax), s	13.4	40.2	7.4	* 38	12.4	* 41	15.4	29.8				
Max Q Clear Time (g_c+I1), s	15.4	15.2	7.5	39.8	13.0	23.9	12.0	36.6				
Green Ext Time (p_c), s	0.0	3.6	0.0	0.0	0.0	5.0	0.2	0.0				

Intersection Summary

HCM 6th Ctrl Delay	110.4
HCM 6th LOS	F

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

**APPENDIX 7.2:**

**EAPC (2025) CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS**

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Intersection												
Int Delay, s/veh	0.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	5	0	2	0	0	3	5	699	43	0	284	15
Future Vol, veh/h	5	0	2	0	0	3	5	699	43	0	284	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	150	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	5	0	2	0	0	3	5	760	47	0	309	16

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	707	1134	163	949	1119	404	325	0	0	807	0	0
Stage 1	317	317	-	794	794	-	-	-	-	-	-	-
Stage 2	390	817	-	155	325	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	326	204	859	218	209	602	1246	-	-	827	-	-
Stage 1	674	658	-	352	403	-	-	-	-	-	-	-
Stage 2	611	393	-	838	653	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	323	203	859	217	208	602	1246	-	-	827	-	-
Mov Cap-2 Maneuver	323	203	-	217	208	-	-	-	-	-	-	-
Stage 1	671	658	-	351	401	-	-	-	-	-	-	-
Stage 2	605	391	-	836	653	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	14.3	11	0.1	0
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1246	-	-	393	602	827	-
HCM Lane V/C Ratio	0.004	-	-	0.019	0.005	-	-
HCM Control Delay (s)	7.9	-	-	14.3	11	0	-
HCM Lane LOS	A	-	-	B	B	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0	0	-

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↕		↖	↕
Traffic Vol, veh/h	0	6	741	14	10	276
Future Vol, veh/h	0	6	741	14	10	276
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	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	7	805	15	11	300

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	-	410	0	0	820
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	4.1
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	2.2
Pot Cap-1 Maneuver	0	596	-	-	818
Stage 1	0	-	-	-	-
Stage 2	0	-	-	-	-
Platoon blocked, %					
Mov Cap-1 Maneuver	-	596	-	-	818
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.1	0	0.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	596	818
HCM Lane V/C Ratio	-	-	0.011	0.013
HCM Control Delay (s)	-	-	11.1	9.5
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0	0

Timings  
3: Indian Av. & Ramona Exwy.

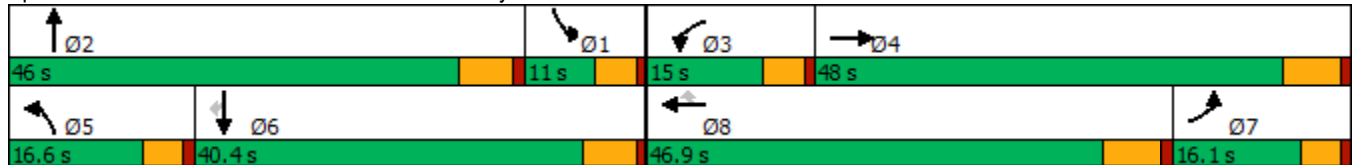


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↖	↕↕↕	↖	↕↕↕	↖	↖	↕↕	↖	↕↕	↖
Traffic Volume (vph)	365	1545	74	2627	186	114	205	29	104	144
Future Volume (vph)	365	1545	74	2627	186	114	205	29	104	144
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2	1	6	
Permitted Phases					8					6
Detector Phase	7	4	3	8	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	46.2	9.6	40.2	40.2	9.6	43.8	9.6	34.8	34.8
Total Split (s)	16.1	48.0	15.0	46.9	46.9	16.6	46.0	11.0	40.4	40.4
Total Split (%)	13.4%	40.0%	12.5%	39.1%	39.1%	13.8%	38.3%	9.2%	33.7%	33.7%
Yellow Time (s)	3.6	5.2	3.6	5.2	5.2	3.6	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
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	6.2	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 97.9  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 3: Indian Av. & Ramona Exwy.





























HCM 6th Signalized Intersection Summary  
3: Indian Av. & Ramona Exwy.

Ramona-Indian Warehouse Project (JN 13758)

05/20/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	365	1545	127	74	2627	186	114	205	43	29	104	144
Future Volume (veh/h)	365	1545	127	74	2627	186	114	205	43	29	104	144
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	372	1577	128	76	2681	161	116	209	33	30	106	140
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	224	2563	208	98	2270	705	146	361	56	118	407	182
Arrive On Green	0.12	0.52	0.52	0.05	0.44	0.44	0.08	0.12	0.12	0.07	0.11	0.11
Sat Flow, veh/h	1810	4890	397	1810	5187	1610	1810	3128	486	1810	3610	1610
Grp Volume(v), veh/h	372	1115	590	76	2681	161	116	119	123	30	106	140
Grp Sat Flow(s),veh/h/ln	1810	1729	1828	1810	1729	1610	1810	1805	1809	1810	1805	1610
Q Serve(g_s), s	11.5	21.1	21.1	3.9	40.7	5.8	5.9	5.8	6.0	1.5	2.5	5.6
Cycle Q Clear(g_c), s	11.5	21.1	21.1	3.9	40.7	5.8	5.9	5.8	6.0	1.5	2.5	5.6
Prop In Lane	1.00		0.22	1.00		1.00	1.00		0.27	1.00		1.00
Lane Grp Cap(c), veh/h	224	1812	958	98	2270	705	146	208	209	118	407	182
V/C Ratio(X)	1.66	0.62	0.62	0.77	1.18	0.23	0.79	0.57	0.59	0.25	0.26	0.77
Avail Cap(c_a), veh/h	224	1812	958	202	2270	705	233	780	782	125	1343	599
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	40.8	15.5	15.5	43.4	26.2	16.3	42.0	39.0	39.0	41.3	37.7	20.5
Incr Delay (d2), s/veh	317.1	0.6	1.2	4.8	86.4	0.2	3.7	2.5	2.6	0.4	0.3	6.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	24.5	7.2	7.7	1.8	32.6	2.0	2.7	2.6	2.7	0.6	1.1	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	357.9	16.2	16.7	48.2	112.5	16.5	45.7	41.4	41.7	41.7	38.0	27.2
LnGrp LOS	F	B	B	D	F	B	D	D	D	D	D	C
Approach Vol, veh/h		2077			2918			358			276	
Approach Delay, s/veh		77.5			105.5			42.9			33.0	
Approach LOS		E			F			D			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.9	16.5	9.7	54.9	12.1	16.3	17.7	46.9				
Change Period (Y+Rc), s	5.8	* 5.8	4.6	6.2	4.6	5.8	6.2	* 6.2				
Max Green Setting (Gmax), s	6.4	* 40	10.4	41.8	12.0	34.6	11.5	* 41				
Max Q Clear Time (g_c+I1), s	3.5	8.0	5.9	23.1	7.9	7.6	13.5	42.7				
Green Ext Time (p_c), s	0.0	1.3	0.0	10.5	0.0	1.0	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	87.7
HCM 6th LOS	F

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑	↑		↑
Traffic Vol, veh/h	0	1617	2883	10	0	3
Future Vol, veh/h	0	1617	2883	10	0	3
Conflicting Peds, #/hr	0	0	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	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	1758	3134	11	0	3

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	-	0	-	0	1567
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	-	-	-	0 87
Stage 1	0	-	-	-	0 -
Stage 2	0	-	-	-	0 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	87
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	48
HCM LOS			E

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	87
HCM Lane V/C Ratio	-	-	-	0.037
HCM Control Delay (s)	-	-	-	48
HCM Lane LOS	-	-	-	E
HCM 95th %tile Q(veh)	-	-	-	0.1

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↑↑	↑↑↑	
Traffic Vol, veh/h	0	28	0	1599	818	34
Future Vol, veh/h	0	28	0	1599	818	34
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	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	30	0	1738	889	37

Major/Minor	Minor2	Major1	Major2		
Conflicting Flow All	-	463	-	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	471	0	-	-
Stage 1	0	-	0	-	-
Stage 2	0	-	0	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	-	471	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.2	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT EBLn1	SBT	SBR
Capacity (veh/h)	- 471	-	-
HCM Lane V/C Ratio	- 0.065	-	-
HCM Control Delay (s)	- 13.2	-	-
HCM Lane LOS	- B	-	-
HCM 95th %tile Q(veh)	- 0.2	-	-

Timings  
6: Perris Bl. & Ramona Exwy.

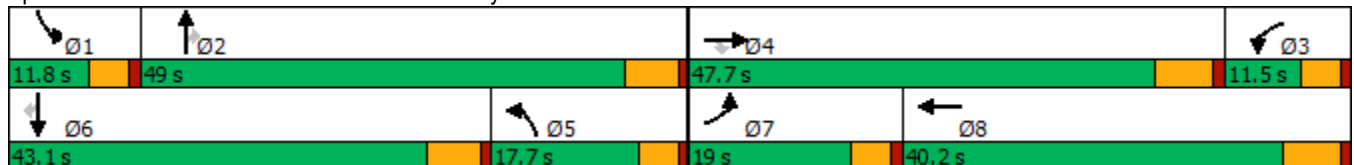


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↖	↑↑↑	↗	↖↖	↑↑↑	↖↖	↑↑	↗	↖↖	↑↑	↗
Traffic Volume (vph)	385	952	207	206	2230	399	904	149	169	421	256
Future Volume (vph)	385	952	207	206	2230	399	904	149	169	421	256
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8	5	2		1	6	
Permitted Phases			4					2			6
Detector Phase	7	4	4	3	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	36.2	36.2	9.6	34.2	9.6	38.8	38.8	9.6	41.8	41.8
Total Split (s)	19.0	47.7	47.7	11.5	40.2	17.7	49.0	49.0	11.8	43.1	43.1
Total Split (%)	15.8%	39.8%	39.8%	9.6%	33.5%	14.8%	40.8%	40.8%	9.8%	35.9%	35.9%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	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
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 112.7  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated


































Splits and Phases: 6: Perris Bl. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
6: Perris Bl. & Ramona Exwy.

Ramona-Indian Warehouse Project (JN 13758)

05/20/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  		 	  		 	 		 	 	
Traffic Volume (veh/h)	385	952	207	206	2230	311	399	904	149	169	421	256
Future Volume (veh/h)	385	952	207	206	2230	311	399	904	149	169	421	256
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	393	971	166	210	2276	298	407	922	104	172	430	202
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	450	1311	406	594	1435	183	693	1105	492	229	588	262
Arrive On Green	0.13	0.25	0.25	0.17	0.31	0.31	0.20	0.31	0.31	0.07	0.16	0.16
Sat Flow, veh/h	3510	5187	1604	3510	4654	594	3510	3610	1609	3510	3610	1610
Grp Volume(v), veh/h	393	971	166	210	1676	898	407	922	104	172	430	202
Grp Sat Flow(s),veh/h/ln	1755	1729	1604	1755	1729	1790	1755	1805	1609	1755	1805	1610
Q Serve(g_s), s	12.1	19.0	9.5	5.8	34.0	34.0	11.6	26.3	3.2	5.3	12.5	9.7
Cycle Q Clear(g_c), s	12.1	19.0	9.5	5.8	34.0	34.0	11.6	26.3	3.2	5.3	12.5	9.7
Prop In Lane	1.00		1.00	1.00		0.33	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	450	1311	406	594	1066	552	693	1105	492	229	588	262
V/C Ratio(X)	0.87	0.74	0.41	0.35	1.57	1.63	0.59	0.83	0.21	0.75	0.73	0.77
Avail Cap(c_a), veh/h	458	1952	604	594	1066	552	693	1414	630	229	1221	544
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	47.2	37.9	34.3	40.5	38.2	38.2	40.2	35.7	10.2	50.7	43.9	23.8
Incr Delay (d2), s/veh	15.8	0.8	0.7	0.1	262.1	290.5	0.9	3.6	0.2	11.6	1.8	4.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	7.7	3.6	2.4	52.2	58.4	4.9	11.5	1.9	2.6	5.5	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.0	38.7	35.0	40.6	300.3	328.6	41.1	39.2	10.4	62.3	45.6	28.5
LnGrp LOS	E	D	D	D	F	F	D	D	B	E	D	C
Approach Vol, veh/h		1530			2784			1433			804	
Approach Delay, s/veh		44.6			289.8			37.7			44.9	
Approach LOS		D			F			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.8	39.6	24.9	34.1	27.6	23.8	18.8	40.2				
Change Period (Y+Rc), s	4.6	5.8	6.2	* 6.2	5.8	* 5.8	4.6	6.2				
Max Green Setting (Gmax), s	7.2	43.2	6.9	* 42	13.1	* 37	14.4	34.0				
Max Q Clear Time (g_c+I1), s	7.3	28.3	7.8	21.0	13.6	14.5	14.1	36.0				
Green Ext Time (p_c), s	0.0	5.5	0.0	6.7	0.0	3.2	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	147.3
HCM 6th LOS	F

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection												
Int Delay, s/veh	0.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	14	0	5	0	0	6	2	772	29	0	544	5
Future Vol, veh/h	14	0	5	0	0	6	2	772	29	0	544	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	150	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	15	0	5	0	0	7	2	839	32	0	591	5

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1018	1469	298	1155	1455	436	596	0	0	871	0	0
Stage 1	594	594	-	859	859	-	-	-	-	-	-	-
Stage 2	424	875	-	296	596	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	194	129	704	154	131	574	990	-	-	783	-	-
Stage 1	463	496	-	322	376	-	-	-	-	-	-	-
Stage 2	584	370	-	694	495	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	191	129	704	153	131	574	990	-	-	783	-	-
Mov Cap-2 Maneuver	191	129	-	153	131	-	-	-	-	-	-	-
Stage 1	462	496	-	321	375	-	-	-	-	-	-	-
Stage 2	576	369	-	689	495	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	21.7		11.3		0		0	
HCM LOS	C		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	990	-	-	236	574	783	-
HCM Lane V/C Ratio	0.002	-	-	0.088	0.011	-	-
HCM Control Delay (s)	8.6	-	-	21.7	11.3	0	-
HCM Lane LOS	A	-	-	C	B	A	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0	0	-

Intersection						
Int Delay, s/veh	0.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↕		↖	↕
Traffic Vol, veh/h	0	11	792	4	10	539
Future Vol, veh/h	0	11	792	4	10	539
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	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	12	861	4	11	586

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	-	433	0	0	865
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	4.1
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	2.2
Pot Cap-1 Maneuver	0	576	-	-	787
Stage 1	0	-	-	-	-
Stage 2	0	-	-	-	-
Platoon blocked, %					
Mov Cap-1 Maneuver	-	576	-	-	787
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.4	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	576	787
HCM Lane V/C Ratio	-	-	0.021	0.014
HCM Control Delay (s)	-	-	11.4	9.6
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.1	0

Timings  
3: Indian Av. & Ramona Exwy.

