

Appendix G

Transportation Impact Analysis

Avenida Encinas Coastal Rail Trail

Traffic Impact Analysis

May 2022 Report



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1 INTRODUCTION

The Avenida Encinas Coastal Rail Trail (CRT) project includes a variety of complete street, traffic system, and aesthetic improvements along Avenida Encinas within the City limits and is state and federally funded with an Active Transportation Program (ATP) grant. The purpose of this project is to create a balanced multi-modal corridor with improved bicycle and pedestrian facilities that will increase mobility and safety along the corridor for all users. The project is located within the City limits along Avenida Encinas between Palomar Airport Road and Carlsbad Boulevard. The project is divided into two segments, Segment Two and Segment Three. Segment Two is bounded by Carlsbad Boulevard and the Carlsbad Poinsettia Coaster Station driveway, while Segment Three is bounded by the Carlsbad Poinsettia Coaster Station driveway and Palomar Airport Road. Through discussions with City staff, it was identified that Segment Two would be designed and built in advance of Segment Three in order to meet critical milestones identified within the ATP grant fund. Segment Three design and construction are to take place in the next phase of the project. This report will focus on the design improvements and related traffic operation analysis regarding both Segment Two and Segment Three project improvements and design.

1.1 Document Purpose

This Traffic Impact Analysis (TIA) report studies the operating condition of Avenida Encinas with the project improvements. The purpose of this report is to inform the project team of the impacts and performance characteristics of various improvements to help lead the decision makers in selecting the best alternative, geometrics, pedestrian and bicycle enhancements, and control elements on roadway segments and intersections. The report follows analysis criteria in the City's Traffic Impact Analysis (TIA) Guidelines. The report also includes qualitative assessments utilizing the Federal Highway Administration's (FHWA) *'Guide for Improving Pedestrian Safety at Uncontrolled Crossing Locations'* guidelines that are not typically included in the City's TIA's.

1.2 Project Need and Improvements

Avenida Encinas is classified as a north-south neighborhood connector street and runs parallel to the Interstate 5 (I-5) freeway. The corridor's primary purpose is to connect people to different neighborhoods and land uses throughout the City. The City's General Plan Mobility Element identifies the preferred attributes of a neighbor connector street, such as Avenida Encinas, to include the following:

- › Designed to safely move all modes of travel while enhancing mobility for pedestrians and bicyclists.
- › Vehicle speeds should be managed to promote safe pedestrian and bicycle movement.
- › Bicycle lanes should be provided.
- › Bicycle boulevards can be considered.
- › Pedestrians should be accommodated on sidewalks adjacent to the travel way (minimum 5' wide sidewalk).
- › Mid-block pedestrian crossings and traffic calming devices should be considered, but only at locations with high pedestrian activity levels or major destinations/attractions.

The project corridor currently lacks separated bicycle facilities and has sidewalk gaps in close proximity to the Carlsbad Poinsettia Coaster Station and along the west side of Avenida Encinas south of Palomar

Airport Road. Additionally, through discussions with City staff and community outreach performed by City in relation to the ATP grant, several pedestrian crossing areas were identified along the corridor that would benefit from pedestrian enhancements to improve mobility. STC reviewed and analyzed guidelines and requirements to aid in the decision of which enhancements should be included as part of the project. The analysis is provided in the subsequent sections of this report. Based on the analysis, the project's improvements that will address the corridor needs include:

- › Class II directional bikeway separated from the adjacent travel lane with a buffer. Where parking is provided, the parking lane will be against the curb with the bike lane situated to the left of the parking lane separated with a buffer.
- › Pedestrian accessibility improvements including sidewalk, curb ramps, crosswalk enhancements, curb extensions to reduce crossing distance, LED countdown heads and audible signals.
- › Enhanced pedestrian and bicycle access to regional and local transit and important community destinations along the corridor.
- › Installation of a Pedestrian Hybrid Beacon at Avenida Encinas & San Carlos Street / Shopping Plaza driveway.
- › Installation of new sidewalks where sidewalk gaps exist.
- › Traffic signal system and operation improvements.
- › Traffic calming with lane reduction improvements.

1.3 Study Area

The project study area includes four signalized intersections subject to traffic operation analysis, ten unsignalized intersections subject to pedestrian enhancement analysis, and five roadway segments subject to roadway capacity analysis. Furthermore, the unsignalized intersection of Avenida Encinas & Portage Way / Marlin Way will receive project enhancements, however, this intersection is classified as a controlled intersection (i.e., All-Way Stop controlled intersection) and therefore is not subject to the pedestrian enhancement analysis. The project study area locations along with the existing intersection geometry and traffic control are illustrated in **Figure 1-1** and are highlighted below:

Avenida Encinas CRT

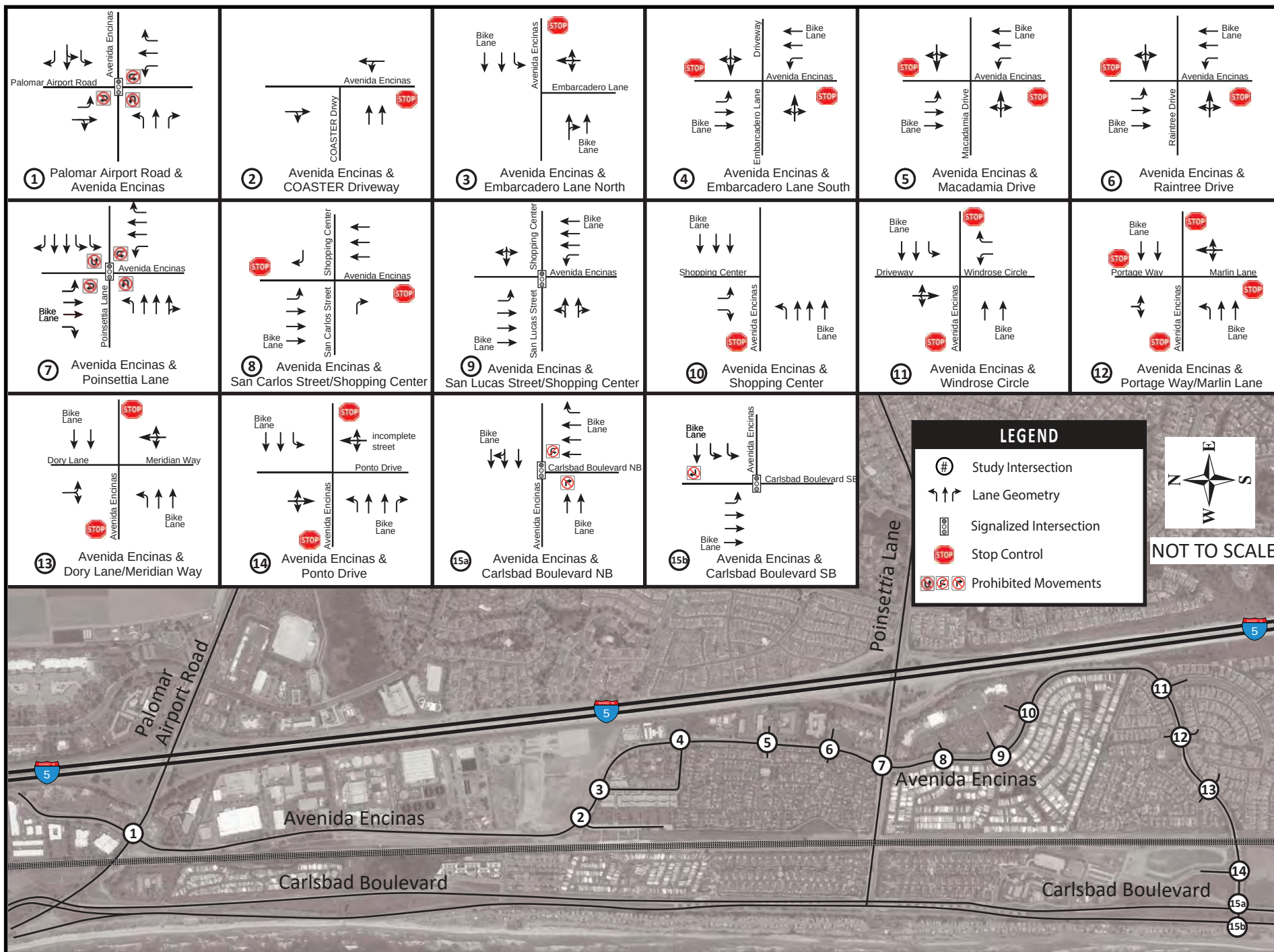


Figure 1-1
Study Area and Existing Lane Geometry (2022)

Signalized Intersections:

- › Avenida Encinas & Palomar Airport Road
- › Avenida Encinas & Poinsettia Lane
- › Avenida Encinas & San Lucas / Shopping Plaza driveway
- › Avenida Encinas & Carlsbad Boulevard

Unsignalized Intersections:

- › Avenida Encinas & Carlsbad Poinsettia Coaster Station driveway
- › Avenida Encinas & Embarcadero Lane (north)
- › Avenida Encinas & Embarcadero Lane (south)
- › Avenida Encinas & Macadamia Drive
- › Avenida Encinas & Raintree Drive
- › Avenida Encinas & San Carlos Street / Shopping Plaza driveway (north)
- › Avenida Encinas & Shopping Plaza driveway (south)
- › Avenida Encinas & Windrose Circle
- › Avenida Encinas & Portage Way / Marlin Way
- › Avenida Encinas & Dory Lane / Meridian Way
- › Avenida Encinas & Ponto Drive

Roadway Segments:

- › Avenida Encinas between Poinsettia Lane and San Carlos Street
- › Avenida Encinas between San Carlos Street and San Lucas
- › Avenida Encinas between San Lucas and Shopping Plaza driveway (south)
- › Avenida Encinas between Shopping Plaza driveway and Windrose Circle

2 EXISTING CONDITIONS

2.1 Roadway Network

Avenida Encinas currently operates with a posted speed limit of 35 MPH within the project study area. The roadway accommodates two-way traffic with one lane in each direction between the Palomar Airport Road and Poinsettia Lane. Avenida Encinas expands to two lanes in the southbound direction and three lanes in the northbound direction between Poinsettia Lane and San Lucas / Shopping Plaza driveway. Avenida Encinas contains two lanes in each direction south of San Lucas / Shopping Plaza driveway until reaching Windrose Circle where the roadway reduces back to one lane in each direction until reaching Carlsbad Boulevard. The abutting land uses include residential, a mix of commercial/retail, and the Carlsbad Poinsettia Coaster Station. Sidewalks are provided along both sides of the roadway for the entire length of Segment Two excluding the eastern side of the roadway between the Carlsbad Poinsettia Coaster Station and just south of Embarcadero Lane. Sidewalks are provided along the east side of Segment Three but is primarily missing sidewalk along the west side. Bike lanes are provided along both directions of the roadway for Segment Two, except in the northbound direction between Poinsettia Lane and San Lucas/Shopping Plaza driveway where no bike lane is provided. No bike lanes are provided along

Segment 3. On street parking is generally provided on Avenida Encinas between the Carlsbad Poinsettia Coaster Station driveway and Poinsettia Lane.

2.2 Existing Traffic Volumes

Turning movement counts (TMC) were collected for the signalized project study area intersections for the weekday AM and weekday PM peak hours on Wednesday, March 9th, 2022, which represents a typical day for traffic count purposes (non-holiday) while schools were in session. Based on the compiled TMC data, the existing weekday AM peak hour occurs between 7:45 AM and 8:45 AM, while the existing weekday PM peak hour occurs between 5:00 PM and 6:00 PM. **Figures 2-1** shows the 2022 Existing Conditions vehicular volumes at the signalized intersections for each location's respective weekday AM and PM peak hours. The TMC data is included in **Appendix A**.

Average daily traffic (ADT) data was also collected along Avenida Encinas on March 9th, 2022, which aided the efforts related to the roadway capacity and FHWA pedestrian crossing enhancement analyses. ADT data is included in Appendix A. ADT data was collected at the following locations:

- › Avenida Encinas south of Embarcadero Lane
- › Avenida Encinas between Poinsettia Lane and San Carlos Street
- › Avenida Encinas between San Carlos Street and San Lucas
- › Avenida Encinas between San Lucas and Shopping Plaza driveway (south)
- › Avenida Encinas between Shopping Plaza driveway and Windrose Circle
- › Avenida Encinas between Portage Way / Marlin Way & Dory Lane / Meridian Way

Additionally, pedestrian and bicycle counts were completed during the data collection effort mentioned above to identify the levels of pedestrian and bicycle activity along the corridor. During the weekday AM and PM peak hours, modest bicyclist activity occurs on the roadways within the project study area. Additionally, prominent levels of pedestrian activity were observed at the Avenida Encinas & Poinsettia Lane intersection during the weekday AM and PM peak hours. The pedestrian and bicycle count data for each location is provided in Appendix A.

Avenida Encinas CRT



Figure 2-1
Existing Peak Hour Vehicle Turning Movement Volumes
(2022)



3 TRAFFIC ANALYSIS

This section presents the methodology and results of the intersection operation analysis, storage lane queuing analysis, roadway capacity analysis, and multi-modal level-of-service (MMLOS) for the Existing conditions and Existing plus Project Improvement conditions. The analysis was conducted for the typical morning (7am-9am) and evening (4pm-6pm) peak hours. The analysis methodology follows the City of Carlsbad Traffic Impact Analysis Guidelines (April 2018) and discussions with City staff.

The analysis under the Existing plus Project Improvement conditions, utilized existing vehicular, pedestrian, and bicycle volumes. Project improvements incorporated in the analyses include the following:

- › Northbound and westbound right-turn overlap phasing at Avenida Encinas & Poinsettia Lane. It should be noted the only the overlap phasing was included as part of this analysis. The existing splits and cycle length remained unchanged.
- › Approach lane geometry for the intersection of Avenida Encinas & the Shopping Center driveway was modified to include one exclusive right-turn lane, one through lane, and one exclusive left-turn lane for the northbound and southbound approaches. All remaining signalized intersections contain the same approach lane geometry as the Existing conditions scenario, however, turn-lane storage lengths were based on the latest conceptual design plan (April 2022) of Segment Two, which is included in **Appendix B**.
- › Traffic calming measures along Avenida Encinas which includes reducing the number of thru lanes between Poinsettia Lane and Windrose Circle down to one lane in each direction.
- › Installation of a pedestrian signal at the intersection of Avenida Encinas & San Carlos Street/Shopping Plaza Driveway

Additionally, the methodology and results of the FHWA unsignalized crossing enhancements, pedestrian hybrid beacon, and pedestrian signal warrant analyses are provided in subsequent sections.

3.1 Intersection Level of Service

3.1.1 Methodology

Signalized intersections were evaluated using the Highway Capacity Manual (HCM) 6th Edition methodology. The study area was modeled in Synchro 11 software to calculate delays and levels of service (LOS). Existing signal timing data obtained from the signal cabinets was used to model the signalized intersections for the Existing conditions and Existing plus Project Improvement conditions. Signal timing sheets are included in **Appendix C**. **Table 3-1** provides a description of the HCM signalized intersection control delay and level of service thresholds. The HCM 6th Edition defines intersection control delay as the summation of the weighted average delay for all lane groups at the subject intersection.

Table 3-1: Level of Service Threshold

LOS	Control Delay (sec/veh)	Description
	Signalized Intersection	
A	≤10	Operations with very low delay and most vehicles do not stop.
B	>10 and ≤20	Operations with good progression but with some restricted movements.
C	>20 and ≤35	Operations where a significant number of vehicles are stopping with some backup and light congestion.
D	>35 and ≤55	Operations where congestion is noticeable, longer delays occur, and many vehicles stop. The proportion of vehicles not stopping declines.
E	>55 and ≤80	Operations where there is significant delay, extensive queuing, and poor progression.
F	>80	Operations that are unacceptable to most drivers, when the arrival rates exceed the capacity of the intersection.

Source: HCM 6th Edition.

3.1.2 LOS Analysis Results

Table 3-2 provides the LOS analysis results for each signalized intersection under Existing conditions and Existing plus Project Improvement conditions. LOS analysis worksheets are included in **Appendix D**.

Table 3-2 Signalized Intersection Capacity Analysis

Location	Existing Conditions		Existing plus Project Improvement Conditions	
	Control Delay ^a	LOS ^b	Control Delay ^a	LOS ^b
Avenida Encinas at Palomar Airport Road				
AM Peak Hour	35.2	D	35.2	D
PM Peak Hour	34.4	C	34.4	C
Avenida Encinas at Poinsettia Lane				
AM Peak Hour	36.5	D	29.1	C
PM Peak Hour	48.6	D	34.3	C
Avenida Encinas at San Lucas / Shopping Plaza driveway				
AM Peak Hour	12.3	B	12.9	B
PM Peak Hour	14.1	B	14.7	B
Avenida Encinas at Carlsbad Boulevard				
AM Peak Hour	6.4	A	6.4	A
PM Peak Hour	7.8	A	7.8	A
Avenida Encinas at San Carlos Street / Shopping Plaza driveway				
AM Peak Hour	Pedestrian signal does not exist under existing conditions		12.1	B
PM Peak Hour			28.0	C

Note: Shaded cells denote LOS E/F conditions.

a Summation of the weighted average delay for all lane groups at the subject intersection, in seconds per vehicle.

b Level-of-service.

As seen in Table 3-2 above, all signalized intersections operate at an overall LOS D or better during both peak hours under the Existing conditions and Existing plus Project Improvement conditions analysis scenarios. Delay and LOS decrease slightly for the intersection located along Segment Two where through lanes are reduced to accommodate enhanced bicycle facilities. Notable improvements to intersection operations occur at the intersection of Avenida Encinas & Poinsettia Lane due to the addition of right-turn overlap phasing for the northbound and westbound right-turns.

3.2 Queueing Analysis

3.2.1 Methodology

Queueing analysis was conducted to determine the adequacy of turn lane storage length. The 95th percentile queue length was reported using the Synchro 11 software. At signalized intersections, Synchro reports queue lengths for each lane group. For the purposes of this document, only the lane groups in which the storage length was exceeded by the 95th queue was reported. The queueing analysis worksheets for each lane group are included in Appendix D.

3.2.2 Queueing Analysis Results

The queue lengths for the Existing conditions and Existing plus Project Improvement conditions along with the respective turn-lane storage lengths are shown in **Table 3-3**.

Table 3-3 Signalized Intersection Queueing Analysis

Location / Movement	Existing Conditions			Existing plus Project Improvement Conditions		
	Storage Length	95 th Q ^a	Exceeds Storage (Y/N)	Storage Length	95 th Q	Exceeds Storage (Y/N)
Avenida Encinas at Palomar Airport Road						
<i>Weekday AM</i>						
EBL	90'	63'	N	90'	63'	N
WBL	180'	569'	Y	180'	569'	Y
NBL	100'	47'	N	100'	47'	N
NBR	400'	0'	N	400'	0'	N
SBL	250'	121'	N	250'	121'	N
SBR	550'	0'	N	550'	0'	N
<i>Weekday PM</i>						
EBL	90'	121'	Y	90'	121'	Y
WBL	180'	250'	Y	180'	250'	Y
NBL	100'	91'	N	100'	91'	N
NBR	400'	9'	N	400'	9'	N
SBL	250'	192'	N	250'	192'	N
SBR	550'	32'	N	550'	32'	N
Avenida Encinas at Poinsettia Lane						
<i>Weekday AM</i>						
EBL	225'	71'	N	225'	71'	N
WBL	230'	218'	N	230'	218'	N
WBR	200'	70'	N	200'	83'	N
SB L	215'	300'	Y	215'	300'	Y
SBR	200'	0'	N	200'	0'	N

Location / Movement	Existing Conditions			Existing plus Project Improvement Conditions		
	Storage Length	95 th Q ^a	Exceeds Storage (Y/N)	Storage Length	95 th Q	Exceeds Storage (Y/N)
Weekday PM						
EBL	225'	94'	N	225'	95'	N
WB L	230'	295'	Y	230'	295'	Y
WBR	200'	73'	N	200'	43'	N
SB L	215'	320'	Y	215'	323'	Y
SBR	200'	0'	N	200'	0'	N
Avenida Encinas at San Lucas / Shopping Plaza driveway						
Weekday AM						
NBL	155'	0'	N	155'	0'	N
NBR	Lane group does not exist under existing condition			155'	0'	N
SBL	300'	59'	N	300'	66'	N
SBR	Lane group does not exist under existing condition			185'	1'	N
Weekday PM						
NBL	155'	28'	N	155'	18'	N
NBR	Lane group does not exist under existing condition			155'	0'	N
SBL	300'	142'	N	300'	82'	N
SBR	Lane group does not exist under existing condition			185'	7'	N
Avenida Encinas at Carlsbad Boulevard						
Weekday AM						
WBL	180'	24'	N	180'	27'	N
NBR	570'	10'	N	570'	13'	N
SBL	470'	24'	N	470'	15'	N
Weekday PM						
WBL	180'	47'	N	180'	42'	N
NBR	570'	11'	N	570'	15'	N
SBL	470'	26'	N	470'	17'	N
Avenida Encinas at San Carlos Street / Shopping Plaza driveway						
Weekday AM						
NBR	Pedestrian signal does not exist under existing conditions			175'	8'	N
SBL				225'	64'	N
SBR				180'	2'	N
Weekday PM						
NBR	Pedestrian signal does not exist under existing conditions			175'	11'	N
SBL				225'	83'	N
SBR				180'	3'	N

a 95th percentile queue, in feet.

As shown in Table 3-3, the 95th queue lengths for the intersections of Avenida Encinas & San Lucas / Shopping Plaza driveway and Avenida Encinas & Carlsbad Boulevard do not exceed the provided storage lengths under the Existing conditions and Existing plus Project Improvement conditions. The proposed project improvements along Avenida Encinas do not result in any changes to 95th percentile queue lengths for the intersections of Avenida Encinas & Poinsettia Lane and Avenida Encinas & Palomar Airport Road. The installation of a conventional pedestrian signal operation at the intersection of Avenida Encinas & San Carlos Street / Shopping Plaza driveway is not expected to result in queueing conditions that exceed the storage lengths provided.

3.3 Roadway Capacity Analysis

3.3.1 Methodology

As previously mentioned, Avenida Encinas is classified as a Neighborhood Connector Street and thus is not subject to an Auto Multi Modal Level of Service evaluation. However, considering a portion of Avenida Encinas, between Poinsettia Lane and Windrose Circle, is subject to lane reductions under the project improvement condition, a roadway capacity analysis was conducted for this specific section of roadway. The roadway capacity analysis was conducted in accordance with the City of Carlsbad's TIA guidelines (April 2018) and Service Volume Tables Report (June 2021). Carlsbad's Service Volume Tables Report provides peak hour roadway service volume thresholds for specific corridors and generalized roadway corridors that are based on various geometry, signal timing, and traffic characteristic parameters specific to the City of Carlsbad. Since Avenida Encinas is not included in the *Specific Corridor* section, the peak hour volume thresholds identified in the *Generalized Data* were utilized to evaluate the roadway level of service for the Existing conditions and Existing plus Project Improvement conditions. **Table 3-4** provides description of the *Generalized Data* level of service thresholds provided in Carlsbad's *Service Volume Tables Report*. The City has identified LOS D as the threshold for acceptable roadway capacity operations.

Avenida Encinas between Poinsettia Lane and Windrose Circle was divided into the following segments for the purposes of the roadway capacity analysis:

- › Avenida Encinas between Poinsettia Lane and San Carlos Street
- › Avenida Encinas between San Carlos Street and San Lucas
- › Avenida Encinas between San Lucas and Shopping Plaza Driveway (south)
- › Avenida Encinas between Shopping Plaza Driveway and 900' s/o Shopping Plaza Driveway
- › Avenida Encinas between 900' s/o Shopping Plaza Driveway and Windrose Circle

Table 3-4 Service Volume Report Level of Service Thresholds – Generalized Data

Lanes	Speed Limit	Median	Level of Service (LOS) Peak Directional Volume Threshold*			
			B	C	D	E
1	35	Undivided	**	180	590	740
	35	Divided	**	190	630	780
2	35	Divided	**	520	1390	1540
	45	Divided	**	600	1560	1760
	50	Divided	**	850	1690	1820
	55	Divided	**	1050	1800	1890
3	35	Divided	**	680	2230	2540
	45	Divided	**	2040	2660	2700
	50	Divided	**	2360	2760	2800
	55	Divided	390	2600	2870	2900
4	45	Divided	**	2780	3560	3620

* Peak directional volume LOS thresholds reported as vehicle per hour per direction in the peak hour.

** Indicates LOS cannot be achieved during peak hour.

3.3.2 Roadway Capacity Analysis Results

Table 3-5 through **Table 3-8** provides the roadway capacity analysis results for the Existing conditions and Existing plus Project Improvement conditions. Vehicular volume data used to support the roadway capacity analysis is included in Appendix A.

Table 3-5 Existing Conditions - Weekday AM Peak Hour

Direction	Number of Lanes	Speed Limit	Median	LOS D Capacity ^a	Peak Direction Volume ^a	LOS
<i>Between Poinsettia Lane and San Carlos Street / Shopping Plaza Driveway</i>						
NB	3	35 MPH	Divided	2230	421	C
SB	2	35 MPH	Divided	1390	430	C
<i>Between San Carlos Street / Shopping Plaza Driveway and San Lucas</i>						
NB	3	35 MPH	Divided	2230	299	C
SB	2	35 MPH	Divided	1390	233	C
<i>Between San Lucas and Shopping Center Plaza Driveway (south)</i>						
NB	2	35 MPH	Divided	1390	157	C
SB	2	35 MPH	Divided	1390	139	C
<i>Between Shopping Center Plaza Driveway (south) and 900' S/O Shopping Plaza Driveway</i>						
NB	2	35 MPH	Divided	1390	170	C
SB	2	35 MPH	Divided	1390	121	C
<i>Between 900' S/O Shopping Plaza Driveway and Windrose Circle</i>						
NB	2	35 MPH	Undivided	1180	170	C
SB	1	35 MPH	Undivided	590	121	C

a Peak directional volume LOS thresholds reported as vehicle per hour per direction in the peak hour.

Table 3-6 Existing plus Project Improvement Conditions – Weekday AM Peak Hour

Direction	Number of Lanes	Speed Limit	Median	LOS D Capacity ^a	Peak Direction Volume ^a	LOS
<i>Between Poinsettia Lane and San Carlos Street / Shopping Plaza Driveway^b</i>						
NB	1	35 MPH	Divided	630	421	D
SB	1	35 MPH	Divided	630	430	D
<i>Between San Carlos Street / Shopping Plaza Driveway and San Lucas</i>						
NB	1	35 MPH	Divided	630	299	D
SB	1	35 MPH	Divided	630	233	D
<i>Between San Lucas and Shopping Center Plaza Driveway (south)</i>						
NB	1	35 MPH	Divided	630	157	C
SB	1	35 MPH	Divided	630	139	C
<i>Between Shopping Center Plaza Driveway (south) and 900' S/O Shopping Plaza Driveway</i>						
NB	1	35 MPH	Divided	630	170	C
SB	1	35 MPH	Divided	630	121	C
<i>Between 900' S/O Shopping Plaza Driveway and Windrose Circle</i>						
NB	1	35 MPH	Undivided	1180	170	C
SB	1	35 MPH	Undivided	590	121	C

a Peak directional volume LOS thresholds reported as vehicle per hour per direction in the peak hour.

b Avenida Encinas is proposed to contain two receiving lanes in the SB direction and then reduce to one lane prior to San Carlos Street. The worst-case scenario of one lane was used for the purposes of this roadway capacity analysis.

Table 3-7 Existing Conditions - Weekday PM Peak Hour

Direction	Number of Lanes	Speed Limit	Median	LOS D Capacity*	Peak Direction Volume*	LOS
<i>Between Poinsettia Lane and San Carlos Street / Shopping Plaza Driveway</i>						
NB	3	35 MPH	Divided	2230	613	C
SB	2	35 MPH	Divided	1390	522	D
<i>Between San Carlos Street / Shopping Plaza Driveway and San Lucas</i>						
NB	3	35 MPH	Divided	2230	441	C
SB	2	35 MPH	Divided	1390	302	C
<i>Between San Lucas and Shopping Center Plaza Driveway (south)</i>						
NB	2	35 MPH	Divided	1390	223	C
SB	2	35 MPH	Divided	1390	179	C
<i>Between Shopping Center Plaza Driveway (south) and 900' S/O Shopping Plaza Driveway</i>						
NB	2	35 MPH	Divided	1390	208	C
SB	2	35 MPH	Divided	1390	200	C
<i>Between 900' S/O Shopping Plaza Driveway and Windrose Circle</i>						
NB	2	35 MPH	Undivided	1180	208	C
SB	1	35 MPH	Undivided	590	200	D

Table 3-8 Existing plus Project Improvement Conditions – Weekday PM Peak Hour

Direction	Number of Lanes	Speed Limit	Median	LOS D Capacity ^a	Peak Direction Volume ^a	LOS
<i>Between Poinsettia Lane and San Carlos Street / Shopping Plaza Driveway^b</i>						
NB	1	35 MPH	Divided	630	613	D
SB	1	35 MPH	Divided	630	522	D
<i>Between San Carlos Street / Shopping Plaza Driveway and San Lucas</i>						
NB	1	35 MPH	Divided	630	441	D
SB	1	35 MPH	Divided	630	302	D
<i>Between San Lucas and Shopping Center Plaza Driveway (south)</i>						
NB	1	35 MPH	Divided	630	223	D
SB	1	35 MPH	Divided	630	179	C
<i>Between San Lucas and Shopping Center Plaza Driveway (south)</i>						
NB	1	35 MPH	Divided	630	208	D
SB	1	35 MPH	Divided	630	200	D
<i>Between 900' S/O Shopping Plaza Driveway and Windrose Circle</i>						
NB	1	35 MPH	Undivided	1180	208	D
SB	1	35 MPH	Undivided	590	200	D

a Peak directional volume LOS thresholds reported as vehicle per hour per direction in the peak hour.

b Avenida Encinas is proposed to contain two receiving lanes in the SB direction and then reduce to one lane prior to San Carlos Street. The worst-case scenario of one lane was used for the purposes of this roadway capacity analysis.

The following is a summary of notable findings based on the roadway capacity tables listed above:

- › Existing Conditions – All roadway segments operate at LOS D or better during both peak hours.
- › Existing plus Project Improvements Conditions – with the proposed traffic calming measures reducing the number of lanes to just one in each direction the corresponding roadway capacity LOS reduced to LOS D for most of the roadway segments identified in the tables below. However, LOS D is noted to be an acceptable roadway capacity operation according to the City's TIA guidelines and Service Volume Report.

3.4 Multi-Modal Level of Service

3.4.1 Methodology

STC evaluated the transportation services of Avenida Encinas from a multi-modal perspective in accordance with the City of Carlsbad's Mobility Element of the General Plan and Traffic Impact Analysis (TIA) Guidelines (2018). STC utilized the latest version of the City of Carlsbad's MMLOS Tool to aid the MMLOS methodology and to determine the MMLOS "grade" and corresponding LOS standard for the Existing conditions and Existing plus Project Improvement conditions scenarios. Within the study area Avenida Encinas is classified as a Neighborhood Connector Street, which according to the City's TIA guidelines is subject to a Pedestrian and Bicycle MMLOS standard but not subject to an Auto MMLOS standard. The pedestrian and bicycle facilities were evaluated based on the attributes identified in the MMLOS Tool for five segments of Avenida Encinas as noted below:

- › Palomar Airport Road to 6200 Avenida Encinas
- › 6200 Avenida Encinas to Embarcadero Lane
- › Embarcadero Lane to Poinsettia Lane
- › Poinsettia Lane to Windrose Circle
- › Windrose Circle to Carlsbad Boulevard

Table 3-9 provides a description of the LOS scores and corresponding letter grade as identified in the City of Carlsbad's Traffic Impact Analysis (TIA) Guidelines. The guidelines state that Level of Service (LOS) D should be maintained for each mode of travel for which the MMLOS standard is applicable.

Table 3-9: MMLOS Level of Service Thresholds

Point Score	LOS
90-100	A
80-89	B
70-79	C
60-69	D
50-59	E
0-49	F

Source: Carlsbad's Traffic Impact Analysis (TIA) Guidelines (2018).

3.4.2 MMLOS Analysis Results

The analysis under the 'Project Improvement' condition, assumed the following project improvements to be incorporated as part of the project:

- › New sidewalk installation on the east side of Avenida Encinas between Palomar Airport Road and the Carlsbad Poinsettia Coaster Station driveway.
- › New sidewalk installation on the eastern side of Avenida Encinas between the Carlsbad Poinsettia Coaster Station and just south of Embarcadero Lane.
- › Class II directional bikeway separated from the adjacent travel lane with a buffer. Where parking is provided, the parking lane will be against the curb with the bike lane situated to the left of the parking lane separated with a buffer.
- › Pedestrian accessibility improvements including ADA compliant curb ramps, high-visibility crosswalk enhancements, curb extensions to reduce crossing distance, LED countdown heads and audible signals.
- › Installation of a Pedestrian Hybrid Beacon at Avenida Encinas & San Carlos Street / Shopping Plaza driveway.

Table 3-10 provides the MMLOS analysis results for the Existing conditions and Existing plus Project Improvement conditions summarized by each segment and direction of travel. MMLOS analysis worksheets for each segment are included in **Appendix E**.

Table 3-10 MMLOS Analysis Results

#	Segment	Existing Condition				Existing Plus Project Improvement Condition			
		Score	LOS	Score	LOS	Score	LOS	Score	LOS
		NB		SB		NB		SB	
Pedestrian MMLOS									
1	Palomar Airport Road to 6200 Avenida Encinas	75	C	0	F	100	A	90	A
2	6200 Avenida Encinas to Embarcadero Lane	70	C	65	D	100	A	90	A
3	Embarcadero Lane to Poinsettia Lane	90	A	100	A	100	A	100	A
4	Poinsettia Lane to Windrose Circle	80	B	80	B	100	A	100	A
5	Windrose Circle to Carlsbad Boulevard	85	B	85	B	100	A	100	A
Bicycle MMLOS									
1	Palomar Airport Road to 6200 Avenida Encinas	70	C	70	C	95	A	95	A
2	6200 Avenida Encinas to Embarcadero Lane	0	F	0	F	90	A	90	A
3	Embarcadero Lane to Poinsettia Lane	90	A	90	A	100	A	100	A
4	Poinsettia Lane to Windrose Circle	75	C	80	B	95	A	95	A
5	Windrose Circle to Carlsbad Boulevard	95	A	95	A	100	A	100	A

*Unacceptable LOS denoted in **Bold**.

The following is a summary of notable findings based on Table 3-9 above:

- › Existing Conditions – the Pedestrian MMLOS for segment 1 in the southbound direction is currently at an unacceptable LOS F. The Bicycle MMLOS for segment 2 in the northbound and southbound direction are both currently at an unacceptable LOS F.
- › Existing plus Project Improvements Conditions – with the proposed pedestrian and bicycle improvements the corresponding Pedestrian and Bicycle MMLOS either remain or improve to LOS A for all segments in the northbound and southbound directions.

3.5 FHWA Unsignalized Crossing Enhancement Analysis

3.5.1 Methodology

STC reviewed and analyzed the *FHWA Guide for Improving Pedestrian Safety at Unsignalized Crossing Locations* guidelines in order to aid the decision of what enhancements should be included as part of the project. The FHWA guidelines provides assistance in selecting various countermeasures that help improve pedestrian safety at uncontrolled pedestrian crossing locations, which occur where sidewalks or designated walkways intersect the major roadway at a location where no traffic control (i.e., traffic signal, or STOP sign) is present. The guidelines identify countermeasures by roadway conditions such as vehicle speed limit, annual average daily traffic (AADT), and number of travel lanes. **Figure 3-1** below identifies recommended countermeasures based on various roadway characteristics as depicted in the *FHWA Guide for Improving Pedestrian Safety at Unsignalized Crossing Locations*.

Figure 3-1 Application of Pedestrian Countermeasures by Roadway Feature

Roadway Configuration	Posted Speed Limit and AADT								
	Vehicle AADT <9,000			Vehicle AADT 9,000–15,000			Vehicle AADT >15,000		
	≤30 mph	35 mph	≥40 mph	≤30 mph	35 mph	≥40 mph	≤30 mph	35 mph	≥40 mph
2 lanes (1 lane in each direction)	① 2 4 5 6	① 5 6 7 9	① 5 6 ⑦ ⑨	① 4 5 6 7 9	① 5 6 7 9	① 5 6 ⑦ ⑨	① 4 5 6 7 9	① 5 6 7 9	① 5 6 ⑨
3 lanes with raised median (1 lane in each direction)	① 2 3 4 5	① ③ 5 7 9	① ③ 5 ⑦ ⑨	① 3 4 5 7 9	① ③ 5 ⑦ ⑨	① ③ 5 ⑦ ⑨	① ③ 4 5 7 9	① ③ 5 ⑦ ⑨	① ③ 5 ⑨
3 lanes w/o raised median (1 lane in each direction with a two-way left-turn lane)	① 2 3 4 5 6 7 9	① ③ 5 6 7 9	① ③ 5 6 ⑨	① 3 4 5 6 7 9	① ③ 5 6 ⑦ ⑨	① ③ 5 6 ⑨	① ③ 4 5 6 7 9	① ③ 5 6 ⑨	① ③ 5 6 ⑨
4+ lanes with raised median (2 or more lanes in each direction)	① ③ 5 7 8 9	① ③ 5 7 8 9	① ③ 5 8 ⑨	① ③ 5 7 8 9	① ③ 5 ⑦ 8 ⑨	① ③ 5 8 ⑨	① ③ 5 ⑦ 8 ⑨	① ③ 5 8 ⑨	① ③ 5 8 ⑨
4+ lanes w/o raised median (2 or more lanes in each direction)	① ③ 5 6 7 8 9	① ③ 5 ⑥ 7 8 9	① ③ 5 ⑥ 8 ⑨	① ③ 5 ⑥ 7 8 9	① ③ 5 ⑥ ⑦ 8 ⑨	① ③ 5 ⑥ 8 ⑨	① ③ 5 ⑥ ⑦ 8 ⑨	① ③ 5 ⑥ 8 ⑨	① ③ 5 ⑥ 8 ⑨
Given the set of conditions in a cell, # Signifies that the countermeasure is a candidate treatment at a marked uncontrolled crossing location. ● Signifies that the countermeasure should always be considered, but not mandated or required, based upon engineering judgment at a marked uncontrolled crossing location. ○ Signifies that crosswalk visibility enhancements should always occur in conjunction with other identified countermeasures.* The absence of a number signifies that the countermeasure is generally not an appropriate treatment, but exceptions may be considered following engineering judgment. 1 High-visibility crosswalk markings, parking restrictions on crosswalk approach, adequate nighttime lighting levels, and crossing warning signs 2 Raised crosswalk 3 Advance Yield Here To (Stop Here For) Pedestrians sign and yield (stop) line 4 In-Street Pedestrian Crossing sign 5 Curb extension 6 Pedestrian refuge island 7 Rectangular Rapid-Flashing Beacon (RRFB)** 8 Road Diet 9 Pedestrian Hybrid Beacon (PHB)**									

The following locations were subject to the analysis based on the criteria set forth in the *FHWA Guide for Improving Pedestrian Safety at Unsignalized Crossing Locations*:

- › Avenida Encinas & Carlsbad Poinsettia Coaster Station driveway
- › Avenida Encinas & Embarcadero Lane (north)
- › Avenida Encinas & Embarcadero Lane (south)
- › Avenida Encinas & Macadamia Drive
- › Avenida Encinas & Raintree Drive
- › Avenida Encinas & San Carlos Street / Shopping Plaza driveway (north)
- › Avenida Encinas & Shopping Plaza driveway (south)
- › Avenida Encinas & Windrose Circle
- › Avenida Encinas & Dory Lane / Meridian Way
- › Avenida Encinas & Ponto Drive

The FHWA unsignalized crossing enhancement analysis worksheets are included in **Appendix F**. The remaining unsignalized locations where project improvements are proposed were based on discussions with the City and the City's community outreach efforts. A discussion on the pedestrian enhancements at these additional locations is provided in Section 4.2.