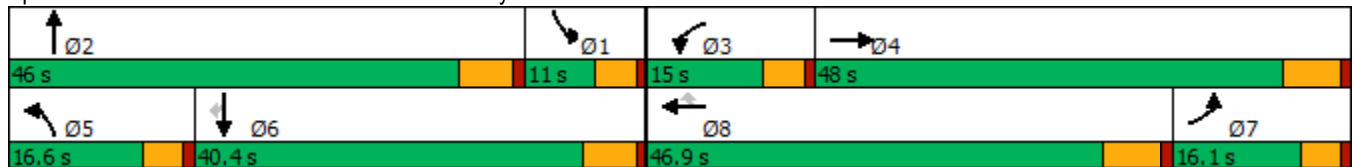


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↖	↕↕↕	↖	↕↕↕	↖	↖	↕↕	↖	↕↕	↖
Traffic Volume (vph)	411	2785	142	1896	162	188	224	192	181	166
Future Volume (vph)	411	2785	142	1896	162	188	224	192	181	166
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2	1	6	
Permitted Phases					8					6
Detector Phase	7	4	3	8	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	46.2	9.6	40.2	40.2	9.6	43.8	9.6	34.8	34.8
Total Split (s)	16.1	48.0	15.0	46.9	46.9	16.6	46.0	11.0	40.4	40.4
Total Split (%)	13.4%	40.0%	12.5%	39.1%	39.1%	13.8%	38.3%	9.2%	33.7%	33.7%
Yellow Time (s)	3.6	5.2	3.6	5.2	5.2	3.6	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
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	6.2	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 100.2  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 3: Indian Av. & Ramona Exwy.



























HCM 6th Signalized Intersection Summary  
 3: Indian Av. & Ramona Exwy.

Ramona-Indian Warehouse Project (JN 13758)

05/20/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	411	2785	188	142	1896	162	188	224	46	192	181	166
Future Volume (veh/h)	411	2785	188	142	1896	162	188	224	46	192	181	166
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	419	2842	170	145	1935	143	192	229	27	196	185	140
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	217	2274	133	176	2153	668	224	339	40	202	376	168
Arrive On Green	0.12	0.45	0.45	0.10	0.41	0.41	0.12	0.10	0.10	0.11	0.10	0.10
Sat Flow, veh/h	1810	5011	294	1810	5187	1610	1810	3257	380	1810	3610	1610
Grp Volume(v), veh/h	419	1944	1068	145	1935	143	192	126	130	196	185	140
Grp Sat Flow(s),veh/h/ln	1810	1729	1847	1810	1729	1610	1810	1805	1832	1810	1805	1610
Q Serve(g_s), s	11.5	43.6	43.6	7.6	33.5	5.5	10.0	6.5	6.6	10.4	4.7	6.0
Cycle Q Clear(g_c), s	11.5	43.6	43.6	7.6	33.5	5.5	10.0	6.5	6.6	10.4	4.7	6.0
Prop In Lane	1.00		0.16	1.00		1.00	1.00		0.21	1.00		1.00
Lane Grp Cap(c), veh/h	217	1569	838	176	2153	668	224	188	191	202	376	168
V/C Ratio(X)	1.94	1.24	1.27	0.82	0.90	0.21	0.86	0.67	0.68	0.97	0.49	0.84
Avail Cap(c_a), veh/h	217	1569	838	196	2197	682	226	755	766	202	1300	580
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	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	42.3	26.2	26.2	42.5	26.2	18.0	41.2	41.5	41.5	42.5	40.7	22.3
Incr Delay (d2), s/veh	437.3	113.1	132.7	19.7	5.4	0.2	24.8	4.1	4.3	54.5	1.0	10.4
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	31.2	40.1	47.4	4.2	13.3	1.9	5.8	3.0	3.1	7.5	2.1	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	479.6	139.3	158.9	62.3	31.6	18.2	66.1	45.6	45.8	97.1	41.7	32.7
LnGrp LOS	F	F	F	E	C	B	E	D	D	F	D	C
Approach Vol, veh/h		3431			2223			448			521	
Approach Delay, s/veh		187.0			32.8			54.4			60.1	
Approach LOS		F			C			D			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.5	15.8	14.0	49.8	16.5	15.8	17.7	46.1				
Change Period (Y+Rc), s	5.8	* 5.8	4.6	6.2	4.6	5.8	6.2	* 6.2				
Max Green Setting (Gmax), s	6.4	* 40	10.4	41.8	12.0	34.6	11.5	* 41				
Max Q Clear Time (g_c+I1), s	12.4	8.6	9.6	45.6	12.0	8.0	13.5	35.5				
Green Ext Time (p_c), s	0.0	1.4	0.0	0.0	0.0	1.5	0.0	4.4				

Intersection Summary

HCM 6th Ctrl Delay	116.3
HCM 6th LOS	F

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑	↑		↑
Traffic Vol, veh/h	0	3024	2188	3	0	12
Future Vol, veh/h	0	3024	2188	3	0	12
Conflicting Peds, #/hr	0	0	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	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	3287	2378	3	0	13

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	-	0	-	0	1189
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	-	-	-	0 157
Stage 1	0	-	-	-	0 -
Stage 2	0	-	-	-	0 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	157
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	30
HCM LOS			D

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	157
HCM Lane V/C Ratio	-	-	-	0.083
HCM Control Delay (s)	-	-	-	30
HCM Lane LOS	-	-	-	D
HCM 95th %tile Q(veh)	-	-	-	0.3

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↑↑	↑↑↑	
Traffic Vol, veh/h	0	48	0	1042	1437	38
Future Vol, veh/h	0	48	0	1042	1437	38
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	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	52	0	1133	1562	41

Major/Minor	Minor2	Major1	Major2		
Conflicting Flow All	-	802	-	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	284	0	-	-
Stage 1	0	-	0	-	-
Stage 2	0	-	0	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	-	284	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	20.5	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	284	-	-
HCM Lane V/C Ratio	-	0.184	-	-
HCM Control Delay (s)	-	20.5	-	-
HCM Lane LOS	-	C	-	-
HCM 95th %tile Q(veh)	-	0.7	-	-

Timings  
6: Perris Bl. & Ramona Exwy.

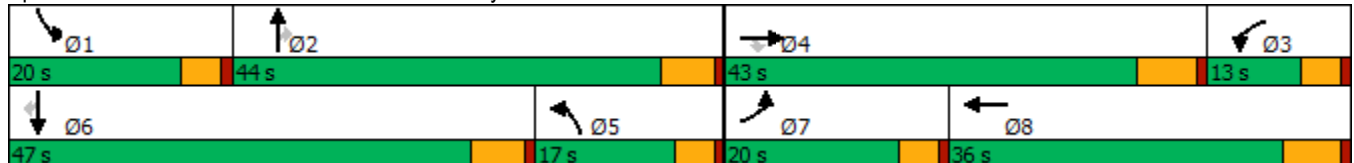


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑↑	↔	↔↔	↑↑↑	↔↔	↑↑	↔	↔↔	↑↑	↔
Traffic Volume (vph)	312	2302	372	171	1506	346	490	202	458	752	274
Future Volume (vph)	312	2302	372	171	1506	346	490	202	458	752	274
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8	5	2		1	6	
Permitted Phases			4					2			6
Detector Phase	7	4	4	3	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	36.2	36.2	9.6	34.2	9.6	38.8	38.8	9.6	41.8	41.8
Total Split (s)	20.0	43.0	43.0	13.0	36.0	17.0	44.0	44.0	20.0	47.0	47.0
Total Split (%)	16.7%	35.8%	35.8%	10.8%	30.0%	14.2%	36.7%	36.7%	16.7%	39.2%	39.2%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	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
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 109.8  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated


































Splits and Phases: 6: Perris Bl. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
6: Perris Bl. & Ramona Exwy.

Ramona-Indian Warehouse Project (JN 13758)

05/20/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  		 	  		 	 		 	 	
Traffic Volume (veh/h)	312	2302	372	171	1506	241	346	490	202	458	752	274
Future Volume (veh/h)	312	2302	372	171	1506	241	346	490	202	458	752	274
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	322	2373	284	176	1553	235	357	505	157	472	775	208
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	386	1731	536	236	1388	210	395	912	406	490	971	432
Arrive On Green	0.11	0.33	0.33	0.07	0.31	0.31	0.11	0.25	0.25	0.14	0.27	0.27
Sat Flow, veh/h	3510	5187	1607	3510	4545	686	3510	3610	1608	3510	3610	1605
Grp Volume(v), veh/h	322	2373	284	176	1181	607	357	505	157	472	775	208
Grp Sat Flow(s),veh/h/ln	1755	1729	1607	1755	1729	1773	1755	1805	1608	1755	1805	1605
Q Serve(g_s), s	9.9	36.8	15.8	5.4	33.7	33.7	11.1	13.4	6.8	14.7	22.0	8.7
Cycle Q Clear(g_c), s	9.9	36.8	15.8	5.4	33.7	33.7	11.1	13.4	6.8	14.7	22.0	8.7
Prop In Lane	1.00		1.00	1.00		0.39	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	386	1731	536	236	1056	542	395	912	406	490	971	432
V/C Ratio(X)	0.83	1.37	0.53	0.74	1.12	1.12	0.90	0.55	0.39	0.96	0.80	0.48
Avail Cap(c_a), veh/h	490	1731	536	267	1056	542	395	1250	557	490	1348	599
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	48.1	36.7	29.7	50.5	38.3	38.3	48.4	35.8	19.9	47.2	37.5	17.6
Incr Delay (d2), s/veh	7.8	170.8	1.0	7.7	65.9	76.6	23.2	0.5	0.6	31.1	2.4	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	41.8	5.9	2.6	23.0	25.2	6.0	5.7	3.3	8.3	9.6	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.9	207.5	30.7	58.2	104.2	114.9	71.5	36.3	20.5	78.2	39.9	18.4
LnGrp LOS	E	F	C	E	F	F	E	D	C	E	D	B
Approach Vol, veh/h		2979			1964			1019			1455	
Approach Delay, s/veh		174.3			103.4			46.2			49.3	
Approach LOS		F			F			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.0	33.7	13.6	43.0	18.2	35.5	16.7	39.9				
Change Period (Y+Rc), s	4.6	5.8	6.2	* 6.2	5.8	* 5.8	4.6	6.2				
Max Green Setting (Gmax), s	15.4	38.2	8.4	* 37	12.4	* 41	15.4	29.8				
Max Q Clear Time (g_c+I1), s	16.7	15.4	7.4	38.8	13.1	24.0	11.9	35.7				
Green Ext Time (p_c), s	0.0	3.6	0.0	0.0	0.0	5.2	0.2	0.0				

Intersection Summary

HCM 6th Ctrl Delay	113.4
HCM 6th LOS	F

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

**APPENDIX 7.3:**

**EAC (2025) CONDITIONS TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS**

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### Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

<u>DIST</u>	<u>CO</u>	<u>RTE</u>	<u>PM</u>	<u>CALC</u>	<u>TRAFFIC CONDITIONS</u>	<u>EAC 2025</u>
Jurisdiction: <u>City of Perris</u>				CHK <u>RV</u>	DATE <u>06/30/21</u>	
Major Street: <u>Indian Avenue</u>				CHK <u>RV</u>	DATE <u>06/30/21</u>	
Minor Street: <u>Perry Street</u>				Critical Approach Speed (Major) <u>40</u> mph		
				Critical Approach Speed (Minor) <u>25</u> mph		
Major Street Approach Lanes = <u>2</u>	lane	Minor Street Approach Lanes = <u>1</u>	lane			
Major Street Future ADT = <u>6,905</u>	vpd	Minor Street Future ADT = <u>245</u>	vpd			
Speed limit or critical speed on major street traffic > 64 km/h (40 mph); .....						<input type="checkbox"/>
						or
In built up area of isolated community of < 10,000 population .....						<input type="checkbox"/>

**RURAL (R)**

**(Based on Estimated Average Daily Traffic - See Note)**

<u>URBAN</u>	<u>RURAL</u>	Minimum Requirements EADT			
<b>XX</b>					
<b>CONDITION A - Minimum Vehicular Volume</b>		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
<u>Satisfied</u>	<u>Not Satisfied</u>				
	<b>XX</b>				
Number of lanes for moving traffic on each approach					
<u>Major Street</u>	<u>Minor Street</u>	<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
1	1	8,000	5,600	2,400	1,680
2 + <b>6,905</b>	1 <b>245</b>	9,600	6,720	2,400	1,680
2 +	2 +	9,600	6,720	3,200	2,240
1	2 +	8,000	5,600	3,200	2,240
<b>CONDITION B - Interruption of Continuous Traffic</b>		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
<u>Satisfied</u>	<u>Not Satisfied</u>				
	<b>XX</b>				
Number of lanes for moving traffic on each approach					
<u>Major Street</u>	<u>Minor Street</u>	<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
1	1	12,000	8,400	1,200	850
2 + <b>6,905</b>	1 <b>245</b>	14,400	10,080	1,200	850
2 +	2 +	14,400	10,080	1,600	1,120
1	2 +	12,000	8,400	1,600	1,120
<b>Combination of CONDITIONS A + B</b>		2 CONDITIONS		2 CONDITIONS	
<u>Satisfied</u>	<u>Not Satisfied</u>	80%		80%	
No one condition satisfied, but following conditions fulfilled 80% of more .....	<b>XX</b>				
	<b>A</b>				
	<b>10%</b>				
	<b>B</b>				
	<b>20%</b>				

**Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.**

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.





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**APPENDIX 7.4:**

**EAPC (2025) CONDITIONS TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS**

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### Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

<u>DIST</u>	<u>CO</u>	<u>RTE</u>	<u>PM</u>	<u>CALC</u>	<u>TRAFFIC CONDITIONS</u>	<u>EAPC 2025</u>
Jurisdiction: <u>City of Perris</u>				<u>RV</u>	<u>RV</u>	DATE <u>06/30/21</u>
Major Street: <u>Indian Avenue</u>				<u>CHK</u>	<u>RV</u>	DATE <u>06/30/21</u>
Minor Street: <u>Perry Street</u>					Critical Approach Speed (Major) <u>40</u> mph	
					Critical Approach Speed (Minor) <u>25</u> mph	
Major Street Approach Lanes =		<u>2</u>	lane	Minor Street Approach Lanes =		<u>1</u> lane
Major Street Future ADT =		<u>7,430</u>	vpd	Minor Street Future ADT =		<u>245</u> vpd
Speed limit or critical speed on major street traffic > 64 km/h (40 mph); .....						<input type="checkbox"/>
						or
In built up area of isolated community of < 10,000 population .....						<input type="checkbox"/>
						<b>RURAL (R)</b>

**(Based on Estimated Average Daily Traffic - See Note)**

<u>URBAN</u> <b>XX</b>	<u>RURAL</u>	Minimum Requirements EADT			
<u>CONDITION A - Minimum Vehicular Volume Satisfied</u>	<u>Not Satisfied</u> <b>XX</b>	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
<u>Major Street</u>	<u>Minor Street</u>	<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
1	1	8,000	5,600	2,400	1,680
2 + <b>7,430</b>	1 <b>245</b>	9,600	6,720	2,400	1,680
2 +	2 +	9,600	6,720	3,200	2,240
1	2 +	8,000	5,600	3,200	2,240
<u>CONDITION B - Interruption of Continuous Traffic Satisfied</u>	<u>Not Satisfied</u> <b>XX</b>	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
<u>Major Street</u>	<u>Minor Street</u>	<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
1	1	12,000	8,400	1,200	850
2 + <b>7,430</b>	1 <b>245</b>	14,400	10,080	1,200	850
2 +	2 +	14,400	10,080	1,600	1,120
1	2 +	12,000	8,400	1,600	1,120
<u>Combination of CONDITIONS A + B Satisfied</u>		2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% of more .....					
<b>A</b> <b>10%</b>				<b>B</b> <b>20%</b>	

**Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.**

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.



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**APPENDIX 7.5:**

**EAPC (2025) CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS  
WITH IMPROVEMENTS**

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Timings  
3: Indian Av. & Ramona Exwy.

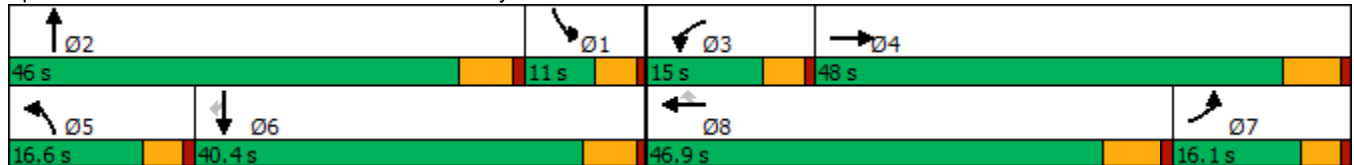


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	365	1545	74	2627	186	114	205	29	104	144
Future Volume (vph)	365	1545	74	2627	186	114	205	29	104	144
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2	1	6	
Permitted Phases					8					6
Detector Phase	7	4	3	8	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	46.2	9.6	40.2	40.2	9.6	43.8	9.6	34.8	34.8
Total Split (s)	16.1	48.0	15.0	46.9	46.9	16.6	46.0	11.0	40.4	40.4
Total Split (%)	13.4%	40.0%	12.5%	39.1%	39.1%	13.8%	38.3%	9.2%	33.7%	33.7%
Yellow Time (s)	3.6	5.2	3.6	5.2	5.2	3.6	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
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	6.2	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 97.9  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 3: Indian Av. & Ramona Exwy.



































HCM 6th Signalized Intersection Summary  
3: Indian Av. & Ramona Exwy.

Ramona-Indian Warehouse Project (JN 13758)

05/20/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  			  			 		 	 	
Traffic Volume (veh/h)	365	1545	127	74	2627	186	114	205	43	29	104	144
Future Volume (veh/h)	365	1545	127	74	2627	186	114	205	43	29	104	144
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	372	1577	128	76	2681	161	116	209	33	30	106	140
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	434	2563	208	98	2270	705	146	361	56	118	407	182
Arrive On Green	0.12	0.52	0.52	0.05	0.44	0.44	0.08	0.12	0.12	0.07	0.11	0.11
Sat Flow, veh/h	3510	4890	397	1810	5187	1610	1810	3128	486	1810	3610	1610
Grp Volume(v), veh/h	372	1115	590	76	2681	161	116	119	123	30	106	140
Grp Sat Flow(s),veh/h/ln	1755	1729	1828	1810	1729	1610	1810	1805	1809	1810	1805	1610
Q Serve(g_s), s	9.7	21.1	21.1	3.9	40.7	5.8	5.9	5.8	6.0	1.5	2.5	5.6
Cycle Q Clear(g_c), s	9.7	21.1	21.1	3.9	40.7	5.8	5.9	5.8	6.0	1.5	2.5	5.6
Prop In Lane	1.00		0.22	1.00		1.00	1.00		0.27	1.00		1.00
Lane Grp Cap(c), veh/h	434	1812	958	98	2270	705	146	208	209	118	407	182
V/C Ratio(X)	0.86	0.62	0.62	0.77	1.18	0.23	0.79	0.57	0.59	0.25	0.26	0.77
Avail Cap(c_a), veh/h	434	1812	958	202	2270	705	233	780	782	125	1343	599
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.9	15.5	15.5	43.4	26.2	16.3	42.0	39.0	39.0	41.3	37.7	20.5
Incr Delay (d2), s/veh	14.9	0.6	1.2	4.8	86.4	0.2	3.7	2.5	2.6	0.4	0.3	6.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.2	0.3	0.1	18.2	0.0	0.1	0.1	0.2	0.0	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.8	16.2	16.7	48.2	112.5	16.5	45.7	41.4	41.7	41.7	38.0	27.2
LnGrp LOS	D	B	B	D	F	B	D	D	D	D	D	C
Approach Vol, veh/h		2077			2918			358			276	
Approach Delay, s/veh		23.3			105.5			42.9			33.0	
Approach LOS		C			F			D			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.9	16.5	9.7	54.9	12.1	16.3	17.7	46.9				
Change Period (Y+Rc), s	5.8	* 5.8	4.6	6.2	4.6	5.8	6.2	* 6.2				
Max Green Setting (Gmax), s	6.4	* 40	10.4	41.8	12.0	34.6	11.5	* 41				
Max Q Clear Time (g_c+I1), s	3.5	8.0	5.9	23.1	7.9	7.6	11.7	42.7				
Green Ext Time (p_c), s	0.0	1.3	0.0	10.5	0.0	1.0	0.0	0.0				

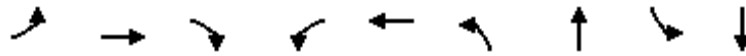
Intersection Summary

HCM 6th Ctrl Delay	67.6
HCM 6th LOS	E

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
6: Perris Bl. & Ramona Exwy.

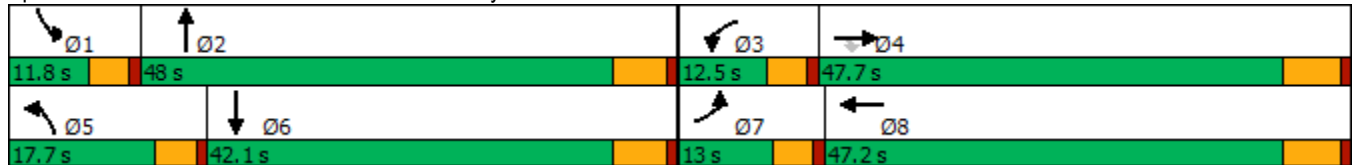


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖↖	↑↑↑	↗	↖↖	↑↑↑	↖↖	↑↑↑	↖↖	↑↑↑
Traffic Volume (vph)	385	952	207	206	2230	399	904	169	421
Future Volume (vph)	385	952	207	206	2230	399	904	169	421
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4		3	8	5	2	1	6
Permitted Phases			4						
Detector Phase	7	4	4	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	36.2	36.2	9.6	34.2	9.6	38.8	9.6	41.8
Total Split (s)	13.0	47.7	47.7	12.5	47.2	17.7	48.0	11.8	42.1
Total Split (%)	10.8%	39.8%	39.8%	10.4%	39.3%	14.8%	40.0%	9.8%	35.1%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	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	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 106.6  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated




































Splits and Phases: 6: Perris Bl. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
6: Perris Bl. & Ramona Exwy.

Ramona-Indian Warehouse Project (JN 13758)

05/20/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  		 	  		 	  		 	  	 
Traffic Volume (veh/h)	385	952	207	206	2230	311	399	904	149	169	421	256
Future Volume (veh/h)	385	952	207	206	2230	311	399	904	149	169	421	256
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	393	971	166	210	2276	298	407	922	104	172	430	202
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	294	2288	645	275	1963	250	458	1268	143	237	726	308
Arrive On Green	0.08	0.40	0.40	0.08	0.40	0.40	0.13	0.25	0.25	0.07	0.19	0.19
Sat Flow, veh/h	3619	5700	1607	3619	4953	631	3619	5032	566	3619	3800	1610
Grp Volume(v), veh/h	393	971	166	210	1731	843	407	695	331	172	430	202
Grp Sat Flow(s),veh/h/ln	1810	1900	1607	1810	1900	1784	1810	1900	1797	1810	1900	1610
Q Serve(g_s), s	8.4	12.7	7.1	5.9	41.0	41.0	11.4	17.3	17.4	4.8	10.7	12.0
Cycle Q Clear(g_c), s	8.4	12.7	7.1	5.9	41.0	41.0	11.4	17.3	17.4	4.8	10.7	12.0
Prop In Lane	1.00		1.00	1.00		0.35	1.00		0.31	1.00		1.00
Lane Grp Cap(c), veh/h	294	2288	645	275	1506	707	458	958	453	237	726	308
V/C Ratio(X)	1.34	0.42	0.26	0.76	1.15	1.19	0.89	0.73	0.73	0.72	0.59	0.66
Avail Cap(c_a), veh/h	294	2288	645	276	1506	707	458	1550	733	252	1333	565
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	47.5	22.3	20.7	46.9	31.2	31.2	44.5	35.4	35.5	47.4	38.2	38.7
Incr Delay (d2), s/veh	173.2	0.1	0.2	10.7	75.5	100.1	18.2	1.1	2.3	7.8	0.8	2.4
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	11.3	9.3	7.7	3.4	37.4	40.0	7.0	10.1	9.8	2.7	6.3	6.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	220.7	22.5	20.9	57.6	106.8	131.3	62.7	36.5	37.7	55.2	39.0	41.1
LnGrp LOS	F	C	C	E	F	F	E	D	D	E	D	D
Approach Vol, veh/h		1530			2784			1433			804	
Approach Delay, s/veh		73.2			110.5			44.2			43.0	
Approach LOS		E			F			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.4	31.9	12.5	47.7	17.7	25.6	13.0	47.2				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	4.6	5.8	4.6	6.2				
Max Green Setting (Gmax), s	7.2	42.2	7.9	41.5	13.1	36.3	8.4	41.0				
Max Q Clear Time (g_c+I1), s	6.8	19.4	7.9	14.7	13.4	14.0	10.4	43.0				
Green Ext Time (p_c), s	0.0	6.5	0.0	7.3	0.0	3.8	0.0	0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				79.0								
HCM 6th LOS				E								

Timings  
3: Indian Av. & Ramona Exwy.

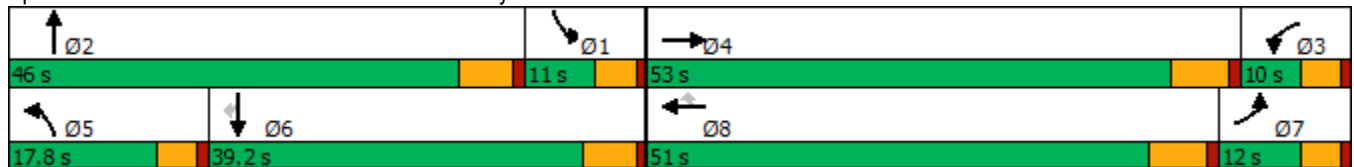


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↔↔	↕↕↕	↔	↕↕↕	↔	↔	↕↕	↔	↕↕	↔
Traffic Volume (vph)	411	2785	142	1896	162	188	224	192	181	166
Future Volume (vph)	411	2785	142	1896	162	188	224	192	181	166
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2	1	6	
Permitted Phases					8					6
Detector Phase	7	4	3	8	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	46.2	9.6	40.2	40.2	9.6	43.8	9.6	34.8	34.8
Total Split (s)	12.0	53.0	10.0	51.0	51.0	17.8	46.0	11.0	39.2	39.2
Total Split (%)	10.0%	44.2%	8.3%	42.5%	42.5%	14.8%	38.3%	9.2%	32.7%	32.7%
Yellow Time (s)	3.6	5.2	3.6	5.2	5.2	3.6	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
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	6.2	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lag	Lead	Lag	Lead	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 101.2  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated





























Splits and Phases: 3: Indian Av. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
3: Indian Av. & Ramona Exwy.