3.5.2 FHWA Unsignalized Crossing Enhancement Analysis Results

This section summarizes each proposed crossing locations' roadway characteristics and corresponding pedestrian enhancement countermeasures based on FHWA guidelines. The countermeasures identified in the subsequent sections will help aid the decision of what enhancements will be recommended to be included as part the project detailed in Section 4.2. It should be noted that the intersection of Avenida Encinas & Portage Way / Marlin Lane was not subject to the FHWA criteria since this location is controlled by stop signs on all four approaches. However, through discussions with City staff and to be consistent with improvements proposed throughout the corridor, the project will incorporate high-visibility crosswalk markings across all approaches, curb extensions on all four corners of the intersection, and ADA compliant curb ramps at this location.

3.5.2.1 Avenida Encinas & San Carlos Street / Shopping Plaza Driveway

Avenida Encinas contains a roadway configuration of 4+ lanes with a raised median and a posted speed limit of 35 mph at the intersection with San Carlos Street / Shopping Plaza driveway. Based on the traffic count data, the ADT in the vicinity of this crossing location is 11,628 vehicles. Based on these parameters, the FHWA guidelines recommend considering one or more of the following enhancements:

- High-visibility crosswalk markings, parking restrictions on crosswalk approach, adequate nighttime lighting levels, and crossing warning signs
- Advance Yield Here To (Stop Here For) Pedestrians sign and yield (stop) line.
- Curb-extensions
- Rectangular Rapid Flashing Beacon (RRFB)
- Road Diet
- Pedestrian Hybrid Beacon (PHB)

Based on existing roadway characteristics, if high visibility crosswalk markings are installed, the FHWA guidelines recommend supplementing the marked crosswalk with one or more of the other enhancements listed above.

3.5.2.2 Avenida Encinas & Embarcadero Lane

Avenida Encinas contains a roadway configuration of 3 lanes without a raised median and a posted speed limit of 35 mph at the intersection with Embarcadero Lane (north). Based on the traffic count data, the ADT in the vicinity of this crossing location is 5,924 vehicles. Based on these parameters, the FHWA guidelines recommend considering one or more the following enhancements:

- High-visibility crosswalk markings, parking restrictions on crosswalk approach, adequate nighttime lighting levels, and crossing warning signs.
- Advance Yield Here To (Stop Here For) Pedestrians sign and yield (stop) line.
- Curb-extensions

- Pedestrian Refuge Island
- Rectangular Rapid Flashing Beacon (RRFB)
- Pedestrian Hybrid Beacon (PHB)

3.5.2.3 Avenida Encinas & Ponto Drive

Avenida Encinas contains a roadway configuration of 3 lanes without a raised median and a posted speed limit of 35 mph at the intersection with Ponto Drive. Based on the traffic count data, the ADT in the vicinity of this crossing location is 2,850 vehicles. Based on these parameters, the FHWA guidelines recommend considering one or more of the following enhancements:

- High-visibility crosswalk markings, parking restrictions on crosswalk approach, adequate nighttime lighting levels, and crossing warning signs.
- Advance Yield Here To (Stop Here For) Pedestrians sign and yield (stop) line.
- Curb-extensions
- Pedestrian Refuge Island
- Rectangular Rapid Flashing Beacon (RRFB)
- Pedestrian Hybrid Beacon (PHB)

3.5.2.4 Avenida Encinas & Carlsbad Poinsettia Coaster Station Driveway

Avenida Encinas contains a roadway configuration of 2 lanes and a posted speed limit of 35 mph at the intersection with the Carlsbad Poinsettia Coaster Station driveway. Based on the traffic count data, the ADT in the vicinity of this crossing location is 5,924 vehicles. Based on these parameters, the FHWA guidelines recommend considering one or more of the following enhancements :

- High-visibility crosswalk markings, parking restrictions on crosswalk approach, adequate nighttime lighting levels, and crossing warning signs.
- Curb-extensions
- Pedestrian Refuge Island
- Rectangular Rapid Flashing Beacon (RRFB)
- Pedestrian Hybrid Beacon (PHB)

3.5.2.5 Avenida Encinas & Embarcadero Lane (south)

Avenida Encinas contains a roadway configuration of 3 lanes without a median and a posted speed limit of 35 mph at the intersection with the Embarcadero Lane (south). Based on the traffic count data in the vicinity of this location, the ADT is 5,924 vehicles. Based on these parameters, the FHWA guidelines recommend considering one or more of the following enhancements:

- High-visibility crosswalk markings, parking restrictions on crosswalk approach, adequate nighttime lighting levels, and crossing warning signs.
- Advance Yield Here To (Stop Here For) Pedestrians sign and yield (stop) line.
- Curb-extensions
- Pedestrian Refuge Island
- Rectangular Rapid Flashing Beacon (RRFB)
- Pedestrian Hybrid Beacon (PHB)

3.5.2.6 Avenida Encinas & Macadamia Drive

Avenida Encinas contains a roadway configuration of 3 lanes without a median and a posted speed limit of 35 mph at the intersection with the Macadamia Drive. Based on the traffic count data in the vicinity of this location, the ADT is 5,924 vehicles. Based on these parameters, the FHWA guidelines recommend considering one or more of the following enhancements:

- High-visibility crosswalk markings, parking restrictions on crosswalk approach, adequate nighttime lighting levels, and crossing warning signs.
- Advance Yield Here To (Stop Here For) Pedestrians sign and yield (stop) line.
- Curb-extensions
- Pedestrian Refuge Island
- Rectangular Rapid Flashing Beacon (RRFB)
- Pedestrian Hybrid Beacon (PHB)

3.5.2.7 Avenida Encinas & Raintree Drive

Avenida Encinas contains a roadway configuration of 3 lanes without a median and a posted speed limit of 35 mph at the intersection with the Raintree Drive. Based on the traffic count data in the vicinity of this location, the ADT is 5,924 vehicles. Based on these parameters, the FHWA guidelines recommend considering one or more of the following enhancements:

- High-visibility crosswalk markings, parking restrictions on crosswalk approach, adequate nighttime lighting levels, and crossing warning signs.
- Advance Yield Here To (Stop Here For) Pedestrians sign and yield (stop) line.
- Curb-extensions
- Pedestrian Refuge Island
- Rectangular Rapid Flashing Beacon (RRFB)
- Pedestrian Hybrid Beacon (PHB)

3.5.2.8 Avenida Encinas & Shopping Plaza driveway (south)

Avenida Encinas contains a roadway configuration of 4 lanes with a median and a posted speed limit of 35 mph at the intersection with the Shopping Plaza driveway (south). Based on the traffic count data in the vicinity of this location, the ADT is 4,336 vehicles. Based on these parameters, the FHWA guidelines recommend considering one or more of the following enhancements:

- High-visibility crosswalk markings, parking restrictions on crosswalk approach, adequate nighttime lighting levels, and crossing warning signs.
- Advance Yield Here To (Stop Here For) Pedestrians sign and yield (stop) line.
- Curb-extensions
- Rectangular Rapid Flashing Beacon (RRFB)
- Road Diet
- Pedestrian Hybrid Beacon (PHB)

3.5.2.9 Avenida Encinas & Windrose Circle

Avenida Encinas contains a roadway configuration of 2 lanes and a posted speed limit of 35 mph at the intersection with Windrose Circle. Based on the traffic count data in the vicinity of this location, the ADT is 4,336 vehicles. Based on these parameters, the FHWA guidelines recommend considering one or more of the following enhancements:

- High-visibility crosswalk markings, parking restrictions on crosswalk approach, adequate nighttime lighting levels, and crossing warning signs.
- Curb-extensions
- Pedestrian refuge island
- Rectangular Rapid Flashing Beacon (RRFB)
- Pedestrian Hybrid Beacon (PHB)

3.5.2.10 Avenida Encinas & Dory Lane / Meridian Way

Avenida Encinas contains a roadway configuration of 2 lanes and a posted speed limit of 35 mph at the intersection with Dory Lane / Meridian Way. Based on the traffic count data in the vicinity of this location, the ADT is 4,336 vehicles. Based on these parameters, the FHWA guidelines recommend considering one or more of the following enhancements:

- High-visibility crosswalk markings, parking restrictions on crosswalk approach, adequate nighttime lighting levels, and crossing warning signs.
- Curb-extensions
- Pedestrian refuge island
- Rectangular Rapid Flashing Beacon (RRFB)
- Pedestrian Hybrid Beacon (PHB)

3.6 Pedestrian Hybrid Beacon Warrant Analysis

3.6.1 Methodology

A Pedestrian Hybrid Beacon (PHB) analysis was conducted at the intersection of Avenida Encinas & San Carlos / Shopping Plaza Driveway with the primary goal of providing a controlled pedestrian crossing at this location based on discussions with the City and the City's community outreach effort. The PHB warrant analysis is based on the latest adopted California Manual on Uniform Traffic Control Devices (CA-MUTCD) Section 4F.01 which defines a PHB as the following:

01 - A pedestrian hybrid beacon is a special type of hybrid beacon used to warn and control traffic at an unsignalized location to assist pedestrians in crossing a street or highway at a marked crosswalk.

The CA-MUTCD offers the following alternative to a PHB:

01a - A conventional traffic control signal operation with a standard signal face displaying green, yellow and red (steady and/or flashing red) indications, at a mid-block crosswalk is an alternative to the pedestrian hybrid beacon.

The CA-MUTCD provides guidelines for the installation of Pedestrian Hybrid Beacons (PHB) based on the peak pedestrian volume of pedestrians crossing the major street, the peak vehicular volume of both approaches on the major street, and the speed of the roadway. Guidelines for the installation of a PHB are provided for roadways classified as the following:

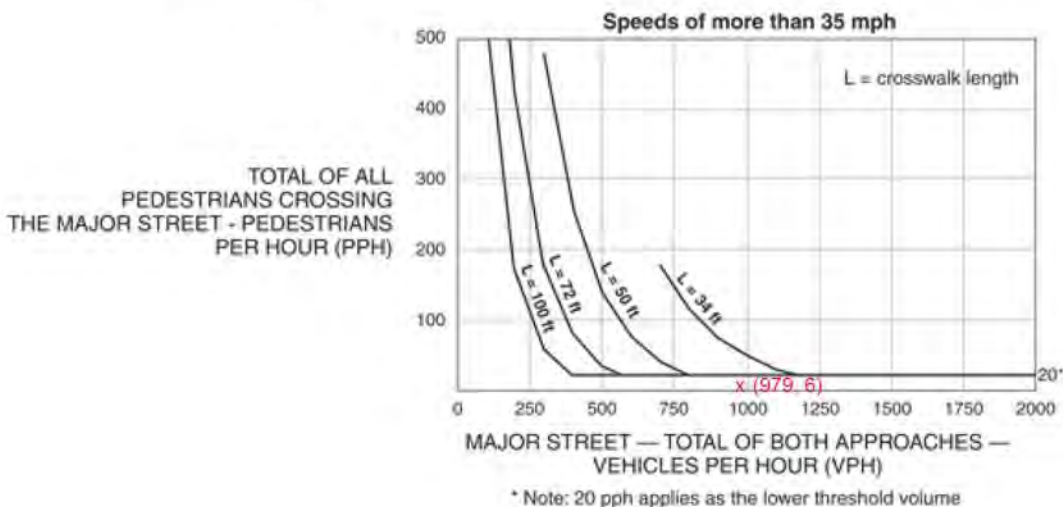
- Low-speed roadway (vehicle speeds are less than or equal to 35 MPH)
- High-speed roadway (vehicle speeds are greater than 35 MPH)

The warrant analysis is summarized in the subsequent section and the analysis worksheet is included in **Appendix G**.

3.6.2 Pedestrian Hybrid Beacon Warrant Analysis Results

Based on traffic counts collected on March 9th, 2022, the 85th percentile speed along Avenida Encinas, within the vicinity of the proposed crossing, was found to be 37 MPH, which classifies Avenida Encinas as a high-speed roadway under the CA MUTCD guidelines of installing a PHB. The peak hour total (4:30pm to 5:30pm) of pedestrians crossing Avenida Encinas near the intersection of San Carlos Street / Shopping Plaza Driveway was shown to be 6 pedestrians, while the conflicting vehicular total of both approaches on Avenida Encinas was shown to be 979 vehicles. These volumes are shown in relation to **MUTCD Figure 4F-2** below. The existing roadway width is about 84 feet, measured curb-to-curb.

Figure 4F-2. Guidelines for the Installation of Pedestrian Hybrid Beacons on High-Speed Roadways



As shown in the figure above, the minimum threshold for pedestrians crossing the major street required to justify the PHB based on the vehicular volume and crosswalk length is 20 pedestrians per hour (pph). The pedestrian volumes are slightly below the threshold guidelines, with 6 pph rather than 20 pph. However, based on engineering judgement, it is anticipated that some of the pedestrians currently crossing Avenida Encinas & Poinsettia Lane and Avenida Encinas & San Lucas / Shopping Plaza driveway would prefer to cross at Avenida Encinas & San Carlos Street, if an enhanced pedestrian crossing was available, since this location provides direct access between the residential neighborhood and the shopping center. Pedestrian volume data at Avenida Encinas & Poinsettia Lane and Avenida Encinas & San

Lucas / Shopping Plaza during the same peak hour shows a total of 29 and 7 pedestrians crossing Avenida Encinas, respectively. Additionally, 12-hour pedestrian volume data at Avenida Encinas & Poinsettia Lane and Avenida Encinas & San Lucas / Shopping Plaza driveway shows a total of 286 and 73 pedestrians crossing Avenida Encinas, respectively. Based on these results and engineering judgment, a PHB is warranted at the location of Avenida Encinas & San Carlos Street / Shopping Plaza driveway.

3.7 Traffic Signal Warrant Analysis

3.7.1 Methodology

A traffic signal warrant analysis was conducted for the intersection of Avenida Encinas & San Carlos Street / Shopping Plaza Driveway in accordance with the CA MUTCD, Chapter 4C. While all the warrants provided in the CA MUTCD were reviewed, only the following warrants were considered applicable and therefore were analyzed in further detail:

- › Warrant 1, Eight-Hour Vehicular Volume.
- › Warrant 2, Four-Hour Vehicular Volume.
- › Warrant 3, Peak-Hour.
- › Warrant 4, Pedestrian Volume.
- › Warrant 6, Coordinated Signal System
- › Warrant 7, Crash Experience.

Data used for the analysis include the vehicular volumes, pedestrian counts, and 85th percentile speed data collected on March 9th, 2022, as well as historical crash data from the year 2021. The warrant analysis is summarized in the subsequent section.

3.7.2 Traffic Signal Warrant Analysis Results

The traffic signal warrant analysis results are summarized in **Table 3-11**, followed by a summary of key criteria. The warrant analysis sheets and Figures 4C-2 and 4C-4 from the CA MUTCD, are included in **Appendix H**.

Table 3-11 Traffic Signal Warrant Analysis Summary

Warrant 1-Eight Hour Vehicular Volume			Warrant 2-Four Hour Vehicular Volume	Warrant 3-Peak Hour	Warrant 4 - Pedestrian Volume	Warrant 6 - Coordinated Signal System	Warrant 7- Crash Experience
Condition A	Condition B	Combination of Conditions A & B		Part B			
Yes	No	Yes	Yes	No	No	No	No

Below is summary of key criteria:

- Warrant 1 and Warrant 2 – are based entirely on vehicular volume, exceed the minimum thresholds for a traffic signal to be considered.

- Warrant 3 (Part B) – is based on the peak hour volume totals of both major street approaches and the highest minor street approach, did not exceed the minimum thresholds.
- Warrant 4 – considered the pedestrian volume thresholds for the pedestrian signal. Based on the results, this location did not meet the minimum thresholds required for Warrant 4.
- Warrant 6 – a coordinated signal system should meet the minimum signal spacing requirements of 1,000 feet. Failure to meet the minimum signal spacing requirements makes coordinating the signals in the system a difficult process and could potentially lead to undesired capacity issues along the corridor. The location of this pedestrian signal, were it to be installed, would provide spacing between signals to the north and south of approximately 585 feet and 565 feet, respectively. Therefore, based on the results, this location would not meet the minimum thresholds required for Warrant 6.
- Warrant 7 – is based on the number of crashes reported within a 12-month period, susceptible to correction by a traffic signal. Based on crash data obtained from Statewide Integrated Traffic Records System (SWITRS), only one accident was reported at this location in 2021, however that accident involved a single vehicle that overturned and thus is not susceptible to correction by a traffic signal. Collision data used for the signal warrant analysis is included in **Appendix I**.

4 RECOMMENDED PROJECT IMPROVEMENTS

This section provides a high-level overview of the recommended project improvements, which are supported by the traffic analysis results. The proposed project improvements are highlighted in **Figure 4-1** and are incorporated in the latest conceptual design plan (April 2022) included in Appendix B.

4.1 Traffic Calming

Traffic calming measures along Avenida Encinas are proposed to reduce the number of through lanes to one lane in each direction between Poinsettia Lane and Windrose Circle. This will provide bicyclists with a Class II bike lane separated from traffic and curbed parking lanes with a buffer, affording an enhanced and reasonably safer bicycle access to regional and local transit locations and important community destinations along the corridor. The proposed traffic calming effort will also aim to slow vehicular speeds along the corridor in an effort to provide a reasonably safer environment for pedestrians. Based on the roadway capacity analysis results, the proposed lane reduction is not anticipated to degrade the roadway conditions below a LOS of D. Since the roadway is expected to operate at an acceptable LOS based on the City of Carlsbad TIA guidelines, the proposed improvement for this section of the corridor is recommended to be included as part of the project enhancements.

4.2 Pedestrian and Bicycle Enhancements

In order to create a balanced multi-modal corridor, the project proposes to install a variety of pedestrian improvements that include ADA compliant curb ramps, high visibility continental crosswalk enhancements, and curb extensions to reduce crossing distance.

- Unsignalized intersections – proposed improvements at unsignalized locations are summarized in **Table 4-1**.
- Signalized intersections – recommend to incorporate enhanced high-visibility continental crosswalks as a safety countermeasure.
- Class II bikeway – Incorporates dashed green pavement markings whenever a bike lane conflicts with a right-turn lane. Bikeway will be separated from the adjacent travel lane with a buffer. Where parking is provided, the parking lane will be against the curb with the bike lane situated to the left of the parking lane separated with a buffer
- Sidewalks – Gaps that exist south of Palomar Airport Road are proposed to be fulfilled with the installation of new sidewalk and ADA compliant accommodations in this area.

Additionally, the intersection of Avenida Encinas & San Carlos Street / Shopping Plaza driveway was analyzed for a Pedestrian Hybrid Beacon (PHB) or traffic signal based on feedback obtained from the community. The analysis results, which are supported by engineering judgement, conclude that warrants are met for installation of a PHB or a traffic signal. As supported by the CA-MUTCD, a conventional pedestrian signal operation (3-section signal heads with green, yellow, red indications) is recommended as an alternative to a PHB to better support intersection geometrics, traffic operations, and continuity with nearby intersections.

Together, these improvements aim to increase mobility and enhance safety along the corridor for all users which aligns with the City's goals outlined in the Mobility Element of the General Plan.

Table 4-1 Recommended Pedestrian Improvements by Intersection

Location	Recommended Pedestrian Enhancement
Avenida Encinas & San Carlos / Shopping Plaza Driveway	• High-visibility crosswalk markings • Crossing warning signs • Advance Yield Here To (Stop Here For) Pedestrians sign and yield (stop) line • Curb-extension on southeast corner • ADA compliant curb ramps • Pedestrian Signal
Avenida Encinas & Embarcadero Lane (north)	• High-visibility crosswalk markings across minor roadway
Avenida Encinas & Ponto Drive	• High-visibility crosswalk markings • Crossing warning signs
Avenida Encinas & Carlsbad Poinsettia Coaster Station driveway	• High-visibility crosswalk markings across minor roadway
Avenida Encinas & Embarcadero Lane (south)	• High-visibility crosswalk markings across minor roadway
Avenida Encinas & Macadamia Drive	• High-visibility crosswalk markings across minor roadway • Curb extensions on two corners of the intersection (east side) • ADA compliant curb ramps
Avenida Encinas & Raintree Drive	• High-visibility crosswalk markings across minor roadway • Curb extensions on two corners of the intersection (east side) • ADA compliant curb ramps
Avenida Encinas & Shopping Plaza driveway (south)	• High-visibility crosswalk markings across minor roadway
Avenida Encinas & Windrose Circle	• High-visibility crosswalk markings across minor roadway
Avenida Encinas & Portage Way / Marlin Way	• High-visibility crosswalk markings across major and minor roadway • Curb extensions on all four corners of the intersection • ADA compliant curb ramps
Avenida Encinas & Dory Lane / Meridian Way	• High-visibility crosswalk markings across minor roadway • Curb extensions on all four corners of the intersection • ADA compliant curb ramps

Avenida Encinas CRT

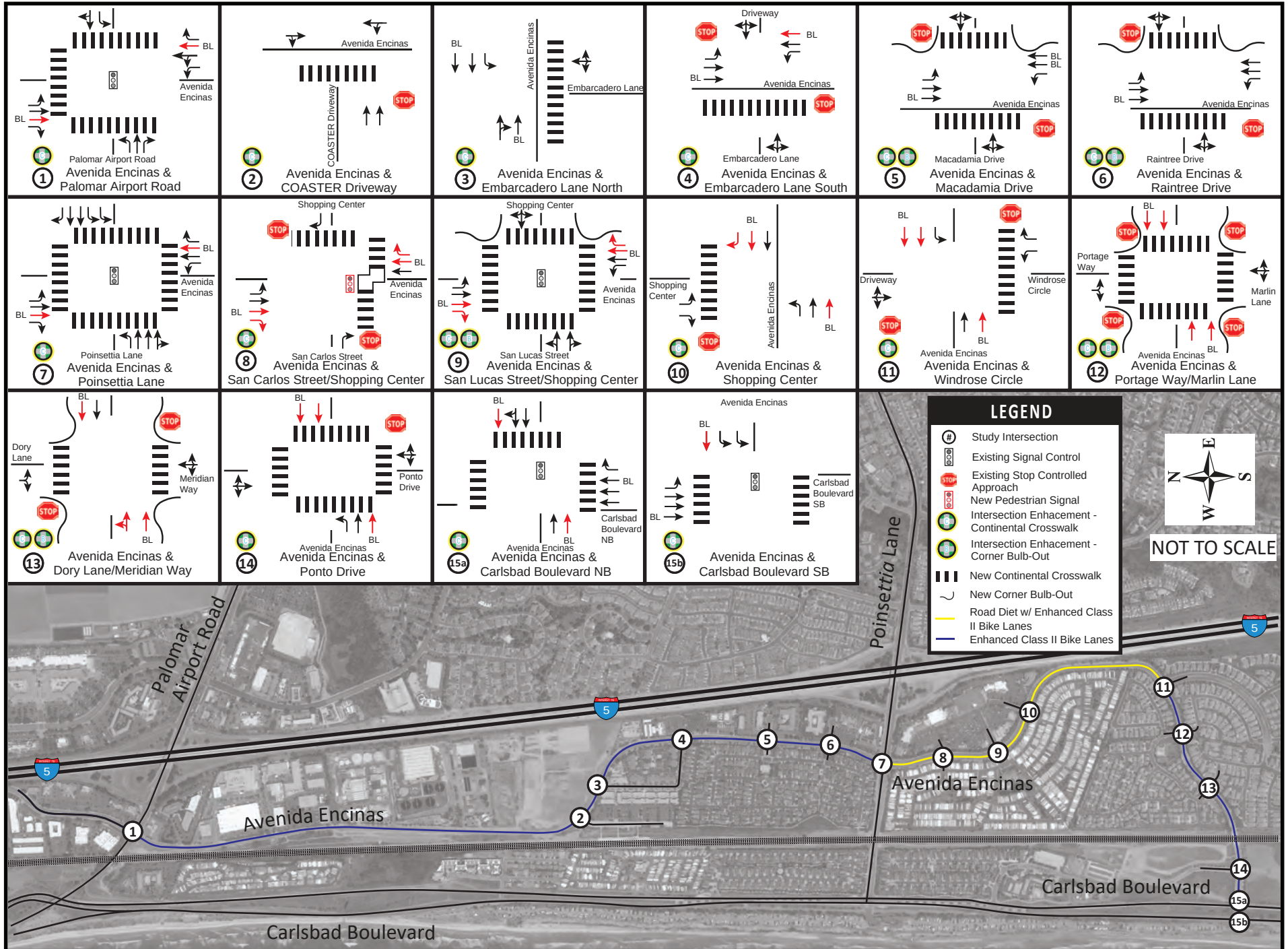


Figure 4-1
Proposed Project Enhancements

4.3 Traffic Signal Modifications

This report reviewed opportunities to implement right-turn overlap phasing to improve operations at signalized intersections. According to the CA-MUTCD Section 4D.21:

13 A right-turn green arrow should be considered for use only when there is an exclusive right-turn lane or it is the only movement that traffic is permitted to make or when the right-turn volume exceeds 200 vehicles per hour.

Based on this criteria and as supported by the traffic analysis which indicate significant improvements to intersection operations, the following locations are recommended for the installation of right-turn overlap phasing:

- › Avenida Encinas & Poinsettia Lane northbound right-turn movement
- › Avenida Encinas & Poinsettia Lane westbound right-turn movement

It should be noted that both movements mentioned above do not conflict with any U-turn movement as no U-turns are currently allowed for the westbound and southbound approaches.

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Appendix E - MMLOS Analysis Worksheets.....	E1-E10
Appendix F - FHWA Unsignalized Crossing Enhancement Analysis Worksheets	F1-F20
Appendix G - Pedestrian Hybrid Beacon Warrant Analysis Worksheets	G1-G2
Appendix H - Traffic Signal Warrant Analysis Worksheets	H1-H10
Appendix I - Collision Data	I1

Appendix A:

Traffic Volume Data

TMC Data (Vehicles/Pedestrians/Bicycles):

Avenida Encinas & Palomar Airport Road	A1 - A5
Avenida Encinas & Poinsettia Lane	A6 - A10
Avenida Encinas & Carlsbad Boulevard	A11 - A20
Avenida Encinas & Dory Lane	A21 - A25
Avenida Encinas & Portage Way	A26 - A30
Avenida Encinas & San Carlos Street	A31 - A35
Avenida Encinas & Embaradero Lane	A36 - A40
Avenida Encinas & Carlsbad Poinsettia Coaster Station Driveway	A41 - A45
Avenida Encinas & San Lucas / Shopping Plaza Driveway (Signal)	A46 - A50

ATR Data:

Between Carlsbad Poinsettia Coaster Station Driveway & Embarcadero Lane	A51 - A53
Between Dory Lane & Portage Way	A54 - A56
Between Poinsettia Lane & San Carlos Street	A57 - A59
Between San Carlos Street & San Lucas	A60 - A62
Between San Lucas & Shopping Plaza Driveway	A63 - A65
Between Shopping Plaza Driveway & Windrose Circle	A66 - A68

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

City of Carlsbad
N/S: Avenida Encinas
E/W: Palomar Airport Road
Weather: Clear

File Name : 01_CAR_Ave E_Pal_VEH
Site Code : 23222185
Start Date : 3/9/2022
Page No : 1

Groups Printed- Total Volume

	Avenida Encinas Southbound				Palomar Airport Road Westbound				Avenida Encinas Northbound				Palomar Airport Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	17	8	4	29	58	31	44	133	0	8	17	25	6	48	6	60	247
07:15 AM	33	17	3	53	65	25	26	116	12	5	19	36	7	38	13	58	263
07:30 AM	11	14	2	27	56	22	47	125	5	7	29	41	4	55	16	75	268
07:45 AM	22	23	11	56	77	36	41	154	6	17	21	44	5	85	19	109	363
Total	83	62	20	165	256	114	158	528	23	37	86	146	22	226	54	302	1141
08:00 AM	9	21	2	32	80	32	43	155	5	11	30	46	10	64	16	90	323
08:15 AM	24	34	6	64	86	37	69	192	7	12	36	55	6	76	21	103	414
08:30 AM	23	36	6	65	75	36	47	158	10	23	60	93	7	52	19	78	394
08:45 AM	19	23	2	44	67	36	54	157	4	20	44	68	3	56	11	70	339
Total	75	114	16	205	308	141	213	662	26	66	170	262	26	248	67	341	1470
09:00 AM	36	21	6	63	59	27	53	139	3	18	43	64	6	52	8	66	332
09:15 AM	22	13	3	38	71	54	52	177	6	17	44	67	6	44	12	62	344
09:30 AM	28	8	6	42	53	44	41	138	6	12	45	63	9	63	7	79	322
09:45 AM	28	12	9	49	47	33	41	121	5	17	52	74	3	51	14	68	312
Total	114	54	24	192	230	158	187	575	20	64	184	268	24	210	41	275	1310
10:00 AM	25	11	6	42	46	30	40	116	11	16	53	80	2	56	10	68	306
10:15 AM	23	12	2	37	45	33	45	123	12	9	47	68	5	54	10	69	297
10:30 AM	28	18	6	52	54	49	42	145	11	12	44	67	6	71	5	82	346
10:45 AM	35	15	12	62	44	34	48	126	8	14	47	69	3	53	11	67	324
Total	111	56	26	193	189	146	175	510	42	51	191	284	16	234	36	286	1273
11:00 AM	48	20	6	74	48	49	68	165	12	17	45	74	4	62	11	77	390
11:15 AM	36	20	12	68	47	68	70	185	7	19	67	93	3	58	9	70	416
11:30 AM	47	24	9	80	60	52	75	187	7	22	57	86	14	71	10	95	448
11:45 AM	49	19	15	83	61	62	87	210	4	17	55	76	5	56	12	73	442
Total	180	83	42	305	216	231	300	747	30	75	224	329	26	247	42	315	1696
12:00 PM	51	12	12	75	47	66	54	167	11	29	59	99	10	67	3	80	421
12:15 PM	49	12	7	68	38	74	75	187	9	28	50	87	10	67	7	84	426
12:30 PM	55	16	8	79	54	66	61	181	11	25	48	84	5	50	10	65	409
12:45 PM	41	20	8	69	56	62	65	183	7	18	56	81	5	69	11	85	418
Total	196	60	35	291	195	268	255	718	38	100	213	351	30	253	31	314	1674
01:00 PM	79	23	18	120	51	53	67	171	12	24	54	90	8	47	18	73	454
01:15 PM	67	22	14	103	46	54	61	161	10	16	51	77	8	43	9	60	401
01:30 PM	59	9	8	76	48	79	56	183	13	11	56	80	10	49	17	76	415
01:45 PM	45	21	11	77	60	50	58	168	11	21	43	75	5	60	6	71	391
Total	250	75	51	376	205	236	242	683	46	72	204	322	31	199	50	280	1661
02:00 PM	43	18	13	74	53	72	41	166	14	15	47	76	10	52	9	71	387
02:15 PM	53	22	8	83	65	45	39	149	13	19	54	86	13	55	21	89	407
02:30 PM	39	28	5	72	63	80	43	186	22	19	66	107	5	57	12	74	439
02:45 PM	45	14	7	66	43	77	54	174	16	27	55	98	14	60	11	85	423
Total	180	82	33	295	224	274	177	675	65	80	222	367	42	224	53	319	1656
03:00 PM	33	18	6	57	48	71	46	165	17	22	59	98	4	63	7	74	394
03:15 PM	44	9	13	66	54	93	65	212	17	26	59	102	7	62	8	77	457
03:30 PM	43	23	12	78	67	93	41	201	21	37	83	141	7	50	8	65	485
03:45 PM	47	20	10	77	76	85	62	223	13	37	75	125	9	65	16	90	515
Total	167	70	41	278	245	342	214	801	68	122	276	466	27	240	39	306	1851
04:00 PM	45	23	10	78	46	92	51	189	12	48	75	135	18	61	5	84	486

City of Carlsbad
N/S: Avenida Encinas
E/W: Palomar Airport Road
Weather: Clear

File Name : 01_CAR_Ave E_Pal_VEH
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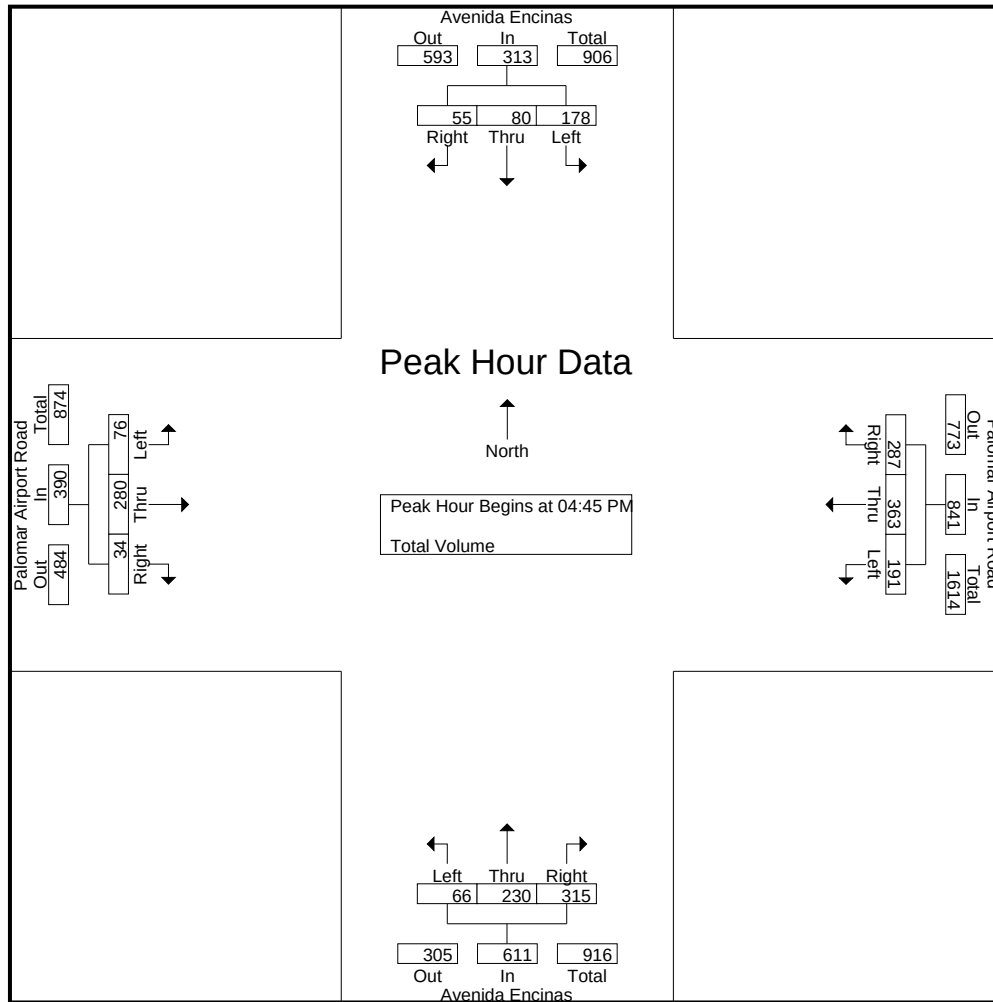
Groups Printed- Total Volume

	Avenida Encinas Southbound				Palomar Airport Road Westbound				Avenida Encinas Northbound				Palomar Airport Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:15 PM	53	12	15	80	63	101	37	201	15	35	52	102	9	59	19	87	470
04:30 PM	35	17	12	64	42	79	53	174	19	47	94	160	6	67	5	78	476
04:45 PM	39	20	12	71	57	88	70	215	16	51	62	129	14	66	10	90	505
Total	172	72	49	293	208	360	211	779	62	181	283	526	47	253	39	339	1937
05:00 PM	44	12	15	71	41	86	62	189	20	69	121	210	21	66	10	97	567
05:15 PM	49	27	14	90	54	84	75	213	22	59	64	145	23	72	9	104	552
05:30 PM	46	21	14	81	39	105	80	224	8	51	68	127	18	76	5	99	531
05:45 PM	44	12	16	72	53	71	67	191	13	45	76	134	16	73	7	96	493
Total	183	72	59	314	187	346	284	817	63	224	329	616	78	287	31	396	2143
06:00 PM	51	11	6	68	32	60	63	155	8	42	81	131	13	41	8	62	416
06:15 PM	50	8	9	67	42	60	68	170	9	24	65	98	11	50	8	69	404
06:30 PM	75	15	3	93	24	39	51	114	9	23	65	97	9	34	5	48	352
06:45 PM	49	11	7	67	28	32	38	98	3	9	30	42	9	38	3	50	257
Total	225	45	25	295	126	191	220	537	29	98	241	368	42	163	24	229	1429
Grand Total	1936	845	421	3202	2589	2807	2636	8032	512	1170	2623	4305	411	2784	507	3702	19241
Apprch %	60.5	26.4	13.1		32.2	34.9	32.8		11.9	27.2	60.9		11.1	75.2	13.7		
Total %	10.1	4.4	2.2	16.6	13.5	14.6	13.7	41.7	2.7	6.1	13.6	22.4	2.1	14.5	2.6	19.2	

	Avenida Encinas Southbound				Palomar Airport Road Westbound				Avenida Encinas Northbound				Palomar Airport Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	39	20	12	71	57	88	70	215	16	51	62	129	14	66	10	90	505
05:00 PM	44	12	15	71	41	86	62	189	20	69	121	210	21	66	10	97	567
05:15 PM	49	27	14	90	54	84	75	213	22	59	64	145	23	72	9	104	552
05:30 PM	46	21	14	81	39	105	80	224	8	51	68	127	18	76	5	99	531
Total Volume	178	80	55	313	191	363	287	841	66	230	315	611	76	280	34	390	2155
% App. Total	56.9	25.6	17.6		22.7	43.2	34.1		10.8	37.6	51.6		19.5	71.8	8.7		
PHF	.908	.741	.917	.869	.838	.864	.897	.939	.750	.833	.651	.727	.826	.921	.850	.938	.950

City of Carlsbad
N/S: Avenida Encinas
E/W: Palomar Airport Road
Weather: Clear

File Name : 01_CAR_Ave E_Pal VEH
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Peak Hour Analysis From 07:00 AM to 06:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	01:00 PM				04:45 PM				04:30 PM				05:00 PM			
+0 mins.	79	23	18	120	57	88	70	215	19	47	94	160	21	66	10	97
+15 mins.	67	22	14	103	41	86	62	189	16	51	62	129	23	72	9	104
+30 mins.	59	9	8	76	54	84	75	213	20	69	121	210	18	76	5	99
+45 mins.	45	21	11	77	39	105	80	224	22	59	64	145	16	73	7	96
Total Volume	250	75	51	376	191	363	287	841	77	226	341	644	78	287	31	396
% App. Total	66.5	19.9	13.6		22.7	43.2	34.1		12	35.1	53		19.7	72.5	7.8	
PHF	.791	.815	.708	.783	.838	.864	.897	.939	.875	.819	.705	.767	.848	.944	.775	.952

Location: Carlsbad
 N/S: Avenida Encinas
 E/W: Palomar Airport Road



Date: 3/9/2022
 Day Wednesday

PEDESTRIANS

Time	North Leg Avenida Encinas	East Leg Palomar Airport Road	South Leg Avenida Encinas	West Leg Palomar Airport Road	TOTAL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	2	0	2
7:30 AM	0	1	1	0	2
7:45 AM	0	0	0	0	0
8:00 AM	0	2	4	0	6
8:15 AM	0	3	0	0	3
8:30 AM	1	0	0	0	1
8:45 AM	1	1	0	0	2
9:00 AM	0	0	0	0	0
9:15 AM	0	0	2	0	2
9:30 AM	0	2	0	0	2
9:45 AM	0	1	0	0	1
10:00 AM	0	6	0	0	6
10:15 AM	0	0	0	0	0
10:30 AM	1	3	1	0	5
10:45 AM	0	0	0	0	0
11:00 AM	1	0	0	1	2
11:15 AM	0	0	0	0	0
11:30 AM	1	1	0	0	2
11:45 AM	0	0	0	0	0
12:00 PM	0	0	0	2	2
12:15 PM	0	0	0	0	0
12:30 PM	0	2	0	0	2
12:45 PM	0	0	2	0	2
1:00 PM	0	8	5	0	13
1:15 PM	0	1	1	0	2
1:30 PM	0	0	1	0	1
1:45 PM	0	6	3	0	9
2:00 PM	0	1	2	2	5
2:15 PM	0	2	0	0	2
2:30 PM	0	1	0	0	1
2:45 PM	0	1	1	0	2
3:00 PM	0	2	2	0	4
3:15 PM	0	3	3	0	6
3:30 PM	1	2	1	0	4
3:45 PM	0	1	0	0	1
4:00 PM	1	1	2	0	4
4:15 PM	0	0	2	0	2
4:30 PM	0	2	0	0	2
4:45 PM	0	0	0	0	0
5:00 PM	0	1	1	0	2
5:15 PM	0	0	0	0	0
5:30 PM	0	1	0	0	1
5:45 PM	0	0	2	0	2
6:00 PM	0	1	3	0	4
6:15 PM	0	0	1	0	1
6:30 PM	0	0	0	0	0
6:45 PM	0	0	0	0	0
TOTAL VOLUMES:	7	56	42	5	110