Ramona-Indian Warehouse Project (JN 13758)

05/20/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	 			 			 		 	 	
Traffic Volume (veh/h)	411	2785	188	142	1896	162	188	224	46	192	181	166
Future Volume (veh/h)	411	2785	188	142	1896	162	188	224	46	192	181	166
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	419	2842	170	145	1935	143	192	229	27	196	185	140
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	368	2462	144	103	2298	713	225	342	40	203	379	169
Arrive On Green	0.10	0.49	0.49	0.06	0.44	0.44	0.12	0.10	0.10	0.11	0.10	0.10
Sat Flow, veh/h	3510	5011	294	1810	5187	1610	1810	3257	380	1810	3610	1610
Grp Volume(v), veh/h	419	1944	1068	145	1935	143	192	126	130	196	185	140
Grp Sat Flow(s),veh/h/ln	1755	1729	1847	1810	1729	1610	1810	1805	1832	1810	1805	1610
Q Serve(g_s), s	10.0	46.8	46.8	5.4	31.6	5.2	9.9	6.4	6.5	10.3	4.6	6.2
Cycle Q Clear(g_c), s	10.0	46.8	46.8	5.4	31.6	5.2	9.9	6.4	6.5	10.3	4.6	6.2
Prop In Lane	1.00		0.16	1.00		1.00	1.00		0.21	1.00		1.00
Lane Grp Cap(c), veh/h	368	1699	907	103	2298	713	225	189	192	203	379	169
V/C Ratio(X)	1.14	1.14	1.18	1.41	0.84	0.20	0.85	0.66	0.68	0.97	0.49	0.83
Avail Cap(c_a), veh/h	368	1699	907	103	2439	757	251	762	773	203	1266	565
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	42.6	24.2	24.2	44.9	23.6	16.2	40.8	41.0	41.1	42.1	40.2	24.2
Incr Delay (d2), s/veh	89.9	72.4	91.2	233.9	2.7	0.1	20.1	4.0	4.1	53.5	1.0	9.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.7	33.3	40.3	9.0	11.8	1.7	5.5	3.0	3.1	7.4	2.0	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	132.5	96.7	115.4	278.8	26.3	16.4	61.0	45.0	45.2	95.7	41.2	34.0
LnGrp LOS	F	F	F	F	C	B	E	D	D	F	D	C
Approach Vol, veh/h		3431			2223			448			521	
Approach Delay, s/veh		106.9			42.1			51.9			59.8	
Approach LOS		F			D			D			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.5	15.8	10.0	53.0	16.5	15.8	14.6	48.4				
Change Period (Y+Rc), s	5.8	* 5.8	4.6	6.2	4.6	5.8	4.6	6.2				
Max Green Setting (Gmax), s	6.4	* 40	5.4	46.8	13.2	33.4	7.4	44.8				
Max Q Clear Time (g_c+1), s	12.3	8.5	7.4	48.8	11.9	8.2	12.0	33.6				
Green Ext Time (p_c), s	0.0	1.4	0.0	0.0	0.0	1.5	0.0	8.6				

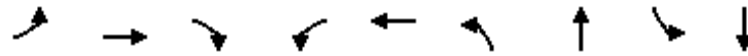
Intersection Summary

HCM 6th Ctrl Delay	77.7
HCM 6th LOS	E

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
6: Perris Bl. & Ramona Exwy.

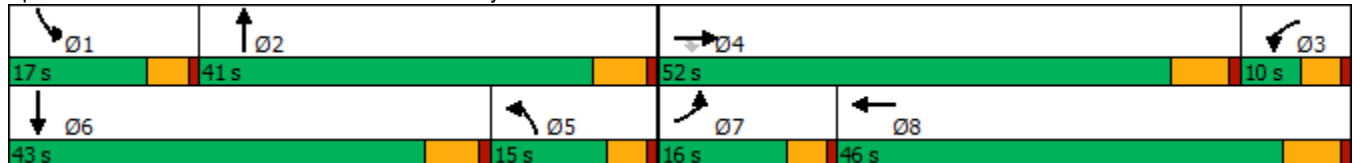


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖↖	↑↑↑	↗	↖↖	↑↑↑	↖↖	↑↑↑	↖↖	↑↑↑
Traffic Volume (vph)	312	2302	372	171	1506	346	490	458	752
Future Volume (vph)	312	2302	372	171	1506	346	490	458	752
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4		3	8	5	2	1	6
Permitted Phases			4						
Detector Phase	7	4	4	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	36.2	36.2	9.6	34.2	9.6	38.8	9.6	41.8
Total Split (s)	16.0	52.0	52.0	10.0	46.0	15.0	41.0	17.0	43.0
Total Split (%)	13.3%	43.3%	43.3%	8.3%	38.3%	12.5%	34.2%	14.2%	35.8%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	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	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 112.9  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 6: Perris Bl. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
6: Perris Bl. & Ramona Exwy.

Ramona-Indian Warehouse Project (JN 13758)

05/20/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑↑	↔	↔↔	↑↑↑		↔↔	↑↑↑		↔↔	↑↑↑	
Traffic Volume (veh/h)	312	2302	372	171	1506	241	346	490	202	458	752	274
Future Volume (veh/h)	312	2302	372	171	1506	241	346	490	202	458	752	274
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	322	2373	284	176	1553	235	357	505	157	472	775	208
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	352	2089	647	167	1654	250	321	950	286	383	1008	268
Arrive On Green	0.10	0.40	0.40	0.05	0.36	0.36	0.09	0.24	0.24	0.11	0.25	0.25
Sat Flow, veh/h	3510	5187	1608	3510	4545	686	3510	3950	1192	3510	4075	1083
Grp Volume(v), veh/h	322	2373	284	176	1181	607	357	440	222	472	657	326
Grp Sat Flow(s),veh/h/ln	1755	1729	1608	1755	1729	1773	1755	1729	1684	1755	1729	1700
Q Serve(g_s), s	10.3	45.8	14.6	5.4	37.5	37.7	10.4	12.6	13.1	12.4	20.1	20.3
Cycle Q Clear(g_c), s	10.3	45.8	14.6	5.4	37.5	37.7	10.4	12.6	13.1	12.4	20.1	20.3
Prop In Lane	1.00		1.00	1.00		0.39	1.00		0.71	1.00		0.64
Lane Grp Cap(c), veh/h	352	2089	647	167	1259	645	321	831	405	383	856	421
V/C Ratio(X)	0.92	1.14	0.44	1.06	0.94	0.94	1.11	0.53	0.55	1.23	0.77	0.78
Avail Cap(c_a), veh/h	352	2089	647	167	1259	645	321	1070	521	383	1131	556
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	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	50.7	34.0	24.6	54.2	34.9	35.0	51.7	37.6	37.8	50.7	39.8	39.9
Incr Delay (d2), s/veh	27.2	67.8	0.5	85.3	13.2	22.1	83.9	0.5	1.2	125.7	2.3	5.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	30.7	5.3	4.3	16.9	19.0	8.2	5.2	5.3	12.0	8.5	8.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	77.9	101.7	25.1	139.5	48.2	57.1	135.6	38.1	39.0	176.4	42.1	44.8
LnGrp LOS	E	F	C	F	D	E	F	D	D	F	D	D
Approach Vol, veh/h		2979			1964			1019			1455	
Approach Delay, s/veh		91.9			59.1			72.5			86.3	
Approach LOS		F			E			E			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.0	33.1	11.6	52.0	16.2	33.9	16.0	47.6				
Change Period (Y+Rc), s	4.6	5.8	6.2	* 6.2	5.8	* 5.8	4.6	6.2				
Max Green Setting (Gmax), s	12.4	35.2	5.4	* 46	10.4	* 37	11.4	39.8				
Max Q Clear Time (g_c+I1), s	14.4	15.1	7.4	47.8	12.4	22.3	12.3	39.7				
Green Ext Time (p_c), s	0.0	3.8	0.0	0.0	0.0	5.3	0.0	0.1				

Intersection Summary

HCM 6th Ctrl Delay	79.4
HCM 6th LOS	E

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

**APPENDIX 8.1:**

**HORIZON YEAR (2040) WITHOUT PROJECT CONDITIONS INTERSECTION OPERATIONS  
ANALYSIS WORKSHEETS**



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Intersection												
Int Delay, s/veh	0.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	5	0	2	0	0	4	5	494	24	0	359	16
Future Vol, veh/h	5	0	2	0	0	4	5	494	24	0	359	16
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	150	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	5	0	2	0	0	4	5	537	26	0	390	17

Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	678	972	204	755	967	282	407	0	0	563	0	0
Stage 1	399	399	-	560	560	-	-	-	-	-	-	-
Stage 2	279	573	-	195	407	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	342	254	809	301	256	721	1163	-	-	1019	-	-
Stage 1	604	606	-	485	514	-	-	-	-	-	-	-
Stage 2	710	507	-	794	601	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	339	253	809	299	255	721	1163	-	-	1019	-	-
Mov Cap-2 Maneuver	339	253	-	299	255	-	-	-	-	-	-	-
Stage 1	602	606	-	483	512	-	-	-	-	-	-	-
Stage 2	703	505	-	792	601	-	-	-	-	-	-	-

Approach	EB		WB			NB			SB		
HCM Control Delay, s	14		10			0.1			0		
HCM LOS	B		B								

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1163	-	-	406	721	1019	-	-
HCM Lane V/C Ratio	0.005	-	-	0.019	0.006	-	-	-
HCM Control Delay (s)	8.1	-	-	14	10	0	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0	0	-	-

Timings  
3: Indian Av. & Ramona Exwy.

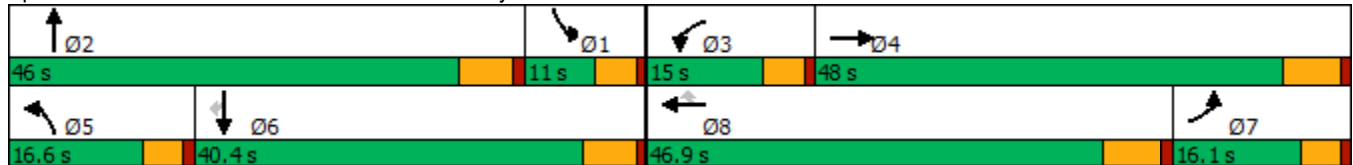


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↖	↕↕↕	↖	↕↕↕	↖	↖	↕↕	↖	↕↕	↖
Traffic Volume (vph)	175	1236	178	1766	164	131	184	69	143	149
Future Volume (vph)	175	1236	178	1766	164	131	184	69	143	149
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2	1	6	
Permitted Phases					8					6
Detector Phase	7	4	3	8	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	46.2	9.6	40.2	40.2	9.6	43.8	9.6	34.8	34.8
Total Split (s)	16.1	48.0	15.0	46.9	46.9	16.6	46.0	11.0	40.4	40.4
Total Split (%)	13.4%	40.0%	12.5%	39.1%	39.1%	13.8%	38.3%	9.2%	33.7%	33.7%
Yellow Time (s)	3.6	5.2	3.6	5.2	5.2	3.6	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
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	6.2	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 98.7  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 3: Indian Av. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
 3: Indian Av. & Ramona Exwy.

Ramona-Indian Warehouse Project (JN 13758)

05/20/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↗↗↗		↗	↗↗↗	↗	↗	↗↗		↗	↗↗	↗
Traffic Volume (veh/h)	175	1236	192	178	1766	164	131	184	62	69	143	149
Future Volume (veh/h)	175	1236	192	178	1766	164	131	184	62	69	143	149
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	179	1261	194	182	1802	138	134	188	52	70	146	145
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	213	1996	307	209	2179	677	167	334	90	138	420	188
Arrive On Green	0.12	0.44	0.44	0.12	0.42	0.42	0.09	0.12	0.12	0.08	0.12	0.12
Sat Flow, veh/h	1810	4534	698	1810	5187	1610	1810	2809	756	1810	3610	1610
Grp Volume(v), veh/h	179	962	493	182	1802	138	134	119	121	70	146	145
Grp Sat Flow(s),veh/h/ln	1810	1729	1774	1810	1729	1610	1810	1805	1759	1810	1805	1610
Q Serve(g_s), s	8.7	19.4	19.4	8.9	27.8	4.9	6.5	5.6	5.9	3.3	3.4	5.6
Cycle Q Clear(g_c), s	8.7	19.4	19.4	8.9	27.8	4.9	6.5	5.6	5.9	3.3	3.4	5.6
Prop In Lane	1.00		0.39	1.00		1.00	1.00		0.43	1.00		1.00
Lane Grp Cap(c), veh/h	213	1522	781	209	2179	677	167	215	209	138	420	188
V/C Ratio(X)	0.84	0.63	0.63	0.87	0.83	0.20	0.80	0.55	0.58	0.51	0.35	0.77
Avail Cap(c_a), veh/h	231	1607	824	209	2346	728	241	806	786	138	1388	619
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	38.8	19.5	19.5	39.1	23.2	16.5	40.1	37.4	37.5	39.9	36.6	19.8
Incr Delay (d2), s/veh	20.1	0.7	1.5	29.2	2.4	0.1	7.5	2.2	2.5	1.3	0.5	6.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.8	6.9	7.3	5.4	10.3	1.6	3.1	2.5	2.6	1.5	1.5	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.9	20.3	21.0	68.4	25.6	16.7	47.5	39.6	40.0	41.2	37.1	26.4
LnGrp LOS	E	C	C	E	C	B	D	D	D	D	D	C
Approach Vol, veh/h		1634			2122			374			361	
Approach Delay, s/veh		24.7			28.7			42.6			33.6	
Approach LOS		C			C			D			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.7	16.5	15.0	45.8	12.9	16.3	16.8	44.0				
Change Period (Y+Rc), s	5.8	* 5.8	4.6	6.2	4.6	5.8	6.2	* 6.2				
Max Green Setting (Gmax), s	6.4	* 40	10.4	41.8	12.0	34.6	11.5	* 41				
Max Q Clear Time (g_c+I1), s	5.3	7.9	10.9	21.4	8.5	7.6	10.7	29.8				
Green Ext Time (p_c), s	0.0	1.3	0.0	9.2	0.0	1.3	0.0	8.0				

Intersection Summary

HCM 6th Ctrl Delay	28.8
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
6: Perris Bl. & Ramona Exwy.

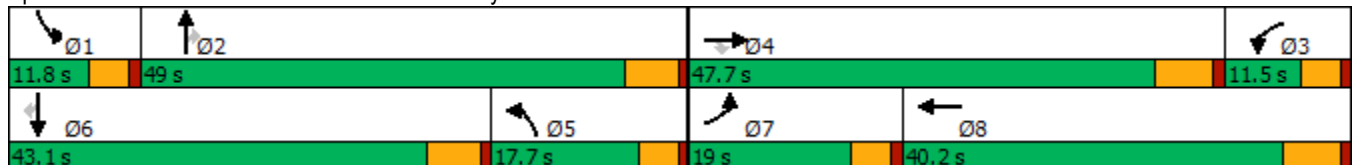


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↑↑↑	↗	↖↗	↑↑↑	↖↗	↑↑	↗	↖↗	↑↑	↗
Traffic Volume (vph)	379	833	154	205	1379	321	886	116	185	509	353
Future Volume (vph)	379	833	154	205	1379	321	886	116	185	509	353
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8	5	2		1	6	
Permitted Phases			4					2			6
Detector Phase	7	4	4	3	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	36.2	36.2	9.6	34.2	9.6	38.8	38.8	9.6	41.8	41.8
Total Split (s)	19.0	47.7	47.7	11.5	40.2	17.7	49.0	49.0	11.8	43.1	43.1
Total Split (%)	15.8%	39.8%	39.8%	9.6%	33.5%	14.8%	40.8%	40.8%	9.8%	35.9%	35.9%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	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
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 111.2  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated

























Splits and Phases: 6: Perris Bl. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
6: Perris Bl. & Ramona Exwy.

Ramona-Indian Warehouse Project (JN 13758)

05/20/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	379	833	154	205	1379	386	321	886	116	185	509	353
Future Volume (veh/h)	379	833	154	205	1379	386	321	886	116	185	509	353
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	387	850	112	209	1407	375	328	904	70	189	519	301
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	446	1183	366	687	1270	337	571	1088	485	232	699	312
Arrive On Green	0.13	0.23	0.23	0.20	0.31	0.31	0.16	0.30	0.30	0.07	0.19	0.19
Sat Flow, veh/h	3510	5187	1604	3510	4077	1082	3510	3610	1609	3510	3610	1610
Grp Volume(v), veh/h	387	850	112	209	1193	589	328	904	70	189	519	301
Grp Sat Flow(s),veh/h/ln	1755	1729	1604	1755	1729	1700	1755	1805	1609	1755	1805	1610
Q Serve(g_s), s	11.8	16.5	6.3	5.6	34.0	34.0	9.4	25.5	2.0	5.8	14.8	14.7
Cycle Q Clear(g_c), s	11.8	16.5	6.3	5.6	34.0	34.0	9.4	25.5	2.0	5.8	14.8	14.7
Prop In Lane	1.00		1.00	1.00		0.64	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	446	1183	366	687	1077	530	571	1088	485	232	699	312
V/C Ratio(X)	0.87	0.72	0.31	0.30	1.11	1.11	0.57	0.83	0.14	0.82	0.74	0.97
Avail Cap(c_a), veh/h	463	1972	610	687	1077	530	571	1429	637	232	1234	550
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	46.7	38.9	35.0	37.5	37.6	37.6	42.2	35.5	8.8	50.3	41.5	22.9
Incr Delay (d2), s/veh	14.8	0.8	0.5	0.1	61.7	73.9	0.9	3.3	0.1	18.6	1.6	20.4
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	5.8	6.7	2.4	2.3	22.6	24.0	4.0	11.1	1.3	3.1	6.5	6.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.6	39.7	35.4	37.6	99.3	111.4	43.1	38.9	8.9	69.0	43.0	43.3
LnGrp LOS	E	D	D	D	F	F	D	D	A	E	D	D
Approach Vol, veh/h		1349			1991			1302			1009	
Approach Delay, s/veh		45.6			96.4			38.3			48.0	
Approach LOS		D			F			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.8	38.7	27.6	31.1	23.6	26.9	18.5	40.2				
Change Period (Y+Rc), s	4.6	5.8	6.2	* 6.2	5.8	* 5.8	4.6	6.2				
Max Green Setting (Gmax), s	7.2	43.2	6.9	* 42	13.1	* 37	14.4	34.0				
Max Q Clear Time (g_c+1), s	7.8	27.5	7.6	18.5	11.4	16.8	13.8	36.0				
Green Ext Time (p_c), s	0.0	5.4	0.0	5.8	0.1	4.1	0.1	0.0				

Intersection Summary

HCM 6th Ctrl Delay	62.3
HCM 6th LOS	E

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection												
Int Delay, s/veh	0.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	15	0	5	0	0	6	2	542	6	0	1002	5
Future Vol, veh/h	15	0	5	0	0	6	2	542	6	0	1002	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	150	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	16	0	5	0	0	7	2	589	7	0	1089	5

Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	1391	1692	547	1142	1691	298	1094	0	0	596	0	0
Stage 1	1092	1092	-	597	597	-	-	-	-	-	-	-
Stage 2	299	600	-	545	1094	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	103	94	486	158	94	704	645	-	-	990	-	-
Stage 1	232	293	-	461	495	-	-	-	-	-	-	-
Stage 2	691	493	-	495	292	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	102	94	486	156	94	704	645	-	-	990	-	-
Mov Cap-2 Maneuver	102	94	-	156	94	-	-	-	-	-	-	-
Stage 1	231	293	-	460	494	-	-	-	-	-	-	-
Stage 2	682	492	-	489	292	-	-	-	-	-	-	-

Approach	EB		WB			NB			SB		
HCM Control Delay, s	39.1		10.2			0			0		
HCM LOS	E		B								

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	645	-	-	127	704	990	-
HCM Lane V/C Ratio	0.003	-	-	0.171	0.009	-	-
HCM Control Delay (s)	10.6	-	-	39.1	10.2	0	-
HCM Lane LOS	B	-	-	E	B	A	-
HCM 95th %tile Q(veh)	0	-	-	0.6	0	0	-

Timings  
3: Indian Av. & Ramona Exwy.

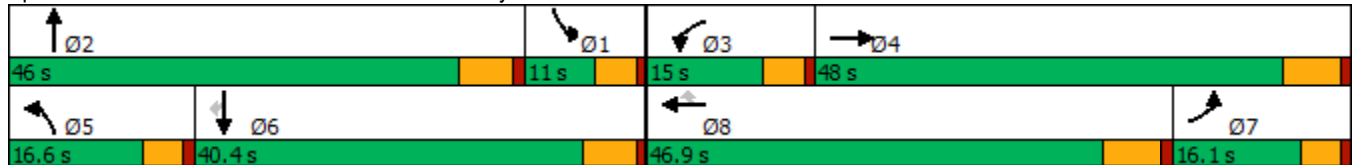


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↖	↕↕↕	↖	↕↕↕	↖	↖	↕↕	↖	↕↕	↖
Traffic Volume (vph)	219	1819	140	1320	84	252	247	298	341	368
Future Volume (vph)	219	1819	140	1320	84	252	247	298	341	368
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2	1	6	
Permitted Phases					8					6
Detector Phase	7	4	3	8	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	46.2	9.6	40.2	40.2	9.6	43.8	9.6	34.8	34.8
Total Split (s)	16.1	48.0	15.0	46.9	46.9	16.6	46.0	11.0	40.4	40.4
Total Split (%)	13.4%	40.0%	12.5%	39.1%	39.1%	13.8%	38.3%	9.2%	33.7%	33.7%
Yellow Time (s)	3.6	5.2	3.6	5.2	5.2	3.6	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
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	6.2	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 106.3  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 3: Indian Av. & Ramona Exwy.





HCM 6th Signalized Intersection Summary  
3: Indian Av. & Ramona Exwy.

Ramona-Indian Warehouse Project (JN 13758)

05/20/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	219	1819	220	140	1320	84	252	247	206	298	341	368
Future Volume (veh/h)	219	1819	220	140	1320	84	252	247	206	298	341	368
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	223	1856	202	143	1347	64	257	252	190	304	348	347
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	296	1972	213	173	1719	534	217	341	248	172	570	254
Arrive On Green	0.16	0.41	0.41	0.10	0.33	0.33	0.12	0.17	0.17	0.09	0.16	0.16
Sat Flow, veh/h	1810	4751	514	1810	5187	1610	1810	1995	1449	1810	3610	1610
Grp Volume(v), veh/h	223	1348	710	143	1347	64	257	227	215	304	348	347
Grp Sat Flow(s),veh/h/ln	1810	1729	1807	1810	1729	1610	1810	1805	1639	1810	1805	1610
Q Serve(g_s), s	11.8	37.4	38.0	7.8	23.5	2.8	12.0	12.0	12.5	9.5	9.0	10.5
Cycle Q Clear(g_c), s	11.8	37.4	38.0	7.8	23.5	2.8	12.0	12.0	12.5	9.5	9.0	10.5
Prop In Lane	1.00		0.28	1.00		1.00	1.00		0.88	1.00		1.00
Lane Grp Cap(c), veh/h	296	1435	750	173	1719	534	217	308	280	172	570	254
V/C Ratio(X)	0.75	0.94	0.95	0.82	0.78	0.12	1.19	0.74	0.77	1.77	0.61	1.36
Avail Cap(c_a), veh/h	296	1442	754	188	2106	654	217	724	657	172	1246	556
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	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	40.0	28.1	28.3	44.5	30.3	23.3	44.1	39.4	39.7	45.4	39.3	18.6
Incr Delay (d2), s/veh	9.4	12.1	20.8	21.5	1.6	0.1	120.6	3.4	4.4	369.6	1.1	174.2
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	5.7	16.2	19.0	4.4	9.3	1.0	12.5	5.4	5.2	21.8	4.0	15.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.4	40.2	49.1	66.0	31.9	23.4	164.7	42.8	44.1	414.9	40.4	192.8
LnGrp LOS	D	D	D	E	C	C	F	D	D	F	D	F
Approach Vol, veh/h		2281			1554			699			999	
Approach Delay, s/veh		43.8			34.7			88.0			207.3	
Approach LOS		D			C			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.3	22.9	14.2	47.8	16.6	21.6	22.6	39.4				
Change Period (Y+Rc), s	5.8	* 5.8	4.6	6.2	4.6	5.8	6.2	* 6.2				
Max Green Setting (Gmax), s	6.4	* 40	10.4	41.8	12.0	34.6	11.5	* 41				
Max Q Clear Time (g_c+I1), s	11.5	14.5	9.8	40.0	14.0	12.5	13.8	25.5				
Green Ext Time (p_c), s	0.0	2.6	0.0	1.6	0.0	3.3	0.0	7.7				

Intersection Summary

HCM 6th Ctrl Delay	76.4
HCM 6th LOS	E

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
6: Perris Bl. & Ramona Exwy.

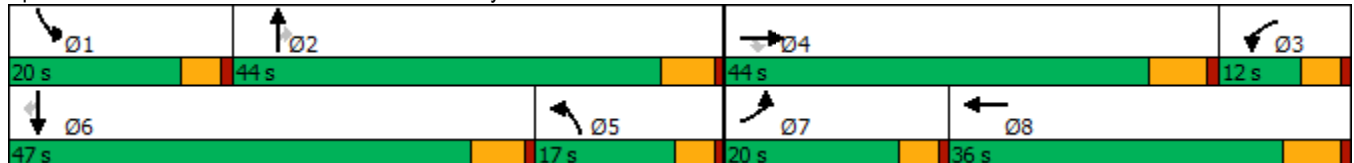


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑↑	↔	↔↔	↑↑↑	↔↔	↑↑	↔	↔↔	↑↑	↔
Traffic Volume (vph)	430	1510	384	187	993	227	649	246	373	825	249
Future Volume (vph)	430	1510	384	187	993	227	649	246	373	825	249
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8	5	2		1	6	
Permitted Phases			4					2			6
Detector Phase	7	4	4	3	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	36.2	36.2	9.6	34.2	9.6	38.8	38.8	9.6	41.8	41.8
Total Split (s)	20.0	44.0	44.0	12.0	36.0	17.0	44.0	44.0	20.0	47.0	47.0
Total Split (%)	16.7%	36.7%	36.7%	10.0%	30.0%	14.2%	36.7%	36.7%	16.7%	39.2%	39.2%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	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
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 111.1  
 Natural Cycle: 110  
 Control Type: Actuated-Uncoordinated


































Splits and Phases: 6: Perris Bl. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
6: Perris Bl. & Ramona Exwy.