Location: Carlsbad
 N/S: Avenida Encinas
 E/W: Palomar Airport Road

Date: 3/9/2022
 Day: Wednesday



BICYCLES

	Southbound Avenida Encinas			Westbound Palomar Airport Road			Northbound Avenida Encinas			Eastbound Palomar Airport Road			
	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	2	0	2
7:30 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
7:45 AM	0	0	1	0	0	0	0	0	1	0	2	1	5
8:00 AM	0	1	0	0	1	0	1	1	0	0	1	0	5
8:15 AM	0	0	0	0	0	0	0	0	0	2	0	0	2
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	1	0	0	0	1	2
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	1	0	0	0	0	1	0	0	0	0	0	2
9:30 AM	0	0	0	0	0	0	0	0	0	0	1	1	2
9:45 AM	0	0	0	0	0	0	0	0	1	0	0	1	2
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM	0	1	0	0	0	0	0	0	0	1	0	0	2
10:30 AM	0	0	0	0	2	0	0	1	0	0	1	1	5
10:45 AM	0	0	0	0	0	0	1	0	1	0	0	0	2
11:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	2
11:15 AM	0	0	1	0	1	0	0	0	0	0	0	0	2
11:30 AM	0	0	0	0	1	0	1	0	0	0	1	0	3
11:45 AM	0	0	0	0	0	0	0	0	0	1	1	0	2
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
12:30 PM	0	2	0	0	0	0	1	0	0	0	2	1	6
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	2	0	0	1	0	3
1:15 PM	0	1	0	0	0	0	0	0	1	0	0	0	2
1:30 PM	0	2	2	0	0	0	0	0	0	0	0	0	4
1:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	2
2:00 PM	0	0	1	0	0	0	1	1	0	0	0	0	3
2:15 PM	0	0	0	0	0	0	1	0	0	0	0	0	1
2:30 PM	0	0	0	0	1	0	0	0	0	0	0	1	2
2:45 PM	0	0	0	1	1	0	0	0	0	1	0	1	4
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
3:30 PM	0	0	0	0	0	0	0	0	0	1	0	0	1
3:45 PM	1	0	0	0	0	0	0	0	0	0	0	1	2
4:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	2	0	2
4:30 PM	0	0	2	0	0	0	0	1	0	1	2	0	6
4:45 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	1	0	0	0	1	0	2
5:15 PM	0	1	0	0	1	0	1	0	0	0	3	0	6
5:30 PM	1	0	0	0	1	0	0	0	0	0	0	0	2
5:45 PM	0	0	0	1	1	0	0	0	0	0	0	1	3
6:00 PM	0	1	0	0	0	0	1	0	0	0	0	0	2
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 PM	0	0	0	0	0	0	0	0	0	0	1	1	2
6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	2	12	7	2	12	0	11	8	4	8	23	11	100

City of Carlsbad
N/S: Avenida Encinas
E/W: Poinsettia Lane
Weather: Clear

File Name : 02_CAR_Ave E_Poin VEH
Site Code : 23222185
Start Date : 3/9/2022
Page No : 1

Groups Printed- Total Volume

	Avenida Encinas Southbound				Poinsettia Lane Westbound				Avenida Encinas Northbound				Poinsettia Lane Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	27	12	4	43	37	20	39	96	12	4	65	81	2	21	10	33	253
07:15 AM	42	11	8	61	56	15	44	115	3	13	54	70	2	30	2	34	280
07:30 AM	71	5	5	81	56	30	32	118	2	7	77	86	4	32	7	43	328
07:45 AM	64	8	4	76	89	42	64	195	5	17	91	113	8	52	15	75	459
Total	204	36	21	261	238	107	179	524	22	41	287	350	16	135	34	185	1320
08:00 AM	54	10	14	78	87	51	79	217	5	14	107	126	8	52	10	70	491
08:15 AM	42	16	8	66	78	54	70	202	5	20	66	91	6	35	13	54	413
08:30 AM	55	31	15	101	78	47	75	200	4	16	72	92	11	44	30	85	478
08:45 AM	43	24	7	74	94	36	54	184	10	13	92	115	6	43	9	58	431
Total	194	81	44	319	337	188	278	803	24	63	337	424	31	174	62	267	1813
09:00 AM	39	7	7	53	85	29	56	170	7	8	66	81	8	37	18	63	367
09:15 AM	29	21	5	55	88	36	48	172	10	18	70	98	1	19	13	33	358
09:30 AM	32	12	10	54	71	32	47	150	13	21	99	133	2	30	13	45	382
09:45 AM	27	11	8	46	90	31	45	166	11	15	95	121	1	30	9	40	373
Total	127	51	30	208	334	128	196	658	41	62	330	433	12	116	53	181	1480
10:00 AM	36	18	6	60	110	36	63	209	9	9	75	93	0	23	13	36	398
10:15 AM	38	15	4	57	92	28	39	159	7	21	86	114	11	38	16	65	395
10:30 AM	42	9	12	63	96	44	51	191	10	15	123	148	3	32	14	49	451
10:45 AM	44	20	8	72	92	38	51	181	13	12	108	133	6	36	21	63	449
Total	160	62	30	252	390	146	204	740	39	57	392	488	20	129	64	213	1693
11:00 AM	52	20	8	80	108	36	34	178	15	11	90	116	6	37	12	55	429
11:15 AM	30	25	10	65	113	51	38	202	7	19	92	118	3	25	13	41	426
11:30 AM	35	26	9	70	126	40	62	228	16	18	118	152	7	37	15	59	509
11:45 AM	39	25	6	70	127	41	50	218	18	21	111	150	3	43	21	67	505
Total	156	96	33	285	474	168	184	826	56	69	411	536	19	142	61	222	1869
12:00 PM	37	27	6	70	123	34	45	202	11	17	125	153	7	33	24	64	489
12:15 PM	39	23	7	69	112	39	37	188	17	20	145	182	7	32	12	51	490
12:30 PM	29	25	7	61	82	34	30	146	20	19	120	159	2	27	17	46	412
12:45 PM	30	24	6	60	130	31	61	222	20	28	118	166	7	51	19	77	525
Total	135	99	26	260	447	138	173	758	68	84	508	660	23	143	72	238	1916
01:00 PM	35	31	8	74	110	31	32	173	26	20	129	175	3	30	13	46	468
01:15 PM	49	20	5	74	111	31	39	181	14	21	112	147	6	29	20	55	457
01:30 PM	34	14	5	53	108	37	30	175	12	16	119	147	4	42	19	65	440
01:45 PM	43	13	6	62	120	34	53	207	17	18	131	166	11	41	19	71	506
Total	161	78	24	263	449	133	154	736	69	75	491	635	24	142	71	237	1871
02:00 PM	42	23	3	68	86	37	45	168	16	10	115	141	5	39	11	55	432
02:15 PM	56	17	13	86	98	51	70	219	15	17	136	168	9	55	18	82	555
02:30 PM	71	20	18	109	124	44	86	254	16	14	129	159	9	45	12	66	588
02:45 PM	51	24	10	85	128	48	125	301	16	28	105	149	7	28	17	52	587
Total	220	84	44	348	436	180	326	942	63	69	485	617	30	167	58	255	2162
03:00 PM	51	24	10	85	103	44	67	214	16	21	112	149	5	44	16	65	513
03:15 PM	45	24	5	74	119	76	60	255	15	17	123	155	4	38	12	54	538
03:30 PM	51	23	10	84	85	50	79	214	11	30	104	145	7	44	13	64	507
03:45 PM	47	25	13	85	121	65	76	262	16	28	110	154	11	41	21	73	574
Total	194	96	38	328	428	235	282	945	58	96	449	603	27	167	62	256	2132
04:00 PM	52	22	9	83	115	64	64	243	17	21	119	157	8	45	23	76	559

City of Carlsbad
N/S: Avenida Encinas
E/W: Poinsettia Lane
Weather: Clear

File Name : 02_CAR_Ave E_Poin VEH
Site Code : 23222185
Start Date : 3/9/2022
Page No : 2

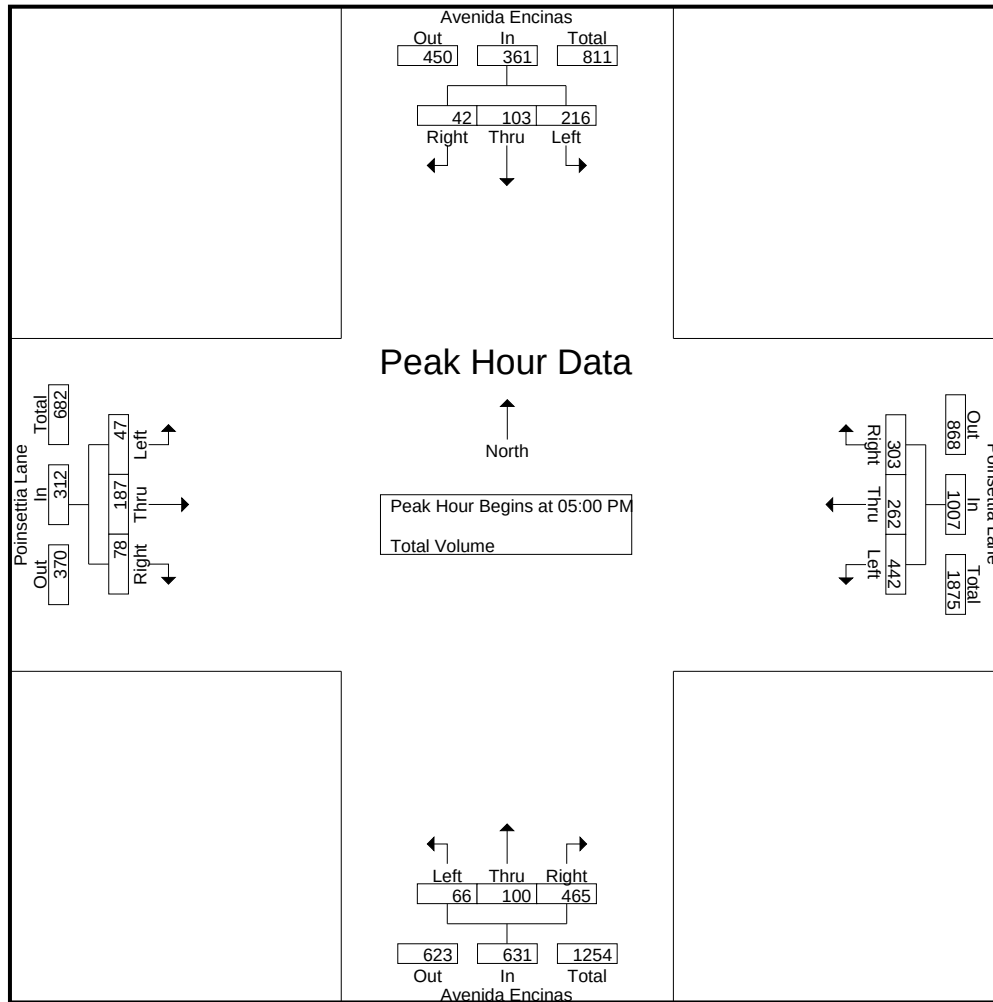
Groups Printed- Total Volume

	Avenida Encinas Southbound				Poinsettia Lane Westbound				Avenida Encinas Northbound				Poinsettia Lane Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:15 PM	42	29	12	83	121	68	78	267	17	27	122	166	16	42	16	74	590
04:30 PM	64	19	7	90	101	49	59	209	22	26	120	168	7	45	13	65	532
04:45 PM	43	18	11	72	103	59	78	240	12	26	105	143	21	41	10	72	527
Total	201	88	39	328	440	240	279	959	68	100	466	634	52	173	62	287	2208
05:00 PM	66	28	18	112	101	61	66	228	17	24	102	143	7	56	12	75	558
05:15 PM	54	25	9	88	115	77	82	274	18	28	117	163	16	56	25	97	622
05:30 PM	54	32	6	92	117	68	76	261	12	27	125	164	15	43	20	78	595
05:45 PM	42	18	9	69	109	56	79	244	19	21	121	161	9	32	21	62	536
Total	216	103	42	361	442	262	303	1007	66	100	465	631	47	187	78	312	2311
06:00 PM	40	16	5	61	95	31	45	171	20	17	136	173	6	51	18	75	480
06:15 PM	44	24	7	75	75	37	43	155	19	27	90	136	4	37	17	58	424
06:30 PM	32	19	8	59	69	25	48	142	12	14	99	125	6	32	12	50	376
06:45 PM	38	12	6	56	73	27	34	134	15	27	68	110	4	20	15	39	339
Total	154	71	26	251	312	120	170	602	66	85	393	544	20	140	62	222	1619
Grand Total	2122	945	397	3464	4727	2045	2728	9500	640	901	5014	6555	321	1815	739	2875	22394
Apprch %	61.3	27.3	11.5		49.8	21.5	28.7		9.8	13.7	76.5		11.2	63.1	25.7		
Total %	9.5	4.2	1.8	15.5	21.1	9.1	12.2	42.4	2.9	4	22.4	29.3	1.4	8.1	3.3	12.8	

	Avenida Encinas Southbound				Poinsettia Lane Westbound				Avenida Encinas Northbound				Poinsettia Lane Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	66	28	18	112	101	61	66	228	17	24	102	143	7	56	12	75	558
05:15 PM	54	25	9	88	115	77	82	274	18	28	117	163	16	56	25	97	622
05:30 PM	54	32	6	92	117	68	76	261	12	27	125	164	15	43	20	78	595
05:45 PM	42	18	9	69	109	56	79	244	19	21	121	161	9	32	21	62	536
Total Volume	216	103	42	361	442	262	303	1007	66	100	465	631	47	187	78	312	2311
% App. Total	59.8	28.5	11.6		43.9	26	30.1		10.5	15.8	73.7		15.1	59.9	25		
PHF	.818	.805	.583	.806	.944	.851	.924	.919	.868	.893	.930	.962	.734	.835	.780	.804	.929

City of Carlsbad
N/S: Avenida Encinas
E/W: Poinsettia Lane
Weather: Clear

File Name : 02_CAR_Ave E_Poin VEH
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Peak Hour Analysis From 07:00 AM to 06:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	02:15 PM				02:30 PM				12:15 PM				04:45 PM			
+0 mins.	56	17	13	86	124	44	86	254	17	20	145	182	21	41	10	72
+15 mins.	71	20	18	109	128	48	125	301	20	19	120	159	7	56	12	75
+30 mins.	51	24	10	85	103	44	67	214	20	28	118	166	16	56	25	97
+45 mins.	51	24	10	85	119	76	60	255	26	20	129	175	15	43	20	78
Total Volume	229	85	51	365	474	212	338	1024	83	87	512	682	59	196	67	322
% App. Total	62.7	23.3	14		46.3	20.7	33		12.2	12.8	75.1		18.3	60.9	20.8	
PHF	.806	.885	.708	.837	.926	.697	.676	.850	.798	.777	.883	.937	.702	.875	.670	.830

Location: Carlsbad
N/S: Avenida Encinas
E/W: Poinsettia Lane



Date: 3/9/2022
Day Wednesday

PEDESTRIANS

Time	North Leg Avenida Encinas	East Leg Poinsettia Lane	South Leg Avenida Encinas	West Leg Poinsettia Lane	TOTAL
7:00 AM	3	0	2	1	6
7:15 AM	2	0	5	1	8
7:30 AM	3	0	3	2	8
7:45 AM	8	0	1	5	14
8:00 AM	8	4	1	3	16
8:15 AM	0	1	3	2	6
8:30 AM	4	2	2	0	8
8:45 AM	1	2	2	2	7
9:00 AM	2	2	3	0	7
9:15 AM	3	0	5	1	9
9:30 AM	2	2	2	4	10
9:45 AM	3	1	4	2	10
10:00 AM	1	2	1	1	5
10:15 AM	2	5	1	2	10
10:30 AM	4	0	9	3	16
10:45 AM	2	4	3	3	12
11:00 AM	0	1	4	0	5
11:15 AM	3	3	7	2	15
11:30 AM	1	1	7	0	9
11:45 AM	4	5	6	3	18
12:00 PM	6	6	4	0	16
12:15 PM	0	1	2	2	5
12:30 PM	3	1	4	1	9
12:45 PM	2	2	5	6	15
1:00 PM	4	6	3	1	14
1:15 PM	2	1	2	2	7
1:30 PM	5	0	2	0	7
1:45 PM	2	1	1	1	5
2:00 PM	4	2	1	1	8
2:15 PM	1	4	0	0	5
2:30 PM	1	0	1	0	2
2:45 PM	0	9	3	0	12
3:00 PM	1	3	5	3	12
3:15 PM	1	1	3	0	5
3:30 PM	0	5	0	2	7
3:45 PM	0	6	1	1	8
4:00 PM	5	6	3	0	14
4:15 PM	4	2	1	2	9
4:30 PM	2	4	3	0	9
4:45 PM	1	0	1	5	7
5:00 PM	6	5	2	1	14
5:15 PM	8	1	6	2	17
5:30 PM	4	5	9	1	19
5:45 PM	2	5	4	0	11
6:00 PM	2	6	9	2	19
6:15 PM	1	3	5	1	10
6:30 PM	1	2	4	0	7
6:45 PM	1	7	6	3	17
TOTAL VOLUMES:	125	129	161	74	489

Location: Carlsbad
N/S: Avenida Encinas
E/W: Poinsettia Lane

Date: 3/9/2022
Day: Wednesday



BICYCLES

	Southbound Avenida Encinas			Westbound Poinsettia Lane			Northbound Avenida Encinas			Eastbound Poinsettia Lane			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	1	0	0	1	0	2
7:15 AM	0	1	1	0	2	0	0	0	0	0	2	0	6
7:30 AM	1	0	0	0	2	0	0	0	5	0	3	0	11
7:45 AM	1	0	0	0	1	1	0	1	0	0	2	0	6
8:00 AM	0	0	0	0	5	0	0	0	0	0	2	0	7
8:15 AM	0	1	0	0	2	0	0	0	0	0	1	0	4
8:30 AM	0	0	0	0	0	0	0	0	0	0	2	0	2
8:45 AM	0	0	4	0	0	0	0	2	0	0	1	1	8
9:00 AM	0	0	0	0	3	0	1	0	0	0	0	0	4
9:15 AM	0	0	0	0	5	2	2	0	3	0	1	1	14
9:30 AM	0	1	0	0	2	0	0	0	1	0	2	0	6
9:45 AM	0	0	0	0	0	0	1	0	1	0	2	1	5
10:00 AM	0	3	0	0	1	0	0	0	0	0	6	0	10
10:15 AM	0	0	1	0	1	1	0	0	0	2	1	0	6
10:30 AM	0	0	1	1	8	0	1	1	1	0	2	3	18
10:45 AM	0	0	0	0	3	1	1	0	2	1	1	0	9
11:00 AM	1	0	0	0	1	0	0	0	0	0	2	2	6
11:15 AM	0	0	0	0	1	0	0	0	1	0	2	1	5
11:30 AM	0	0	0	0	4	1	0	0	1	1	1	0	8
11:45 AM	0	0	0	0	1	0	1	0	0	0	1	0	3
12:00 PM	0	0	0	1	6	0	1	0	0	0	2	0	10
12:15 PM	0	0	1	0	1	1	0	0	1	1	1	0	6
12:30 PM	0	0	1	0	1	0	0	3	0	0	4	1	10
12:45 PM	0	0	0	0	4	0	0	0	0	0	0	0	4
1:00 PM	0	0	0	0	2	0	0	0	0	0	1	0	3
1:15 PM	0	0	2	0	1	0	0	0	0	0	4	0	7
1:30 PM	0	3	1	0	0	0	0	0	2	0	5	1	12
1:45 PM	0	0	0	0	1	1	0	0	3	0	0	0	5
2:00 PM	0	0	0	0	2	0	0	1	0	0	0	0	3
2:15 PM	0	0	0	0	4	0	0	1	0	0	2	1	8
2:30 PM	0	1	0	1	5	2	0	0	0	0	0	1	10
2:45 PM	0	0	0	1	4	1	0	1	0	0	1	1	9
3:00 PM	1	1	0	0	0	1	0	0	1	0	3	0	7
3:15 PM	0	0	0	0	3	1	0	0	1	0	3	3	11
3:30 PM	1	0	0	2	3	0	2	0	0	0	3	0	11
3:45 PM	2	1	0	0	2	0	2	0	0	0	2	0	9
4:00 PM	0	0	0	0	3	1	0	1	1	1	1	0	8
4:15 PM	0	0	0	0	2	0	0	1	0	0	1	0	4
4:30 PM	0	0	1	0	5	0	0	0	3	0	3	2	14
4:45 PM	1	0	0	2	7	0	0	0	0	0	3	0	13
5:00 PM	0	0	1	0	4	0	0	0	1	0	0	1	7
5:15 PM	3	0	0	1	3	0	0	1	1	0	1	0	10
5:30 PM	0	0	1	0	2	0	0	0	1	0	1	0	5
5:45 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
6:00 PM	0	1	2	0	0	0	0	0	0	1	0	0	4
6:15 PM	0	0	0	0	0	0	0	0	0	1	1	0	2
6:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
6:45 PM	0	0	1	0	0	0	0	0	0	1	14	0	16
TOTAL VOLUMES:	11	13	18	9	108	14	12	14	30	9	92	20	350

City of Carlsbad
N/S: Carlsbad Boulevard (Southbound)
E/W: Avenida Encinas
Weather: Clear

File Name : 03A_CAR_Carl SB_Ave E VEH
Site Code : 23222185
Start Date : 3/9/2022
Page No : 1

Groups Printed- Total Volume

	Carlsbad Boulevard Southbound			Avenida Encinas Westbound			Carlsbad Boulevard Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	0	57	57	18	0	18	0	0	0	75
07:15 AM	0	65	65	27	0	27	0	0	0	92
07:30 AM	3	107	110	22	0	22	0	0	0	132
07:45 AM	5	147	152	21	0	21	0	0	0	173
Total	8	376	384	88	0	88	0	0	0	472
08:00 AM	2	92	94	29	0	29	0	0	0	123
08:15 AM	3	124	127	16	0	16	0	0	0	143
08:30 AM	10	137	147	26	0	26	0	0	0	173
08:45 AM	1	127	128	28	0	28	0	0	0	156
Total	16	480	496	99	0	99	0	0	0	595
09:00 AM	3	81	84	25	0	25	0	0	0	109
09:15 AM	2	61	63	24	0	24	0	0	0	87
09:30 AM	1	84	85	29	0	29	0	0	0	114
09:45 AM	2	76	78	27	0	27	0	0	0	105
Total	8	302	310	105	0	105	0	0	0	415
10:00 AM	2	67	69	24	0	24	0	0	0	93
10:15 AM	4	78	82	20	0	20	0	0	0	102
10:30 AM	3	83	86	24	0	24	0	0	0	110
10:45 AM	2	91	93	28	0	28	0	0	0	121
Total	11	319	330	96	0	96	0	0	0	426
11:00 AM	7	107	114	27	0	27	0	0	0	141
11:15 AM	8	90	98	36	0	36	0	0	0	134
11:30 AM	4	106	110	24	0	24	0	0	0	134
11:45 AM	2	84	86	36	0	36	0	0	0	122
Total	21	387	408	123	0	123	0	0	0	531
12:00 PM	4	89	93	30	0	30	0	0	0	123
12:15 PM	4	89	93	29	0	29	0	0	0	122
12:30 PM	4	107	111	28	0	28	0	0	0	139
12:45 PM	1	87	88	19	0	19	0	0	0	107
Total	13	372	385	106	0	106	0	0	0	491
01:00 PM	4	98	102	33	0	33	0	0	0	135
01:15 PM	5	95	100	16	0	16	0	0	0	116
01:30 PM	5	108	113	28	0	28	0	0	0	141
01:45 PM	2	95	97	16	0	16	0	0	0	113
Total	16	396	412	93	0	93	0	0	0	505
02:00 PM	2	106	108	24	0	24	0	0	0	132
02:15 PM	6	94	100	28	0	28	0	0	0	128
02:30 PM	4	90	94	20	0	20	0	0	0	114
02:45 PM	6	94	100	17	0	17	0	0	0	117
Total	18	384	402	89	0	89	0	0	0	491
03:00 PM	4	104	108	36	0	36	0	0	0	144
03:15 PM	5	106	111	34	0	34	0	0	0	145
03:30 PM	3	117	120	24	0	24	0	0	0	144
03:45 PM	5	124	129	21	0	21	0	0	0	150
Total	17	451	468	115	0	115	0	0	0	583
04:00 PM	4	98	102	26	0	26	0	0	0	128

City of Carlsbad
N/S: Carlsbad Boulevard (Southbound)
E/W: Avenida Encinas
Weather: Clear

File Name : 03A_CAR_Carl SB_Ave E VEH
Site Code : 23222185
Start Date : 3/9/2022
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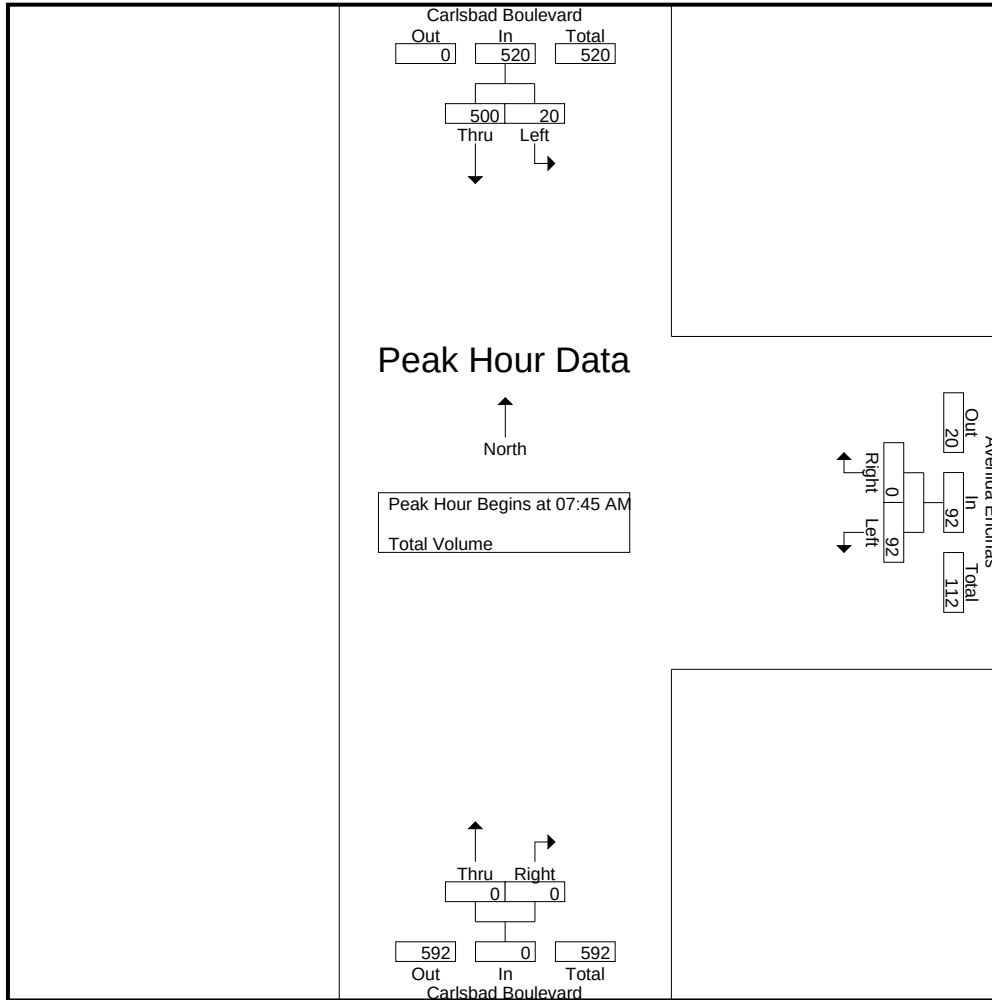
Groups Printed- Total Volume

	Carlsbad Boulevard Southbound			Avenida Encinas Westbound			Carlsbad Boulevard Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:15 PM	3	111	114	32	0	32	0	0	0	146
04:30 PM	3	104	107	28	0	28	0	0	0	135
04:45 PM	3	96	99	35	0	35	0	0	0	134
Total	13	409	422	121	0	121	0	0	0	543
05:00 PM	3	101	104	37	0	37	0	0	0	141
05:15 PM	4	115	119	30	0	30	0	0	0	149
05:30 PM	4	116	120	34	0	34	0	0	0	154
05:45 PM	4	70	74	26	0	26	0	0	0	100
Total	15	402	417	127	0	127	0	0	0	544
06:00 PM	2	73	75	20	0	20	0	0	0	95
06:15 PM	1	70	71	25	0	25	0	0	0	96
06:30 PM	4	56	60	19	0	19	0	0	0	79
06:45 PM	2	35	37	13	0	13	0	0	0	50
Total	9	234	243	77	0	77	0	0	0	320
Grand Total	165	4512	4677	1239	0	1239	0	0	0	5916
Apprch %	3.5	96.5		100	0		0	0		
Total %	2.8	76.3	79.1	20.9	0	20.9	0	0	0	

	Carlsbad Boulevard Southbound			Avenida Encinas Westbound			Carlsbad Boulevard Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 06:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:45 AM										
07:45 AM	5	147	152	21	0	21	0	0	0	173
08:00 AM	2	92	94	29	0	29	0	0	0	123
08:15 AM	3	124	127	16	0	16	0	0	0	143
08:30 AM	10	137	147	26	0	26	0	0	0	173
Total Volume	20	500	520	92	0	92	0	0	0	612
% App. Total	3.8	96.2		100	0		0	0		
PHF	.500	.850	.855	.793	.000	.793	.000	.000	.000	.884

City of Carlsbad
N/S: Carlsbad Boulevard (Southbound)
E/W: Avenida Encinas
Weather: Clear

File Name : 03A_CAR_Carl SB_Ave E VEH
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Peak Hour Analysis From 07:00 AM to 06:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:45 AM			04:45 PM			07:00 AM		
+0 mins.	5	147	152	35	0	35	0	0	0
+15 mins.	2	92	94	37	0	37	0	0	0
+30 mins.	3	124	127	30	0	30	0	0	0
+45 mins.	10	137	147	34	0	34	0	0	0
Total Volume	20	500	520	136	0	136	0	0	0
% App. Total	3.8	96.2		100	0		0	0	
PHF	.500	.850	.855	.919	.000	.919	.000	.000	.000

Location: Carlsbad
N/S: Carlsbad Blvd SB
E/W: Avenida Encinas



Date: 3/9/2022
Day Wednesday

PEDESTRIANS

Time	North Leg Carlsbad Blvd SB	East Leg Avenida Encinas	South Leg Carlsbad Blvd SB	West Leg Avenida Encinas	TOTAL
7:00 AM	0	0	0	0	0
7:15 AM	2	0	0	0	2
7:30 AM	2	0	0	0	2
7:45 AM	2	1	0	0	3
8:00 AM	2	0	0	0	2
8:15 AM	3	0	0	0	3
8:30 AM	2	0	0	0	2
8:45 AM	1	1	0	0	2
9:00 AM	2	0	0	0	2
9:15 AM	5	0	0	0	5
9:30 AM	8	0	0	0	8
9:45 AM	4	1	0	0	5
10:00 AM	1	0	0	0	1
10:15 AM	1	0	0	0	1
10:30 AM	0	0	0	0	0
10:45 AM	3	0	0	0	3
11:00 AM	5	1	0	0	6
11:15 AM	5	0	0	0	5
11:30 AM	2	0	0	0	2
11:45 AM	2	0	0	0	2
12:00 PM	2	0	0	0	2
12:15 PM	1	0	0	0	1
12:30 PM	3	0	0	0	3
12:45 PM	5	2	0	0	7
1:00 PM	3	0	0	0	3
1:15 PM	0	0	0	0	0
1:30 PM	3	0	0	0	3
1:45 PM	1	0	0	0	1
2:00 PM	4	0	0	0	4
2:15 PM	2	0	0	0	2
2:30 PM	0	0	0	0	0
2:45 PM	2	0	0	0	2
3:00 PM	1	0	0	0	1
3:15 PM	1	0	0	0	1
3:30 PM	3	0	0	0	3
3:45 PM	3	0	0	0	3
4:00 PM	5	0	0	0	5
4:15 PM	1	0	0	0	1
4:30 PM	2	0	0	0	2
4:45 PM	1	0	0	0	1
5:00 PM	4	0	0	0	4
5:15 PM	1	0	0	0	1
5:30 PM	3	0	0	0	3
5:45 PM	0	0	0	0	0
6:00 PM	0	0	0	0	0
6:15 PM	1	0	0	0	1
6:30 PM	0	0	0	0	0
6:45 PM	0	0	0	0	0
TOTAL VOLUMES:	104	6	0	0	110

Location: Carlsbad
N/S: Carlsbad Blvd SB
E/W: Avenida Encinas

Date: 3/9/2022
Day: Wednesday



BICYCLES

	Southbound Carlsbad Blvd SB			Westbound Avenida Encinas			Northbound Carlsbad Blvd SB			Eastbound Avenida Encinas			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
7:15 AM	0	4	0	0	0	0	0	0	0	0	0	0	4
7:30 AM	0	3	0	0	0	0	0	0	0	0	0	0	3
7:45 AM	0	4	0	0	0	0	0	0	0	0	0	0	4
8:00 AM	0	7	0	0	0	0	0	0	0	0	0	0	7
8:15 AM	0	5	0	1	0	0	0	0	0	0	0	0	6
8:30 AM	2	5	0	0	0	0	0	0	0	0	0	0	7
8:45 AM	0	4	0	1	0	0	0	0	0	0	0	0	5
9:00 AM	0	5	0	0	0	0	0	0	0	0	0	0	5
9:15 AM	1	21	0	1	0	0	0	0	0	0	0	0	23
9:30 AM	0	12	0	1	0	0	0	0	0	0	0	0	13
9:45 AM	1	17	0	1	0	0	0	0	0	0	0	0	19
10:00 AM	0	13	0	0	0	2	0	0	0	0	0	0	15
10:15 AM	1	15	0	1	0	5	0	0	0	0	0	0	22
10:30 AM	4	30	0	0	0	0	0	0	0	0	0	0	34
10:45 AM	6	17	0	5	0	2	0	0	0	0	0	0	30
11:00 AM	1	22	0	0	0	0	0	0	0	0	0	0	23
11:15 AM	1	10	0	0	0	1	0	0	0	0	0	0	12
11:30 AM	2	24	0	2	0	0	0	0	0	0	0	0	28
11:45 AM	0	6	0	0	0	0	0	0	0	0	0	0	6
12:00 PM	0	7	0	1	0	0	0	0	0	0	0	0	8
12:15 PM	4	10	0	1	0	1	0	0	0	0	0	0	16
12:30 PM	1	14	0	1	0	0	0	0	0	0	0	0	16
12:45 PM	0	9	0	0	0	0	0	0	0	0	0	0	9
1:00 PM	0	6	0	1	0	0	0	0	0	0	0	0	7
1:15 PM	0	10	0	2	0	0	0	0	0	0	0	0	12
1:30 PM	0	4	0	0	0	0	0	0	0	0	0	0	4
1:45 PM	0	4	0	1	0	0	0	0	0	0	0	0	5
2:00 PM	0	12	0	1	0	0	0	0	0	0	0	0	13
2:15 PM	2	14	0	0	0	0	0	0	0	0	0	0	16
2:30 PM	0	6	0	0	0	0	0	0	0	0	0	0	6
2:45 PM	0	11	0	2	0	2	0	0	0	0	0	0	15
3:00 PM	0	4	0	1	0	0	0	0	0	0	0	0	5
3:15 PM	2	8	0	0	0	0	0	0	0	0	0	0	10
3:30 PM	0	12	0	5	0	0	0	0	0	0	0	0	17
3:45 PM	0	8	0	0	0	0	0	0	0	0	0	0	8
4:00 PM	0	15	0	1	0	1	0	0	0	0	0	0	17
4:15 PM	0	7	0	1	0	0	0	0	0	0	0	0	8
4:30 PM	0	5	0	0	0	1	0	0	0	0	0	0	6
4:45 PM	0	6	0	0	0	0	0	0	0	0	0	0	6
5:00 PM	0	0	0	0	0	2	0	0	0	0	0	0	2
5:15 PM	2	5	0	0	0	1	0	0	0	0	0	0	8
5:30 PM	1	5	0	0	0	0	0	0	0	0	0	0	6
5:45 PM	0	3	0	0	0	0	0	0	0	0	0	0	3
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	31	410	0	31	0	18	0	0	0	0	0	0	490

City of Carlsbad
N/S: Carlsbad Boulevard (Northbound)
E/W: Avenida Encinas
Weather: Clear

File Name : 03B_CAR_Carl NB_Ave E VEH
Site Code : 23222185
Start Date : 3/9/2022
Page No : 1

Groups Printed- Total Volume

	Carlsbad Boulevard Southbound				Avenida Encinas Westbound				Carlsbad Boulevard Northbound				Avenida Encinas Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	20	0	20	0	27	9	36	0	0	0	0	56
07:15 AM	0	0	0	0	0	27	2	29	0	31	11	42	0	0	0	0	71
07:30 AM	0	0	0	0	0	22	3	25	0	40	16	56	0	3	0	3	84
07:45 AM	0	0	0	0	0	21	3	24	1	46	19	66	0	5	0	5	95
Total	0	0	0	0	0	90	8	98	1	144	55	200	0	8	0	8	306
08:00 AM	0	0	0	0	0	29	3	32	0	36	18	54	0	2	0	2	88
08:15 AM	0	0	0	0	0	16	2	18	0	61	18	79	0	3	0	3	100
08:30 AM	0	0	0	0	0	26	1	27	0	54	17	71	3	5	0	8	106
08:45 AM	0	0	0	0	0	29	5	34	0	53	32	85	0	1	0	1	120
Total	0	0	0	0	0	100	11	111	0	204	85	289	3	11	0	14	414
09:00 AM	0	0	0	0	0	24	2	26	0	52	26	78	0	3	0	3	107
09:15 AM	0	0	0	0	0	24	1	25	0	51	25	76	0	2	0	2	103
09:30 AM	0	0	0	0	0	29	1	30	0	53	13	66	1	0	0	1	97
09:45 AM	0	0	0	0	0	27	2	29	0	39	31	70	0	2	0	2	101
Total	0	0	0	0	0	104	6	110	0	195	95	290	1	7	0	8	408
10:00 AM	0	0	0	0	0	25	0	25	0	41	20	61	0	2	0	2	88
10:15 AM	0	0	0	0	0	19	3	22	0	47	32	79	0	4	0	4	105
10:30 AM	0	0	0	0	0	24	0	24	0	64	27	91	1	2	0	3	118
10:45 AM	0	0	0	0	0	29	1	30	0	51	24	75	0	2	0	2	107
Total	0	0	0	0	0	97	4	101	0	203	103	306	1	10	0	11	418
11:00 AM	0	0	0	0	0	27	2	29	0	81	25	106	2	6	0	8	143
11:15 AM	0	0	0	0	0	34	3	37	1	72	40	113	2	6	0	8	158
11:30 AM	0	0	0	0	0	24	3	27	0	92	28	120	0	6	0	6	153
11:45 AM	0	0	0	0	0	35	2	37	0	84	30	114	0	1	0	1	152
Total	0	0	0	0	0	120	10	130	1	329	123	453	4	19	0	23	606
12:00 PM	0	0	0	0	0	30	2	32	0	90	32	122	1	3	0	4	158
12:15 PM	0	0	0	0	1	28	2	31	0	87	32	119	0	4	0	4	154
12:30 PM	0	0	0	0	0	28	0	28	0	94	22	116	2	2	0	4	148
12:45 PM	0	0	0	0	0	19	3	22	0	81	29	110	0	1	0	1	133
Total	0	0	0	0	1	105	7	113	0	352	115	467	3	10	0	13	593
01:00 PM	0	0	0	0	1	33	2	36	0	91	44	135	1	3	0	4	175
01:15 PM	0	0	0	0	0	16	3	19	0	105	29	134	1	4	0	5	158
01:30 PM	0	0	0	0	0	27	2	29	0	95	25	120	3	2	0	5	154
01:45 PM	0	0	0	0	0	16	4	20	0	88	30	118	2	0	0	2	140
Total	0	0	0	0	1	92	11	104	0	379	128	507	7	9	0	16	627
02:00 PM	0	0	0	0	0	24	2	26	0	101	41	142	1	2	0	3	171
02:15 PM	0	0	0	0	0	26	2	28	1	105	30	136	0	6	0	6	170
02:30 PM	0	0	0	0	0	20	2	22	0	136	39	175	1	3	0	4	201
02:45 PM	0	0	0	0	0	17	1	18	0	116	32	148	2	4	0	6	172
Total	0	0	0	0	0	87	7	94	1	458	142	601	4	15	0	19	714
03:00 PM	0	0	0	0	0	37	5	42	0	122	31	153	0	4	0	4	199
03:15 PM	0	0	0	0	0	31	1	32	0	134	34	168	2	4	0	6	206
03:30 PM	0	0	0	0	0	25	5	30	0	122	34	156	0	3	0	3	189
03:45 PM	0	0	0	0	0	21	6	27	0	147	36	183	0	5	0	5	215
Total	0	0	0	0	0	114	17	131	0	525	135	660	2	16	0	18	809
04:00 PM	0	0	0	0	0	26	4	30	0	138	48	186	0	4	0	4	220