Ramona-Indian Warehouse Project (JN 13758)

05/20/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  		 	  		 	 		 	 	
Traffic Volume (veh/h)	430	1510	384	187	993	263	227	649	246	373	825	249
Future Volume (veh/h)	430	1510	384	187	993	263	227	649	246	373	825	249
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		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	443	1557	296	193	1024	258	234	669	203	385	851	183
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	496	1750	542	239	1150	289	298	932	415	447	1045	465
Arrive On Green	0.14	0.34	0.34	0.07	0.28	0.28	0.08	0.26	0.26	0.13	0.29	0.29
Sat Flow, veh/h	3510	5187	1607	3510	4126	1038	3510	3610	1608	3510	3610	1605
Grp Volume(v), veh/h	443	1557	296	193	858	424	234	669	203	385	851	183
Grp Sat Flow(s),veh/h/ln	1755	1729	1607	1755	1729	1706	1755	1805	1608	1755	1805	1605
Q Serve(g_s), s	13.5	31.0	16.3	5.9	25.9	26.0	7.1	18.4	8.9	11.7	23.9	6.6
Cycle Q Clear(g_c), s	13.5	31.0	16.3	5.9	25.9	26.0	7.1	18.4	8.9	11.7	23.9	6.6
Prop In Lane	1.00		1.00	1.00		0.61	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	496	1750	542	239	964	475	298	932	415	447	1045	465
V/C Ratio(X)	0.89	0.89	0.55	0.81	0.89	0.89	0.79	0.72	0.49	0.86	0.81	0.39
Avail Cap(c_a), veh/h	496	1800	558	239	964	475	400	1266	564	496	1366	607
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.9	34.2	29.3	50.1	37.7	37.7	48.9	36.8	19.8	46.6	36.0	13.8
Incr Delay (d2), s/veh	17.7	5.8	1.0	17.3	10.4	18.7	5.0	1.3	0.9	12.3	3.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.8	13.0	6.1	3.1	11.7	12.6	3.2	7.9	3.2	5.7	10.4	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.6	40.0	30.4	67.4	48.1	56.4	53.9	38.1	20.7	58.9	39.0	14.3
LnGrp LOS	E	D	C	E	D	E	D	D	C	E	D	B
Approach Vol, veh/h		2296			1475			1106			1419	
Approach Delay, s/veh		43.3			53.0			38.2			41.2	
Approach LOS		D			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.5	33.9	13.6	42.9	15.0	37.3	20.0	36.5				
Change Period (Y+Rc), s	4.6	5.8	6.2	* 6.2	5.8	* 5.8	4.6	6.2				
Max Green Setting (Gmax), s	15.4	38.2	7.4	* 38	12.4	* 41	15.4	29.8				
Max Q Clear Time (g_c+I1), s	13.7	20.4	7.9	33.0	9.1	25.9	15.5	28.0				
Green Ext Time (p_c), s	0.2	4.6	0.0	3.8	0.1	5.4	0.0	1.3				

Intersection Summary

HCM 6th Ctrl Delay	44.2
HCM 6th LOS	D

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

**APPENDIX 8.2:**

**HORIZON YEAR (2040) WITH PROJECT CONDITIONS INTERSECTION OPERATIONS  
ANALYSIS WORKSHEETS**

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Intersection												
Int Delay, s/veh	0.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	5	0	2	0	0	4	5	510	44	0	369	16
Future Vol, veh/h	5	0	2	0	0	4	5	510	44	0	369	16
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	150	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	5	0	2	0	0	4	5	554	48	0	401	17

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	697	1022	209	789	1006	301	418	0	0	602	0	0
Stage 1	410	410	-	588	588	-	-	-	-	-	-	-
Stage 2	287	612	-	201	418	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	331	238	803	285	243	701	1152	-	-	985	-	-
Stage 1	595	599	-	467	499	-	-	-	-	-	-	-
Stage 2	702	487	-	788	594	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	328	237	803	283	242	701	1152	-	-	985	-	-
Mov Cap-2 Maneuver	328	237	-	283	242	-	-	-	-	-	-	-
Stage 1	593	599	-	465	497	-	-	-	-	-	-	-
Stage 2	695	485	-	786	594	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	14.3		10.2		0.1		0	
HCM LOS	B		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1152	-	-	395	701	985	-	-
HCM Lane V/C Ratio	0.005	-	-	0.019	0.006	-	-	-
HCM Control Delay (s)	8.1	-	-	14.3	10.2	0	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0	0	-	-

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↕		↖	↕
Traffic Vol, veh/h	0	6	553	14	10	361
Future Vol, veh/h	0	6	553	14	10	361
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	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	7	601	15	11	392

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	-	308	0	0	616
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	4.1
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	2.2
Pot Cap-1 Maneuver	0	694	-	-	974
Stage 1	0	-	-	-	-
Stage 2	0	-	-	-	-
Platoon blocked, %					
Mov Cap-1 Maneuver	-	694	-	-	974
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.2	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	694	974
HCM Lane V/C Ratio	-	-	0.009	0.011
HCM Control Delay (s)	-	-	10.2	8.7
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0	0

Timings  
3: Indian Av. & Ramona Exwy.

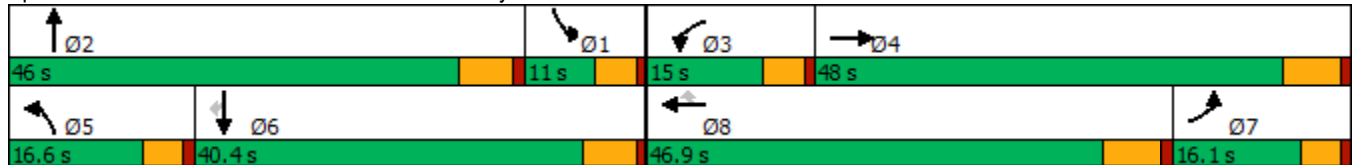


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↖	↕↕↕	↖	↕↕↕	↖	↖	↕↕	↖	↕↕	↖
Traffic Volume (vph)	195	1236	180	1778	182	131	190	69	143	149
Future Volume (vph)	195	1236	180	1778	182	131	190	69	143	149
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2	1	6	
Permitted Phases					8					6
Detector Phase	7	4	3	8	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	46.2	9.6	40.2	40.2	9.6	43.8	9.6	34.8	34.8
Total Split (s)	16.1	48.0	15.0	46.9	46.9	16.6	46.0	11.0	40.4	40.4
Total Split (%)	13.4%	40.0%	12.5%	39.1%	39.1%	13.8%	38.3%	9.2%	33.7%	33.7%
Yellow Time (s)	3.6	5.2	3.6	5.2	5.2	3.6	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
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	6.2	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 98.7  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 3: Indian Av. & Ramona Exwy.



























HCM 6th Signalized Intersection Summary  
3: Indian Av. & Ramona Exwy.

Ramona-Indian Warehouse Project (JN 13758)

05/20/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	195	1236	192	180	1778	182	131	190	62	69	143	149
Future Volume (veh/h)	195	1236	192	180	1778	182	131	190	62	69	143	149
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	199	1261	194	184	1814	157	134	194	52	70	146	145
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	228	2029	312	206	2168	673	166	332	87	138	414	185
Arrive On Green	0.13	0.45	0.45	0.11	0.42	0.42	0.09	0.12	0.12	0.08	0.11	0.11
Sat Flow, veh/h	1810	4534	698	1810	5187	1610	1810	2829	739	1810	3610	1610
Grp Volume(v), veh/h	199	962	493	184	1814	157	134	122	124	70	146	145
Grp Sat Flow(s),veh/h/ln	1810	1729	1774	1810	1729	1610	1810	1805	1763	1810	1805	1610
Q Serve(g_s), s	9.9	19.4	19.4	9.2	28.6	5.7	6.6	5.8	6.1	3.4	3.4	5.7
Cycle Q Clear(g_c), s	9.9	19.4	19.4	9.2	28.6	5.7	6.6	5.8	6.1	3.4	3.4	5.7
Prop In Lane	1.00		0.39	1.00		1.00	1.00		0.42	1.00		1.00
Lane Grp Cap(c), veh/h	228	1548	794	206	2168	673	166	212	207	138	414	185
V/C Ratio(X)	0.87	0.62	0.62	0.89	0.84	0.23	0.81	0.58	0.60	0.51	0.35	0.78
Avail Cap(c_a), veh/h	228	1582	811	206	2310	717	238	794	775	138	1367	610
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.2	19.3	19.3	39.9	23.8	17.1	40.7	38.2	38.3	40.6	37.3	19.8
Incr Delay (d2), s/veh	28.1	0.7	1.4	34.3	2.7	0.2	8.1	2.5	2.8	1.3	0.5	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	5.9	7.0	7.3	5.8	10.7	1.9	3.2	2.6	2.7	1.5	1.5	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	67.3	20.0	20.7	74.3	26.5	17.3	48.8	40.6	41.1	41.8	37.8	27.0
LnGrp LOS	E	C	C	E	C	B	D	D	D	D	D	C
Approach Vol, veh/h		1654			2155			380			361	
Approach Delay, s/veh		25.9			29.9			43.7			34.2	
Approach LOS		C			C			D			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.8	16.5	15.0	47.1	13.0	16.3	17.7	44.4				
Change Period (Y+Rc), s	5.8	* 5.8	4.6	6.2	4.6	5.8	6.2	* 6.2				
Max Green Setting (Gmax), s	6.4	* 40	10.4	41.8	12.0	34.6	11.5	* 41				
Max Q Clear Time (g_c+I1), s	5.4	8.1	11.2	21.4	8.6	7.7	11.9	30.6				
Green Ext Time (p_c), s	0.0	1.3	0.0	9.2	0.0	1.3	0.0	7.6				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			30.0									
HCM 6th LOS			C									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑	↑		↑
Traffic Vol, veh/h	0	1367	2137	10	0	3
Future Vol, veh/h	0	1367	2137	10	0	3
Conflicting Peds, #/hr	0	0	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	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	1486	2323	11	0	3

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	-	0	- 0 - 1162
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	-	- 0 164
Stage 1	0	-	- 0 -
Stage 2	0	-	- 0 -
Platoon blocked, %	-	-	- - -
Mov Cap-1 Maneuver	-	-	- - 164
Mov Cap-2 Maneuver	-	-	- - -
Stage 1	-	-	- - -
Stage 2	-	-	- - -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	27.4
HCM LOS			D

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	164
HCM Lane V/C Ratio	-	-	-	0.02
HCM Control Delay (s)	-	-	-	27.4
HCM Lane LOS	-	-	-	D
HCM 95th %tile Q(veh)	-	-	-	0.1

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↑↑	↑↑↑	
Traffic Vol, veh/h	0	28	0	1651	1047	34
Future Vol, veh/h	0	28	0	1651	1047	34
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	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	30	0	1795	1138	37

Major/Minor	Minor2	Major1	Major2		
Conflicting Flow All	-	588	-	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	391	0	-	-
Stage 1	0	-	0	-	-
Stage 2	0	-	0	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	-	391	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT EBLn1	SBT	SBR
Capacity (veh/h)	- 391	-	-
HCM Lane V/C Ratio	- 0.078	-	-
HCM Control Delay (s)	- 15	-	-
HCM Lane LOS	- C	-	-
HCM 95th %tile Q(veh)	- 0.3	-	-

Timings  
6: Perris Bl. & Ramona Exwy.

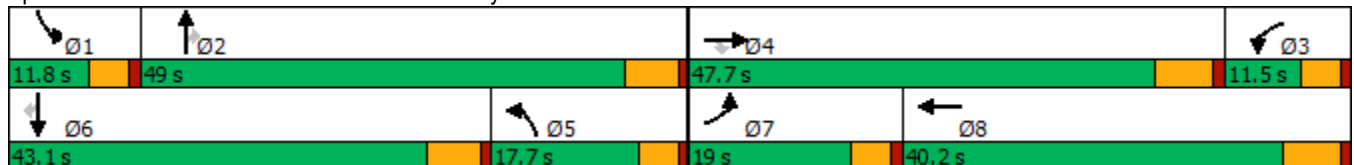


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑↑	↗	↔↔	↑↑↑	↔↔	↑↑	↗	↔↔	↑↑	↗
Traffic Volume (vph)	379	833	154	205	1385	333	886	116	188	513	374
Future Volume (vph)	379	833	154	205	1385	333	886	116	188	513	374
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8	5	2		1	6	
Permitted Phases			4					2			6
Detector Phase	7	4	4	3	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	36.2	36.2	9.6	34.2	9.6	38.8	38.8	9.6	41.8	41.8
Total Split (s)	19.0	47.7	47.7	11.5	40.2	17.7	49.0	49.0	11.8	43.1	43.1
Total Split (%)	15.8%	39.8%	39.8%	9.6%	33.5%	14.8%	40.8%	40.8%	9.8%	35.9%	35.9%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	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
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 111.2  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated


































Splits and Phases: 6: Perris Bl. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
6: Perris Bl. & Ramona Exwy.

Ramona-Indian Warehouse Project (JN 13758)

05/20/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  		 	  		 	 		 	 	
Traffic Volume (veh/h)	379	833	154	205	1385	386	333	886	116	188	513	374
Future Volume (veh/h)	379	833	154	205	1385	386	333	886	116	188	513	374
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	387	850	112	209	1413	375	340	904	70	192	523	323
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	446	1183	366	687	1271	336	539	1088	485	232	732	326
Arrive On Green	0.13	0.23	0.23	0.20	0.31	0.31	0.15	0.30	0.30	0.07	0.20	0.20
Sat Flow, veh/h	3510	5187	1604	3510	4081	1078	3510	3610	1609	3510	3610	1610
Grp Volume(v), veh/h	387	850	112	209	1196	592	340	904	70	192	523	323
Grp Sat Flow(s),veh/h/ln	1755	1729	1604	1755	1729	1701	1755	1805	1609	1755	1805	1610
Q Serve(g_s), s	11.8	16.5	6.3	5.6	34.0	34.0	9.9	25.5	2.0	5.9	14.7	15.7
Cycle Q Clear(g_c), s	11.8	16.5	6.3	5.6	34.0	34.0	9.9	25.5	2.0	5.9	14.7	15.7
Prop In Lane	1.00		1.00	1.00		0.63	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	446	1183	366	687	1077	530	539	1088	485	232	732	326
V/C Ratio(X)	0.87	0.72	0.31	0.30	1.11	1.12	0.63	0.83	0.14	0.83	0.71	0.99
Avail Cap(c_a), veh/h	463	1972	610	687	1077	530	539	1429	637	232	1234	550
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	46.7	38.9	35.0	37.5	37.6	37.6	43.3	35.5	8.8	50.4	40.6	22.6
Incr Delay (d2), s/veh	14.8	0.8	0.5	0.1	63.1	75.2	1.8	3.3	0.1	20.4	1.3	27.1
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	5.8	6.7	2.4	2.3	22.8	24.2	4.3	11.1	1.3	3.2	6.4	8.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.6	39.7	35.4	37.6	100.7	112.8	45.1	38.9	8.9	70.8	41.9	49.7
LnGrp LOS	E	D	D	D	F	F	D	D	A	E	D	D
Approach Vol, veh/h		1349			1997			1314			1038	
Approach Delay, s/veh		45.6			97.6			38.9			49.7	
Approach LOS		D			F			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.8	38.7	27.6	31.1	22.6	27.9	18.5	40.2				
Change Period (Y+Rc), s	4.6	5.8	6.2	* 6.2	5.8	* 5.8	4.6	6.2				
Max Green Setting (Gmax), s	7.2	43.2	6.9	* 42	13.1	* 37	14.4	34.0				
Max Q Clear Time (g_c+I1), s	7.9	27.5	7.6	18.5	11.9	17.7	13.8	36.0				
Green Ext Time (p_c), s	0.0	5.4	0.0	5.8	0.1	4.2	0.1	0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				63.0								
HCM 6th LOS				E								
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Intersection												
Int Delay, s/veh	0.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	15	0	5	0	0	6	2	568	29	0	1012	5
Future Vol, veh/h	15	0	5	0	0	6	2	568	29	0	1012	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	150	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	16	0	5	0	0	7	2	617	32	0	1100	5