City of Carlsbad
N/S: Carlsbad Boulevard (Northbound)
E/W: Avenida Encinas
Weather: Clear

File Name : 03B_CAR_Carl NB_Ave E VEH
Site Code : 23222185
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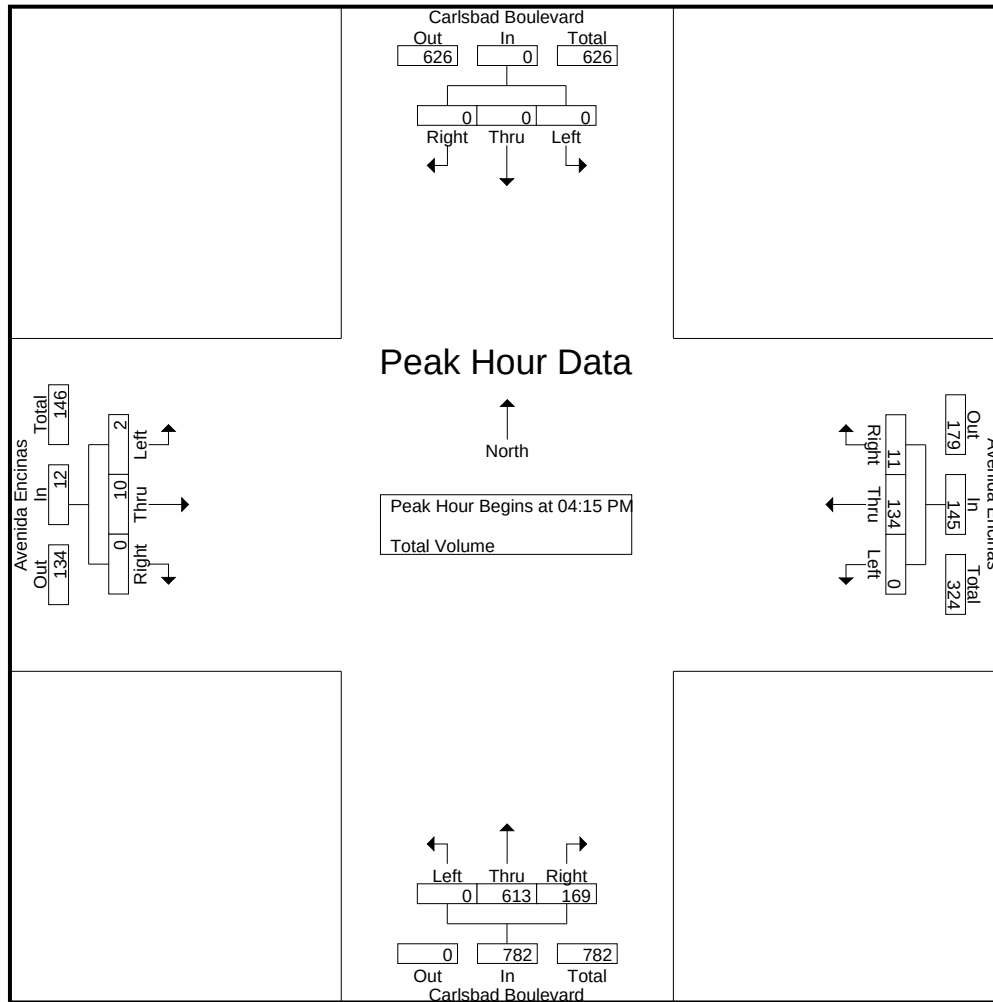
Groups Printed- Total Volume

	Carlsbad Boulevard Southbound				Avenida Encinas Westbound				Carlsbad Boulevard Northbound				Avenida Encinas Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:15 PM	0	0	0	0	0	33	3	36	0	153	40	193	0	3	0	3	232
04:30 PM	0	0	0	0	0	29	0	29	0	141	43	184	1	2	0	3	216
04:45 PM	0	0	0	0	0	35	5	40	0	149	41	190	0	2	0	2	232
Total	0	0	0	0	0	123	12	135	0	581	172	753	1	11	0	12	900
05:00 PM	0	0	0	0	0	37	3	40	0	170	45	215	1	3	0	4	259
05:15 PM	0	0	0	0	0	30	2	32	0	105	53	158	1	3	0	4	194
05:30 PM	0	0	0	0	0	34	4	38	1	164	37	202	2	2	0	4	244
05:45 PM	0	0	0	0	0	25	2	27	0	157	46	203	3	1	0	4	234
Total	0	0	0	0	0	126	11	137	1	596	181	778	7	9	0	16	931
06:00 PM	0	0	0	0	0	21	2	23	0	103	20	123	0	2	0	2	148
06:15 PM	0	0	0	0	0	25	1	26	0	96	20	116	0	1	0	1	143
06:30 PM	0	0	0	0	0	19	0	19	0	54	24	78	2	2	0	4	101
06:45 PM	0	0	0	0	0	12	0	12	1	53	23	77	2	0	0	2	91
Total	0	0	0	0	0	77	3	80	1	306	87	394	4	5	0	9	483
Grand Total	0	0	0	0	2	1235	107	1344	5	4272	1421	5698	37	130	0	167	7209
Apprch %	0	0	0		0.1	91.9	8		0.1	75	24.9		22.2	77.8	0		
Total %	0	0	0		0	17.1	1.5	18.6	0.1	59.3	19.7	79	0.5	1.8	0	2.3	

	Carlsbad Boulevard Southbound				Avenida Encinas Westbound				Carlsbad Boulevard Northbound				Avenida Encinas Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	0	0	0	0	0	33	3	36	0	153	40	193	0	3	0	3	232
04:30 PM	0	0	0	0	0	29	0	29	0	141	43	184	1	2	0	3	216
04:45 PM	0	0	0	0	0	35	5	40	0	149	41	190	0	2	0	2	232
05:00 PM	0	0	0	0	0	37	3	40	0	170	45	215	1	3	0	4	259
Total Volume	0	0	0	0	0	134	11	145	0	613	169	782	2	10	0	12	939
% App. Total	0	0	0		0	92.4	7.6		0	78.4	21.6		16.7	83.3	0		
PHF	.000	.000	.000	.000	.000	.905	.550	.906	.000	.901	.939	.909	.500	.833	.000	.750	.906

City of Carlsbad
N/S: Carlsbad Boulevard (Northbound)
E/W: Avenida Encinas
Weather: Clear

File Name : 03B_CAR_Carl NB_Ave E VEH
Site Code : 23222185
Start Date : 3/9/2022
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Peak Hour Analysis From 07:00 AM to 06:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				04:45 PM				04:15 PM				10:45 AM			
+0 mins.	0	0	0	0	0	35	5	40	0	153	40	193	0	2	0	2
+15 mins.	0	0	0	0	0	37	3	40	0	141	43	184	2	6	0	8
+30 mins.	0	0	0	0	0	30	2	32	0	149	41	190	2	6	0	8
+45 mins.	0	0	0	0	0	34	4	38	0	170	45	215	0	6	0	6
Total Volume	0	0	0	0	0	136	14	150	0	613	169	782	4	20	0	24
% App. Total	0	0	0	0	0	90.7	9.3		0	78.4	21.6		16.7	83.3	0	
PHF	.000	.000	.000	.000	.000	.919	.700	.938	.000	.901	.939	.909	.500	.833	.000	.750

Location: Carlsbad
 N/S: Carlsbad Blvd NB
 E/W: Avenida Encinas



Date: 3/9/2022
 Day Wednesday

PEDESTRIANS

Time	North Leg Carlsbad Blvd NB	East Leg Avenida Encinas	South Leg Carlsbad Blvd NB	West Leg Avenida Encinas	TOTAL
7:00 AM	0	1	1	0	2
7:15 AM	2	0	0	0	2
7:30 AM	2	0	2	0	4
7:45 AM	1	0	3	0	4
8:00 AM	2	0	1	0	3
8:15 AM	3	0	1	0	4
8:30 AM	2	0	2	0	4
8:45 AM	0	0	5	0	5
9:00 AM	1	0	2	0	3
9:15 AM	5	0	6	0	11
9:30 AM	10	0	3	0	13
9:45 AM	1	0	2	1	4
10:00 AM	1	0	0	0	1
10:15 AM	1	0	0	2	3
10:30 AM	0	0	1	0	1
10:45 AM	1	0	4	0	5
11:00 AM	4	0	3	1	8
11:15 AM	6	0	1	0	7
11:30 AM	0	0	0	0	0
11:45 AM	2	0	0	0	2
12:00 PM	2	0	0	0	2
12:15 PM	2	0	3	0	5
12:30 PM	3	0	0	0	3
12:45 PM	7	0	4	2	13
1:00 PM	3	0	0	0	3
1:15 PM	1	0	2	0	3
1:30 PM	0	0	0	0	0
1:45 PM	0	0	0	0	0
2:00 PM	0	0	4	0	4
2:15 PM	2	0	2	0	4
2:30 PM	0	0	0	0	0
2:45 PM	0	0	2	0	2
3:00 PM	1	0	8	0	9
3:15 PM	1	0	3	0	4
3:30 PM	3	0	1	0	4
3:45 PM	3	0	5	0	8
4:00 PM	4	0	0	0	4
4:15 PM	3	0	6	0	9
4:30 PM	2	0	0	0	2
4:45 PM	1	0	1	0	2
5:00 PM	4	2	1	0	7
5:15 PM	1	0	1	0	2
5:30 PM	3	0	0	0	3
5:45 PM	0	0	1	0	1
6:00 PM	0	0	1	0	1
6:15 PM	0	0	0	0	0
6:30 PM	0	0	0	0	0
6:45 PM	0	0	0	0	0
TOTAL VOLUMES:	90	3	82	6	181

Location: Carlsbad
N/S: Carlsbad Blvd NB
E/W: Avenida Encinas

Date: 3/9/2022
Day: Wednesday



BICYCLES

	Southbound Carlsbad Blvd NB			Westbound Avenida Encinas			Northbound Carlsbad Blvd NB			Eastbound Avenida Encinas			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	3	0	0	0	0	3
7:15 AM	0	0	0	0	0	0	0	3	0	0	0	0	3
7:30 AM	0	0	0	0	0	2	0	8	1	0	0	0	11
7:45 AM	0	0	0	0	0	0	0	13	1	0	0	0	14
8:00 AM	0	0	0	0	0	0	0	6	1	0	0	0	7
8:15 AM	0	0	0	0	1	0	0	3	0	0	0	0	4
8:30 AM	0	0	0	0	0	1	0	7	0	1	1	0	10
8:45 AM	0	0	0	0	1	0	0	14	0	0	0	0	15
9:00 AM	0	0	0	0	0	2	0	7	2	0	0	0	11
9:15 AM	0	0	0	0	1	0	0	52	0	1	0	0	54
9:30 AM	0	0	0	0	1	2	0	13	1	0	1	0	18
9:45 AM	0	0	0	0	1	0	0	12	0	0	1	0	14
10:00 AM	0	0	0	0	6	0	0	22	0	0	1	0	29
10:15 AM	0	0	0	0	0	0	0	13	2	1	0	0	16
10:30 AM	0	0	0	0	0	3	0	11	2	0	2	0	18
10:45 AM	0	0	0	0	9	1	2	12	1	1	6	0	32
11:00 AM	0	0	0	0	1	0	0	7	1	1	0	0	10
11:15 AM	0	0	0	0	0	1	1	9	0	1	0	0	12
11:30 AM	0	0	0	0	0	1	2	12	1	0	2	0	18
11:45 AM	0	0	0	0	0	3	0	15	3	0	0	0	21
12:00 PM	0	0	0	0	1	0	0	11	0	0	0	0	12
12:15 PM	0	0	0	0	0	0	0	12	0	1	0	0	13
12:30 PM	0	0	0	0	2	0	0	8	0	1	0	0	11
12:45 PM	0	0	0	0	0	0	0	4	1	0	0	0	5
1:00 PM	0	0	0	0	0	0	0	9	0	0	0	0	9
1:15 PM	0	0	0	0	0	1	2	7	2	0	0	0	12
1:30 PM	0	0	0	0	0	0	0	7	0	0	0	0	7
1:45 PM	0	0	0	0	1	0	0	3	2	0	0	0	6
2:00 PM	0	0	0	0	1	1	0	2	0	0	0	0	4
2:15 PM	0	0	0	0	0	0	0	13	0	0	3	0	16
2:30 PM	0	0	0	0	0	0	0	7	0	0	1	0	8
2:45 PM	0	0	0	0	0	0	0	8	2	0	0	0	10
3:00 PM	0	0	0	0	1	0	0	6	0	0	0	0	7
3:15 PM	0	0	0	0	0	1	0	13	0	0	0	0	14
3:30 PM	0	0	0	0	4	0	2	10	4	0	1	0	21
3:45 PM	0	0	0	0	0	0	0	8	0	0	0	0	8
4:00 PM	0	0	0	0	1	0	1	5	0	0	0	0	7
4:15 PM	0	0	0	0	0	0	0	4	0	0	0	0	4
4:30 PM	0	0	0	0	0	0	0	5	0	0	1	0	6
4:45 PM	0	0	0	0	1	0	0	6	2	0	1	0	10
5:00 PM	0	0	0	0	2	0	0	1	0	0	0	0	3
5:15 PM	0	0	0	0	1	0	0	3	1	0	2	0	7
5:30 PM	0	0	0	0	0	0	0	4	1	0	2	0	7
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	1	1	0	0	0	2
6:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
TOTAL VOLUMES:	0	0	0	0	36	19	10	401	32	8	25	0	531

City of Carlsbad
N/S: Dory Lane/Meridian Way
E/W: Avenida Encinas
Weather: Clear

File Name : 04_CAR_Dory_Ave E VEH
Site Code : 23222185
Start Date : 3/9/2022
Page No : 1

Groups Printed- Total Volume

	Dory Lane Southbound				Avenida Encinas Westbound				Meridian Way Northbound				Avenida Encinas Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	2	0	1	3	0	9	0	9	5	0	2	7	0	4	0	4	23
07:15 AM	2	0	7	9	0	15	2	17	5	0	1	6	0	8	0	8	40
07:30 AM	7	0	3	10	0	18	0	18	5	0	1	6	1	10	0	11	45
07:45 AM	2	0	1	3	0	13	0	13	1	0	4	5	0	21	0	21	42
Total	13	0	12	25	0	55	2	57	16	0	8	24	1	43	0	44	150
08:00 AM	1	0	5	6	0	15	2	17	5	0	2	7	1	12	0	13	43
08:15 AM	2	0	1	3	0	9	1	10	2	0	0	2	1	17	0	18	33
08:30 AM	0	0	0	0	0	23	0	23	3	0	1	4	0	20	0	20	47
08:45 AM	2	0	1	3	0	23	0	23	2	1	1	4	0	24	0	24	54
Total	5	0	7	12	0	70	3	73	12	1	4	17	2	73	0	75	177
09:00 AM	0	0	1	1	0	23	0	23	0	0	0	0	0	27	0	27	51
09:15 AM	2	0	2	4	0	24	0	24	1	0	1	2	0	23	0	23	53
09:30 AM	1	0	1	2	0	20	0	20	5	0	3	8	0	8	0	8	38
09:45 AM	2	0	5	7	0	15	0	15	1	0	2	3	1	23	0	24	49
Total	5	0	9	14	0	82	0	82	7	0	6	13	1	81	0	82	191
10:00 AM	0	0	2	2	0	15	2	17	2	0	0	2	0	19	0	19	40
10:15 AM	3	0	1	4	0	11	2	13	2	0	2	4	1	24	0	25	46
10:30 AM	2	0	1	3	0	21	0	21	1	0	0	1	0	25	0	25	50
10:45 AM	0	0	2	2	0	18	0	18	2	0	1	3	0	20	0	20	43
Total	5	0	6	11	0	65	4	69	7	0	3	10	1	88	0	89	179
11:00 AM	2	0	2	4	0	24	0	24	3	0	0	3	1	23	0	24	55
11:15 AM	0	0	0	0	0	17	0	17	3	0	2	5	1	29	0	30	52
11:30 AM	1	0	0	1	0	19	0	19	5	0	0	5	0	25	0	25	50
11:45 AM	1	0	0	1	0	25	0	25	5	0	1	6	1	25	0	26	58
Total	4	0	2	6	0	85	0	85	16	0	3	19	3	102	0	105	215
12:00 PM	1	0	1	2	0	22	3	25	3	0	1	4	1	28	0	29	60
12:15 PM	4	0	1	5	0	20	1	21	1	0	0	1	1	26	0	27	54
12:30 PM	1	0	2	3	1	20	1	22	0	1	0	1	0	20	0	20	46
12:45 PM	3	0	1	4	0	17	0	17	1	0	0	1	1	24	0	25	47
Total	9	0	5	14	1	79	5	85	5	1	1	7	3	98	0	101	207
01:00 PM	2	0	2	4	0	27	3	30	3	1	0	4	0	35	0	35	73
01:15 PM	1	0	1	2	0	15	0	15	2	0	2	4	1	37	0	38	59
01:30 PM	3	0	2	5	0	23	4	27	2	0	3	5	1	26	0	27	64
01:45 PM	2	0	1	3	0	14	2	16	2	0	0	2	0	28	0	28	49
Total	8	0	6	14	0	79	9	88	9	1	5	15	2	126	0	128	245
02:00 PM	4	0	4	8	0	17	3	20	1	0	0	1	0	33	0	33	62
02:15 PM	2	0	1	3	0	21	1	22	1	0	0	1	0	27	0	27	53
02:30 PM	1	0	0	1	0	11	3	14	2	0	2	4	0	37	0	37	56
02:45 PM	3	0	0	3	0	16	1	17	1	0	3	4	3	28	0	31	55
Total	10	0	5	15	0	65	8	73	5	0	5	10	3	125	0	128	226
03:00 PM	2	0	4	6	1	28	4	33	1	0	3	4	0	29	0	29	72
03:15 PM	1	0	2	3	0	20	0	20	2	0	1	3	1	33	0	34	60
03:30 PM	0	0	3	3	0	22	1	23	1	0	1	2	1	34	0	35	63
03:45 PM	2	0	2	4	0	20	2	22	0	0	0	0	0	36	0	36	62
Total	5	0	11	16	1	90	7	98	4	0	5	9	2	132	0	134	257
04:00 PM	1	0	1	2	0	22	3	25	4	0	3	7	0	44	0	44	78

City of Carlsbad
N/S: Dory Lane/Meridian Way
E/W: Avenida Encinas
Weather: Clear

File Name : 04_CAR_Dory_Ave E VEH
Site Code : 23222185
Start Date : 3/9/2022
Page No : 2

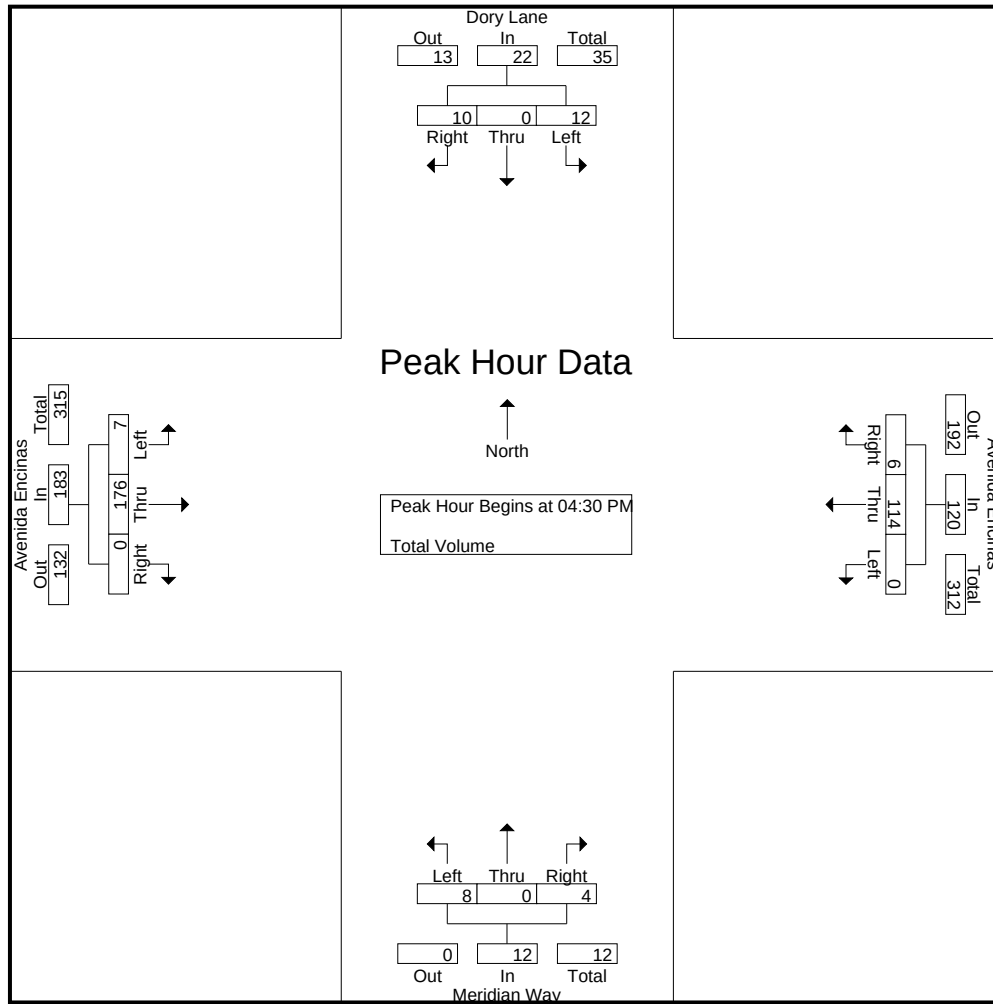
Groups Printed- Total Volume

	Dory Lane Southbound				Avenida Encinas Westbound				Meridian Way Northbound				Avenida Encinas Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:15 PM	3	0	3	6	0	25	3	28	2	0	1	3	0	39	0	39	76
04:30 PM	5	0	1	6	0	24	4	28	1	0	1	2	3	43	0	46	82
04:45 PM	3	0	2	5	0	34	1	35	2	0	2	4	2	39	0	41	85
Total	12	0	7	19	0	105	11	116	9	0	7	16	5	165	0	170	321
05:00 PM	2	0	4	6	0	26	1	27	3	0	0	3	1	41	0	42	78
05:15 PM	2	0	3	5	0	30	0	30	2	0	1	3	1	53	0	54	92
05:30 PM	2	0	0	2	0	27	1	28	3	0	0	3	0	35	0	35	68
05:45 PM	1	0	1	2	0	21	8	29	0	0	0	0	1	37	0	38	69
Total	7	0	8	15	0	104	10	114	8	0	1	9	3	166	0	169	307
06:00 PM	3	0	0	3	0	18	4	22	2	0	3	5	0	25	0	25	55
06:15 PM	1	0	2	3	0	21	3	24	1	0	0	1	2	21	0	23	51
06:30 PM	2	0	0	2	0	17	1	18	1	0	0	1	0	24	0	24	45
06:45 PM	0	0	0	0	0	11	0	11	1	0	0	1	0	22	0	22	34
Total	6	0	2	8	0	67	8	75	5	0	3	8	2	92	0	94	185
Grand Total	89	0	80	169	2	946	67	1015	103	3	51	157	28	1291	0	1319	2660
Apprch %	52.7	0	47.3		0.2	93.2	6.6		65.6	1.9	32.5		2.1	97.9	0		
Total %	3.3	0	3	6.4	0.1	35.6	2.5	38.2	3.9	0.1	1.9	5.9	1.1	48.5	0	49.6	

	Dory Lane Southbound				Avenida Encinas Westbound				Meridian Way Northbound				Avenida Encinas Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	5	0	1	6	0	24	4	28	1	0	1	2	3	43	0	46	82
04:45 PM	3	0	2	5	0	34	1	35	2	0	2	4	2	39	0	41	85
05:00 PM	2	0	4	6	0	26	1	27	3	0	0	3	1	41	0	42	78
05:15 PM	2	0	3	5	0	30	0	30	2	0	1	3	1	53	0	54	92
Total Volume	12	0	10	22	0	114	6	120	8	0	4	12	7	176	0	183	337
% App. Total	54.5	0	45.5		0	95	5		66.7	0	33.3		3.8	96.2	0		
PHF	.600	.000	.625	.917	.000	.838	.375	.857	.667	.000	.500	.750	.583	.830	.000	.847	.916

City of Carlsbad
N/S: Dory Lane/Meridian Way
E/W: Avenida Encinas
Weather: Clear

File Name : 04_CAR_Dory_Ave E VEH
Site Code : 23222185
Start Date : 3/9/2022
Page No : 3



Peak Hour Analysis From 07:00 AM to 06:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				04:30 PM				07:00 AM				04:30 PM			
+0 mins.	2	0	7	9	0	24	4	28	5	0	2	7	3	43	0	46
+15 mins.	7	0	3	10	0	34	1	35	5	0	1	6	2	39	0	41
+30 mins.	2	0	1	3	0	26	1	27	5	0	1	6	1	41	0	42
+45 mins.	1	0	5	6	0	30	0	30	1	0	4	5	1	53	0	54
Total Volume	12	0	16	28	0	114	6	120	16	0	8	24	7	176	0	183
% App. Total	42.9	0	57.1		0	95	5		66.7	0	33.3		3.8	96.2	0	
PHF	.429	.000	.571	.700	.000	.838	.375	.857	.800	.000	.500	.857	.583	.830	.000	.847

Location: Carlsbad
 N/S: Dory Lane/Meridian Way
 E/W: Avenida Encinas



Date: 3/9/2022
 Day Wednesday

PEDESTRIANS

Time	North Leg Dory Lane	East Leg Avenida Encinas	South Leg Meridian Way	West Leg Avenida Encinas	TOTAL
7:00 AM	2	0	0	0	2
7:15 AM	7	0	0	0	7
7:30 AM	0	0	1	0	1
7:45 AM	1	0	2	0	3
8:00 AM	0	0	2	0	2
8:15 AM	3	0	0	0	3
8:30 AM	2	0	2	0	4
8:45 AM	0	0	2	0	2
9:00 AM	0	0	2	0	2
9:15 AM	2	0	0	0	2
9:30 AM	0	0	3	0	3
9:45 AM	5	1	2	0	8
10:00 AM	0	0	1	0	1
10:15 AM	3	0	1	0	4
10:30 AM	1	0	1	0	2
10:45 AM	2	0	3	0	5
11:00 AM	4	0	0	0	4
11:15 AM	2	0	0	0	2
11:30 AM	1	0	0	0	1
11:45 AM	2	0	1	0	3
12:00 PM	2	0	1	0	3
12:15 PM	1	0	1	0	2
12:30 PM	0	1	1	0	2
12:45 PM	5	0	1	0	6
1:00 PM	2	0	0	0	2
1:15 PM	1	1	0	0	2
1:30 PM	1	0	2	0	3
1:45 PM	3	0	2	0	5
2:00 PM	3	1	2	0	6
2:15 PM	1	0	0	0	1
2:30 PM	0	0	0	0	0
2:45 PM	0	0	0	0	0
3:00 PM	0	0	3	0	3
3:15 PM	1	0	5	0	6
3:30 PM	2	0	0	0	2
3:45 PM	0	0	0	0	0
4:00 PM	3	0	2	0	5
4:15 PM	3	0	3	0	6
4:30 PM	6	0	2	0	8
4:45 PM	4	0	4	0	8
5:00 PM	2	0	0	0	2
5:15 PM	1	0	1	0	2
5:30 PM	2	0	1	0	3
5:45 PM	4	0	1	0	5
6:00 PM	2	0	0	0	2
6:15 PM	2	0	0	0	2
6:30 PM	0	0	0	0	0
6:45 PM	0	0	0	0	0
TOTAL VOLUMES:	88	4	55	0	147

Location: Carlsbad
 N/S: Dory Lane/Meridian Way
 E/W: Avenida Encinas

Date: 3/9/2022
 Day: Wednesday



BICYCLES

	Southbound Dory Lane/Meridian Way			Westbound Avenida Encinas			Northbound Dory Lane/Meridian Way			Eastbound Avenida Encinas			
	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	2	0	0	0	2
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	1	0	1
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	1	0	0	0	1	0	1	0	0	0	1	0	4
9:15 AM	0	0	0	0	1	0	1	0	0	0	1	0	3
9:30 AM	0	0	0	0	2	0	0	0	1	0	1	0	4
9:45 AM	0	0	0	0	0	0	2	0	0	0	3	0	5
10:00 AM	0	0	0	0	2	1	0	0	0	0	1	0	4
10:15 AM	0	0	5	1	0	0	0	0	0	0	0	0	6
10:30 AM	0	0	0	0	2	0	0	0	0	0	2	0	4
10:45 AM	0	0	0	0	6	0	0	0	0	0	6	0	12
11:00 AM	0	0	0	0	1	0	0	0	0	0	1	0	2
11:15 AM	0	0	0	0	0	1	0	0	0	0	1	0	2
11:30 AM	0	0	1	0	0	0	0	0	0	0	1	0	2
11:45 AM	0	0	0	0	0	0	0	0	0	0	3	0	3
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	2	0	0	0	0	0	4	0	6
12:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	1	0	0	0	0	0	2	0	3
1:15 PM	0	0	0	0	0	0	0	0	0	0	3	0	3
1:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
1:45 PM	0	0	0	0	1	0	0	0	0	0	2	0	3
2:00 PM	0	0	0	0	2	0	0	0	0	0	0	0	2
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	1	0	0	0	0	0	1	1	3
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
3:30 PM	0	0	0	0	2	0	0	0	0	0	4	0	6
3:45 PM	0	0	1	0	0	0	0	0	0	0	1	0	2
4:00 PM	0	0	0	0	1	0	0	0	0	1	0	0	2
4:15 PM	0	0	0	0	1	0	0	0	0	0	1	0	2
4:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
5:00 PM	0	0	0	0	2	0	0	0	0	0	0	0	2
5:15 PM	0	0	1	0	0	0	0	0	0	1	3	0	5
5:30 PM	0	0	0	0	0	0	0	0	0	1	2	0	3
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	1	0	8	1	31	2	4	0	3	3	50	1	104

City of Carlsbad
N/S: Portage Way/Marlin Lane
E/W: Avenida Encinas
Weather: Clear

File Name : 05_CAR_Port_Ave E VEH
Site Code : 23222185
Start Date : 3/9/2022
Page No : 1

Groups Printed- Total Volume

	Portage Way Southbound				Avenida Encinas Westbound				Marlin Lane Northbound				Avenida Encinas Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	3	0	2	5	0	7	0	7	0	0	6	6	1	7	0	8	26
07:15 AM	10	0	5	15	0	11	6	17	1	0	2	3	2	8	0	10	45
07:30 AM	19	0	6	25	0	12	2	14	0	0	5	5	2	16	0	18	62
07:45 AM	26	0	7	33	0	6	2	8	0	0	5	5	7	20	0	27	73
Total	58	0	20	78	0	36	10	46	1	0	18	19	12	51	0	63	206
08:00 AM	14	0	5	19	0	12	17	29	0	1	14	15	4	12	0	16	79
08:15 AM	10	0	4	14	0	6	8	14	0	0	3	3	3	16	0	19	50
08:30 AM	13	0	8	21	0	16	5	21	1	0	1	2	4	17	0	21	65
08:45 AM	9	0	3	12	0	19	5	24	0	0	2	2	6	21	0	27	65
Total	46	0	20	66	0	53	35	88	1	1	20	22	17	66	0	83	259
09:00 AM	11	0	2	13	0	21	10	31	0	0	1	1	2	26	0	28	73
09:15 AM	7	0	5	12	0	16	7	23	3	0	4	7	6	19	0	25	67
09:30 AM	6	0	2	8	1	19	0	20	0	0	2	2	1	10	0	11	41
09:45 AM	7	0	1	8	0	11	9	20	2	0	2	4	2	27	0	29	61
Total	31	0	10	41	1	67	26	94	5	0	9	14	11	82	0	93	242
10:00 AM	2	0	6	8	0	10	9	19	3	0	0	3	1	19	0	20	50
10:15 AM	13	0	2	15	0	9	6	15	1	0	0	1	6	22	0	28	59
10:30 AM	7	0	4	11	0	16	5	21	2	0	3	5	4	24	0	28	65
10:45 AM	10	0	3	13	0	14	9	23	1	0	0	1	5	14	0	19	56
Total	32	0	15	47	0	49	29	78	7	0	3	10	16	79	0	95	230
11:00 AM	7	0	4	11	0	20	4	24	0	0	1	1	2	25	0	27	63
11:15 AM	2	0	0	2	0	15	5	20	2	0	1	3	4	26	0	30	55
11:30 AM	5	0	3	8	0	14	3	17	0	0	1	1	1	25	0	26	52
11:45 AM	9	0	1	10	0	24	10	34	0	0	2	2	3	24	0	27	73
Total	23	0	8	31	0	73	22	95	2	0	5	7	10	100	0	110	243
12:00 PM	5	0	2	7	0	23	5	28	0	0	6	6	4	25	0	29	70
12:15 PM	7	0	3	10	0	16	5	21	2	0	3	5	3	28	0	31	67
12:30 PM	8	0	3	11	1	18	7	26	1	0	1	2	1	21	0	22	61
12:45 PM	10	0	2	12	0	12	10	22	3	0	1	4	2	24	0	26	64
Total	30	0	10	40	1	69	27	97	6	0	11	17	10	98	0	108	262
01:00 PM	7	0	7	14	0	22	9	31	1	0	1	2	3	35	0	38	85
01:15 PM	7	0	1	8	0	15	8	23	0	0	1	1	8	31	0	39	71
01:30 PM	8	0	3	11	0	23	10	33	0	0	2	2	4	27	0	31	77
01:45 PM	5	0	3	8	0	13	7	20	1	1	3	5	4	26	0	30	63
Total	27	0	14	41	0	73	34	107	2	1	7	10	19	119	0	138	296
02:00 PM	6	0	3	9	0	17	6	23	1	0	4	5	4	34	0	38	75
02:15 PM	14	0	3	17	0	18	7	25	1	0	5	6	6	23	0	29	77
02:30 PM	8	0	0	8	0	13	10	23	0	0	5	5	3	38	0	41	77
02:45 PM	11	0	3	14	0	12	33	45	2	0	7	9	5	28	0	33	101
Total	39	0	9	48	0	60	56	116	4	0	21	25	18	123	0	141	330
03:00 PM	3	0	6	9	0	26	7	33	1	0	1	2	5	31	0	36	80
03:15 PM	13	0	4	17	0	16	14	30	1	0	4	5	5	30	0	35	87
03:30 PM	7	0	0	7	0	18	5	23	3	0	3	6	1	34	0	35	71
03:45 PM	13	0	5	18	2	18	8	28	1	0	3	4	5	33	0	38	88
Total	36	0	15	51	2	78	34	114	6	0	11	17	16	128	0	144	326
04:00 PM	6	0	1	7	1	22	4	27	0	1	2	3	8	38	0	46	83

City of Carlsbad
N/S: Portage Way/Marlin Lane
E/W: Avenida Encinas
Weather: Clear

File Name : 05_CAR_Port_Ave E VEH
Site Code : 23222185
Start Date : 3/9/2022
Page No : 2

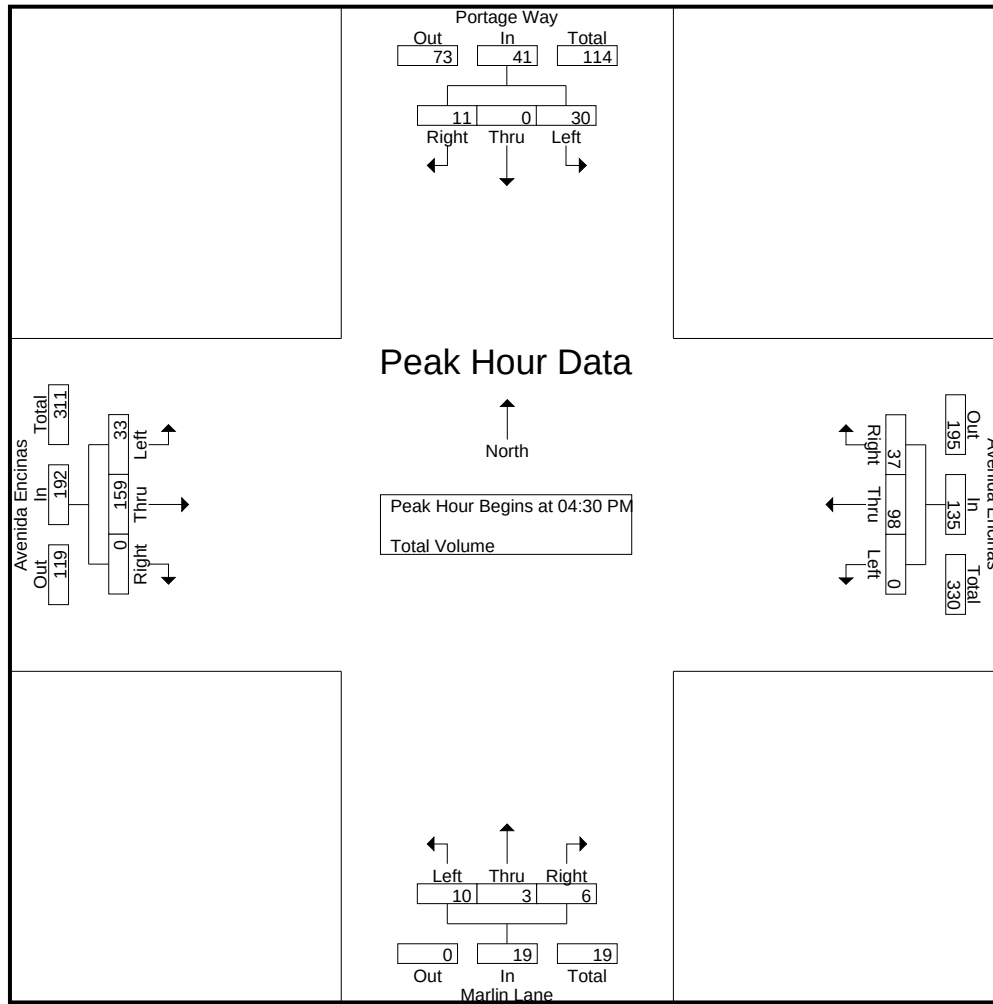
Groups Printed- Total Volume

	Portage Way Southbound				Avenida Encinas Westbound				Marlin Lane Northbound				Avenida Encinas Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:15 PM	8	0	2	10	0	25	11	36	2	1	3	6	6	39	0	45	97
04:30 PM	7	0	2	9	0	24	13	37	1	1	1	3	10	37	0	47	96
04:45 PM	9	0	3	12	0	28	10	38	5	0	2	7	6	40	0	46	103
Total	30	0	8	38	1	99	38	138	8	3	8	19	30	154	0	184	379
05:00 PM	6	0	2	8	0	23	8	31	1	1	2	4	6	37	0	43	86
05:15 PM	8	0	4	12	0	23	6	29	3	1	1	5	11	45	0	56	102
05:30 PM	11	0	2	13	0	26	19	45	0	0	0	0	5	33	0	38	96
05:45 PM	8	0	3	11	0	25	12	37	1	0	3	4	9	29	0	38	90
Total	33	0	11	44	0	97	45	142	5	2	6	13	31	144	0	175	374
06:00 PM	7	0	1	8	0	21	4	25	1	1	2	4	2	28	0	30	67
06:15 PM	13	0	4	17	0	19	5	24	0	0	0	0	4	17	0	21	62
06:30 PM	9	0	1	10	1	17	11	29	0	1	0	1	7	20	0	27	67
06:45 PM	2	0	1	3	0	10	13	23	0	0	4	4	5	17	0	22	52
Total	31	0	7	38	1	67	33	101	1	2	6	9	18	82	0	100	248
Grand Total	416	0	147	563	6	821	389	1216	48	9	125	182	208	1226	0	1434	3395
Apprch %	73.9	0	26.1		0.5	67.5	32		26.4	4.9	68.7		14.5	85.5	0		
Total %	12.3	0	4.3	16.6	0.2	24.2	11.5	35.8	1.4	0.3	3.7	5.4	6.1	36.1	0	42.2	