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1416	1756	553	1187	1742	325	1105	0	0	649	0	0
Stage 1	1103	1103	-	637	637	-	-	-	-	-	-	-
Stage 2	313	653	-	550	1105	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	99	86	482	146	88	677	639	-	-	947	-	-
Stage 1	229	290	-	437	475	-	-	-	-	-	-	-
Stage 2	678	467	-	492	289	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	98	86	482	144	88	677	639	-	-	947	-	-
Mov Cap-2 Maneuver	98	86	-	144	88	-	-	-	-	-	-	-
Stage 1	228	290	-	436	474	-	-	-	-	-	-	-
Stage 2	669	466	-	486	289	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	40.8		10.4		0		0	
HCM LOS	E		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	639	-	-	122	677	947	-
HCM Lane V/C Ratio	0.003	-	-	0.178	0.01	-	-
HCM Control Delay (s)	10.7	-	-	40.8	10.4	0	-
HCM Lane LOS	B	-	-	E	B	A	-
HCM 95th %tile Q(veh)	0	-	-	0.6	0	0	-

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↕		↖	↕
Traffic Vol, veh/h	0	11	589	4	10	1007
Future Vol, veh/h	0	11	589	4	10	1007
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	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	12	640	4	11	1095

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	-	322	0	0	644
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	4.1
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	2.2
Pot Cap-1 Maneuver	0	680	-	-	951
Stage 1	0	-	-	-	-
Stage 2	0	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	-	680	-	-	951
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.4	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	680	951
HCM Lane V/C Ratio	-	-	0.018	0.011
HCM Control Delay (s)	-	-	10.4	8.8
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.1	0

Timings  
3: Indian Av. & Ramona Exwy.

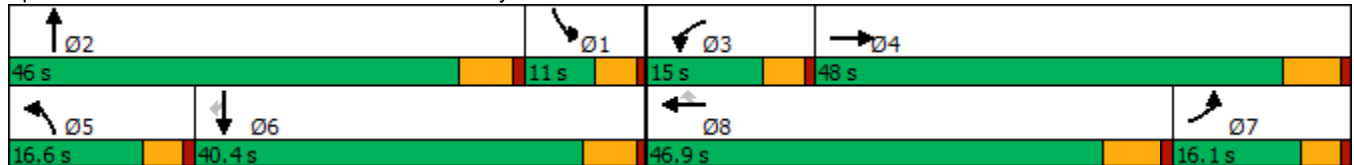


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↖	↕↕↕	↖	↕↕↕	↖	↖	↕↕	↖	↕↕	↖
Traffic Volume (vph)	236	1819	147	1341	108	252	249	298	341	368
Future Volume (vph)	236	1819	147	1341	108	252	249	298	341	368
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2	1	6	
Permitted Phases					8					6
Detector Phase	7	4	3	8	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	46.2	9.6	40.2	40.2	9.6	43.8	9.6	34.8	34.8
Total Split (s)	16.1	48.0	15.0	46.9	46.9	16.6	46.0	11.0	40.4	40.4
Total Split (%)	13.4%	40.0%	12.5%	39.1%	39.1%	13.8%	38.3%	9.2%	33.7%	33.7%
Yellow Time (s)	3.6	5.2	3.6	5.2	5.2	3.6	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
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	6.2	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 106.4  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 3: Indian Av. & Ramona Exwy.





HCM 6th Signalized Intersection Summary  
3: Indian Av. & Ramona Exwy.

Ramona-Indian Warehouse Project (JN 13758)

05/20/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↖	↑↑↑	↗	↖	↑↑		↖	↑↑	↗
Traffic Volume (veh/h)	236	1819	220	147	1341	108	252	249	206	298	341	368
Future Volume (veh/h)	236	1819	220	147	1341	108	252	249	206	298	341	368
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	241	1856	202	150	1368	88	257	254	190	304	348	347
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	293	1962	212	180	1737	539	215	343	247	170	571	255
Arrive On Green	0.16	0.41	0.41	0.10	0.33	0.33	0.12	0.17	0.17	0.09	0.16	0.16
Sat Flow, veh/h	1810	4751	514	1810	5187	1610	1810	2002	1443	1810	3610	1610
Grp Volume(v), veh/h	241	1348	710	150	1368	88	257	228	216	304	348	347
Grp Sat Flow(s),veh/h/ln	1810	1729	1807	1810	1729	1610	1810	1805	1640	1810	1805	1610
Q Serve(g_s), s	13.0	37.8	38.3	8.2	24.0	3.9	12.0	12.1	12.7	9.5	9.1	10.6
Cycle Q Clear(g_c), s	13.0	37.8	38.3	8.2	24.0	3.9	12.0	12.1	12.7	9.5	9.1	10.6
Prop In Lane	1.00		0.28	1.00		1.00	1.00		0.88	1.00		1.00
Lane Grp Cap(c), veh/h	293	1428	746	180	1737	539	215	309	281	170	571	255
V/C Ratio(X)	0.82	0.94	0.95	0.83	0.79	0.16	1.19	0.74	0.77	1.79	0.61	1.36
Avail Cap(c_a), veh/h	293	1433	749	187	2093	650	215	720	654	170	1239	552
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	40.9	28.5	28.6	44.6	30.3	23.6	44.4	39.6	39.9	45.7	39.6	18.8
Incr Delay (d2), s/veh	15.9	12.7	21.8	23.9	1.7	0.1	123.5	3.4	4.4	377.0	1.1	173.9
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	6.8	16.5	19.3	4.7	9.5	1.4	12.6	5.5	5.3	21.9	4.0	15.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.8	41.2	50.4	68.4	32.0	23.7	167.9	43.1	44.3	422.7	40.6	192.8
LnGrp LOS	E	D	D	E	C	C	F	D	D	F	D	F
Approach Vol, veh/h		2299			1606			701			999	
Approach Delay, s/veh		45.7			35.0			89.2			209.7	
Approach LOS		D			C			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.3	23.1	14.7	47.8	16.6	21.7	22.5	40.0				
Change Period (Y+Rc), s	5.8	* 5.8	4.6	6.2	4.6	5.8	6.2	* 6.2				
Max Green Setting (Gmax), s	6.4	* 40	10.4	41.8	12.0	34.6	11.5	* 41				
Max Q Clear Time (g_c+I1), s	11.5	14.7	10.2	40.3	14.0	12.6	15.0	26.0				
Green Ext Time (p_c), s	0.0	2.6	0.0	1.3	0.0	3.3	0.0	7.7				

Intersection Summary

HCM 6th Ctrl Delay	77.3
HCM 6th LOS	E

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑	↑		↑
Traffic Vol, veh/h	0	2323	1584	3	0	12
Future Vol, veh/h	0	2323	1584	3	0	12
Conflicting Peds, #/hr	0	0	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	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	2525	1722	3	0	13

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	-	0	-	0	861
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	-	-	-	0 260
Stage 1	0	-	-	-	0 -
Stage 2	0	-	-	-	0 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	-	-	-	-	260
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	19.6
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	260
HCM Lane V/C Ratio	-	-	-	0.05
HCM Control Delay (s)	-	-	-	19.6
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	0.2

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↑↑	↑↑↑	
Traffic Vol, veh/h	0	48	0	1342	1447	38
Future Vol, veh/h	0	48	0	1342	1447	38
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	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	52	0	1459	1573	41

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	-	807	-	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	282	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	282	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	20.6	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT EBLn1	SBT	SBR
Capacity (veh/h)	- 282	-	-
HCM Lane V/C Ratio	- 0.185	-	-
HCM Control Delay (s)	- 20.6	-	-
HCM Lane LOS	- C	-	-
HCM 95th %tile Q(veh)	- 0.7	-	-

Timings  
6: Perris Bl. & Ramona Exwy.

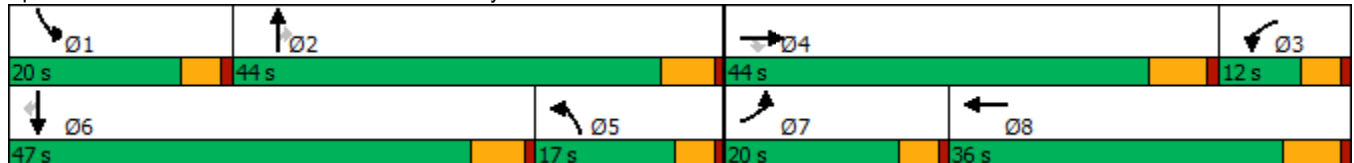


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑↑	↔	↔↔	↑↑↑	↔↔	↑↑	↔	↔↔	↑↑	↔
Traffic Volume (vph)	430	1510	384	187	998	233	649	246	379	835	281
Future Volume (vph)	430	1510	384	187	998	233	649	246	379	835	281
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8	5	2		1	6	
Permitted Phases			4					2			6
Detector Phase	7	4	4	3	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	36.2	36.2	9.6	34.2	9.6	38.8	38.8	9.6	41.8	41.8
Total Split (s)	20.0	44.0	44.0	12.0	36.0	17.0	44.0	44.0	20.0	47.0	47.0
Total Split (%)	16.7%	36.7%	36.7%	10.0%	30.0%	14.2%	36.7%	36.7%	16.7%	39.2%	39.2%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	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
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 111.5  
 Natural Cycle: 110  
 Control Type: Actuated-Uncoordinated


































Splits and Phases: 6: Perris Bl. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
6: Perris Bl. & Ramona Exwy.

Ramona-Indian Warehouse Project (JN 13758)

05/20/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  		 	  		 	 		 	 	
Traffic Volume (veh/h)	430	1510	384	187	998	263	233	649	246	379	835	281
Future Volume (veh/h)	430	1510	384	187	998	263	233	649	246	379	835	281
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		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	443	1557	296	193	1029	258	240	669	203	391	861	216
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	492	1741	539	237	1146	287	303	941	419	452	1054	469
Arrive On Green	0.14	0.34	0.34	0.07	0.28	0.28	0.09	0.26	0.26	0.13	0.29	0.29
Sat Flow, veh/h	3510	5187	1607	3510	4131	1034	3510	3610	1608	3510	3610	1605
Grp Volume(v), veh/h	443	1557	296	193	861	426	240	669	203	391	861	216
Grp Sat Flow(s),veh/h/ln	1755	1729	1607	1755	1729	1707	1755	1805	1608	1755	1805	1605
Q Serve(g_s), s	13.6	31.3	16.5	6.0	26.3	26.4	7.4	18.5	8.9	12.0	24.3	8.1
Cycle Q Clear(g_c), s	13.6	31.3	16.5	6.0	26.3	26.4	7.4	18.5	8.9	12.0	24.3	8.1
Prop In Lane	1.00		1.00	1.00		0.61	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	492	1741	539	237	959	473	303	941	419	452	1054	469
V/C Ratio(X)	0.90	0.89	0.55	0.82	0.90	0.90	0.79	0.71	0.48	0.87	0.82	0.46
Avail Cap(c_a), veh/h	492	1786	553	237	959	473	396	1256	560	492	1355	602
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	46.4	34.6	29.7	50.5	38.2	38.2	49.2	36.8	19.9	46.9	36.1	14.2
Incr Delay (d2), s/veh	18.9	6.2	1.1	18.2	11.2	19.9	5.8	1.2	0.9	13.1	3.1	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.0	13.2	6.1	3.1	12.0	13.0	3.4	8.0	3.2	5.9	10.7	4.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.3	40.8	30.8	68.8	49.3	58.1	55.0	38.1	20.8	60.0	39.3	14.9
LnGrp LOS	E	D	C	E	D	E	D	D	C	E	D	B
Approach Vol, veh/h		2296			1480			1112			1468	
Approach Delay, s/veh		44.2			54.4			38.6			41.2	
Approach LOS		D			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.7	34.4	13.6	43.0	15.3	37.9	20.0	36.6				
Change Period (Y+Rc), s	4.6	5.8	6.2	* 6.2	5.8	* 5.8	4.6	6.2				
Max Green Setting (Gmax), s	15.4	38.2	7.4	* 38	12.4	* 41	15.4	29.8				
Max Q Clear Time (g_c+I1), s	14.0	20.5	8.0	33.3	9.4	26.3	15.6	28.4				
Green Ext Time (p_c), s	0.1	4.5	0.0	3.6	0.1	5.5	0.0	1.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			44.9									
HCM 6th LOS			D									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

**APPENDIX 8.3:**

**HORIZON YEAR (2040) WITHOUT PROJECT CONDITIONS TRAFFIC SIGNAL WARRANT  
ANALYSIS WORKSHEETS**

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### Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

<u>DIST</u>	<u>CO</u>	<u>RTE</u>	<u>PM</u>	<u>CALC</u>	<u>TRAFFIC CONDITIONS</u>	<u>2040 NP</u>
Jurisdiction: <u>City of Perris</u>				CHK <u>RV</u>		DATE <u>06/30/21</u>
Major Street: <u>Indian Avenue</u>				CHK <u>RV</u>		DATE <u>06/30/21</u>
Minor Street: <u>Perry Street</u>					Critical Approach Speed (Major) <u>40</u> mph	
					Critical Approach Speed (Minor) <u>25</u> mph	
Major Street Approach Lanes =		<u>2</u>	lane		Minor Street Approach Lanes:	<u>1</u> lane
Major Street Future ADT =		<u>11,243</u>	vpd		Minor Street Future ADT =	<u>258</u> vpd
Speed limit or critical speed on major street traffic > 64 km/h (40 mph); .....						<input type="checkbox"/>
						or
In built up area of isolated community of < 10,000 population .....						<input type="checkbox"/>

**RURAL (R)**

**(Based on Estimated Average Daily Traffic - See Note)**

<u>URBAN</u>	<u>RURAL</u>	Minimum Requirements EADT			
<b>XX</b>					
<b>CONDITION A - Minimum Vehicular Volume</b>		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
<u>Satisfied</u>	<u>Not Satisfied</u>				
	<b>XX</b>				
Number of lanes for moving traffic on each approach		<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
<u>Major Street</u>	<u>Minor Street</u>				
<u>1</u>	<u>1</u>	8,000	5,600	2,400	1,680
<u>2 + 11,243</u>	<u>1 258</u>	9,600 *	6,720	2,400	1,680
<u>2 +</u>	<u>2 +</u>	9,600	6,720	3,200	2,240
<u>1</u>	<u>2 +</u>	8,000	5,600	3,200	2,240
<b>CONDITION B - Interruption of Continuous Traffic</b>		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
<u>Satisfied</u>	<u>Not Satisfied</u>				
	<b>XX</b>				
Number of lanes for moving traffic on each approach		<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
<u>Major Street</u>	<u>Minor Street</u>				
<u>1</u>	<u>1</u>	12,000	8,400	1,200	850
<u>2 + 11,243</u>	<u>1 258</u>	14,400	10,080	1,200	850
<u>2 +</u>	<u>2 +</u>	14,400	10,080	1,600	1,120
<u>1</u>	<u>2 +</u>	12,000	8,400	1,600	1,120
<b>Combination of CONDITIONS A + B</b>		2 CONDITIONS 80%		2 CONDITIONS 80%	
<u>Satisfied</u>	<u>Not Satisfied</u>				
	<b>XX</b>				
No one condition satisfied, but following conditions fulfilled 80% of more .....					
	<u>A</u>				
	<b>11%</b>				
	<u>B</u>				
	<b>21%</b>				

**Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.**

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.