	Portage Way Southbound				Avenida Encinas Westbound				Marlin Lane Northbound				Avenida Encinas Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	7	0	2	9	0	24	13	37	1	1	1	3	10	37	0	47	96
04:45 PM	9	0	3	12	0	28	10	38	5	0	2	7	6	40	0	46	103
05:00 PM	6	0	2	8	0	23	8	31	1	1	2	4	6	37	0	43	86
05:15 PM	8	0	4	12	0	23	6	29	3	1	1	5	11	45	0	56	102
Total Volume	30	0	11	41	0	98	37	135	10	3	6	19	33	159	0	192	387
% App. Total	73.2	0	26.8		0	72.6	27.4		52.6	15.8	31.6		17.2	82.8	0		
PHF	.833	.000	.688	.854	.000	.875	.712	.888	.500	.750	.750	.679	.750	.883	.000	.857	.939

City of Carlsbad
N/S: Portage Way/Marlin Lane
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Weather: Clear

File Name : 05_CAR_Port_Ave E VEH
Site Code : 23222185
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Peak Hour Analysis From 07:00 AM to 06:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				04:45 PM				07:15 AM				04:30 PM			
+0 mins.	10	0	5	15	0	28	10	38	1	0	2	3	10	37	0	47
+15 mins.	19	0	6	25	0	23	8	31	0	0	5	5	6	40	0	46
+30 mins.	26	0	7	33	0	23	6	29	0	0	5	5	6	37	0	43
+45 mins.	14	0	5	19	0	26	19	45	0	1	14	15	11	45	0	56
Total Volume	69	0	23	92	0	100	43	143	1	1	26	28	33	159	0	192
% App. Total	75	0	25		0	69.9	30.1		3.6	3.6	92.9		17.2	82.8	0	
PHF	.663	.000	.821	.697	.000	.893	.566	.794	.250	.250	.464	.467	.750	.883	.000	.857

Location: Carlsbad
 N/S: Portage Way/Marlin Lane
 E/W: Avenida Encinas



Date: 3/9/2022
 Day Wednesday

PEDESTRIANS

Time	North Leg Portage Way	East Leg Avenida Encinas	South Leg Marlin Lane	West Leg Avenida Encinas	TOTAL
7:00 AM	1	0	1	0	2
7:15 AM	1	0	0	2	3
7:30 AM	0	0	2	2	4
7:45 AM	2	0	3	1	6
8:00 AM	0	0	1	0	1
8:15 AM	3	0	2	0	5
8:30 AM	1	0	0	1	2
8:45 AM	1	0	4	4	9
9:00 AM	5	0	0	5	10
9:15 AM	2	0	0	0	2
9:30 AM	1	0	3	1	5
9:45 AM	3	1	4	1	9
10:00 AM	0	0	2	0	2
10:15 AM	2	0	1	1	4
10:30 AM	0	0	2	2	4
10:45 AM	0	0	0	0	0
11:00 AM	4	0	1	3	8
11:15 AM	2	0	0	0	2
11:30 AM	0	0	0	2	2
11:45 AM	1	2	2	3	8
12:00 PM	2	0	1	0	3
12:15 PM	0	0	2	2	4
12:30 PM	4	0	0	1	5
12:45 PM	0	0	1	1	2
1:00 PM	2	1	0	1	4
1:15 PM	0	0	1	2	3
1:30 PM	1	0	0	0	1
1:45 PM	2	0	3	0	5
2:00 PM	1	0	2	0	3
2:15 PM	0	0	0	1	1
2:30 PM	0	0	0	0	0
2:45 PM	0	0	1	5	6
3:00 PM	0	0	2	0	2
3:15 PM	0	0	2	0	2
3:30 PM	1	0	0	0	1
3:45 PM	0	0	1	0	1
4:00 PM	1	0	1	4	6
4:15 PM	0	0	2	10	12
4:30 PM	6	0	1	6	13
4:45 PM	3	0	4	1	8
5:00 PM	1	2	0	2	5
5:15 PM	0	0	1	2	3
5:30 PM	4	0	1	0	5
5:45 PM	4	0	1	0	5
6:00 PM	1	1	0	1	3
6:15 PM	0	0	0	0	0
6:30 PM	0	0	0	0	0
6:45 PM	0	0	0	0	0
TOTAL VOLUMES:	62	7	55	67	191

Location: Carlsbad
 N/S: Portage Way/Marlin Lane
 E/W: Avenida Encinas

Date: 3/9/2022
 Day: Wednesday



BICYCLES

	Southbound Portage Way/Marlin Lane			Westbound Avenida Encinas			Northbound Portage Way/Marlin Lane			Eastbound Avenida Encinas			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
7:15 AM	0	1	0	0	0	0	0	1	0	0	2	0	4
7:30 AM	5	0	0	0	0	0	0	0	0	0	0	0	5
7:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
8:00 AM	0	1	0	0	0	1	0	0	0	0	0	0	2
8:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	1	0	0	0	0	1	2	0	4
9:15 AM	0	0	0	0	0	0	1	0	0	0	1	0	2
9:30 AM	0	0	0	0	2	0	0	0	0	1	1	0	4
9:45 AM	0	0	0	0	0	0	0	0	0	0	3	0	3
10:00 AM	0	0	1	0	2	0	0	0	0	0	1	0	4
10:15 AM	0	0	1	0	0	0	0	0	0	0	0	0	1
10:30 AM	0	0	0	0	2	0	0	0	0	0	2	0	4
10:45 AM	0	0	0	0	3	0	3	0	0	5	1	0	12
11:00 AM	0	0	0	0	1	0	0	0	0	0	1	0	2
11:15 AM	0	0	1	0	0	0	0	0	0	0	1	0	2
11:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	3	3
12:00 PM	1	0	0	0	0	0	0	0	0	0	0	0	1
12:15 PM	2	0	0	0	2	1	0	0	0	0	4	0	9
12:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
12:45 PM	0	0	0	0	0	2	0	0	0	0	0	0	2
1:00 PM	1	0	0	0	1	0	0	0	0	1	1	0	4
1:15 PM	0	0	0	0	0	1	0	0	0	0	3	0	4
1:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
1:45 PM	0	0	0	0	1	0	0	0	0	0	2	0	3
2:00 PM	0	0	1	0	1	0	0	0	0	0	0	0	2
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	1	3	0	0	0	0	1	0	5
2:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	1
3:00 PM	0	1	0	0	0	0	0	0	1	0	0	0	2
3:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
3:30 PM	0	0	0	0	2	0	0	0	0	0	4	0	6
3:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
4:00 PM	0	0	0	0	0	0	0	0	1	0	0	0	1
4:15 PM	0	0	1	0	0	0	0	0	0	1	0	0	2
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	2	0	0	0	0	0	1	1	1	0	5
5:00 PM	1	0	0	0	0	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	1	0	0	0	2	1	0	4
5:30 PM	0	0	0	0	0	0	0	0	0	1	1	0	2
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
6:15 PM	0	0	2	0	0	0	0	0	0	0	0	0	2
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	10	3	9	0	22	10	4	2	3	13	39	3	118

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

City of Carlsbad
N/S: Avenida Encinas
E/W: San Carlos Street
Weather: Clear

File Name : 06_CAR_Ave E_San C VEH
Site Code : 23222185
Start Date : 3/9/2022
Page No : 1

Groups Printed- Total Volume

	Avenida Encinas Southbound				Poinsettia Village Driveway Westbound				Avenida Encinas Northbound				San Carlos Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	28	32	1	61	0	0	41	41	0	36	3	39	0	0	0	0	141
07:15 AM	35	33	0	68	0	0	19	19	0	51	0	51	0	0	0	0	138
07:30 AM	38	30	0	68	0	0	21	21	0	66	1	67	0	0	0	0	156
07:45 AM	53	60	0	113	0	0	29	29	0	85	0	85	0	0	0	0	227
Total	154	155	1	310	0	0	110	110	0	238	4	242	0	0	0	0	662
08:00 AM	42	58	0	100	0	0	27	27	0	95	1	96	0	0	0	0	223
08:15 AM	48	64	1	113	0	0	22	22	0	68	2	70	0	0	0	0	205
08:30 AM	75	58	4	137	0	0	31	31	0	58	3	61	0	0	0	0	229
08:45 AM	61	64	0	125	0	0	35	35	0	81	1	82	0	0	0	0	242
Total	226	244	5	475	0	0	115	115	0	302	7	309	0	0	0	0	899
09:00 AM	53	58	1	112	0	0	29	29	0	46	1	47	0	0	1	1	189
09:15 AM	60	60	2	122	0	0	35	35	0	61	6	67	0	0	0	0	224
09:30 AM	46	50	1	97	1	0	43	44	0	85	0	85	0	0	0	0	226
09:45 AM	43	66	0	109	0	0	37	37	0	83	4	87	0	0	0	0	233
Total	202	234	4	440	1	0	144	145	0	275	11	286	0	0	1	1	872
10:00 AM	50	80	2	132	0	0	28	28	0	62	2	64	0	0	1	1	225
10:15 AM	76	59	1	136	0	0	33	33	0	80	2	82	0	0	1	1	252
10:30 AM	51	68	1	120	0	0	46	46	0	96	1	97	0	0	0	0	263
10:45 AM	66	71	2	139	0	0	37	37	0	98	6	104	0	0	1	1	281
Total	243	278	6	527	0	0	144	144	0	336	11	347	0	0	3	3	1021
11:00 AM	68	72	1	141	0	0	37	37	0	80	5	85	0	0	1	1	264
11:15 AM	71	76	1	148	0	0	49	49	0	64	4	68	0	0	0	0	265
11:30 AM	90	80	2	172	0	0	50	50	0	102	2	104	0	0	0	0	326
11:45 AM	95	76	2	173	0	0	53	53	0	97	5	102	0	0	0	0	328
Total	324	304	6	634	0	0	189	189	0	343	16	359	0	0	1	1	1183
12:00 PM	100	65	5	170	0	0	52	52	0	106	4	110	0	0	0	0	332
12:15 PM	78	69	0	147	0	0	65	65	0	111	6	117	0	0	0	0	329
12:30 PM	72	48	2	122	1	0	61	62	0	93	1	94	0	0	0	0	278
12:45 PM	90	79	2	171	0	0	62	62	0	103	4	107	0	0	0	0	340
Total	340	261	9	610	1	0	240	241	0	413	15	428	0	0	0	0	1279
01:00 PM	81	76	1	158	0	0	66	66	0	108	2	110	0	0	0	0	334
01:15 PM	72	68	1	141	0	0	52	52	0	92	1	93	0	0	0	0	286
01:30 PM	63	83	2	148	0	0	53	53	0	99	6	105	0	0	0	0	306
01:45 PM	66	85	1	152	0	0	59	59	0	95	3	98	0	0	0	0	309
Total	282	312	5	599	0	0	230	230	0	394	12	406	0	0	0	0	1235
02:00 PM	68	57	1	126	0	0	49	49	0	93	1	94	0	0	0	0	269
02:15 PM	66	68	0	134	0	0	54	54	0	119	1	120	0	0	0	0	308
02:30 PM	54	94	4	152	0	0	52	52	0	100	5	105	0	0	0	0	309
02:45 PM	70	98	2	170	0	0	44	44	0	102	5	107	0	0	0	0	321
Total	258	317	7	582	0	0	199	199	0	414	12	426	0	0	0	0	1207
03:00 PM	71	64	2	137	0	0	58	58	0	93	2	95	0	0	0	0	290
03:15 PM	82	77	0	159	0	0	47	47	0	99	2	101	0	0	0	0	307
03:30 PM	55	67	1	123	0	0	52	52	0	92	6	98	0	0	0	0	273
03:45 PM	66	96	2	164	0	0	38	38	0	122	4	126	0	0	0	0	328
Total	274	304	5	583	0	0	195	195	0	406	14	420	0	0	0	0	1198
04:00 PM	85	73	5	163	0	0	46	46	0	107	3	110	0	0	2	2	321

City of Carlsbad
N/S: Avenida Encinas
E/W: San Carlos Street
Weather: Clear

File Name : 06_CAR_Ave E_San C_VEH
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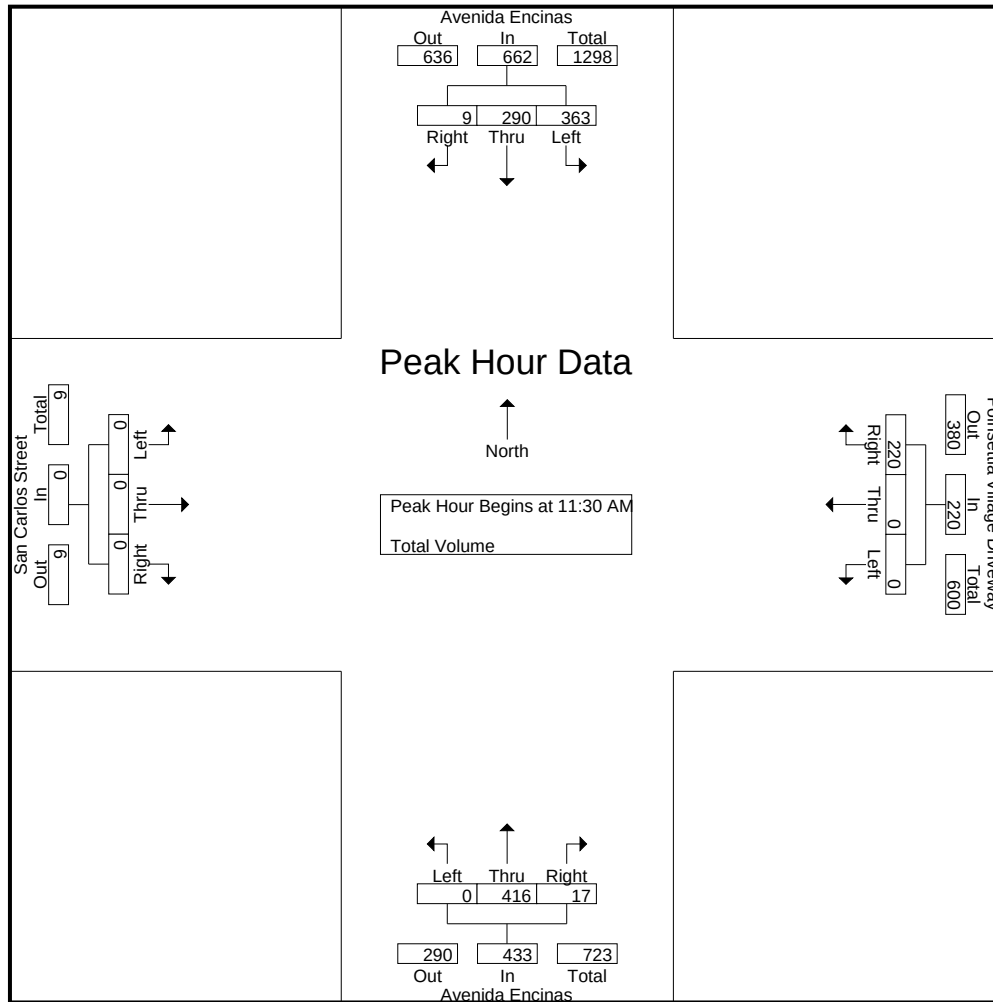
Groups Printed- Total Volume

	Avenida Encinas Southbound				Poinsettia Village Driveway Westbound				Avenida Encinas Northbound				San Carlos Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:15 PM	75	87	0	162	0	0	51	51	0	120	3	123	0	0	0	0	336
04:30 PM	57	74	1	132	0	0	55	55	0	106	2	108	0	0	0	0	295
04:45 PM	65	66	0	131	0	0	46	46	0	98	2	100	0	0	0	0	277
Total	282	300	6	588	0	0	198	198	0	431	10	441	0	0	2	2	1229
05:00 PM	67	74	1	142	0	0	50	50	0	98	1	99	0	0	0	0	291
05:15 PM	86	73	3	162	0	0	54	54	0	101	4	105	0	0	0	0	321
05:30 PM	81	85	2	168	0	0	64	64	0	103	4	107	0	0	0	0	339
05:45 PM	57	79	1	137	0	0	54	54	0	104	2	106	0	0	0	0	297
Total	291	311	7	609	0	0	222	222	0	406	11	417	0	0	0	0	1248
06:00 PM	63	76	1	140	0	0	58	58	0	122	2	124	0	0	0	0	322
06:15 PM	62	51	1	114	0	0	41	41	0	91	1	92	0	0	0	0	247
06:30 PM	47	52	0	99	0	0	53	53	0	72	3	75	0	0	0	0	227
06:45 PM	51	49	0	100	0	0	41	41	0	67	2	69	0	0	0	0	210
Total	223	228	2	453	0	0	193	193	0	352	8	360	0	0	0	0	1006
Grand Total	3099	3248	63	6410	2	0	2179	2181	0	4310	131	4441	0	0	7	7	13039
Apprch %	48.3	50.7	1		0.1	0	99.9		0	97.1	2.9		0	0	100		
Total %	23.8	24.9	0.5	49.2	0	0	16.7	16.7	0	33.1	1	34.1	0	0	0.1	0.1	

	Avenida Encinas Southbound				Poinsettia Village Driveway Westbound				Avenida Encinas Northbound				San Carlos Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 11:30 AM																	
11:30 AM	90	80	2	172	0	0	50	50	0	102	2	104	0	0	0	0	326
11:45 AM	95	76	2	173	0	0	53	53	0	97	5	102	0	0	0	0	328
12:00 PM	100	65	5	170	0	0	52	52	0	106	4	110	0	0	0	0	332
12:15 PM	78	69	0	147	0	0	65	65	0	111	6	117	0	0	0	0	329
Total Volume	363	290	9	662	0	0	220	220	0	416	17	433	0	0	0	0	1315
% App. Total	54.8	43.8	1.4		0	0	100		0	96.1	3.9		0	0	0		
PHF	.908	.906	.450	.957	.000	.000	.846	.846	.000	.937	.708	.925	.000	.000	.000	.000	.990

City of Carlsbad
N/S: Avenida Encinas
E/W: San Carlos Street
Weather: Clear

File Name : 06_CAR_Ave E_San C VEH
Site Code : 23222185
Start Date : 3/9/2022
Page No : 3



Peak Hour Analysis From 07:00 AM to 06:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	11:15 AM				12:15 PM				03:45 PM				10:00 AM			
+0 mins.	71	76	1	148	0	0	65	65	0	122	4	126	0	0	1	1
+15 mins.	90	80	2	172	1	0	61	62	0	107	3	110	0	0	1	1
+30 mins.	95	76	2	173	0	0	62	62	0	120	3	123	0	0	0	0
+45 mins.	100	65	5	170	0	0	66	66	0	106	2	108	0	0	1	1
Total Volume	356	297	10	663	1	0	254	255	0	455	12	467	0	0	3	3
% App. Total	53.7	44.8	1.5		0.4	0	99.6		0	97.4	2.6		0	0	100	
PHF	.890	.928	.500	.958	.250	.000	.962	.966	.000	.932	.750	.927	.000	.000	.750	.750

Location: Carlsbad
 N/S: Avenida Encinas
 E/W: San Carlos Street



Date: 3/9/2022
 Day Wednesday

PEDESTRIANS

Time	North Leg Avenida Encinas	East Leg San Carlos Street	South Leg Avenida Encinas	West Leg Poinsettia Village Driveway	TOTAL
7:00 AM	0	1	0	2	3
7:15 AM	0	1	0	1	2
7:30 AM	0	0	0	2	2
7:45 AM	0	2	0	4	6
8:00 AM	0	2	1	4	7
8:15 AM	0	2	2	1	5
8:30 AM	0	0	0	2	2
8:45 AM	0	3	1	2	6
9:00 AM	0	1	0	0	1
9:15 AM	0	2	0	2	4
9:30 AM	0	2	0	7	9
9:45 AM	0	0	0	3	3
10:00 AM	0	0	1	6	7
10:15 AM	0	0	1	5	6
10:30 AM	0	0	0	6	6
10:45 AM	0	0	1	4	5
11:00 AM	0	0	0	5	5
11:15 AM	0	0	0	2	2
11:30 AM	0	1	0	5	6
11:45 AM	0	0	0	1	1
12:00 PM	0	1	0	0	1
12:15 PM	0	1	0	2	3
12:30 PM	0	0	1	1	2
12:45 PM	0	1	0	2	3
1:00 PM	0	0	0	4	4
1:15 PM	0	0	0	3	3
1:30 PM	0	1	1	1	3
1:45 PM	0	1	0	0	1
2:00 PM	0	0	0	1	1
2:15 PM	0	0	0	3	3
2:30 PM	0	0	1	1	2
2:45 PM	2	2	1	1	6
3:00 PM	0	0	0	2	2
3:15 PM	0	0	0	1	1
3:30 PM	0	0	2	5	7
3:45 PM	0	0	1	2	3
4:00 PM	0	0	1	4	5
4:15 PM	0	0	0	3	3
4:30 PM	0	0	1	0	1
4:45 PM	3	0	0	1	4
5:00 PM	0	2	1	1	4
5:15 PM	1	0	0	2	3
5:30 PM	0	2	0	0	2
5:45 PM	0	0	0	1	1
6:00 PM	0	1	0	2	3
6:15 PM	0	0	0	0	0
6:30 PM	0	0	0	0	0
6:45 PM	0	0	0	0	0
TOTAL VOLUMES:	6	29	17	107	159

Location: Carlsbad
N/S: Avenida Encinas
E/W: San Carlos Street

Date: 3/9/2022
Day: Wednesday



BICYCLES

	Southbound Avenida Encinas			Westbound San Carlos Street			Northbound Avenida Encinas			Eastbound Poinsettia Village Driveway			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
7:15 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
7:30 AM	1	0	0	0	0	0	0	5	0	0	0	0	6
7:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
8:00 AM	1	0	0	0	0	0	0	0	0	0	0	0	1
8:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	1	0	0	0	0	1	0	0	0	0	0	0	2
9:00 AM	0	0	0	0	0	2	0	1	0	0	0	1	4
9:15 AM	0	2	0	0	0	0	0	3	0	0	0	0	5
9:30 AM	0	1	0	0	0	0	0	1	0	0	0	0	2
9:45 AM	1	0	0	0	0	1	0	1	0	0	0	0	3
10:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	2
10:15 AM	1	0	0	0	0	2	0	0	0	0	0	0	3
10:30 AM	0	4	0	0	0	1	0	2	0	0	0	0	7
10:45 AM	0	1	0	0	0	0	0	1	0	0	0	0	2
11:00 AM	2	0	0	0	0	0	0	0	0	0	0	0	2
11:15 AM	0	1	0	0	0	0	0	1	0	0	0	0	2
11:30 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
11:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	2
12:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
12:15 PM	0	0	0	0	0	1	0	0	0	0	0	0	1
12:30 PM	0	0	0	0	0	0	0	3	0	0	0	0	3
12:45 PM	0	1	0	0	0	0	0	1	0	0	0	0	2
1:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
1:15 PM	0	0	0	0	0	0	0	2	0	0	0	0	2
1:30 PM	1	2	0	0	0	0	0	0	0	0	0	0	3
1:45 PM	0	0	0	0	0	0	0	3	0	0	0	0	3
2:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
2:15 PM	0	1	0	0	0	2	0	0	0	0	0	0	3
2:30 PM	2	3	0	0	0	0	0	0	0	0	0	0	5
2:45 PM	1	3	0	0	0	1	0	0	0	0	0	0	5
3:00 PM	1	0	0	0	0	1	0	0	0	0	0	0	2
3:15 PM	2	1	0	0	0	0	0	2	0	0	0	0	5
3:30 PM	0	2	0	0	0	2	0	0	0	0	0	0	4
3:45 PM	0	1	0	0	0	0	0	2	0	0	0	0	3
4:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
4:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	2
4:30 PM	2	0	0	0	0	0	0	0	0	0	0	0	2
4:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	1
5:00 PM	1	1	0	0	0	1	0	0	0	0	0	0	3
5:15 PM	0	0	0	0	0	0	0	2	0	0	0	0	2
5:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	1	0	0	0	0	0	1	0	0	0	0	2
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	17	29	0	0	0	18	0	41	0	0	0	1	106

City of Carlsbad
N/S: Avenida Encinas
E/W: Embarcadero Lane
Weather: Clear

File Name : 07_CAR_Ave E_Embar VEH
Site Code : 23222185
Start Date : 3/9/2022
Page No : 1

Groups Printed- Total Volume

	Avenida Encinas Southbound				Volvo Cars Carlsbad Driveway Westbound				Avenida Encinas Northbound				Embarcadero Lane Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	22	1	23	0	0	0	0	5	21	0	26	0	0	3	3	52
07:15 AM	0	23	0	23	0	0	0	0	3	38	0	41	0	0	7	7	71
07:30 AM	2	22	2	26	0	0	0	0	2	35	0	37	2	0	16	18	81
07:45 AM	0	33	0	33	0	0	0	0	4	54	0	58	1	0	22	23	114
Total	2	100	3	105	0	0	0	0	14	148	0	162	3	0	48	51	318
08:00 AM	1	38	1	40	0	0	0	0	9	47	0	56	1	0	8	9	105
08:15 AM	0	52	16	68	0	0	0	0	17	41	0	58	0	0	7	7	133
08:30 AM	0	85	25	110	0	0	0	0	26	60	0	86	3	0	11	14	210
08:45 AM	0	34	0	34	0	0	0	0	8	52	0	60	5	0	9	14	108
Total	1	209	42	252	0	0	0	0	60	200	0	260	9	0	35	44	556
09:00 AM	0	30	0	30	0	0	0	0	1	46	2	49	2	0	2	4	83
09:15 AM	1	30	1	32	1	0	0	1	2	50	1	53	3	0	4	7	93
09:30 AM	2	31	1	34	2	0	0	2	4	41	1	46	2	0	4	6	88
09:45 AM	1	23	1	25	2	0	1	3	3	61	1	65	0	0	10	10	103
Total	4	114	3	121	5	0	1	6	10	198	5	213	7	0	20	27	367
10:00 AM	0	33	0	33	1	0	0	1	5	33	0	38	1	0	8	9	81
10:15 AM	0	31	0	31	0	0	0	0	2	44	0	46	0	0	3	3	80
10:30 AM	0	33	0	33	0	0	0	0	3	41	0	44	0	0	6	6	83
10:45 AM	1	31	0	32	0	0	0	0	6	40	0	46	1	0	5	6	84
Total	1	128	0	129	1	0	0	1	16	158	0	174	2	0	22	24	328
11:00 AM	1	33	1	35	2	0	1	3	5	44	1	50	1	0	9	10	98
11:15 AM	0	39	2	41	1	0	1	2	2	42	0	44	2	0	1	3	90
11:30 AM	1	40	0	41	0	0	2	2	8	46	2	56	2	0	6	8	107
11:45 AM	1	44	2	47	1	0	0	1	5	49	1	55	4	0	5	9	112
Total	3	156	5	164	4	0	4	8	20	181	4	205	9	0	21	30	407
12:00 PM	0	38	0	38	0	0	0	0	5	52	0	57	5	0	6	11	106
12:15 PM	0	41	1	42	0	0	1	1	2	31	1	34	0	0	7	7	84
12:30 PM	0	33	1	34	0	0	0	0	4	44	0	48	0	0	7	7	89
12:45 PM	1	39	1	41	0	0	1	1	5	54	0	59	0	0	6	6	107
Total	1	151	3	155	0	0	2	2	16	181	1	198	5	0	26	31	386
01:00 PM	2	50	3	55	0	0	1	1	3	41	0	44	0	0	5	5	105
01:15 PM	3	56	0	59	0	0	0	0	7	43	1	51	2	0	8	10	120
01:30 PM	0	35	0	35	1	0	1	2	2	32	1	35	1	0	6	7	79
01:45 PM	2	34	1	37	0	0	2	2	10	46	1	57	1	0	5	6	102
Total	7	175	4	186	1	0	4	5	22	162	3	187	4	0	24	28	406
02:00 PM	0	38	1	39	3	0	1	4	3	30	1	34	4	0	9	13	90
02:15 PM	1	58	12	71	0	1	0	1	21	50	0	71	1	0	9	10	153
02:30 PM	1	69	21	91	1	0	1	2	29	45	0	74	5	0	13	18	185
02:45 PM	0	49	5	54	0	0	1	1	12	73	0	85	1	0	6	7	147
Total	2	214	39	255	4	1	3	8	65	198	1	264	11	0	37	48	575
03:00 PM	0	46	3	49	0	0	0	0	6	64	2	72	0	0	7	7	128
03:15 PM	0	31	1	32	0	0	2	2	6	47	1	54	4	0	10	14	102
03:30 PM	0	53	1	54	1	0	1	2	8	74	1	83	2	0	4	6	145
03:45 PM	2	67	1	70	0	0	1	1	7	87	0	94	2	0	14	16	181
Total	2	197	6	205	1	0	4	5	27	272	4	303	8	0	35	43	556

City of Carlsbad
N/S: Avenida Encinas
E/W: Embarcadero Lane
Weather: Clear

File Name : 07_CAR_Ave E_Embar VEH
Site Code : 23222185
Start Date : 3/9/2022
Page No : 2

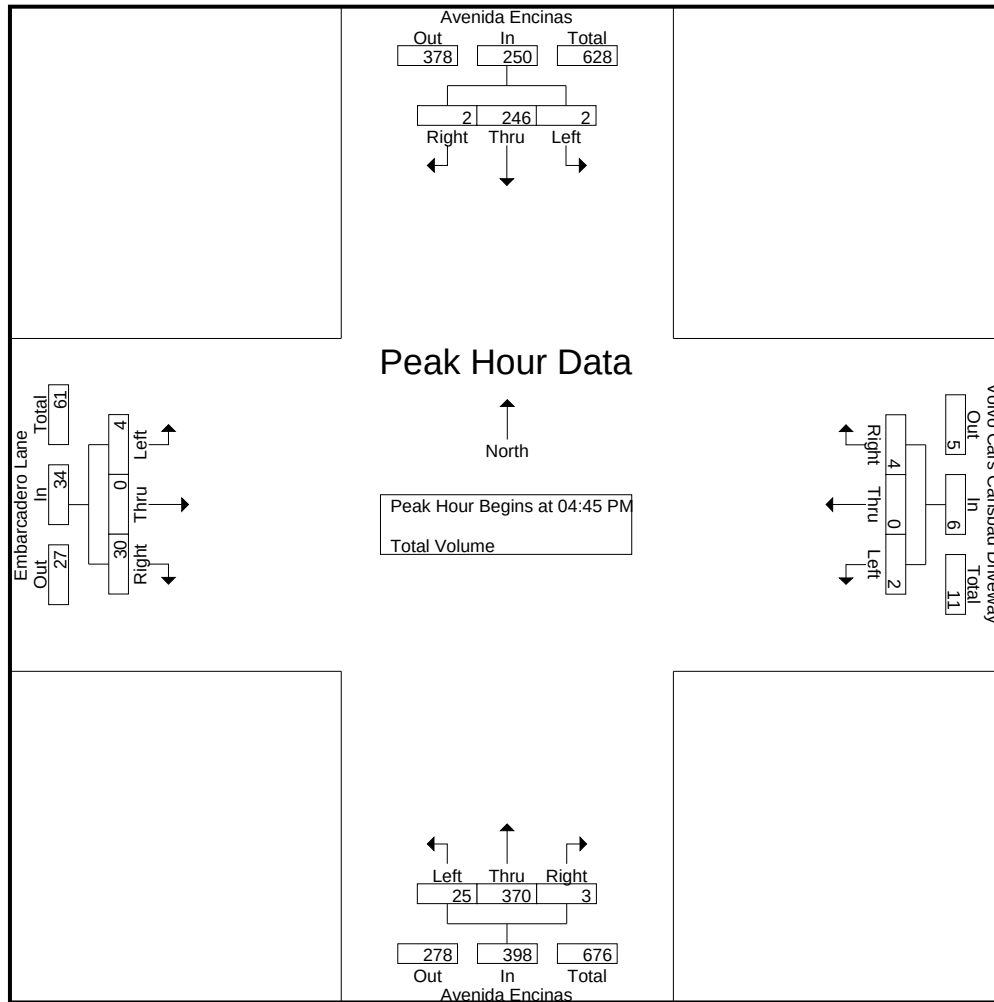
Groups Printed- Total Volume

	Avenida Encinas Southbound				Volvo Cars Carlsbad Driveway Westbound				Avenida Encinas Northbound				Embarcadero Lane Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	1	54	1	56	1	0	3	4	7	70	0	77	0	0	6	6	143
04:15 PM	1	58	0	59	0	0	0	0	6	70	0	76	1	0	8	9	144
04:30 PM	0	68	3	71	1	0	1	2	6	62	0	68	4	0	5	9	150
04:45 PM	0	49	1	50	0	0	0	0	10	107	0	117	0	0	2	2	169
Total	2	229	5	236	2	0	4	6	29	309	0	338	5	0	21	26	606
05:00 PM	2	63	0	65	2	0	2	4	4	86	2	92	2	0	14	16	177
05:15 PM	0	68	1	69	0	0	1	1	6	91	1	98	0	0	9	9	177
05:30 PM	0	66	0	66	0	0	1	1	5	86	0	91	2	0	5	7	165
05:45 PM	1	41	1	43	0	0	0	0	10	67	0	77	1	0	9	10	130
Total	3	238	2	243	2	0	4	6	25	330	3	358	5	0	37	42	649
06:00 PM	0	42	1	43	0	0	0	0	2	43	0	45	1	0	7	8	96
06:15 PM	0	40	0	40	1	0	0	1	5	36	0	41	2	0	8	10	92
06:30 PM	0	51	2	53	0	0	0	0	5	37	0	42	2	0	2	4	99
06:45 PM	0	29	0	29	0	0	1	1	6	22	0	28	3	0	6	9	67
Total	0	162	3	165	1	0	1	2	18	138	0	156	8	0	23	31	354
Grand Total	28	2073	115	2216	21	1	27	49	322	2475	21	2818	76	0	349	425	5508
Apprch %	1.3	93.5	5.2		42.9	2	55.1		11.4	87.8	0.7		17.9	0	82.1		
Total %	0.5	37.6	2.1	40.2	0.4	0	0.5	0.9	5.8	44.9	0.4	51.2	1.4	0	6.3	7.7	

	Avenida Encinas Southbound				Volvo Cars Carlsbad Driveway Westbound				Avenida Encinas Northbound				Embarcadero Lane Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	49	1	50	0	0	0	0	10	107	0	117	0	0	2	2	169
05:00 PM	2	63	0	65	2	0	2	4	4	86	2	92	2	0	14	16	177
05:15 PM	0	68	1	69	0	0	1	1	6	91	1	98	0	0	9	9	177
05:30 PM	0	66	0	66	0	0	1	1	5	86	0	91	2	0	5	7	165
Total Volume	2	246	2	250	2	0	4	6	25	370	3	398	4	0	30	34	688
% App. Total	0.8	98.4	0.8		33.3	0	66.7		6.3	93	0.8		11.8	0	88.2		
PHF	.250	.904	.500	.906	.250	.000	.500	.375	.625	.864	.375	.850	.500	.000	.536	.531	.972

City of Carlsbad
N/S: Avenida Encinas
E/W: Embarcadero Lane
Weather: Clear

File Name : 07_CAR_Ave E_Embar VEH
Site Code : 23222185
Start Date : 3/9/2022
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Peak Hour Analysis From 07:00 AM to 06:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	02:15 PM				01:30 PM				04:45 PM				07:15 AM			
+0 mins.	1	58	12	71	1	0	1	2	10	107	0	117	0	0	7	7
+15 mins.	1	69	21	91	0	0	2	2	4	86	2	92	2	0	16	18
+30 mins.	0	49	5	54	3	0	1	4	6	91	1	98	1	0	22	23
+45 mins.	0	46	3	49	0	1	0	1	5	86	0	91	1	0	8	9
Total Volume	2	222	41	265	4	1	4	9	25	370	3	398	4	0	53	57
% App. Total	0.8	83.8	15.5		44.4	11.1	44.4		6.3	93	0.8		7	0	93	
PHF	.500	.804	.488	.728	.333	.250	.500	.563	.625	.864	.375	.850	.500	.000	.602	.620

Location: Carlsbad
N/S: Avenida Encinas
E/W: Embarcadero Lane



Date: 3/9/2022
Day Wednesday

PEDESTRIANS

Time	North Leg Portage Way	East Leg Embarcadero Lane	South Leg Marlin Lane	West Leg Volvo Cars Driveway	TOTAL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	3	3
7:45 AM	0	0	0	3	3
8:00 AM	0	0	0	1	1
8:15 AM	0	1	0	0	1
8:30 AM	0	0	0	2	2
8:45 AM	0	1	0	2	3
9:00 AM	0	1	0	0	1
9:15 AM	0	0	0	2	2
9:30 AM	0	0	1	0	1
9:45 AM	0	1	0	2	3
10:00 AM	0	0	0	1	1
10:15 AM	1	1	0	3	5
10:30 AM	0	0	1	1	2
10:45 AM	0	0	0	2	2
11:00 AM	0	0	1	1	2
11:15 AM	0	1	0	0	1
11:30 AM	0	1	0	0	1
11:45 AM	0	0	0	0	0
12:00 PM	0	0	0	0	0
12:15 PM	0	0	0	0	0
12:30 PM	0	2	1	2	5
12:45 PM	0	1	0	0	1
1:00 PM	0	0	0	3	3
1:15 PM	0	0	0	3	3
1:30 PM	0	0	0	0	0
1:45 PM	0	1	0	0	1
2:00 PM	0	0	0	0	0
2:15 PM	0	0	0	0	0
2:30 PM	0	0	0	0	0
2:45 PM	0	1	1	0	2
3:00 PM	0	0	0	1	1
3:15 PM	0	0	0	1	1
3:30 PM	0	0	1	2	3
3:45 PM	0	0	0	0	0
4:00 PM	0	1	0	2	3
4:15 PM	0	0	0	0	0
4:30 PM	0	0	2	0	2
4:45 PM	0	0	0	3	3
5:00 PM	0	1	0	2	3
5:15 PM	0	1	0	1	2
5:30 PM	0	1	0	0	1
5:45 PM	0	1	0	3	4
6:00 PM	0	1	0	1	2
6:15 PM	0	0	0	0	0
6:30 PM	0	0	0	2	2
6:45 PM	0	0	0	0	0
TOTAL VOLUMES:	1	18	8	49	76

Location: Carlsbad
N/S: Avenida Encinas
E/W: Embarcadero Lane

Date: 3/9/2022
Day: Wednesday



BICYCLES

	Southbound Avenida Encinas			Westbound Embarcadero Lane			Northbound Avenida Encinas			Eastbound Volvo Cars Driveway			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
7:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	1	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	2	0	0	0	0	2
8:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
8:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
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	1	0	0	0	2	3
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	1	1
9:30 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	3
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	1	0	0	0	1	2
10:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
11:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
12:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
12:45 PM	0	0	0	0	0	0	0	3	0	0	0	0	3
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	3	0	0	0	0	0	0	0	0	0	0	3
1:30 PM	0	3	0	0	0	0	0	0	0	0	0	0	3
1:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
2:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
2:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	1	0	0	0	0	0	1	0	0	0	0	2
3:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
3:15 PM	0	0	0	0	0	0	1	0	0	0	0	0	1
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	1
4:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	2	0	0	0	0	2
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	1
5:15 PM	0	1	0	0	0	0	1	0	0	0	0	2	4
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
6:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	18	0	0	0	0	3	20	0	0	0	10	51

City of Carlsbad
N/S: Coaster Driveway
E/W: Avenida Encinas
Weather: Clear

File Name : 08_CAR_Coast_Ave E VEH
Site Code : 23222185
Start Date : 3/9/2022
Page No : 1

Groups Printed- Total Volume

Start Time	Avenida Encinas Westbound			Coaster Driveway Northbound			Avenida Encinas Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	3	15	18	3	0	3	28	3	31	52
07:15 AM	14	24	38	0	6	6	27	7	34	78
07:30 AM	10	34	44	7	2	9	25	8	33	86
07:45 AM	4	49	53	3	4	7	40	3	43	103
Total	31	122	153	13	12	25	120	21	141	319
08:00 AM	7	48	55	3	2	5	55	5	60	120
08:15 AM	8	47	55	0	3	3	58	3	61	119
08:30 AM	15	77	92	9	4	13	90	5	95	200
08:45 AM	9	55	64	3	3	6	31	6	37	107
Total	39	227	266	15	12	27	234	19	253	546
09:00 AM	9	40	49	1	3	4	32	9	41	94
09:15 AM	7	49	56	4	5	9	35	3	38	103
09:30 AM	7	38	45	4	6	10	25	5	30	85
09:45 AM	9	57	66	1	1	2	31	3	34	102
Total	32	184	216	10	15	25	123	20	143	384
10:00 AM	0	32	32	5	2	7	40	7	47	86
10:15 AM	2	39	41	3	2	5	22	4	26	72
10:30 AM	3	42	45	1	0	1	36	2	38	84
10:45 AM	1	49	50	3	1	4	38	5	43	97
Total	6	162	168	12	5	17	136	18	154	339
11:00 AM	0	49	49	2	1	3	36	3	39	91
11:15 AM	5	42	47	2	5	7	36	3	39	93
11:30 AM	4	44	48	2	2	4	41	6	47	99
11:45 AM	7	46	53	5	5	10	36	3	39	102
Total	16	181	197	11	13	24	149	15	164	385
12:00 PM	4	52	56	6	3	9	38	3	41	106
12:15 PM	2	35	37	4	5	9	34	3	37	83
12:30 PM	3	38	41	3	5	8	36	6	42	91
12:45 PM	7	49	56	7	3	10	42	6	48	114
Total	16	174	190	20	16	36	150	18	168	394
01:00 PM	1	48	49	4	2	6	56	0	56	111
01:15 PM	4	46	50	4	6	10	53	3	56	116
01:30 PM	2	40	42	6	2	8	39	3	42	92
01:45 PM	5	48	53	3	5	8	39	2	41	102
Total	12	182	194	17	15	32	187	8	195	421
02:00 PM	5	32	37	3	3	6	43	3	46	89
02:15 PM	9	47	56	5	8	13	77	7	84	153
02:30 PM	5	79	84	3	3	6	59	9	68	158
02:45 PM	8	81	89	3	5	8	38	3	41	138
Total	27	239	266	14	19	33	217	22	239	538
03:00 PM	3	60	63	2	7	9	44	3	47	119
03:15 PM	3	65	68	2	3	5	35	1	36	109
03:30 PM	1	84	85	5	4	9	56	0	56	150
03:45 PM	5	85	90	8	5	13	65	8	73	176
Total	12	294	306	17	19	36	200	12	212	554
04:00 PM	3	80	83	5	7	12	54	4	58	153

City of Carlsbad
N/S: Coaster Driveway
E/W: Avenida Encinas
Weather: Clear

File Name : 08_CAR_Coast_Ave E VEH
Site Code : 23222185
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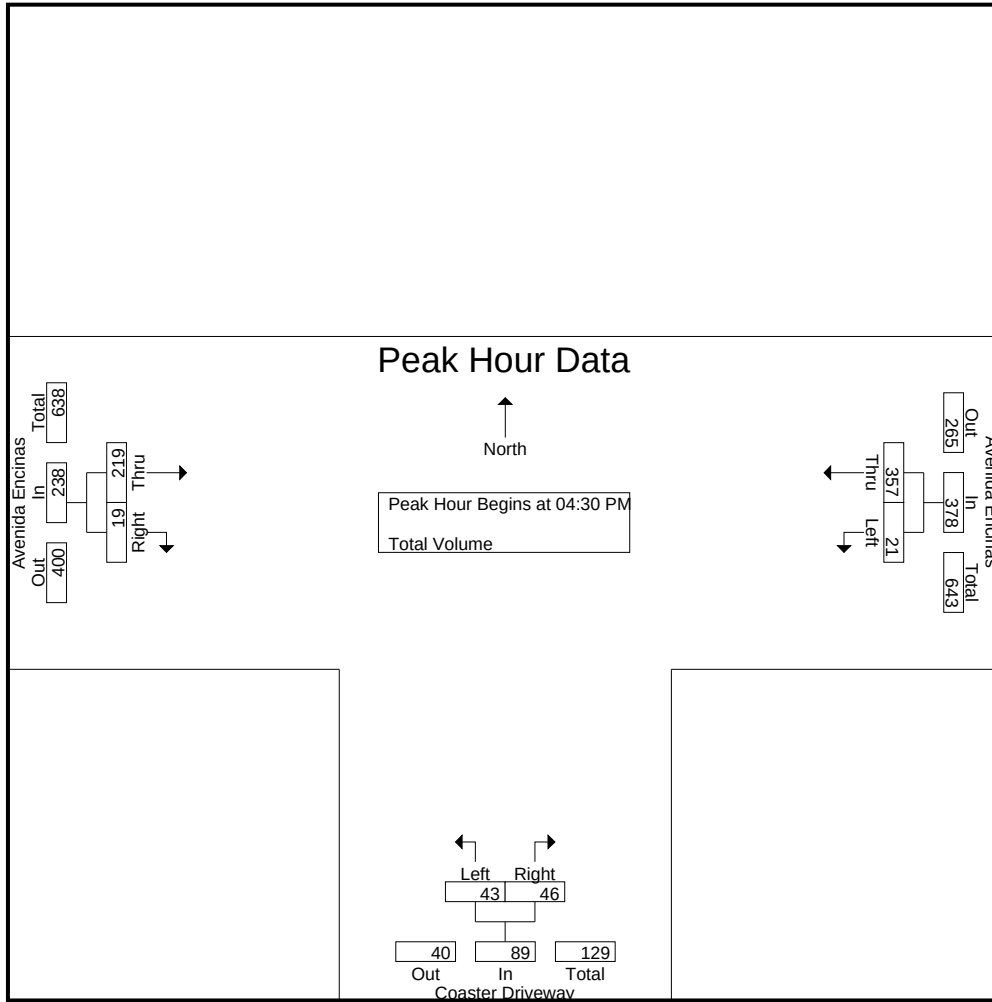
Groups Printed- Total Volume

	Avenida Encinas Westbound			Coaster Driveway Northbound			Avenida Encinas Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:15 PM	2	75	77	4	3	7	56	3	59	143
04:30 PM	3	71	74	16	19	35	53	5	58	167
04:45 PM	5	108	113	5	3	8	54	3	57	178
Total	13	334	347	30	32	62	217	15	232	641
05:00 PM	4	95	99	9	10	19	57	3	60	178
05:15 PM	9	83	92	13	14	27	55	8	63	182
05:30 PM	4	85	89	5	5	10	61	4	65	164
05:45 PM	4	73	77	3	6	9	37	4	41	127
Total	21	336	357	30	35	65	210	19	229	651
06:00 PM	3	51	54	4	5	9	40	1	41	104
06:15 PM	2	43	45	13	9	22	39	9	48	115
06:30 PM	2	41	43	9	16	25	36	1	37	105
06:45 PM	2	27	29	1	2	3	32	1	33	65
Total	9	162	171	27	32	59	147	12	159	389
Grand Total	234	2597	2831	216	225	441	2090	199	2289	5561
Apprch %	8.3	91.7		49	51		91.3	8.7		
Total %	4.2	46.7	50.9	3.9	4	7.9	37.6	3.6	41.2	

	Avenida Encinas Westbound			Coaster Driveway Northbound			Avenida Encinas Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 06:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	3	71	74	16	19	35	53	5	58	167
04:45 PM	5	108	113	5	3	8	54	3	57	178
05:00 PM	4	95	99	9	10	19	57	3	60	178
05:15 PM	9	83	92	13	14	27	55	8	63	182
Total Volume	21	357	378	43	46	89	219	19	238	705
% App. Total	5.6	94.4		48.3	51.7		92	8		
PHF	.583	.826	.836	.672	.605	.636	.961	.594	.944	.968

City of Carlsbad
N/S: Coaster Driveway
E/W: Avenida Encinas
Weather: Clear

File Name : 08_CAR_Coast_Ave E VEH
Site Code : 23222185
Start Date : 3/9/2022
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Peak Hour Analysis From 07:00 AM to 06:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM			04:30 PM			07:45 AM		
+0 mins.	5	108	113	16	19	35	40	3	43
+15 mins.	4	95	99	5	3	8	55	5	60
+30 mins.	9	83	92	9	10	19	58	3	61
+45 mins.	4	85	89	13	14	27	90	5	95
Total Volume	22	371	393	43	46	89	243	16	259
% App. Total	5.6	94.4		48.3	51.7		93.8	6.2	
PHF	.611	.859	.869	.672	.605	.636	.675	.800	.682

Location: Carlsbad
N/S: Coaster Driveway
E/W: Avenida Encinas



Date: 3/9/2022
Day Wednesday

PEDESTRIANS

Time	North Leg Dead End	East Leg Avenida Encinas	South Leg Coaster Driveway	West Leg Volvo Cars Driveway	TOTAL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	1	0	0	1
8:00 AM	1	0	3	0	4
8:15 AM	0	0	0	0	0
8:30 AM	1	3	3	4	11
8:45 AM	0	0	0	0	0
9:00 AM	0	0	0	0	0
9:15 AM	0	0	2	0	2
9:30 AM	0	0	0	0	0
9:45 AM	1	0	2	0	3
10:00 AM	0	0	1	0	1
10:15 AM	0	0	1	0	1
10:30 AM	0	1	1	2	4
10:45 AM	0	0	0	0	0
11:00 AM	0	0	0	0	0
11:15 AM	0	0	0	0	0
11:30 AM	0	0	0	0	0
11:45 AM	0	0	1	0	1
12:00 PM	0	0	0	0	0
12:15 PM	0	0	1	0	1
12:30 PM	0	0	4	0	4
12:45 PM	0	0	0	0	0
1:00 PM	0	0	2	0	2
1:15 PM	0	0	0	0	0
1:30 PM	0	0	0	0	0
1:45 PM	0	0	0	0	0
2:00 PM	0	0	1	0	1
2:15 PM	0	0	0	0	0
2:30 PM	0	0	0	0	0
2:45 PM	0	0	0	0	0
3:00 PM	0	0	0	0	0
3:15 PM	0	0	0	0	0
3:30 PM	0	0	2	0	2
3:45 PM	0	0	1	0	1
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	2	0	2
5:00 PM	0	0	2	0	2
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
6:00 PM	0	0	0	0	0
6:15 PM	0	0	0	0	0
6:30 PM	0	0	0	0	0
6:45 PM	0	0	0	0	0
TOTAL VOLUMES:	3	5	29	6	43

Location: Carlsbad
N/S: Coaster Driveway
E/W: Avenida Encinas

Date: 3/9/2022
Day: Wednesday



BICYCLES

	Southbound Coaster Driveway			Westbound Avenida Encinas			Northbound Coaster Driveway			Eastbound Volvo Cars Driveway			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
8:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
8:30 AM	0	0	0	0	0	0	1	0	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 AM	0	0	0	0	0	0	0	0	3	0	0	0	3
10:15 AM	0	0	0	1	1	0	0	0	0	0	0	0	2
10:30 AM	0	0	0	0	1	0	1	0	0	0	0	0	2
10:45 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
11:00 AM	0	0	0	0	0	0	0	0	0	0	1	2	3
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
12:30 PM	0	0	0	0	0	0	1	0	0	0	1	1	3
12:45 PM	0	0	0	0	3	0	0	0	0	0	0	1	4
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	4	0	4
1:30 PM	0	0	0	0	0	0	0	0	0	0	3	0	3
1:45 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
2:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
2:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	1	0	0	0	0	0	1	0	2
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	1	1	2
4:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
4:15 PM	0	0	0	0	2	0	0	0	0	0	0	1	3
4:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
4:45 PM	0	0	0	0	2	0	0	0	0	0	0	0	2
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	1	1	2
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	1	0	1
6:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	1
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	1	22	0	3	0	3	0	16	8	53

City of Carlsbad
N/S: Avenida Encinas
E/W: Shopping Center Driveway
Weather: Clear

File Name : 09_CAR_Ave E_Shop DW VEH
Site Code : 23222185
Start Date : 3/9/2022
Page No : 1

Groups Printed- Total Volume

	Avenida Encinas Southbound				Shopping Plaza Driveway Westbound				Avenida Encinas Northbound				Lakeshore Gardens MHP Driveway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	20	9	3	32	0	0	16	16	0	12	5	17	10	0	0	10	75
07:15 AM	14	19	0	33	2	1	27	30	0	21	2	23	4	1	2	7	93
07:30 AM	15	10	4	29	1	1	17	19	0	40	0	40	10	1	2	13	101
07:45 AM	27	26	7	60	0	0	28	28	1	55	1	57	3	2	1	6	151
Total	76	64	14	154	3	2	88	93	1	128	8	137	27	4	5	36	420
08:00 AM	25	30	3	58	3	1	32	36	0	53	3	56	13	3	3	19	169
08:15 AM	30	29	4	63	1	1	33	35	0	28	3	31	5	0	1	6	135
08:30 AM	21	22	8	51	2	4	24	30	1	29	1	31	8	2	3	13	125
08:45 AM	26	40	3	69	0	3	37	40	0	37	1	38	9	4	8	21	168
Total	102	121	18	241	6	9	126	141	1	147	8	156	35	9	15	59	597
09:00 AM	25	27	9	61	5	1	18	24	3	24	5	32	5	4	6	15	132
09:15 AM	25	29	6	60	4	1	30	35	2	26	2	30	13	2	3	18	143
09:30 AM	18	31	1	50	5	2	42	49	2	32	4	38	10	1	2	13	150
09:45 AM	20	36	9	65	0	3	29	32	0	45	2	47	12	2	3	17	161
Total	88	123	25	236	14	7	119	140	7	127	13	147	40	9	14	63	586
10:00 AM	32	39	10	81	3	4	29	36	7	26	3	36	9	3	3	15	168
10:15 AM	31	20	10	61	3	6	32	41	2	38	3	43	13	2	4	19	164
10:30 AM	33	30	3	66	6	1	41	48	1	39	3	43	15	2	3	20	177
10:45 AM	37	25	10	72	3	2	46	51	0	51	3	54	7	3	1	11	188
Total	133	114	33	280	15	13	148	176	10	154	12	176	44	10	11	65	697
11:00 AM	31	36	3	70	4	2	38	44	5	37	4	46	8	2	5	15	175
11:15 AM	34	34	9	77	6	2	35	43	2	24	2	28	8	0	1	9	157
11:30 AM	43	29	9	81	2	3	57	62	2	34	4	40	15	7	2	24	207
11:45 AM	34	33	10	77	11	7	61	79	1	38	6	45	5	2	4	11	212
Total	142	132	31	305	23	14	191	228	10	133	16	159	36	11	12	59	751
12:00 PM	31	28	6	65	5	8	49	62	1	54	5	60	5	0	5	10	197
12:15 PM	32	25	10	67	5	1	61	67	1	47	5	53	9	1	2	12	199
12:30 PM	22	21	2	45	5	3	45	53	3	32	4	39	18	3	2	23	160
12:45 PM	38	36	7	81	6	6	59	71	4	33	1	38	14	3	2	19	209
Total	123	110	25	258	21	18	214	253	9	166	15	190	46	7	11	64	765
01:00 PM	33	37	9	79	5	0	58	63	5	43	2	50	12	6	3	21	213
01:15 PM	28	31	8	67	8	5	56	69	2	29	4	35	7	1	0	8	179
01:30 PM	38	38	7	83	2	3	59	64	2	35	4	41	13	4	3	20	208
01:45 PM	37	40	7	84	5	2	45	52	0	44	5	49	8	2	3	13	198
Total	136	146	31	313	20	10	218	248	9	151	15	175	40	13	9	62	798
02:00 PM	33	28	4	65	8	2	54	64	3	35	5	43	5	1	3	9	181
02:15 PM	35	24	9	68	5	4	60	69	3	50	3	56	11	3	1	15	208
02:30 PM	28	50	8	86	5	3	47	55	4	54	1	59	6	4	2	12	212
02:45 PM	42	58	5	105	3	3	50	56	5	49	0	54	6	1	1	8	223
Total	138	160	26	324	21	12	211	244	15	188	9	212	28	9	7	44	824
03:00 PM	20	29	11	60	6	4	55	65	4	33	5	42	7	5	2	14	181
03:15 PM	31	42	7	80	9	4	52	65	3	41	1	45	8	3	1	12	202
03:30 PM	31	28	8	67	5	6	45	56	3	44	3	50	8	1	3	12	185
03:45 PM	42	36	4	82	6	3	52	61	2	63	3	68	11	3	3	17	228
Total	124	135	30	289	26	17	204	247	12	181	12	205	34	12	9	55	796

City of Carlsbad
N/S: Avenida Encinas
E/W: Shopping Center Driveway
Weather: Clear

File Name : 09_CAR_Ave E_Shop DW VEH
Site Code : 23222185
Start Date : 3/9/2022
Page No : 2

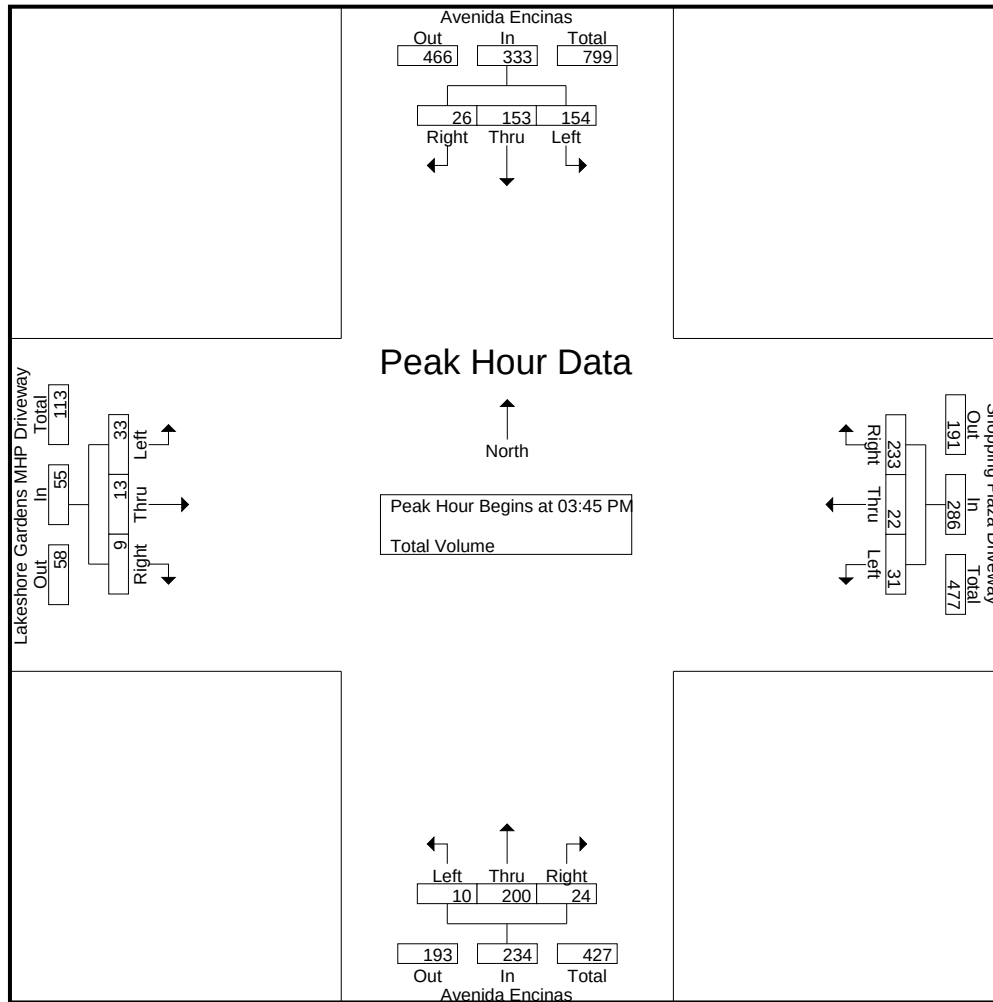
Groups Printed- Total Volume

	Avenida Encinas Southbound				Shopping Plaza Driveway Westbound				Avenida Encinas Northbound				Lakeshore Gardens MHP Driveway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	47	35	7	89	10	7	61	78	2	46	8	56	6	6	0	12	235
04:15 PM	36	41	10	87	11	7	64	82	3	49	7	59	8	1	3	12	240
04:30 PM	29	41	5	75	4	5	56	65	3	42	6	51	8	3	3	14	205
04:45 PM	26	34	7	67	7	4	45	56	5	44	3	52	10	3	2	15	190
Total	138	151	29	318	32	23	226	281	13	181	24	218	32	13	8	53	870
05:00 PM	44	27	3	74	4	5	41	50	5	57	1	63	6	2	4	12	199
05:15 PM	32	32	9	73	4	2	61	67	3	42	5	50	3	0	0	3	193
05:30 PM	32	49	6	87	11	2	54	67	2	47	6	55	3	1	1	5	214
05:45 PM	36	37	6	79	8	1	65	74	1	39	3	43	4	2	3	9	205
Total	144	145	24	313	27	10	221	258	11	185	15	211	16	5	8	29	811
06:00 PM	40	30	4	74	6	1	61	68	0	59	5	64	4	0	2	6	212
06:15 PM	22	23	4	49	8	2	57	67	0	30	6	36	3	2	0	5	157
06:30 PM	26	26	5	57	5	1	41	47	1	34	6	41	0	2	0	2	147
06:45 PM	21	24	4	49	6	2	46	54	3	22	0	25	1	2	0	3	131
Total	109	103	17	229	25	6	205	236	4	145	17	166	8	6	2	16	647
Grand Total	1453	1504	303	3260	233	141	2171	2545	102	1886	164	2152	386	108	111	605	8562
Apprch %	44.6	46.1	9.3		9.2	5.5	85.3		4.7	87.6	7.6		63.8	17.9	18.3		
Total %	17	17.6	3.5	38.1	2.7	1.6	25.4	29.7	1.2	22	1.9	25.1	4.5	1.3	1.3	7.1	

	Avenida Encinas Southbound				Shopping Plaza Driveway Westbound				Avenida Encinas Northbound				Lakeshore Gardens MHP Driveway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:45 PM																	
03:45 PM	42	36	4	82	6	3	52	61	2	63	3	68	11	3	3	17	228
04:00 PM	47	35	7	89	10	7	61	78	2	46	8	56	6	6	0	12	235
04:15 PM	36	41	10	87	11	7	64	82	3	49	7	59	8	1	3	12	240
04:30 PM	29	41	5	75	4	5	56	65	3	42	6	51	8	3	3	14	205
Total Volume	154	153	26	333	31	22	233	286	10	200	24	234	33	13	9	55	908
% App. Total	46.2	45.9	7.8		10.8	7.7	81.5		4.3	85.5	10.3		60	23.6	16.4		
PHF	.819	.933	.650	.935	.705	.786	.910	.872	.833	.794	.750	.860	.750	.542	.750	.809	.946

City of Carlsbad
N/S: Avenida Encinas
E/W: Shopping Center Driveway
Weather: Clear

File Name : 09_CAR_Ave E_Shop DW VEH
Site Code : 23222185
Start Date : 3/9/2022
Page No : 3



Peak Hour Analysis From 07:00 AM to 06:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:45 PM				03:45 PM				03:45 PM				12:15 PM			
+0 mins.	42	36	4	82	6	3	52	61	2	63	3	68	9	1	2	12
+15 mins.	47	35	7	89	10	7	61	78	2	46	8	56	18	3	2	23
+30 mins.	36	41	10	87	11	7	64	82	3	49	7	59	14	3	2	19
+45 mins.	29	41	5	75	4	5	56	65	3	42	6	51	12	6	3	21
Total Volume	154	153	26	333	31	22	233	286	10	200	24	234	53	13	9	75
% App. Total	46.2	45.9	7.8		10.8	7.7	81.5		4.3	85.5	10.3		70.7	17.3	12	
PHF	.819	.933	.650	.935	.705	.786	.910	.872	.833	.794	.750	.860	.736	.542	.750	.815

Location: Carlsbad
N/S: Avenida Encinas
E/W: Shopping Center DW



Date: 3/9/2022
Day Wednesday

PEDESTRIANS

Time	North Leg Avenida Encinas	East Leg Lakeshore MHP DW	South Leg Avenida Encinas	West Leg Shopping Center DW	TOTAL
7:00 AM	1	0	0	1	2
7:15 AM	1	1	2	1	5
7:30 AM	1	0	0	0	1
7:45 AM	0	2	2	5	9
8:00 AM	4	2	1	2	9
8:15 AM	1	0	0	0	1
8:30 AM	0	4	1	2	7
8:45 AM	0	3	0	3	6
9:00 AM	2	0	0	0	2
9:15 AM	0	3	1	1	5
9:30 AM	0	2	0	0	2
9:45 AM	0	0	2	6	8
10:00 AM	2	0	2	2	6
10:15 AM	2	0	0	0	2
10:30 AM	0	0	1	3	4
10:45 AM	0	0	0	4	4
11:00 AM	0	1	0	0	1
11:15 AM	2	0	1	2	5
11:30 AM	0	1	1	1	3
11:45 AM	2	0	0	1	3
12:00 PM	0	1	0	0	1
12:15 PM	1	1	0	0	2
12:30 PM	1	0	0	2	3
12:45 PM	2	0	0	1	3
1:00 PM	2	1	0	1	4
1:15 PM	1	0	2	4	7
1:30 PM	0	1	0	0	1
1:45 PM	1	0	0	2	3
2:00 PM	1	1	0	0	2
2:15 PM	0	0	0	3	3
2:30 PM	0	0	0	0	0
2:45 PM	0	2	0	0	2
3:00 PM	1	0	0	1	2
3:15 PM	1	0	0	1	2
3:30 PM	1	0	0	2	3
3:45 PM	1	0	2	2	5
4:00 PM	6	1	0	2	9
4:15 PM	2	0	1	2	5
4:30 PM	2	0	1	1	4
4:45 PM	0	0	0	1	1
5:00 PM	1	0	0	1	2
5:15 PM	3	0	0	1	4
5:30 PM	0	1	0	0	1
5:45 PM	0	0	2	1	3
6:00 PM	0	0	0	3	3
6:15 PM	0	0	2	0	2
6:30 PM	2	0	0	0	2
6:45 PM	2	0	0	0	2
TOTAL VOLUMES:	49	28	24	65	166

Location: Carlsbad
 N/S: Avenida Encinas
 E/W: Shopping Center DW

Date: 3/9/2022
 Day: Wednesday



BICYCLES

	Southbound Avenida Encinas			Westbound Lakeshore MHP DW			Northbound Avenida Encinas			Eastbound Shopping Center DW			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
7:15 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	0	5	0	0	0	0	5
7:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	1	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	0	1	0	0	0	1	0	0	0	0	0	0	2
9:15 AM	1	1	0	0	0	1	1	2	0	0	0	0	6
9:30 AM	0	1	0	0	0	1	2	0	0	0	0	0	4
9:45 AM	0	0	0	0	0	0	1	1	0	0	0	0	2
10:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	3
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	1	1
10:30 AM	1	3	0	0	0	1	0	1	0	1	0	0	7
10:45 AM	0	1	0	0	0	1	0	0	0	0	0	0	2
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	1	0	0	0	0	1	0	0	0	0	2
11:30 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
11:45 AM	0	0	0	0	0	0	1	0	0	0	0	0	1
12:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	1
12:30 PM	0	1	0	0	0	0	0	3	0	0	0	0	4
12:45 PM	1	0	0	0	0	0	0	0	0	0	0	0	1
1:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	1
1:15 PM	0	0	0	0	0	0	0	2	0	0	0	0	2
1:30 PM	0	2	0	0	0	0	0	0	0	0	0	0	2
1:45 PM	0	0	0	0	0	0	0	3	0	0	0	0	3
2:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
2:15 PM	0	0	1	1	0	0	0	0	0	0	0	0	2
2:30 PM	0	4	0	0	0	0	0	0	0	0	0	0	4
2:45 PM	1	2	0	0	0	0	0	0	0	0	0	0	3
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	2	0	0	0	1	3
3:30 PM	0	2	1	0	0	0	0	0	1	0	0	0	4
3:45 PM	0	0	0	0	0	0	0	2	0	0	0	0	2
4:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
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	1	0	0	0	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	2
5:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	1	0	0	0	0	0	1	0	0	0	0	2
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	4	25	3	1	0	7	5	32	2	1	0	3	83

Counts Unlimited, Inc.

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City of Carlsbad
Avenida Encinas
B/ Coaster Driveway - Embarcadero Lane
24 Hour Directional Speed Survey

CAR006
Site Code: 232-22185

Eastbound

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total
03/09/22	1	0	0	2	1	1	0	0	0	0	0	0	0	0	5
01:00	1	0	0	2	1	0	0	0	0	0	0	0	0	0	4
02:00	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2
03:00	0	0	0	0	2	1	0	0	0	0	0	0	0	0	3
04:00	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:00	4	0	0	1	2	2	0	0	1	0	0	0	0	0	10
06:00	6	0	2	11	13	17	4	1	0	0	0	0	0	0	54
07:00	14	0	6	14	37	32	9	1	0	0	0	0	0	0	113
08:00	9	10	11	55	91	51	8	1	0	0	0	0	0	0	236
09:00	5	1	10	30	49	30	7	0	0	0	0	0	0	0	132
10:00	2	0	4	38	42	44	6	2	0	0	0	0	0	0	138
11:00	4	4	3	33	63	41	13	0	0	0	0	0	0	0	161
12 PM	5	1	3	36	69	32	21	0	0	0	0	0	0	0	167
13:00	10	1	4	34	76	57	11	1	0	0	0	0	0	0	194
14:00	9	1	9	68	74	50	15	0	0	0	0	0	0	0	226
15:00	12	0	2	32	75	65	17	1	0	0	0	0	0	0	204
16:00	7	1	10	41	96	79	10	2	0	0	0	0	0	0	246
17:00	13	0	12	47	80	58	16	0	0	0	0	0	0	0	226
18:00	5	0	13	42	74	37	4	1	0	0	0	0	0	0	176
19:00	2	0	4	29	40	35	3	0	0	0	0	0	0	0	113
20:00	0	0	6	17	41	18	2	0	1	0	0	0	0	0	85
21:00	0	2	7	18	18	15	6	1	0	0	0	0	0	0	67
22:00	1	0	4	13	15	12	3	0	0	0	0	0	0	0	48
23:00	0	0	2	5	3	6	2	1	0	0	0	0	0	0	19
Total	111	21	112	568	963	683	158	12	2	0	0	0	0	0	2630

Daily
15th Percentile : 26 MPH
50th Percentile : 32 MPH
85th Percentile : 38 MPH
95th Percentile : 41 MPH

Statistics
Mean Speed(Average) : 32 MPH
10 MPH Pace Speed : 31-40 MPH
Number in Pace : 1646
Percent in Pace : 62.6%
Number of Vehicles > 55 MPH : 0
Percent of Vehicles > 55 MPH : 0.0%

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City of Carlsbad
Avenida Encinas
B/ Coaster Driveway - Embarcadero Lane
24 Hour Directional Speed Survey

CAR006
Site Code: 232-22185

Westbound

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total
03/09/22	3	0	4	6	1	2	0	0	0	0	0	0	0	0	16
01:00	1	0	0	2	1	1	1	0	0	0	0	0	0	0	6
02:00	1	0	0	0	1	0	0	1	0	0	0	0	0	0	3
03:00	5	0	2	0	2	4	0	0	0	0	0	0	0	0	13
04:00	5	0	4	6	4	1	1	0	0	0	0	0	0	0	21
05:00	4	0	0	6	13	14	11	2	0	0	0	0	0	0	50
06:00	20	0	1	17	18	32	13	4	1	0	0	0	0	0	106
07:00	19	0	6	28	49	56	11	2	1	0	0	0	0	0	172
08:00	11	4	16	65	89	61	16	0	0	0	0	0	0	0	262
09:00	4	0	11	28	79	61	20	3	1	0	0	0	0	0	207
10:00	8	1	3	20	68	59	17	0	0	0	0	0	0	0	176
11:00	2	1	6	35	60	73	20	2	0	0	0	0	0	0	199
12 PM	3	0	2	27	67	74	15	0	0	0	0	0	0	0	188
13:00	7	0	9	36	68	59	10	7	0	0	0	0	0	0	196
14:00	15	1	19	63	92	61	16	1	0	0	0	0	0	0	268
15:00	9	2	5	36	86	127	35	1	0	0	0	0	0	0	301
16:00	11	1	11	44	110	139	35	2	0	0	0	0	0	0	353
17:00	18	4	8	44	112	127	38	3	0	0	0	0	0	0	354
18:00	5	1	9	21	70	49	15	2	0	0	0	0	0	0	172
19:00	1	1	5	18	29	33	12	1	0	0	0	0	0	0	100
20:00	1	0	3	10	25	20	6	0	0	0	0	0	0	0	65
21:00	2	1	6	6	9	8	6	0	0	0	0	0	0	0	38
22:00	1	0	0	4	5	0	3	0	0	0	0	0	0	0	13
23:00	2	0	0	0	5	4	2	1	1	0	0	0	0	0	15
Total	158	17	130	522	1063	1065	303	32	4	0	0	0	0	0	3294

Daily
15th Percentile : 26 MPH
50th Percentile : 33 MPH
85th Percentile : 39 MPH
95th Percentile : 42 MPH

Statistics
Mean Speed(Average) : 33 MPH
10 MPH Pace Speed : 31-40 MPH
Number in Pace : 2128
Percent in Pace : 64.6%
Number of Vehicles > 55 MPH : 0
Percent of Vehicles > 55 MPH : 0.0%

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City of Carlsbad
Avenida Encinas
B/ Coaster Driveway - Embarcadero Lane
24 Hour Directional Speed Survey

CAR006
Site Code: 232-22185

Eastbound, Westbound

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total
03/09/22	4	0	4	8	2	3	0	0	0	0	0	0	0	0	21
01:00	2	0	0	4	2	1	1	0	0	0	0	0	0	0	10
02:00	1	0	0	0	2	0	1	1	0	0	0	0	0	0	5
03:00	5	0	2	0	4	5	0	0	0	0	0	0	0	0	16
04:00	6	0	4	6	4	1	1	0	0	0	0	0	0	0	22
05:00	8	0	0	7	15	16	11	2	1	0	0	0	0	0	60
06:00	26	0	3	28	31	49	17	5	1	0	0	0	0	0	160
07:00	33	0	12	42	86	88	20	3	1	0	0	0	0	0	285
08:00	20	14	27	120	180	112	24	1	0	0	0	0	0	0	498
09:00	9	1	21	58	128	91	27	3	1	0	0	0	0	0	339
10:00	10	1	7	58	110	103	23	2	0	0	0	0	0	0	314
11:00	6	5	9	68	123	114	33	2	0	0	0	0	0	0	360
12 PM	8	1	5	63	136	106	36	0	0	0	0	0	0	0	355
13:00	17	1	13	70	144	116	21	8	0	0	0	0	0	0	390
14:00	24	2	28	131	166	111	31	1	0	0	0	0	0	0	494
15:00	21	2	7	68	161	192	52	2	0	0	0	0	0	0	505
16:00	18	2	21	85	206	218	45	4	0	0	0	0	0	0	599
17:00	31	4	20	91	192	185	54	3	0	0	0	0	0	0	580
18:00	10	1	22	63	144	86	19	3	0	0	0	0	0	0	348
19:00	3	1	9	47	69	68	15	1	0	0	0	0	0	0	213
20:00	1	0	9	27	66	38	8	0	1	0	0	0	0	0	150
21:00	2	3	13	24	27	23	12	1	0	0	0	0	0	0	105
22:00	2	0	4	17	20	12	6	0	0	0	0	0	0	0	61
23:00	2	0	2	5	8	10	4	2	1	0	0	0	0	0	34
Total	269	38	242	1090	2026	1748	461	44	6	0	0	0	0	0	5924

Daily
15th Percentile : 26 MPH
50th Percentile : 33 MPH
85th Percentile : 38 MPH
95th Percentile : 42 MPH

Statistics
Mean Speed(Average) : 33 MPH
10 MPH Pace Speed : 31-40 MPH
Number in Pace : 3774
Percent in Pace : 63.7%
Number of Vehicles > 55 MPH : 0
Percent of Vehicles > 55 MPH : 0.0%

Counts Unlimited, Inc.