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**APPENDIX 8.4:**

**HORIZON YEAR (2040) WITH PROJECT CONDITIONS TRAFFIC SIGNAL WARRANT  
ANALYSIS WORKSHEETS**

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### Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

<u>DIST</u>	<u>CO</u>	<u>RTE</u>	<u>PM</u>	CALC <u>RV</u>	TRAFFIC CONDITIONS	<b>2040 WP</b>
Jurisdiction: <u>City of Perris</u>				CHK <u>RV</u>	DATE <u>06/30/21</u>	DATE <u>06/30/21</u>
Major Street: <u>Indian Avenue</u>					Critical Approach Speed (Major) <u>40</u> mph	
Minor Street: <u>Perry Street</u>					Critical Approach Speed (Minor) <u>25</u> mph	
Major Street Approach Lanes = <u>2</u>	lane	Minor Street Approach Lanes: <u>1</u>	lane			
Major Street Future ADT = <u>11,768</u>	vpd	Minor Street Future ADT = <u>258</u>	vpd			
Speed limit or critical speed on major street traffic > 64 km/h (40 mph); .....					<input type="checkbox"/>	
					or	<b>RURAL (R)</b>
In built up area of isolated community of < 10,000 population .....					<input type="checkbox"/>	

**(Based on Estimated Average Daily Traffic - See Note)**

<u>URBAN</u>		<u>RURAL</u>		Minimum Requirements EADT			
<b>XX</b>							
<b>CONDITION A - Minimum Vehicular Volume</b>							
<u>Satisfied</u>		<u>Not Satisfied</u>		Vehicles Per Day on Major Street		Vehicles Per Day on Higher-Volume Minor Street Approach	
		<b>XX</b>		(Total of Both Approaches)		(One Direction Only)	
<u>Major Street</u>		<u>Minor Street</u>		<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
1		1		8,000	5,600	2,400	1,680
2 + <b>11,768</b>		1 <b>258</b>		9,600 *	6,720	2,400	1,680
2 +		2 +		9,600	6,720	3,200	2,240
1		2 +		8,000	5,600	3,200	2,240
<b>CONDITION B - Interruption of Continuous Traffic</b>							
<u>Satisfied</u>		<u>Not Satisfied</u>		Vehicles Per Day on Major Street		Vehicles Per Day on Higher-Volume Minor Street Approach	
		<b>XX</b>		(Total of Both Approaches)		(One Direction Only)	
<u>Major Street</u>		<u>Minor Street</u>		<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
1		1		12,000	8,400	1,200	850
2 + <b>11,768</b>		1 <b>258</b>		14,400	10,080	1,200	850
2 +		2 +		14,400	10,080	1,600	1,120
1		2 +		12,000	8,400	1,600	1,120
<b>Combination of CONDITIONS A + B</b>							
<u>Satisfied</u>		<u>Not Satisfied</u>		2 CONDITIONS		2 CONDITIONS	
		<b>XX</b>		80%		80%	
No one condition satisfied, but following conditions fulfilled 80% of more .....		<u>A</u>	<u>B</u>				
		<b>11%</b>	<b>21%</b>				

**Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.**

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.



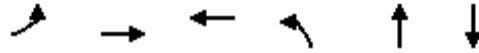
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**APPENDIX 8.5:**

**HORIZON YEAR (2040) WITH PROJECT CONDITIONS INTERSECTION OPERATIONS  
ANALYSIS WORKSHEETS WITH IMPROVEMENTS**

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Timings  
1: Indian Av. & Driveway/Perry St.



Lane Group	EBL	EBT	WBT	NBL	NBT	SBT	Ø1
Lane Configurations		↕	↕	↗	↕	↕	
Traffic Volume (vph)	5	0	0	5	510	369	
Future Volume (vph)	5	0	0	5	510	369	
Turn Type	Perm	NA	NA	Prot	NA	NA	
Protected Phases		4	8	5	2	6	1
Permitted Phases	4						
Detector Phase	4	4	8	5	2	6	
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	5.0	10.0	10.0	5.0
Minimum Split (s)	23.6	23.6	23.6	9.6	23.1	23.1	9.6
Total Split (s)	23.6	23.6	23.6	10.0	26.8	26.4	9.6
Total Split (%)	39.3%	39.3%	39.3%	16.7%	44.7%	44.0%	16%
Yellow Time (s)	3.6	3.6	3.6	3.6	4.1	4.1	3.6
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	
Total Lost Time (s)		4.6	4.6	4.6	5.1	5.1	
Lead/Lag				Lead	Lag	Lag	Lead
Lead-Lag Optimize?				Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 23.2  
 Natural Cycle: 60  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 1: Indian Av. & Driveway/Perry St.





HCM 6th Signalized Intersection Summary  
1: Indian Av. & Driveway/Perry St.

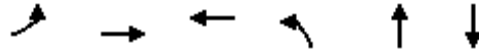
Ramona-Indian Warehouse Project (JN 13758)

05/20/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕↔		↕	↕↔	
Traffic Volume (veh/h)	5	0	2	0	0	4	5	510	44	0	369	16
Future Volume (veh/h)	5	0	2	0	0	4	5	510	44	0	369	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	5	0	2	0	0	4	5	554	48	0	401	17
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	273	0	11	0	0	47	12	2020	175	7	1435	61
Arrive On Green	0.03	0.00	0.03	0.00	0.00	0.03	0.01	0.59	0.59	0.00	0.40	0.40
Sat Flow, veh/h	971	0	388	0	0	1610	1810	3448	298	1810	3619	153
Grp Volume(v), veh/h	7	0	0	0	0	4	5	305	297	0	210	208
Grp Sat Flow(s),veh/h/ln	1359	0	0	0	0	1610	1810	1900	1846	1810	1900	1872
Q Serve(g_s), s	0.1	0.0	0.0	0.0	0.0	0.1	0.1	2.0	2.0	0.0	1.9	1.9
Cycle Q Clear(g_c), s	0.2	0.0	0.0	0.0	0.0	0.1	0.1	2.0	2.0	0.0	1.9	1.9
Prop In Lane	0.71		0.29	0.00		1.00	1.00		0.16	1.00		0.08
Lane Grp Cap(c), veh/h	285	0	0	0	0	47	12	1113	1082	7	753	742
V/C Ratio(X)	0.02	0.00	0.00	0.00	0.00	0.08	0.40	0.27	0.27	0.00	0.28	0.28
Avail Cap(c_a), veh/h	1358	0	0	0	0	1214	388	1636	1590	359	1606	1582
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	12.0	0.0	0.0	0.0	0.0	11.9	12.5	2.6	2.6	0.0	5.2	5.2
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.8	7.7	0.1	0.1	0.0	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.0	0.0	0.0	0.0	0.0	12.7	20.2	2.7	2.7	0.0	5.4	5.4
LnGrp LOS	B	A	A	A	A	B	C	A	A	A	A	A
Approach Vol, veh/h		7			4			607			418	
Approach Delay, s/veh		12.0			12.7			2.9			5.4	
Approach LOS		B			B			A			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	19.9		5.3	4.8	15.1		5.3				
Change Period (Y+Rc), s	4.6	5.1		4.6	4.6	5.1		4.6				
Max Green Setting (Gmax), s	5.0	21.7		19.0	5.4	21.3		19.0				
Max Q Clear Time (g_c+I1), s	0.0	4.0		2.2	2.1	3.9		2.1				
Green Ext Time (p_c), s	0.0	3.2		0.0	0.0	2.1		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				4.0								
HCM 6th LOS				A								

Timings  
1: Indian Av. & Driveway/Perry St.

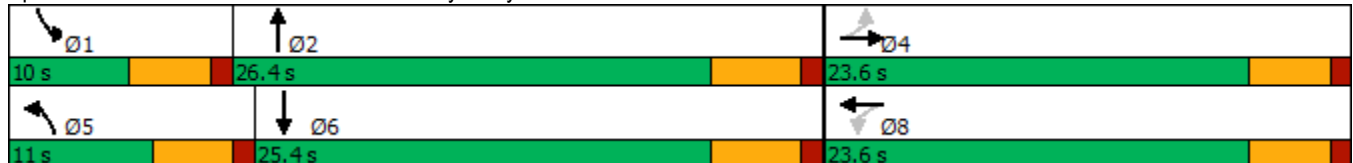


Lane Group	EBL	EBT	WBT	NBL	NBT	SBT	Ø1
Lane Configurations		↕	↕	↙	↕	↕	
Traffic Volume (vph)	15	0	0	2	568	1012	
Future Volume (vph)	15	0	0	2	568	1012	
Turn Type	Perm	NA	NA	Prot	NA	NA	
Protected Phases		4	8	5	2	6	1
Permitted Phases	4						
Detector Phase	4	4	8	5	2	6	
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	5.0	10.0	10.0	5.0
Minimum Split (s)	23.6	23.6	23.6	9.6	22.1	22.1	9.6
Total Split (s)	23.6	23.6	23.6	11.0	26.4	25.4	10.0
Total Split (%)	39.3%	39.3%	39.3%	18.3%	44.0%	42.3%	17%
Yellow Time (s)	3.6	3.6	3.6	3.6	4.1	4.1	3.6
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	
Total Lost Time (s)		4.6	4.6	4.6	5.1	5.1	
Lead/Lag				Lead	Lag	Lag	Lead
Lead-Lag Optimize?				Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 26.2  
 Natural Cycle: 60  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 1: Indian Av. & Driveway/Perry St.



HCM 6th Signalized Intersection Summary  
1: Indian Av. & Driveway/Perry St.

Ramona-Indian Warehouse Project (JN 13758)

05/20/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕↔		↕	↕↔	
Traffic Volume (veh/h)	15	0	5	0	0	6	2	568	29	0	1012	5
Future Volume (veh/h)	15	0	5	0	0	6	2	568	29	0	1012	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		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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	16	0	5	0	0	7	2	617	32	0	1100	5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	281	0	23	0	0	112	6	2191	114	6	1731	8
Arrive On Green	0.07	0.00	0.07	0.00	0.00	0.07	0.00	0.61	0.61	0.00	0.46	0.46
Sat Flow, veh/h	1054	0	329	0	0	1610	1810	3581	186	1810	3780	17
Grp Volume(v), veh/h	21	0	0	0	0	7	2	327	322	0	553	552
Grp Sat Flow(s),veh/h/ln	1384	0	0	0	0	1610	1810	1900	1867	1810	1900	1897
Q Serve(g_s), s	0.4	0.0	0.0	0.0	0.0	0.1	0.0	2.5	2.5	0.0	6.8	6.8
Cycle Q Clear(g_c), s	0.5	0.0	0.0	0.0	0.0	0.1	0.0	2.5	2.5	0.0	6.8	6.8
Prop In Lane	0.76		0.24	0.00		1.00	1.00		0.10	1.00		0.01
Lane Grp Cap(c), veh/h	304	0	0	0	0	112	6	1163	1142	6	870	869
V/C Ratio(X)	0.07	0.00	0.00	0.00	0.00	0.06	0.34	0.28	0.28	0.00	0.64	0.64
Avail Cap(c_a), veh/h	1120	0	0	0	0	1005	381	1330	1307	321	1268	1266
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	13.5	0.0	0.0	0.0	0.0	13.2	15.1	2.8	2.8	0.0	6.3	6.3
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.0	0.0	0.2	11.8	0.1	0.1	0.0	0.8	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.6	0.0	0.0	0.0	0.0	13.5	27.0	2.9	2.9	0.0	7.1	7.1
LnGrp LOS	B	A	A	A	A	B	C	A	A	A	A	A
Approach Vol, veh/h		21			7			651			1105	
Approach Delay, s/veh		13.6			13.5			3.0			7.1	
Approach LOS		B			B			A			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	23.7		6.7	4.7	19.0		6.7				
Change Period (Y+Rc), s	4.6	5.1		4.6	4.6	5.1		4.6				
Max Green Setting (Gmax), s	5.4	21.3		19.0	6.4	20.3		19.0				
Max Q Clear Time (g_c+I1), s	0.0	4.5		2.5	2.0	8.8		2.1				
Green Ext Time (p_c), s	0.0	3.4		0.0	0.0	5.2		0.0				

Intersection Summary

HCM 6th Ctrl Delay	5.7
HCM 6th LOS	A