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City of Carlsbad
Avenida Encinas
B/ Dory Lane - Portage Way
24 Hour Directional Speed Survey

CAR001
Site Code: 232-22185

Eastbound

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total
03/09/22	0	0	0	0	1	0	3	1	0	1	0	0	0	0	6
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	0	0	1	1	0	1	0	0	0	0	0	0	0	3
05:00	0	0	0	0	5	4	2	0	0	0	0	0	0	0	11
06:00	0	0	0	1	1	9	4	1	0	0	0	0	0	0	16
07:00	0	1	1	2	10	34	8	1	0	0	0	0	0	0	57
08:00	0	0	0	3	20	35	12	1	3	0	0	0	0	0	74
09:00	0	0	0	5	17	41	14	3	0	0	0	0	0	0	80
10:00	1	0	1	7	14	29	15	2	0	0	0	0	0	0	69
11:00	0	0	1	3	25	40	15	2	0	0	0	0	0	0	86
12 PM	0	0	3	5	32	34	8	1	1	0	0	0	0	0	84
13:00	4	0	0	9	26	36	11	3	0	0	0	0	0	0	89
14:00	4	2	4	4	22	29	7	2	0	0	0	0	0	0	74
15:00	0	0	1	10	30	32	23	2	1	0	0	0	0	0	99
16:00	4	0	1	8	31	48	16	4	3	0	0	0	0	0	115
17:00	5	0	1	11	25	48	20	2	1	0	0	0	0	0	113
18:00	1	0	0	6	18	36	11	2	1	0	0	0	0	0	75
19:00	1	0	1	1	19	9	8	1	0	0	0	0	0	0	40
20:00	0	0	0	1	5	14	4	2	2	0	0	0	0	0	28
21:00	0	0	0	1	9	12	9	2	0	0	0	0	0	0	33
22:00	0	0	0	2	4	6	7	3	2	1	0	0	0	0	25
23:00	0	0	0	0	0	5	2	0	0	0	0	0	0	0	7
Total	20	3	14	80	315	501	200	35	14	2	0	0	0	0	1184

Daily
15th Percentile : 30 MPH
50th Percentile : 36 MPH
85th Percentile : 41 MPH
95th Percentile : 44 MPH

Statistics
Mean Speed(Average) : 37 MPH
10 MPH Pace Speed : 31-40 MPH
Number in Pace : 816
Percent in Pace : 68.9%
Number of Vehicles > 55 MPH : 2
Percent of Vehicles > 55 MPH : 0.2%

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City of Carlsbad
Avenida Encinas
B/ Dory Lane - Portage Way
24 Hour Directional Speed Survey

CAR001
Site Code: 232-22185

Westbound

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total
03/09/22	0	0	0	3	2	0	0	0	0	0	0	0	0	0	5
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
03:00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
04:00	0	0	0	2	1	0	0	0	0	0	0	0	0	0	3
05:00	0	0	1	2	3	0	2	0	0	0	0	0	0	0	8
06:00	0	0	2	6	7	12	0	1	0	0	0	0	0	0	28
07:00	3	1	7	18	23	13	0	0	0	0	0	0	0	0	65
08:00	0	0	3	12	37	27	3	0	0	0	0	0	0	0	82
09:00	4	0	2	25	42	19	4	0	0	0	0	0	0	0	96
10:00	4	0	7	20	38	27	2	1	0	0	0	0	0	0	99
11:00	3	0	2	27	34	36	8	1	0	0	0	0	0	0	111
12 PM	0	1	7	26	53	19	4	1	0	0	0	0	0	0	111
13:00	7	3	5	26	66	33	6	0	0	0	0	0	0	0	146
14:00	4	1	9	22	70	32	6	1	0	0	0	0	0	0	145
15:00	4	0	5	31	73	29	1	1	0	0	0	0	0	0	144
16:00	3	0	9	34	85	51	3	0	0	0	0	0	0	0	185
17:00	6	1	4	19	86	54	6	0	0	0	0	0	0	0	176
18:00	3	0	7	23	47	18	3	0	0	0	0	0	0	0	101
19:00	1	1	2	12	32	18	1	0	0	0	0	0	0	0	67
20:00	0	0	2	8	16	11	3	1	0	0	0	0	0	0	41
21:00	0	0	1	1	15	11	2	1	0	0	0	0	0	0	31
22:00	0	0	1	1	6	7	2	1	0	0	0	0	0	0	18
23:00	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2
Total	42	8	76	319	738	418	56	9	0	0	0	0	0	0	1666

Daily
15th Percentile : 26 MPH
50th Percentile : 32 MPH
85th Percentile : 37 MPH
95th Percentile : 39 MPH

Statistics
Mean Speed(Average) : 33 MPH
10 MPH Pace Speed : 31-40 MPH
Number in Pace : 1156
Percent in Pace : 69.4%
Number of Vehicles > 55 MPH : 0
Percent of Vehicles > 55 MPH : 0.0%

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City of Carlsbad
Avenida Encinas
B/ Dory Lane - Portage Way
24 Hour Directional Speed Survey

CAR001
Site Code: 232-22185

Eastbound, Westbound

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total
03/09/22	0	0	0	3	3	0	3	1	0	1	0	0	0	0	11
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
03:00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
04:00	0	0	0	3	2	0	1	0	0	0	0	0	0	0	6
05:00	0	0	1	2	8	4	4	0	0	0	0	0	0	0	19
06:00	0	0	2	7	8	21	4	2	0	0	0	0	0	0	44
07:00	3	2	8	20	33	47	8	1	0	0	0	0	0	0	122
08:00	0	0	3	15	57	62	15	1	3	0	0	0	0	0	156
09:00	4	0	2	30	59	60	18	3	0	0	0	0	0	0	176
10:00	5	0	8	27	52	56	17	3	0	0	0	0	0	0	168
11:00	3	0	3	30	59	76	23	3	0	0	0	0	0	0	197
12 PM	0	1	10	31	85	53	12	2	1	0	0	0	0	0	195
13:00	11	3	5	35	92	69	17	3	0	0	0	0	0	0	235
14:00	8	3	13	26	92	61	13	3	0	0	0	0	0	0	219
15:00	4	0	6	41	103	61	24	3	1	0	0	0	0	0	243
16:00	7	0	10	42	116	99	19	4	3	0	0	0	0	0	300
17:00	11	1	5	30	111	102	26	2	1	0	0	0	0	0	289
18:00	4	0	7	29	65	54	14	2	1	0	0	0	0	0	176
19:00	2	1	3	13	51	27	9	1	0	0	0	0	0	0	107
20:00	0	0	2	9	21	25	7	3	2	0	0	0	0	0	69
21:00	0	0	1	2	24	23	11	3	0	0	0	0	0	0	64
22:00	0	0	1	3	10	13	9	4	2	1	0	0	0	0	43
23:00	0	0	0	0	2	5	2	0	0	0	0	0	0	0	9
Total	62	11	90	399	1053	919	256	44	14	2	0	0	0	0	2850

Daily
15th Percentile : 28 MPH
50th Percentile : 34 MPH
85th Percentile : 39 MPH
95th Percentile : 43 MPH

Statistics
Mean Speed(Average) : 34 MPH
10 MPH Pace Speed : 31-40 MPH
Number in Pace : 1972
Percent in Pace : 69.2%
Number of Vehicles > 55 MPH : 2
Percent of Vehicles > 55 MPH : 0.1%

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City of Carlsbad
Avenida Encinas
B/ Poinsettia Lane - San Carlos Street
24 Hour Directional Speed Survey

CAR003
Site Code: 232-22185

Northbound

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total
03/09/22	1	5	4	10	6	0	0	1	0	0	0	0	0	0	27
01:00	0	6	8	5	4	1	0	1	0	0	0	0	0	0	25
02:00	0	1	4	2	4	2	0	0	0	0	0	0	0	0	13
03:00	1	1	3	4	0	2	0	0	0	0	0	0	0	0	11
04:00	1	1	2	2	3	2	1	0	0	0	0	0	0	0	12
05:00	0	1	10	13	11	5	4	0	0	0	0	0	0	0	44
06:00	2	4	33	47	47	15	3	1	0	0	0	0	0	0	152
07:00	11	5	49	122	133	36	5	1	0	0	0	0	0	0	362
08:00	8	6	53	146	142	55	10	1	0	0	0	0	0	0	421
09:00	4	7	66	156	146	47	6	0	0	0	0	0	0	0	432
10:00	12	9	84	182	147	55	5	0	0	0	0	0	0	0	494
11:00	15	21	112	170	158	35	9	0	0	0	0	0	0	0	520
12 PM	22	25	149	239	172	32	4	0	1	0	0	0	0	0	644
13:00	28	45	125	230	152	32	4	2	1	0	0	0	0	0	619
14:00	16	23	111	241	183	47	4	1	1	0	0	0	0	0	627
15:00	14	30	135	223	143	45	13	0	0	0	0	0	0	0	603
16:00	45	33	124	221	148	35	6	1	0	0	0	0	0	0	613
17:00	15	39	145	245	126	38	3	1	0	0	0	0	0	0	612
18:00	18	26	120	229	111	30	2	1	0	0	0	0	0	0	537
19:00	4	4	61	123	91	28	5	0	0	0	0	0	0	0	316
20:00	8	6	45	84	58	24	4	0	0	0	0	0	0	0	229
21:00	5	2	23	49	45	12	0	1	0	0	0	0	0	0	137
22:00	4	4	11	28	22	7	2	0	0	0	0	0	0	0	78
23:00	1	5	9	8	8	6	0	0	0	0	0	0	0	0	37
Total	235	309	1486	2779	2060	591	90	12	3	0	0	0	0	0	7565

Daily
15th Percentile : 21 MPH
50th Percentile : 28 MPH
85th Percentile : 33 MPH
95th Percentile : 37 MPH

Statistics
Mean Speed(Average) : 28 MPH
10 MPH Pace Speed : 26-35 MPH
Number in Pace : 4839
Percent in Pace : 64.0%
Number of Vehicles > 55 MPH : 0
Percent of Vehicles > 55 MPH : 0.0%

Counts Unlimited, Inc.

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City of Carlsbad
Avenida Encinas
B/ Poinsettia Lane - San Carlos Street
24 Hour Directional Speed Survey

CAR003
Site Code: 232-22185

Southbound

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total
03/09/22	2	5	6	8	7	4	4	0	0	0	0	0	0	0	36
01:00	0	0	0	4	7	0	2	0	0	0	0	0	0	0	13
02:00	1	0	1	2	5	5	2	0	0	0	0	0	0	0	16
03:00	0	0	1	2	2	2	1	0	0	0	0	0	0	0	8
04:00	0	0	5	9	6	7	3	2	0	0	0	0	0	0	32
05:00	0	2	5	18	10	8	6	2	0	0	0	0	0	0	51
06:00	9	2	28	49	40	19	10	3	1	0	0	0	0	0	161
07:00	11	7	39	66	67	51	28	6	1	1	0	0	0	0	277
08:00	33	18	42	100	88	103	39	6	0	1	0	0	0	0	430
09:00	32	20	64	78	101	83	27	10	2	1	0	0	0	0	418
10:00	56	17	76	105	97	94	29	7	0	0	0	0	0	0	481
11:00	77	32	74	122	91	76	21	11	4	0	0	0	0	0	508
12 PM	78	32	84	104	94	79	23	3	1	0	0	0	1	0	499
13:00	47	29	78	108	127	77	35	12	1	1	1	1	0	0	517
14:00	43	22	55	109	139	93	40	6	1	0	0	0	0	0	508
15:00	58	30	63	95	98	104	38	9	0	1	0	0	0	0	496
16:00	61	27	71	91	97	79	42	5	2	0	0	0	0	0	475
17:00	70	25	74	96	112	102	33	9	1	0	0	0	0	0	522
18:00	38	24	50	87	96	69	27	0	1	0	0	0	0	0	392
19:00	7	8	40	58	65	44	16	4	2	0	0	0	0	0	244
20:00	5	2	25	44	45	41	16	2	0	0	0	0	0	0	180
21:00	1	1	7	21	27	24	19	4	1	0	0	0	0	0	105
22:00	2	1	10	8	20	19	5	5	1	0	0	0	0	0	71
23:00	0	2	5	13	17	10	5	0	1	0	0	0	0	0	53
Total	631	306	903	1397	1458	1193	471	106	20	5	1	1	1	0	6493

Daily
15th Percentile : 20 MPH
50th Percentile : 30 MPH
85th Percentile : 38 MPH
95th Percentile : 42 MPH

Statistics
Mean Speed(Average) : 29 MPH
10 MPH Pace Speed : 26-35 MPH
Number in Pace : 2855
Percent in Pace : 44.0%
Number of Vehicles > 55 MPH : 8
Percent of Vehicles > 55 MPH : 0.1%

Counts Unlimited, Inc.

City of Carlsbad
Avenida Encinas
B/ Poinsettia Lane - San Carlos Street
24 Hour Directional Speed Survey

PO Box 1178
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CAR003
Site Code: 232-22185

Northbound, Southbound

Start	1	16	21	26	31	36	41	46	51	56	61	66	71	76	
Time	15	20	25	30	35	40	45	50	55	60	65	70	75	999	Total
03/09/22	3	10	10	18	13	4	4	1	0	0	0	0	0	0	63
01:00	0	6	8	9	11	1	2	1	0	0	0	0	0	0	38
02:00	1	1	5	4	9	7	2	0	0	0	0	0	0	0	29
03:00	1	1	4	6	2	4	1	0	0	0	0	0	0	0	19
04:00	1	1	7	11	9	9	4	2	0	0	0	0	0	0	44
05:00	0	3	15	31	21	13	10	2	0	0	0	0	0	0	95
06:00	11	6	61	96	87	34	13	4	1	0	0	0	0	0	313
07:00	22	12	88	188	200	87	33	7	1	1	0	0	0	0	639
08:00	41	24	95	246	230	158	49	7	0	1	0	0	0	0	851
09:00	36	27	130	234	247	130	33	10	2	1	0	0	0	0	850
10:00	68	26	160	287	244	149	34	7	0	0	0	0	0	0	975
11:00	92	53	186	292	249	111	30	11	4	0	0	0	0	0	1028
12 PM	100	57	233	343	266	111	27	3	2	0	0	0	1	0	1143
13:00	75	74	203	338	279	109	39	14	2	1	1	1	0	0	1136
14:00	59	45	166	350	322	140	44	7	2	0	0	0	0	0	1135
15:00	72	60	198	318	241	149	51	9	0	1	0	0	0	0	1099
16:00	106	60	195	312	245	114	48	6	2	0	0	0	0	0	1088
17:00	85	64	219	341	238	140	36	10	1	0	0	0	0	0	1134
18:00	56	50	170	316	207	99	29	1	1	0	0	0	0	0	929
19:00	11	12	101	181	156	72	21	4	2	0	0	0	0	0	560
20:00	13	8	70	128	103	65	20	2	0	0	0	0	0	0	409
21:00	6	3	30	70	72	36	19	5	1	0	0	0	0	0	242
22:00	6	5	21	36	42	26	7	5	1	0	0	0	0	0	149
23:00	1	7	14	21	25	16	5	0	1	0	0	0	0	0	90
Total	866	615	2389	4176	3518	1784	561	118	23	5	1	1	1	0	14058

Daily
15th Percentile : 21 MPH
50th Percentile : 28 MPH
85th Percentile : 36 MPH
95th Percentile : 40 MPH

Statistics
Mean Speed(Average) : 29 MPH
10 MPH Pace Speed : 26-35 MPH
Number in Pace : 7694
Percent in Pace : 54.7%
Number of Vehicles > 55 MPH : 8
Percent of Vehicles > 55 MPH : 0.1%

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Page 1

City of Carlsbad
Avenida Encinas
B/ San Carlos Street - San Lucas Street
24 Hour Directional Speed Survey

CAR004
Site Code: 232-22185

Northbound

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total
03/09/22	0	0	6	7	2	1	0	1	0	0	0	0	0	0	17
01:00	0	0	0	1	1	3	0	1	0	0	0	0	0	0	6
02:00	0	0	0	0	1	4	1	0	0	0	0	0	0	0	6
03:00	0	0	0	1	1	1	1	0	0	0	0	0	0	0	4
04:00	0	0	1	0	4	1	3	0	0	0	0	0	0	0	9
05:00	0	0	1	5	11	10	5	0	0	0	0	0	0	0	32
06:00	1	2	5	11	46	20	12	2	0	0	0	0	0	0	99
07:00	6	3	4	40	106	74	21	5	1	0	0	0	0	0	260
08:00	0	0	10	65	124	72	20	5	3	0	0	0	0	0	299
09:00	3	4	5	67	127	73	16	0	0	0	0	0	0	0	295
10:00	4	1	9	72	156	79	26	1	0	0	0	0	0	0	348
11:00	2	0	21	89	155	81	15	1	1	0	0	0	0	0	365
12 PM	3	0	18	117	182	76	25	2	1	0	0	0	0	0	424
13:00	5	4	20	103	178	82	16	2	1	0	0	0	0	0	411
14:00	4	0	12	108	187	92	23	5	1	0	0	0	0	0	432
15:00	3	3	16	97	173	99	22	4	0	0	0	0	0	0	417
16:00	1	2	23	118	209	73	14	1	0	0	0	0	0	0	441
17:00	2	2	24	115	187	79	12	1	0	0	0	0	0	0	422
18:00	2	1	15	104	150	59	12	4	2	1	0	0	0	0	350
19:00	0	1	6	47	95	46	10	1	1	0	0	0	0	0	207
20:00	1	3	9	30	56	28	11	1	0	0	1	0	0	0	140
21:00	0	1	5	18	35	17	4	1	1	0	0	0	0	0	82
22:00	0	1	2	8	20	11	5	1	0	0	0	0	0	0	48
23:00	0	1	1	5	8	1	5	0	0	0	0	0	0	0	21
Total	37	29	213	1228	2214	1082	279	39	12	1	1	0	0	0	5135

Daily
15th Percentile : 27 MPH
50th Percentile : 32 MPH
85th Percentile : 37 MPH
95th Percentile : 41 MPH

Statistics
Mean Speed(Average) : 33 MPH
10 MPH Pace Speed : 26-35 MPH
Number in Pace : 3442
Percent in Pace : 67.0%
Number of Vehicles > 55 MPH : 2
Percent of Vehicles > 55 MPH : 0.0%

Counts Unlimited, Inc.

City of Carlsbad
Avenida Encinas
B/ San Carlos Street - San Lucas Street
24 Hour Directional Speed Survey

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

CAR004
Site Code: 232-22185

Southbound

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total
03/09/22	0	0	1	2	2	8	1	0	0	0	0	0	0	0	14
01:00	0	0	0	0	2	0	1	0	0	0	0	0	0	0	3
02:00	0	0	1	0	1	5	1	0	0	0	0	0	0	0	8
03:00	0	0	0	0	1	2	0	0	0	0	0	0	0	0	3
04:00	0	0	0	2	4	7	2	0	0	0	0	0	0	0	15
05:00	0	0	2	1	5	5	5	1	0	0	0	0	0	0	19
06:00	0	0	2	8	22	18	10	1	0	0	0	0	0	0	61
07:00	0	0	5	22	61	41	18	3	1	0	0	0	0	0	151
08:00	2	0	3	22	88	91	18	9	0	0	0	0	0	0	233
09:00	3	0	5	27	104	69	18	6	2	0	0	0	0	0	234
10:00	6	2	15	41	103	82	33	1	0	0	0	0	0	0	283
11:00	5	3	13	53	99	83	25	7	0	0	0	0	0	0	288
12 PM	3	2	13	34	95	79	23	2	0	0	0	0	0	0	251
13:00	5	4	7	45	116	89	27	3	0	0	0	0	0	0	296
14:00	6	0	8	55	120	96	18	2	0	0	0	0	0	0	305
15:00	3	4	9	57	112	79	23	5	0	0	0	0	0	0	292
16:00	9	1	9	56	96	82	19	1	1	0	0	0	0	0	274
17:00	7	1	16	58	117	87	14	2	0	0	0	0	0	0	302
18:00	1	2	8	45	73	69	22	1	0	0	0	0	0	0	221
19:00	2	1	1	19	53	42	13	1	1	0	0	0	0	0	133
20:00	0	0	4	10	40	39	9	1	0	0	0	0	0	0	103
21:00	0	0	2	7	20	20	13	4	2	0	0	0	0	0	68
22:00	0	0	1	5	18	16	5	2	1	0	0	0	0	0	48
23:00	0	0	1	8	6	10	1	1	0	0	0	0	0	0	27
Total	52	20	126	577	1358	1119	319	53	8	0	0	0	0	0	3632

Daily
15th Percentile : 28 MPH
50th Percentile : 33 MPH
85th Percentile : 39 MPH
95th Percentile : 43 MPH

Statistics
Mean Speed(Average) : 34 MPH
10 MPH Pace Speed : 31-40 MPH
Number in Pace : 2477
Percent in Pace : 68.2%
Number of Vehicles > 55 MPH : 0
Percent of Vehicles > 55 MPH : 0.0%

Counts Unlimited, Inc.

City of Carlsbad
Avenida Encinas
B/ San Carlos Street - San Lucas Street
24 Hour Directional Speed Survey

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

CAR004
Site Code: 232-22185

Northbound, Southbound

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total
03/09/22	0	0	7	9	4	9	1	1	0	0	0	0	0	0	31
01:00	0	0	0	1	3	3	1	1	0	0	0	0	0	0	9
02:00	0	0	1	0	2	9	2	0	0	0	0	0	0	0	14
03:00	0	0	0	1	2	3	1	0	0	0	0	0	0	0	7
04:00	0	0	1	2	8	8	5	0	0	0	0	0	0	0	24
05:00	0	0	3	6	16	15	10	1	0	0	0	0	0	0	51
06:00	1	2	7	19	68	38	22	3	0	0	0	0	0	0	160
07:00	6	3	9	62	167	115	39	8	2	0	0	0	0	0	411
08:00	2	0	13	87	212	163	38	14	3	0	0	0	0	0	532
09:00	6	4	10	94	231	142	34	6	2	0	0	0	0	0	529
10:00	10	3	24	113	259	161	59	2	0	0	0	0	0	0	631
11:00	7	3	34	142	254	164	40	8	1	0	0	0	0	0	653
12 PM	6	2	31	151	277	155	48	4	1	0	0	0	0	0	675
13:00	10	8	27	148	294	171	43	5	1	0	0	0	0	0	707
14:00	10	0	20	163	307	188	41	7	1	0	0	0	0	0	737
15:00	6	7	25	154	285	178	45	9	0	0	0	0	0	0	709
16:00	10	3	32	174	305	155	33	2	1	0	0	0	0	0	715
17:00	9	3	40	173	304	166	26	3	0	0	0	0	0	0	724
18:00	3	3	23	149	223	128	34	5	2	1	0	0	0	0	571
19:00	2	2	7	66	148	88	23	2	2	0	0	0	0	0	340
20:00	1	3	13	40	96	67	20	2	0	0	1	0	0	0	243
21:00	0	1	7	25	55	37	17	5	3	0	0	0	0	0	150
22:00	0	1	3	13	38	27	10	3	1	0	0	0	0	0	96
23:00	0	1	2	13	14	11	6	1	0	0	0	0	0	0	48
Total	89	49	339	1805	3572	2201	598	92	20	1	1	0	0	0	8767

Daily
15th Percentile : 27 MPH
50th Percentile : 32 MPH
85th Percentile : 38 MPH
95th Percentile : 42 MPH

Statistics
Mean Speed(Average) : 33 MPH
10 MPH Pace Speed : 31-40 MPH
Number in Pace : 5773
Percent in Pace : 65.8%
Number of Vehicles > 55 MPH : 2
Percent of Vehicles > 55 MPH : 0.0%

Counts Unlimited, Inc.

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City of Carlsbad
Avenida Encinas
B/ San Lucas Street - Shopping Center
24 Hour Directional Speed Survey

CAR005
Site Code: 232-22185

Eastbound

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total
03/09/22	0	0	0	1	4	2	2	0	0	0	0	0	0	0	9
01:00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
02:00	0	0	1	0	1	4	1	0	0	0	0	0	0	0	7
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	0	0	1	2	1	0	0	0	0	0	0	0	0	4
05:00	0	0	1	4	0	2	3	1	0	0	0	0	0	0	11
06:00	0	0	2	6	12	7	6	0	0	0	0	0	0	0	33
07:00	1	1	2	14	20	17	6	2	1	0	0	0	0	0	64
08:00	0	0	2	22	53	48	11	3	0	0	0	0	0	0	139
09:00	0	0	4	28	73	32	10	0	0	0	0	0	0	0	147
10:00	1	0	4	33	51	39	14	1	0	0	0	0	0	0	143
11:00	3	1	6	44	60	34	17	1	0	0	0	0	0	0	166
12 PM	2	0	4	25	50	45	13	1	0	0	0	0	0	0	140
13:00	0	0	3	26	68	62	9	3	0	0	0	0	0	0	171
14:00	1	0	5	36	71	49	14	4	0	0	0	0	0	0	180
15:00	3	1	4	50	60	37	18	3	1	0	0	0	0	0	177
16:00	0	0	2	32	76	55	10	3	0	1	0	0	0	0	179
17:00	0	0	2	36	85	38	9	0	0	1	0	0	0	0	171
18:00	2	1	0	20	49	45	12	1	1	0	0	0	0	0	131
19:00	0	0	1	10	26	24	11	2	0	0	0	0	0	0	74
20:00	0	0	0	9	17	21	6	2	1	1	0	0	0	0	57
21:00	0	0	1	5	10	17	9	2	1	0	0	0	0	0	45
22:00	0	0	0	3	13	11	4	5	2	0	0	0	0	0	38
23:00	0	0	1	2	5	6	0	0	0	0	0	0	0	0	14
Total	13	4	45	407	806	596	186	34	7	3	0	0	0	0	2101

Daily
15th Percentile : 28 MPH
50th Percentile : 33 MPH
85th Percentile : 39 MPH
95th Percentile : 43 MPH

Statistics
Mean Speed(Average) : 34 MPH
10 MPH Pace Speed : 31-40 MPH
Number in Pace : 1402
Percent in Pace : 66.7%
Number of Vehicles > 55 MPH : 3
Percent of Vehicles > 55 MPH : 0.1%

Counts Unlimited, Inc.

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City of Carlsbad
Avenida Encinas
B/ San Lucas Street - Shopping Center
24 Hour Directional Speed Survey

CAR005
Site Code: 232-22185

Westbound

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total
03/09/22	0	0	2	2	2	0	0	0	0	0	0	0	0	0	6
01:00	0	0	0	2	0	2	0	0	0	0	0	0	0	0	4
02:00	0	0	0	0	2	3	0	0	0	0	0	0	0	0	5
03:00	0	0	1	0	1	0	1	0	0	0	0	0	0	0	3
04:00	0	1	1	2	1	1	2	0	0	0	0	0	0	0	8
05:00	0	0	1	5	6	4	2	1	0	0	0	0	0	0	19
06:00	0	0	2	8	27	12	6	1	0	0	0	0	0	0	56
07:00	5	0	4	14	64	46	10	2	0	0	0	0	0	0	145
08:00	1	1	6	19	62	59	7	2	0	0	0	0	0	0	157
09:00	6	3	14	29	59	37	5	0	0	0	0	0	0	0	153
10:00	2	3	19	53	75	23	5	0	0	0	0	0	0	0	180
11:00	2	4	23	57	46	22	6	0	0	0	0	0	0	0	160
12 PM	3	3	19	62	72	24	4	1	0	0	0	0	0	0	188
13:00	4	3	31	61	55	23	4	0	0	0	0	0	0	0	181
14:00	1	1	20	60	88	32	9	2	0	0	0	0	0	0	213
15:00	5	6	21	80	58	35	3	0	0	0	0	0	0	0	208
16:00	3	3	46	77	68	22	4	0	0	0	0	0	0	0	223
17:00	0	4	45	66	73	24	1	0	0	0	0	0	0	0	213
18:00	8	7	23	56	45	14	6	0	0	0	0	0	0	0	159
19:00	1	1	14	27	29	7	1	0	0	0	0	0	0	0	80
20:00	0	0	11	14	15	14	2	0	0	0	0	0	0	0	56
21:00	1	0	7	7	11	6	0	0	0	0	0	0	0	0	32
22:00	4	0	1	7	7	3	2	1	0	0	0	0	0	0	25
23:00	0	1	1	1	3	1	0	0	0	0	0	0	0	0	7
Total	46	41	312	709	869	414	80	10	0	0	0	0	0	0	2481

Daily
15th Percentile : 24 MPH
50th Percentile : 30 MPH
85th Percentile : 36 MPH
95th Percentile : 39 MPH

Statistics
Mean Speed(Average) : 31 MPH
10 MPH Pace Speed : 26-35 MPH
Number in Pace : 1578
Percent in Pace : 63.6%
Number of Vehicles > 55 MPH : 0
Percent of Vehicles > 55 MPH : 0.0%

Counts Unlimited, Inc.

City of Carlsbad
Avenida Encinas
B/ San Lucas Street - Shopping Center
24 Hour Directional Speed Survey

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

CAR005
Site Code: 232-22185

Eastbound, Westbound

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total
03/09/22	0	0	2	3	6	2	2	0	0	0	0	0	0	0	15
01:00	0	0	0	2	0	2	1	0	0	0	0	0	0	0	5
02:00	0	0	1	0	3	7	1	0	0	0	0	0	0	0	12
03:00	0	0	1	0	1	0	1	0	0	0	0	0	0	0	3
04:00	0	1	1	3	3	2	2	0	0	0	0	0	0	0	12
05:00	0	0	2	9	6	6	5	2	0	0	0	0	0	0	30
06:00	0	0	4	14	39	19	12	1	0	0	0	0	0	0	89
07:00	6	1	6	28	84	63	16	4	1	0	0	0	0	0	209
08:00	1	1	8	41	115	107	18	5	0	0	0	0	0	0	296
09:00	6	3	18	57	132	69	15	0	0	0	0	0	0	0	300
10:00	3	3	23	86	126	62	19	1	0	0	0	0	0	0	323
11:00	5	5	29	101	106	56	23	1	0	0	0	0	0	0	326
12 PM	5	3	23	87	122	69	17	2	0	0	0	0	0	0	328
13:00	4	3	34	87	123	85	13	3	0	0	0	0	0	0	352
14:00	2	1	25	96	159	81	23	6	0	0	0	0	0	0	393
15:00	8	7	25	130	118	72	21	3	1	0	0	0	0	0	385
16:00	3	3	48	109	144	77	14	3	0	1	0	0	0	0	402
17:00	0	4	47	102	158	62	10	0	0	1	0	0	0	0	384
18:00	10	8	23	76	94	59	18	1	1	0	0	0	0	0	290
19:00	1	1	15	37	55	31	12	2	0	0	0	0	0	0	154
20:00	0	0	11	23	32	35	8	2	1	1	0	0	0	0	113
21:00	1	0	8	12	21	23	9	2	1	0	0	0	0	0	77
22:00	4	0	1	10	20	14	6	6	2	0	0	0	0	0	63
23:00	0	1	2	3	8	7	0	0	0	0	0	0	0	0	21
Total	59	45	357	1116	1675	1010	266	44	7	3	0	0	0	0	4582

Daily
15th Percentile : 26 MPH
50th Percentile : 32 MPH
85th Percentile : 38 MPH
95th Percentile : 41 MPH

Statistics
Mean Speed(Average) : 32 MPH
10 MPH Pace Speed : 26-35 MPH
Number in Pace : 2791
Percent in Pace : 60.9%
Number of Vehicles > 55 MPH : 3
Percent of Vehicles > 55 MPH : 0.1%

Counts Unlimited, Inc.

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

email: counts@countsunlimited.com

City of Carlsbad
Avenida Encinas
B/ Windrose Circle - Shopping Center
24 Hour Directional Speed Survey

CAR002
Site Code: 232-22185

Northbound

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total
03/09/22	0	0	0	0	2	1	1	2	0	0	0	0	0	0	6
01:00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
02:00	0	0	0	0	0	6	0	0	0	0	0	0	0	0	6
03:00	0	0	0	0	0	1	1	0	0	0	0	0	0	0	2
04:00	0	0	0	0	1	3	0	1	1	0	0	0	0	0	6
05:00	0	0	0	4	4	7	2	4	1	0	0	0	0	0	22
06:00	0	0	0	0	10	33	15	3	1	0	0	0	0	0	62
07:00	3	0	0	3	22	76	49	10	3	0	0	0	0	0	166
08:00	0	0	0	2	24	70	60	14	0	0	0	0	0	0	170
09:00	1	1	1	7	24	71	33	11	0	0	0	0	0	0	149
10:00	2	0	1	3	29	68	39	6	0	0	0	0	0	0	148
11:00	0	3	1	3	25	62	45	5	2	0	0	0	0	0	146
12 PM	4	0	3	6	37	83	31	5	1	0	0	0	0	0	170
13:00	3	4	2	2	39	65	37	6	2	0	0	0	0	0	160
14:00	3	0	1	1	48	90	54	11	4	1	0	0	0	0	213
15:00	6	0	2	7	32	85	50	7	1	1	0	0	0	0	191
16:00	0	2	1	3	43	92	57	9	1	0	0	0	0	0	208
17:00	1	1	0	3	36	82	69	11	2	0	0	0	0	0	205
18:00	1	0	0	8	29	59	23	7	1	1	0	0	0	0	129
19:00	1	0	0	3	11	26	12	1	0	0	0	0	0	0	54
20:00	0	0	0	0	9	18	8	1	3	0	0	0	0	0	39
21:00	0	1	0	1	2	10	4	0	0	0	0	0	0	0	18
22:00	0	0	0	0	3	4	5	1	1	0	0	0	0	0	14
23:00	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2
Total	25	12	12	57	431	1012	596	115	24	3	0	0	0	0	2287

Daily
15th Percentile : 32 MPH
50th Percentile : 37 MPH
85th Percentile : 43 MPH
95th Percentile : 46 MPH

Statistics
Mean Speed(Average) : 38 MPH
10 MPH Pace Speed : 36-45 MPH
Number in Pace : 1608
Percent in Pace : 70.3%
Number of Vehicles > 55 MPH : 3
Percent of Vehicles > 55 MPH : 0.1%

Counts Unlimited, Inc.

City of Carlsbad
Avenida Encinas
B/ Windrose Circle - Shopping Center
24 Hour Directional Speed Survey

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(951) 268-6268
email: counts@countsunlimited.com

CAR002
Site Code: 232-22185

Southbound

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total
03/09/22	0	0	0	0	1	3	2	0	1	0	0	0	0	0	7
01:00	0	1	0	0	0	0	1	0	0	0	0	0	0	0	2
02:00	0	0	0	0	1	4	1	0	0	0	0	0	0	0	6
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	0	1	1	1	0	0	1	0	0	0	0	0	0	4
05:00	0	0	1	0	5	2	5	1	0	0	0	0	0	0	14
06:00	0	0	0	3	9	11	14	0	0	0	0	0	0	0	37
07:00	0	0	0	2	12	31	26	7	3	0	0	0	0	0	81
08:00	0	0	0	0	20	48	36	14	3	0	0	0	0	0	121
09:00	2	0	1	5	19	57	32	11	0	0	0	0	0	0	127
10:00	0	0	0	2	22	40	35	7	1	0	0	0	0	0	107
11:00	2	0	0	2	27	58	45	8	2	0	0	0	0	0	144
12 PM	0	0	0	4	24	57	42	6	1	0	0	0	0	0	134
13:00	0	1	1	1	23	71	52	11	1	1	0	0	0	0	162
14:00	1	1	2	0	26	80	48	7	0	0	0	0	0	0	165
15:00	0	0	1	1	33	68	47	15	2	1	0	0	0	0	168
16:00	0	0	0	2	26	89	65	14	1	2	1	0	0	0	200
17:00	0	0	0	1	21	99	56	14	3	0	0	0	0	0	194
18:00	0	0	0	5	26	64	46	5	1	0	0	0	0	0	147
19:00	0	0	0	4	15	37	24	3	0	1	0	0	0	0	84
20:00	0	1	0	2	11	26	20	1	0	1	1	0	0	0	63
21:00	0	0	0	2	3	15	8	2	4	1	0	0	0	0	35
22:00	0	0	0	3	5	11	9	5	2	0	1	0	0	0	36
23:00	0	0	0	0	3	5	2	1	0	0	0	0	0	0	11
Total	5	4	7	40	333	876	616	133	25	7	3	0	0	0	2049

Daily
15th Percentile : 33 MPH
50th Percentile : 38 MPH
85th Percentile : 43 MPH
95th Percentile : 47 MPH

Statistics
Mean Speed(Average) : 39 MPH
10 MPH Pace Speed : 36-45 MPH
Number in Pace : 1492
Percent in Pace : 72.8%
Number of Vehicles > 55 MPH : 10
Percent of Vehicles > 55 MPH : 0.5%

Counts Unlimited, Inc.

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

email: counts@countsunlimited.com

City of Carlsbad
Avenida Encinas
B/ Windrose Circle - Shopping Center
24 Hour Directional Speed Survey

CAR002
Site Code: 232-22185

Northbound, Southbound

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total
03/09/22	0	0	0	0	3	4	3	2	1	0	0	0	0	0	13
01:00	0	1	0	1	0	0	1	0	0	0	0	0	0	0	3
02:00	0	0	0	0	1	10	1	0	0	0	0	0	0	0	12
03:00	0	0	0	0	0	1	1	0	0	0	0	0	0	0	2
04:00	0	0	1	1	2	3	0	2	1	0	0	0	0	0	10
05:00	0	0	1	4	9	9	7	5	1	0	0	0	0	0	36
06:00	0	0	0	3	19	44	29	3	1	0	0	0	0	0	99
07:00	3	0	0	5	34	107	75	17	6	0	0	0	0	0	247
08:00	0	0	0	2	44	118	96	28	3	0	0	0	0	0	291
09:00	3	1	2	12	43	128	65	22	0	0	0	0	0	0	276
10:00	2	0	1	5	51	108	74	13	1	0	0	0	0	0	255
11:00	2	3	1	5	52	120	90	13	4	0	0	0	0	0	290
12 PM	4	0	3	10	61	140	73	11	2	0	0	0	0	0	304
13:00	3	5	3	3	62	136	89	17	3	1	0	0	0	0	322
14:00	4	1	3	1	74	170	102	18	4	1	0	0	0	0	378
15:00	6	0	3	8	65	153	97	22	3	2	0	0	0	0	359
16:00	0	2	1	5	69	181	122	23	2	2	1	0	0	0	408
17:00	1	1	0	4	57	181	125	25	5	0	0	0	0	0	399
18:00	1	0	0	13	55	123	69	12	2	1	0	0	0	0	276
19:00	1	0	0	7	26	63	36	4	0	1	0	0	0	0	138
20:00	0	1	0	2	20	44	28	2	3	1	1	0	0	0	102
21:00	0	1	0	3	5	25	12	2	4	1	0	0	0	0	53
22:00	0	0	0	3	8	15	14	6	3	0	1	0	0	0	50
23:00	0	0	0	0	4	5	3	1	0	0	0	0	0	0	13
Total	30	16	19	97	764	1888	1212	248	49	10	3	0	0	0	4336

Daily
15th Percentile : 33 MPH
50th Percentile : 38 MPH
85th Percentile : 43 MPH
95th Percentile : 46 MPH

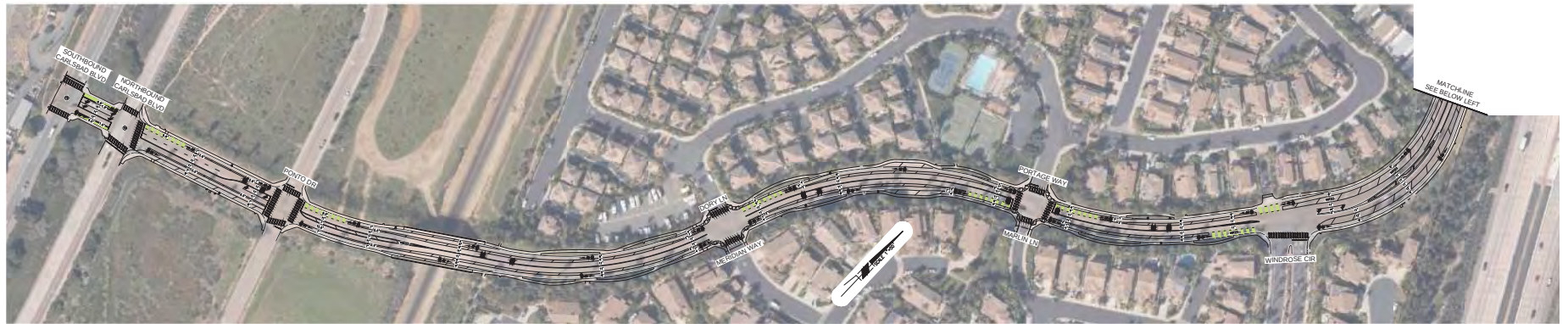
Statistics
Mean Speed(Average) : 39 MPH
10 MPH Pace Speed : 36-45 MPH
Number in Pace : 3100
Percent in Pace : 71.5%
Number of Vehicles > 55 MPH : 13
Percent of Vehicles > 55 MPH : 0.3%

Appendix B:

Segment Two Conceptual Design Plan (April 2022)

Carlsbad Boulevard to Raintree Drive	B1
Raintree Drive to Carlsbad Poinsettia Coaster Station	B2

AVENIDA ENCINAS CONCEPT STRIPING (SHEET 1 OF 2)



AVENIDA ENCINAS CONCEPT STRIPING (SHEET 2 OF 2)



LEGEND:
 PROPOSED STRIPING ————
 EXISTING STRIPING ————
 PROPOSED NO STRIPING ————
 EXISTING NO STRIPING ————

Appendix C:

Signal Timing Sheets

Avenida Encinas & Poinsettia Lane	C1
Avenida Encinas & Carlsbad Boulevard	C2
Avenida Encinas & San Lucas	C3
Avenida Encinas & Palomar Airport Road	C4

Controller Database Timing Sheet

Station: 5161 - Poinsettia Lane @ Avenida Encinas(Standard File)

Type: Scout Ethernet

Firmware:

Created By: STC

Modified By:

Reviewed By:

Controller Phase Times(1.1.1)								
	1	2	3	4	5	6	7	8
TABLE - 1								
Min Grn	4	10	4	6	4	10	4	6
Gap Ext	2	2	2	2	2	2	2	2
Max 1	50	40	20	30	25	40	30	30
Max 2	0	0	0	0	0	0	0	0
Yel Clr	4.5	5	4.5	5	4.5	5	4.5	5
Red Clr	1	1	1	1	1	1	1	1
Walk	0	7	0	7	0	7	0	7
Ped Clr	0	26	0	27	0	26	0	29
Red Revt	5	5	5	5	5	5	5	5
Add Init	0	2	0	2	0	2	0	2
Max Init	0	20	0	20	0	20	0	20
Gap Reduce Time B4	0	0	0	0	0	0	0	0
Gap Reduce Cars B4	0	0	0	0	0	0	0	0
Reduce	0	0	0	0	0	0	0	0
Gap Reduce Time To	0	0	0	0	0	0	0	0
Gap Reduce ReduceBy	0	0	0	0	0	0	0	0
Gap Reduce Min Gap	0	0	0	0	0	0	0	0
DyMaxLim	0	0	0	0	0	0	0	0
Max Step	0	0	0	0	0	0	0	0

INTERSECTION: Avenida Encinas and San Lucas

Group Assignment: NONE
Field Master Assignment: NONE
System Reference Number: 146

N/S Street Name: Not Assigned
E/W Street Name: Not Assigned

Last Database Change: 4/23/2013 14:24

Change Record					
Change	By	Date	Change	By	Date

Drop Number: 111 <C/D+0+0>
Zone Number: 0 <C/D+0+1>
Area Number: 0 <C/D+0+2>
Area Address: 100-200 <C/D+0+3>
QuickNet Channel: 10100-10 24120 (QuickNet)

Communication Addresses

Manual Plan: <C/D+A+1>
Manual Offset: <C/D+B+1>

Notes:

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Flash Start: 0 <F/1+0+E>
Red Revert: 5.0 <F/1+0+F>
All Red Start: 5.0 <F/1+C+0>
FYA Red Revert: 2.0 <F/1+0+5>

Start / Revert Times

Exclusive Walk: 0 <F/1+0+0>
Exclusive FDW: 0 <F/1+0+1>
All Red Clear: 0.0 <F/1+0+2>

Exclusive Ped Phase
(Outputs specified in Assignable
Outputs at E/127+A+E & F)

		Phase							
		1	2	3	4	5	6	7	8
Row	Phase Name								
0	Ped Walk	0	7	0	10	0	7	0	10
1	Ped FDW	0	20	0	29	0	18	0	29
2	Min Green	5	7	0	10	8	7	0	10
3	Type 3 Disconnect	0	0	0	0	0	0	0	0
4	Added per Vehicle	0.0	1.2	0.0	1.2	0.0	1.2	0.0	1.2
5	Veh Extension	2.0	4.0	0.0	2.0	2.0	4.0	0.0	2.0
6	Max Gap	2.0	4.0	0.0	2.0	2.0	4.0	0.0	2.0
7	Min Gap	2.0	4.0	0.0	2.0	2.0	4.0	0.0	2.0
8	Max Limit	20	40	0	30	30	40	0	30
9	Max Limit 2	0	0	0	0	0	0	0	0
A	Adv. / Delay Walk	0	0	0	0	0	0	0	0
B	PE Min Ped FDW	0	20	0	29	0	18	0	29
C	Cond Serv Check	0	0	0	0	0	0	0	0
D	Reduce Every	1.0	1.0	0.0	1.0	1.0	1.0	0.0	1.0
E	Yellow Change	3.5	4.5	0.0	3.5	3.5	4.5	0.0	3.5
F	Red Clear	1.5	1.5	0.0	1.5	1.5	1.5	0.0	1.5

Phase Timing - Bank 1 <C+0+F=1>

	9	A	B	C	D
Phase 1	0	0	0	0	0.0
Phase 2	20	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	20	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	20	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	20	0	0	0	0.0

Max Initial
Alternate Walk
Alternate FDW
Alternate Initial
Alternate Extension

Alternate Timing <C+0+F=1>

RR-1 Delay: 0
RR-1 Clear: 10
EV-A Delay: 0
EV-A Clear: 5
EV-B Delay: 0
EV-B Clear: 5
EV-C Delay: 0
EV-C Clear: 5
EV-D Delay: 0
EV-D Clear: 5
RR-2 Delay: 0
RR-2 Clear: 10
View EV Delay: ---
View EV Clear: ---
View RR Delay: ---
View RR Clear: ---

Preempt Timing

	E	F	Row
Permit	12	456	8
Red Lock			0
Yellow Lock			1
Min Recall	2	6	2
Ped Recall			3
View Set Peds	-----		4
Rest In Walk			5
Red Rest			6
Dual Entry	4	8	7
Max Recall			8
Soft Recall			9
Max 2			A
Cond. Service			B
Man Cntrl Calls			C
Yellow Start			D
First Phases	4	8	E
	2	6	F

Phase Functions <C+0+F=1>

INTERSECTION: PAR & Avenida Encinas

Group Assignment: NONE
Field Master Assignment: NONE
System Reference Number: 22

N/S Street Name: Not Assigned
E/W Street Name: Not Assigned

Page 1 (of 9)
Last Database Change: 5/28/2015 15:12

Change Record					
Change	By	Date	Change	By	Date

Notes:

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Drop Number	1	<C/0+0+0>
Zone Number	0	<C/0+0+1>
Area Number	0	<C/0+0+2>
Area Address	41	<C/0+0+3>
QuicNet Channel	P-8002:10.241.0	(QuicNet)

Communication Addresses

Manual Plan		<C/0+A+1>
Manual Offset		<C/0+B+1>

Manual Selection

Flash Start	0	<F/1+0+E>
Red Revert	0.0	<F/1+0+F>
All Red Start	0.0	<F/1+C+0>
FYA Red Revert	0.0	<F/1+0+5>
OVLP CHG Red	6.0	<F/1+0+3>

Start / Revert Times

Exclusive Walk	0	<F/1+0+0>
Exclusive FDW	0	<F/1+0+1>
All Red Clear	0.0	<F/1+0+7>

Exclusive Ped Phase
(Outputs specified in Assignable
Outputs at E/127+A+E & F)

Column Numbers →		Phase							
		1	2	3	4	5	6	7	8
Row	Phase Names →								
0	Ped Walk	0	7	0	0	0	0	7	7
1	Ped FDW	0	20	0	0	0	0	13	24
2	Min Green	4	8	0	0	4	8	6	6
3	Type 3 Disconnect	0	0	0	0	0	30	0	0
4	Added per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	Veh Extension	2.0	3.0	0.0	0.0	2.0	3.0	2.0	2.0
6	Max Gap	2.0	3.0	0.0	0.0	2.0	3.0	2.0	2.0
7	Min Gap	2.0	3.0	0.0	0.0	2.0	3.0	2.0	2.0
8	Max Limit	25	45	0	0	25	35	50	30
9	Max Limit 2	0	0	0	0	0	0	45	0
A	Adv. / Delay Walk	0	0	0	0	0	0	0	0
B	PE Min Ped FDW	0	20	0	0	0	0	13	24
C	Cond Serv Check	0	0	0	0	0	0	0	0
D	Reduce Every	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	Yellow Change	3.2	4.0	0.0	0.0	3.2	4.0	3.6	3.6
F	Red Clear	1.0	1.0	0.0	0.0	1.0	1.0	1.0	1.0

Phase Timing - Bank 1

<C+0+F=1>

	9	A	B	C	D
Phase 1	0	0	0	0	0.0
Phase 2	0	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	0	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	0	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	0	0	0	0	0.0
Max Initial					
Alternate Walk					
Alternate FDW					
Alternate Initial					
Alternate Extension					

Alternate Timing <C+0+F=1>

	E
RR-1 Delay	0
RR-1 Clear	0
EV-A Delay	0
EV-A Clear	5
EV-B Delay	0
EV-B Clear	5
EV-C Delay	0
EV-C Clear	5
EV-D Delay	0
EV-D Clear	5
RR-2 Delay	0
RR-2 Clear	0
View EV Delay	---
View EV Clear	---
View RR Delay	---
View RR Clear	---

Preempt Timing

	F
Permit	12 5678
Red Lock	
Yellow Lock	
Min Recall	2 6
Ped Recall	
View Set Peds	---
Rest In Walk	
Red Rest	
Dual Entry	
Max Recall	
Soft Recall	
Max 2	
Cond. Service	
Man Cntrl Calls	
Yellow Start	
First Phases	

Phase Function

Appendix D:

LOS and Queuing Analysis

Worksheets

Existing Conditions AM Peak Hour	D1 - D9
Existing Conditions PM Peak Hour	D10 - D18
Existing Conditions Plus Project Improvements AM Peak Hour	D19 - D29
Existing Conditions Plus Project Improvements PM Peak Hour	D30 - D40

Avenida Encinas CRT
1: Avenida Encinas & Palomar Airport Road

Existing Conditions
Timing Plan: AM Peak

											
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	32	404	370	164	233	44	98	230	85	146	30
v/c Ratio	0.27	0.78	0.80	0.17	0.25	0.20	0.42	0.58	0.37	0.61	0.11
Control Delay	57.7	45.2	52.3	17.1	3.5	43.9	48.2	12.0	48.4	55.2	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.7	45.2	52.3	17.1	3.5	43.9	48.2	12.0	48.4	55.2	0.8
Queue Length 50th (ft)	19	216	205	53	0	25	56	0	49	87	0
Queue Length 95th (ft)	63	423	#569	137	42	47	89	0	121	191	0
Internal Link Dist (ft)		637		267			850			909	
Turn Bay Length (ft)	90		180			100		400	250		550
Base Capacity (vph)	462	845	462	978	923	573	603	657	790	829	751
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.48	0.80	0.17	0.25	0.08	0.16	0.35	0.11	0.18	0.04

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Avenida Encinas CRT
1: Avenida Encinas & Palomar Airport Road

Existing Conditions

Timing Plan: AM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	277	75	318	141	200	28	63	147	78	114	25
Future Volume (vph)	28	277	75	318	141	200	28	63	147	78	114	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	90		0	180		0	100		400	250		550
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1770	1789	0	1770	1863	1583	1770	1863	1583	1681	1764	1583
Flt Permitted	0.950			0.950			0.950			0.950	0.997	
Satd. Flow (perm)	1765	1789	0	1757	1863	1547	1770	1863	1550	1681	1764	1518
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8				233			230			72
Link Speed (mph)		35			35			40			35	
Link Distance (ft)		717			347			930			989	
Travel Time (s)		14.0			6.8			15.9			19.3	
Confl. Peds. (#/hr)	1		4	4		1			5			5
Confl. Bikes (#/hr)			3			1			1			1
Peak Hour Factor	0.87	0.87	0.87	0.86	0.86	0.86	0.64	0.64	0.64	0.83	0.83	0.83
Shared Lane Traffic (%)										10%		
Lane Group Flow (vph)	32	404	0	370	164	233	44	98	230	85	146	30
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		8	8		7	7	
Permitted Phases						6			8			7
Detector Phase	5	2		1	6	6	8	8	8	7	7	7
Switch Phase												
Minimum Initial (s)	4.0	8.0		4.0	8.0	8.0	6.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	8.2	32.0		8.2	13.0	13.0	35.6	35.6	35.6	24.6	24.6	24.6
Total Split (s)	29.2	50.0		29.2	50.0	50.0	35.6	35.6	35.6	49.6	49.6	49.6
Total Split (%)	17.8%	30.4%		17.8%	30.4%	30.4%	21.7%	21.7%	21.7%	30.2%	30.2%	30.2%
Maximum Green (s)	25.0	45.0		25.0	45.0	45.0	31.0	31.0	31.0	45.0	45.0	45.0
Yellow Time (s)	3.2	4.0		3.2	4.0	4.0	3.6	3.6	3.6	3.6	3.6	3.6
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)	4.2	5.0		4.2	5.0	5.0	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	3.0		2.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	None	Min		None	Min	Min	None	None	None	None	None	None
Walk Time (s)		7.0					7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		20.0					24.0	24.0	24.0	13.0	13.0	13.0
Pedestrian Calls (#/hr)		4					5	5	5	0	0	0
Act Effect Green (s)	6.6	28.5		26.1	52.6	52.6	12.5	12.5	12.5	13.7	13.7	13.7
Actuated g/C Ratio	0.07	0.28		0.26	0.53	0.53	0.12	0.12	0.12	0.14	0.14	0.14
v/c Ratio	0.27	0.78		0.80	0.17	0.25	0.20	0.42	0.58	0.37	0.61	0.11
Control Delay	57.7	45.2		52.3	17.1	3.5	43.9	48.2	12.0	48.4	55.2	0.8
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.7	45.2		52.3	17.1	3.5	43.9	48.2	12.0	48.4	55.2	0.8
LOS	E	D		D	B	A	D	D	B	D	E	A
Approach Delay		46.1			30.0			25.3			46.7	

STC::MB
Lanes, Volumes, Timings

Synchro 11 Report
Page 1

Avenida Encinas CRT
1: Avenida Encinas & Palomar Airport Road

Existing Conditions
Timing Plan: AM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	D			C			C			D		
Intersection Summary												
Area Type:	Other											
Cycle Length: 164.4												
Actuated Cycle Length: 100.1												
Natural Cycle: 115												
Control Type: Actuated-Uncoordinated												
Maximum v/c Ratio: 0.80												
Intersection Signal Delay: 35.2						Intersection LOS: D						
Intersection Capacity Utilization 61.3%						ICU Level of Service B						
Analysis Period (min) 15												

Avenida Encinas CRT
2: Avenida Encinas & Poinsettia Lane

Existing Conditions
Timing Plan: AM Peak

											
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	39	299	353	206	306	23	80	400	272	82	52
v/c Ratio	0.28	0.33	0.61	0.17	0.44	0.19	0.33	0.73	0.64	0.11	0.08
Control Delay	54.5	29.3	43.6	25.7	5.8	54.9	42.6	12.6	42.7	22.7	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.5	29.3	43.6	25.7	5.8	54.9	42.6	12.6	42.7	22.7	0.2
Queue Length 50th (ft)	18	41	81	43	0	11	37	0	112	21	0
Queue Length 95th (ft)	71	93	218	108	70	49	100	55	300	75	0
Internal Link Dist (ft)	1109		1337		560		1079				
Turn Bay Length (ft)	225	230		200		215		200			
Base Capacity (vph)	425	2351	2063	2896	1248	425	806	895	638	1059	925
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.13	0.17	0.07	0.25	0.05	0.10	0.45	0.43	0.08	0.06
Intersection Summary											

Avenida Encinas CRT
2: Avenida Encinas & Poinsettia Lane

Existing Conditions

Timing Plan: AM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	183	68	332	194	288	19	67	336	215	65	41
Future Volume (veh/h)	33	183	68	332	194	288	19	67	336	215	65	41
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	1.00		0.93	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	39	218	81	353	206	306	23	80	400	272	82	52
Peak Hour Factor	0.84	0.84	0.84	0.94	0.94	0.94	0.84	0.84	0.84	0.79	0.79	0.79
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	49	600	201	439	927	386	34	558	462	308	846	703
Arrive On Green	0.03	0.16	0.16	0.13	0.26	0.26	0.02	0.30	0.30	0.17	0.45	0.45
Sat Flow, veh/h	1781	3714	1245	3456	3554	1479	1781	1870	1549	1781	1870	1555
Grp Volume(v), veh/h	39	198	101	353	206	306	23	80	400	272	82	52
Grp Sat Flow(s),veh/h/ln	1781	1702	1555	1728	1777	1479	1781	1870	1549	1781	1870	1555
Q Serve(g_s), s	2.1	5.0	5.6	9.5	4.4	18.5	1.2	3.0	23.4	14.3	2.4	1.8
Cycle Q Clear(g_c), s	2.1	5.0	5.6	9.5	4.4	18.5	1.2	3.0	23.4	14.3	2.4	1.8
Prop In Lane	1.00		0.80	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	49	550	251	439	927	386	34	558	462	308	846	703
V/C Ratio(X)	0.79	0.36	0.40	0.80	0.22	0.79	0.68	0.14	0.87	0.88	0.10	0.07
Avail Cap(c_a), veh/h	372	1422	649	1804	2598	1081	372	703	582	558	898	747
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	46.3	35.7	36.0	40.6	27.8	33.0	46.7	24.6	31.8	38.6	15.0	14.9
Incr Delay (d2), s/veh	10.0	0.1	0.4	1.3	0.0	1.4	8.4	0.0	9.3	3.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	2.0	2.1	4.0	1.8	6.5	0.6	1.3	9.6	6.3	1.0	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.3	35.9	36.4	42.0	27.8	34.4	55.0	24.7	41.1	41.9	15.0	14.9
LnGrp LOS	E	D	D	D	C	C	E	C	D	D	B	B
Approach Vol, veh/h		338			865			503			406	
Approach Delay, s/veh		38.4			35.9			39.1			33.0	
Approach LOS		D			D			D			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.7	21.5	7.3	49.3	8.2	31.0	22.1	34.5				
Change Period (Y+Rc), s	5.5	6.0	5.5	6.0	5.5	6.0	5.5	6.0				
Max Green Setting (Gmax), s	50.0	40.0	20.0	46.0	20.0	70.0	30.0	36.0				
Max Q Clear Time (g_c+I1), s	11.5	7.6	3.2	4.4	4.1	20.5	16.3	25.4				
Green Ext Time (p_c), s	0.7	1.3	0.0	0.4	0.0	1.5	0.3	0.8				
Intersection Summary												
HCM 6th Ctrl Delay			36.5									
HCM 6th LOS			D									

Avenida Encinas CRT
3: Carlsbad Blvd & Avenida Encinas

Existing Conditions
Timing Plan: AM Peak

					
Lane Group	WBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	112	210	102	18	527
v/c Ratio	0.14	0.13	0.10	0.04	0.30
Control Delay	9.6	12.8	0.9	16.9	9.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	9.6	12.8	0.9	16.9	9.4
Queue Length 50th (ft)	6	9	0	2	25
Queue Length 95th (ft)	24	69	10	24	120
Internal Link Dist (ft)	365	268			492
Turn Bay Length (ft)	180				
Base Capacity (vph)	3013	3316	1456	828	3537
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.04	0.06	0.07	0.02	0.15
Intersection Summary					

Avenida Encinas CRT
3: Carlsbad Blvd & Avenida Encinas

Existing Conditions

Timing Plan: AM Peak

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	99	6	195	95	16	480
Future Volume (veh/h)	99	6	195	95	16	480
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.95	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	112	0	210	102	18	527
Peak Hour Factor	0.93	0.93	0.93	0.93	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	284	126	1141	608	66	1901
Arrive On Green	0.08	0.00	0.32	0.32	0.04	0.53
Sat Flow, veh/h	3563	1585	3647	1499	1781	3647
Grp Volume(v), veh/h	112	0	210	102	18	527
Grp Sat Flow(s),veh/h/ln	1781	1585	1777	1499	1781	1777
Q Serve(g_s), s	0.9	0.0	1.3	1.4	0.3	2.5
Cycle Q Clear(g_c), s	0.9	0.0	1.3	1.4	0.3	2.5
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	284	126	1141	608	66	1901
V/C Ratio(X)	0.39	0.00	0.18	0.17	0.27	0.28
Avail Cap(c_a), veh/h	3433	1527	5136	2292	858	7476
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.6	0.0	7.6	6.0	14.6	4.0
Incr Delay (d2), s/veh	0.3	0.0	0.0	0.0	0.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.2	0.2	0.1	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	13.9	0.0	7.7	6.0	15.4	4.0
LnGrp LOS	B	A	A	A	B	A
Approach Vol, veh/h	112		312			545
Approach Delay, s/veh	13.9		7.1			4.4
Approach LOS	B		A			A
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	6.7	16.5		8.0		23.2
Change Period (Y+Rc), s	5.5	6.5		5.5		6.5
Max Green Setting (Gmax), s	15.0	45.0		30.0		65.5
Max Q Clear Time (g_c+l1), s	2.3	3.4		2.9		4.5
Green Ext Time (p_c), s	0.0	0.9		0.2		2.0
Intersection Summary						
HCM 6th Ctrl Delay			6.4			
HCM 6th LOS			A			
Notes						
User approved volume balancing among the lanes for turning movement.						



Lane Group	EBT	WBT	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	84	17	143	225	117	160
v/c Ratio	0.12	0.04	0.28	0.17	0.31	0.07
Control Delay	11.9	14.4	5.5	14.2	18.1	4.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.9	14.4	5.5	14.2	18.1	4.8
Queue Length 50th (ft)	6	3	0	24	25	8
Queue Length 95th (ft)	15	15	32	35	59	16
Internal Link Dist (ft)	214	146		758		483
Turn Bay Length (ft)					310	
Base Capacity (vph)	2480	1440	1427	3244	1318	3458
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.01	0.10	0.07	0.09	0.05
Intersection Summary						

Avenida Encinas CRT

4: Avenida Encinas & Lakeshore Gardens Drwy/Shopping Plaza Drwy

Existing Conditions

Timing Plan: AM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	9	15	6	9	126	0	147	8	102	121	18
Future Volume (veh/h)	35	9	15	6	9	126	0	147	8	102	121	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	0.99		0.99	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	50	13	21	7	10	143	0	213	12	117	139	21
Peak Hour Factor	0.70	0.70	0.70	0.88	0.88	0.88	0.69	0.69	0.69	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	500	158	255	261	319	426	4	662	37	256	1425	211
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.00	0.19	0.19	0.14	0.46	0.46
Sat Flow, veh/h	1198	584	943	505	1180	1576	1781	3416	191	1781	3096	458
Grp Volume(v), veh/h	50	0	34	17	0	143	0	110	115	117	79	81
Grp Sat Flow(s),veh/h/ln	1198	0	1526	1685	0	1576	1781	1777	1831	1781	1777	1778
Q Serve(g_s), s	1.3	0.0	0.7	0.0	0.0	3.0	0.0	2.2	2.2	2.5	1.0	1.1
Cycle Q Clear(g_c), s	1.5	0.0	0.7	0.3	0.0	3.0	0.0	2.2	2.2	2.5	1.0	1.1
Prop In Lane	1.00		0.62	0.41		1.00	1.00		0.10	1.00		0.26
Lane Grp Cap(c), veh/h	500	0	413	580	0	426	4	344	355	256	818	818
V/C Ratio(X)	0.10	0.00	0.08	0.03	0.00	0.34	0.00	0.32	0.32	0.46	0.10	0.10
Avail Cap(c_a), veh/h	1342	0	1458	1693	0	1506	873	1741	1793	1309	2176	2177
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.5	0.0	11.1	11.0	0.0	12.0	0.0	14.1	14.2	16.0	6.2	6.2
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.8	0.7	0.5	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.2	0.1	0.0	0.9	0.0	0.8	0.8	0.9	0.3	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.6	0.0	11.1	11.0	0.0	12.1	0.0	14.9	14.9	16.5	6.3	6.3
LnGrp LOS	B	A	B	B	A	B	A	B	B	B	A	A
Approach Vol, veh/h		84			160			225			277	
Approach Delay, s/veh		11.4			12.0			14.9			10.6	
Approach LOS		B			B			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	24.8		16.0	10.9	13.9		16.0				
Change Period (Y+Rc), s	5.0	6.0		5.0	5.0	6.0		5.0				
Max Green Setting (Gmax), s	20.0	50.0		39.0	30.0	40.0		39.0				
Max Q Clear Time (g_c+I1), s	0.0	3.1		5.0	4.5	4.2		3.5				
Green Ext Time (p_c), s	0.0	1.4		0.3	0.1	1.9		0.3				
Intersection Summary												
HCM 6th Ctrl Delay			12.3									
HCM 6th LOS			B									

Avenida Encinas CRT
1: Avenida Encinas & Palomar Airport Road

Existing Conditions
Timing Plan: PM Peak

											
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	81	334	203	386	305	90	315	432	146	151	63
v/c Ratio	0.48	0.73	0.67	0.59	0.43	0.21	0.69	0.61	0.61	0.61	0.22
Control Delay	59.6	47.6	54.5	34.4	7.8	36.6	46.6	7.8	56.5	56.2	10.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.6	47.6	54.5	34.4	7.8	36.6	46.6	7.8	56.5	56.2	10.8
Queue Length 50th (ft)	52	202	127	216	20	47	186	0	96	100	0
Queue Length 95th (ft)	121	363	250	383	98	91	280	9	192	197	32
Internal Link Dist (ft)		637		307			850			909	
Turn Bay Length (ft)	90		180			100		400	250		550
Base Capacity (vph)	455	849	455	869	860	565	594	791	779	804	757
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.39	0.45	0.44	0.35	0.16	0.53	0.55	0.19	0.19	0.08
Intersection Summary											

Avenida Encinas CRT
1: Avenida Encinas & Palomar Airport Road

Existing Conditions

Timing Plan: PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	76	280	34	191	363	287	66	230	315	178	80	55
Future Volume (vph)	76	280	34	191	363	287	66	230	315	178	80	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	90		0	180		0	100		400	250		550
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1770	1827	0	1770	1863	1583	1770	1863	1583	1681	1736	1583
Flt Permitted	0.950			0.950			0.950			0.950	0.981	
Satd. Flow (perm)	1770	1827	0	1766	1863	1545	1770	1863	1559	1678	1735	1550
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4				262			432			72
Link Speed (mph)		35			35			40			35	
Link Distance (ft)		717			387			930			989	
Travel Time (s)		14.0			7.5			15.9			19.3	
Confl. Peds. (#/hr)			1	1					2	2		
Confl. Bikes (#/hr)			4			3						1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.73	0.73	0.73	0.87	0.87	0.87
Shared Lane Traffic (%)										29%		
Lane Group Flow (vph)	81	334	0	203	386	305	90	315	432	146	151	63
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		8	8		7	7	
Permitted Phases						6			8			7
Detector Phase	5	2		1	6	6	8	8	8	7	7	7
Switch Phase												
Minimum Initial (s)	4.0	8.0		4.0	8.0	8.0	6.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	8.2	32.0		8.2	13.0	13.0	35.6	35.6	35.6	24.6	24.6	24.6
Total Split (s)	29.2	50.0		29.2	50.0	50.0	35.6	35.6	35.6	49.6	49.6	49.6
Total Split (%)	17.8%	30.4%		17.8%	30.4%	30.4%	21.7%	21.7%	21.7%	30.2%	30.2%	30.2%
Maximum Green (s)	25.0	45.0		25.0	45.0	45.0	31.0	31.0	31.0	45.0	45.0	45.0
Yellow Time (s)	3.2	4.0		3.2	4.0	4.0	3.6	3.6	3.6	3.6	3.6	3.6
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)	4.2	5.0		4.2	5.0	5.0	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	3.0		2.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	None	Min		None	Min	Min	None	None	None	None	None	None
Walk Time (s)		7.0					7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		20.0					24.0	24.0	24.0	13.0	13.0	13.0
Pedestrian Calls (#/hr)		1					2	2	2	0	0	0
Act Effect Green (s)	9.9	25.5		17.7	36.3	36.3	25.3	25.3	25.3	14.7	14.7	14.7
Actuated g/C Ratio	0.10	0.25		0.17	0.35	0.35	0.25	0.25	0.25	0.14	0.14	0.14
v/c Ratio	0.48	0.73		0.67	0.59	0.43	0.21	0.69	0.61	0.61	0.61	0.22
Control Delay	59.6	47.6		54.5	34.4	7.8	36.6	46.6	7.8	56.5	56.2	10.8
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.6	47.6		54.5	34.4	7.8	36.6	46.6	7.8	56.5	56.2	10.8
LOS	E	D		D	C	A	D	D	A	E	E	B
Approach Delay		49.9			29.9			25.5			48.4	

STC::MB
Lanes, Volumes, Timings

Synchro 11 Report
Page 1

Avenida Encinas CRT
1: Avenida Encinas & Palomar Airport Road

Existing Conditions
Timing Plan: PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	D			C			C			D		
Intersection Summary												
Area Type:	Other											
Cycle Length: 164.4												
Actuated Cycle Length: 102.7												
Natural Cycle: 105												
Control Type: Actuated-Uncoordinated												
Maximum v/c Ratio: 0.73												
Intersection Signal Delay: 34.4						Intersection LOS: C						
Intersection Capacity Utilization 62.9%						ICU Level of Service B						
Analysis Period (min) 15												

Avenida Encinas CRT
2: Avenida Encinas & Poinsettia Lane

Existing Conditions
Timing Plan: PM Peak

											
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	59	332	480	285	329	34	104	484	267	127	52
v/c Ratio	0.41	0.33	0.71	0.23	0.46	0.30	0.36	0.75	0.69	0.19	0.08
Control Delay	69.1	35.0	52.5	30.2	5.9	69.5	49.6	11.9	56.6	30.2	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.1	35.0	52.5	30.2	5.9	69.5	49.6	11.9	56.6	30.2	0.2
Queue Length 50th (ft)	45	61	179	75	0	26	79	0	188	78	0
Queue Length 95th (ft)	94	102	295	148	73	72	142	104	320	123	0
Internal Link Dist (ft)	1109		1337				556			1079	
Turn Bay Length (ft)	225	230		200				215	200		
Base Capacity (vph)	354	1953	1718	2434	1102	354	671	859	531	910	820
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.17	0.28	0.12	0.30	0.10	0.15	0.56	0.50	0.14	0.06
Intersection Summary											

Avenida Encinas CRT
2: Avenida Encinas & Poinsettia Lane

Existing Conditions

Timing Plan: PM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	187	78	442	262	303	33	100	465	216	103	42
Future Volume (veh/h)	47	187	78	442	262	303	33	100	465	216	103	42
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	1.00		0.93	1.00		0.97	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	59	234	98	480	285	329	34	104	484	267	127	52
Peak Hour Factor	0.80	0.80	0.80	0.92	0.92	0.92	0.96	0.96	0.96	0.81	0.81	0.81
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	76	546	205	556	960	398	43	593	489	298	861	722
Arrive On Green	0.04	0.15	0.15	0.16	0.27	0.27	0.02	0.32	0.32	0.17	0.46	0.46
Sat Flow, veh/h	1781	3588	1350	3456	3554	1472	1781	1870	1541	1781	1870	1569
Grp Volume(v), veh/h	59	221	111	480	285	329	34	104	484	267	127	52
Grp Sat Flow(s),veh/h/ln	1781	1702	1534	1728	1777	1472	1781	1870	1541	1781	1870	1569
Q Serve(g_s), s	3.7	6.7	7.5	15.4	7.2	23.8	2.2	4.6	35.5	16.7	4.5	2.1
Cycle Q Clear(g_c), s	3.7	6.7	7.5	15.4	7.2	23.8	2.2	4.6	35.5	16.7	4.5	2.1
Prop In Lane	1.00		0.88	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	76	518	233	556	960	398	43	593	489	298	861	722
V/C Ratio(X)	0.77	0.43	0.48	0.86	0.30	0.83	0.79	0.18	0.99	0.90	0.15	0.07
Avail Cap(c_a), veh/h	314	1200	541	1523	2192	908	314	593	489	471	861	722
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	53.8	43.6	44.0	46.4	32.9	38.9	55.1	28.0	38.6	46.3	17.7	17.1
Incr Delay (d2), s/veh	6.1	0.2	0.6	1.6	0.1	1.7	11.2	0.1	37.9	9.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	2.8	2.9	6.6	3.1	8.6	1.1	2.0	18.1	8.0	1.9	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.8	43.8	44.6	48.0	32.9	40.6	66.3	28.1	76.4	55.3	17.8	17.1
LnGrp LOS	E	D	D	D	C	D	E	C	E	E	B	B
Approach Vol, veh/h		391			1094			622			446	
Approach Delay, s/veh		46.4			41.8			67.8			40.2	
Approach LOS		D			D			E			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	23.8	23.3	8.2	58.2	10.4	36.7	24.5	42.0				
Change Period (Y+Rc), s	5.5	6.0	5.5	6.0	5.5	6.0	5.5	6.0				
Max Green Setting (Gmax), s	50.0	40.0	20.0	46.0	20.0	70.0	30.0	36.0				
Max Q Clear Time (g_c+I1), s	17.4	9.5	4.2	6.5	5.7	25.8	18.7	37.5				
Green Ext Time (p_c), s	0.9	1.4	0.0	0.5	0.0	1.9	0.3	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			48.6									
HCM 6th LOS			D									

Avenida Encinas CRT
3: Carlsbad Blvd & Avenida Encinas

Existing Conditions
Timing Plan: PM Peak

					
Lane Group	WBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	160	661	198	15	465
v/c Ratio	0.20	0.50	0.19	0.04	0.32
Control Delay	13.1	12.9	0.8	22.4	8.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	13.1	12.9	0.8	22.4	8.8
Queue Length 50th (ft)	9	35	0	2	23
Queue Length 95th (ft)	47	197	11	26	100
Internal Link Dist (ft)	331	268			405
Turn Bay Length (ft)	180				
Base Capacity (vph)	2868	3208	1462	796	3380
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.06	0.21	0.14	0.02	0.14
Intersection Summary					

Avenida Encinas CRT
3: Carlsbad Blvd & Avenida Encinas

Existing Conditions

Timing Plan: PM Peak

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	136	14	588	176	14	428
Future Volume (veh/h)	136	14	588	176	14	428
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.96	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	159	0	661	198	15	465
Peak Hour Factor	0.94	0.94	0.89	0.89	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	339	151	1141	640	56	1869
Arrive On Green	0.10	0.00	0.32	0.32	0.03	0.53
Sat Flow, veh/h	3563	1585	3647	1523	1781	3647
Grp Volume(v), veh/h	159	0	661	198	15	465
Grp Sat Flow(s),veh/h/ln	1781	1585	1777	1523	1781	1777
Q Serve(g_s), s	1.3	0.0	4.9	2.8	0.3	2.3
Cycle Q Clear(g_c), s	1.3	0.0	4.9	2.8	0.3	2.3
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	339	151	1141	640	56	1869
V/C Ratio(X)	0.47	0.00	0.58	0.31	0.27	0.25
Avail Cap(c_a), veh/h	3375	1501	5049	2315	844	7349
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.6	0.0	9.0	6.2	15.0	4.1
Incr Delay (d2), s/veh	0.4	0.0	0.2	0.1	1.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	0.9	0.5	0.1	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	13.9	0.0	9.1	6.3	15.9	4.1
LnGrp LOS	B	A	A	A	B	A
Approach Vol, veh/h	159		859			480
Approach Delay, s/veh	13.9		8.5			4.5
Approach LOS	B		A			A
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	6.5	16.7		8.5		23.2
Change Period (Y+Rc), s	5.5	6.5		5.5		6.5
Max Green Setting (Gmax), s	15.0	45.0		30.0		65.5
Max Q Clear Time (g_c+l1), s	2.3	6.9		3.3		4.3
Green Ext Time (p_c), s	0.0	3.0		0.3		1.8
Intersection Summary						
HCM 6th Ctrl Delay			7.8			
HCM 6th LOS			A			
Notes						
User approved volume balancing among the lanes for turning movement.						



Lane Group	EBT	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	60	64	263	14	223	147	203
v/c Ratio	0.07	0.14	0.42	0.07	0.27	0.40	0.13
Control Delay	13.8	16.5	4.8	30.5	19.0	27.0	9.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.8	16.5	4.8	30.5	19.0	27.0	9.9
Queue Length 50th (ft)	5	13	0	3	23	33	10
Queue Length 95th (ft)	22	49	40	28	86	142	63
Internal Link Dist (ft)	44	146			758		484
Turn Bay Length (ft)				155		310	
Base Capacity (vph)	2293	1265	1314	807	2891	1194	3112
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.05	0.20	0.02	0.08	0.12	0.07
Intersection Summary							

Avenida Encinas CRT

4: Avenida Encinas & Lakeshore Gardens Drwy/Shopping Plaza Drwy

Existing Conditions

Timing Plan: PM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	13	8	32	23	226	13	181	24	131	151	29
Future Volume (veh/h)	32	13	8	32	23	226	13	181	24	131	151	29
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.99	0.99		0.99	1.00		0.96	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	36	15	9	37	27	263	14	197	26	147	170	33
Peak Hour Factor	0.88	0.88	0.88	0.86	0.86	0.86	0.92	0.92	0.92	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	468	303	182	373	240	478	32	552	72	272	923	175
Arrive On Green	0.30	0.30	0.30	0.30	0.30	0.30	0.02	0.18	0.18	0.15	0.31	0.31
Sat Flow, veh/h	995	992	595	797	786	1569	1781	3145	408	1781	2976	565
Grp Volume(v), veh/h	36	0	24	64	0	263	14	110	113	147	100	103
Grp Sat Flow(s),veh/h/ln	995	0	1588	1583	0	1569	1781	1777	1776	1781	1777	1765
Q Serve(g_s), s	1.1	0.0	0.5	0.0	0.0	6.1	0.3	2.4	2.4	3.3	1.8	1.9
Cycle Q Clear(g_c), s	2.2	0.0	0.5	1.1	0.0	6.1	0.3	2.4	2.4	3.3	1.8	1.9
Prop In Lane	1.00		0.38	0.58		1.00	1.00		0.23	1.00		0.32
Lane Grp Cap(c), veh/h	468	0	484	613	0	478	32	312	312	272	551	548
V/C Ratio(X)	0.08	0.00	0.05	0.10	0.00	0.55	0.44	0.35	0.36	0.54	0.18	0.19
Avail Cap(c_a), veh/h	1107	0	1421	1525	0	1404	817	1630	1630	1226	2038	2024
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.7	0.0	10.7	10.9	0.0	12.7	21.2	15.8	15.8	17.1	11.0	11.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.4	3.5	1.0	1.0	0.6	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.1	0.4	0.0	1.8	0.2	0.9	0.9	1.2	0.6	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.7	0.0	10.7	10.9	0.0	13.0	24.7	16.8	16.8	17.7	11.2	11.2
LnGrp LOS	B	A	B	B	A	B	C	B	B	B	B	B
Approach Vol, veh/h		60			327			237			350	
Approach Delay, s/veh		11.3			12.6			17.3			13.9	
Approach LOS		B			B			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.8	19.5		18.3	11.7	13.7		18.3				
Change Period (Y+Rc), s	5.0	6.0		5.0	5.0	6.0		5.0				
Max Green Setting (Gmax), s	20.0	50.0		39.0	30.0	40.0		39.0				
Max Q Clear Time (g_c+I1), s	2.3	3.9		8.1	5.3	4.4		4.2				
Green Ext Time (p_c), s	0.0	1.8		0.7	0.2	1.9		0.2				
Intersection Summary												
HCM 6th Ctrl Delay			14.1									
HCM 6th LOS			B									

Avenida Encinas CRT
1: Avenida Encinas & Palomar Airport Road

Existing Condition Plus Project
Timing Plan: AM Peak

											
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	32	404	370	164	233	44	98	230	85	146	30
v/c Ratio	0.27	0.78	0.80	0.17	0.25	0.20	0.42	0.58	0.37	0.61	0.11
Control Delay	57.6	45.2	52.3	17.1	3.5	43.9	48.1	12.0	48.3	55.1	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.6	45.2	52.3	17.1	3.5	43.9	48.1	12.0	48.3	55.1	0.8
Queue Length 50th (ft)	19	216	205	53	0	24	56	0	48	87	0
Queue Length 95th (ft)	63	422	#569	137	42	47	89	0	121	191	0
Internal Link Dist (ft)		637		265			850			909	
Turn Bay Length (ft)	90		180			100		400	250		550
Base Capacity (vph)	462	847	462	978	923	573	603	658	790	829	753
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.48	0.80	0.17	0.25	0.08	0.16	0.35	0.11	0.18	0.04

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Avenida Encinas CRT
1: Avenida Encinas & Palomar Airport Road

Existing Condition Plus Project

Timing Plan: AM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	277	75	318	141	200	28	63	147	78	114	25
Future Volume (vph)	28	277	75	318	141	200	28	63	147	78	114	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	90		0	180		0	100		400	250		550
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1770	1791	0	1770	1863	1583	1770	1863	1583	1681	1764	1583
Flt Permitted	0.950			0.950			0.950			0.950	0.997	
Satd. Flow (perm)	1765	1791	0	1757	1863	1549	1770	1863	1552	1681	1764	1520
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8				233			230			72
Link Speed (mph)		35			35			40			35	
Link Distance (ft)		717			345			930			989	
Travel Time (s)		14.0			6.7			15.9			19.3	
Confl. Peds. (#/hr)	1		4	4		1			5			5
Peak Hour Factor	0.87	0.87	0.87	0.86	0.86	0.86	0.64	0.64	0.64	0.83	0.83	0.83
Shared Lane Traffic (%)										10%		
Lane Group Flow (vph)	32	404	0	370	164	233	44	98	230	85	146	30
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		8	8		7	7	
Permitted Phases						6			8			7
Detector Phase	5	2		1	6	6	8	8	8	7	7	7
Switch Phase												
Minimum Initial (s)	4.0	8.0		4.0	8.0	8.0	6.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	8.2	32.0		8.2	13.0	13.0	35.6	35.6	35.6	24.6	24.6	24.6
Total Split (s)	29.2	50.0		29.2	50.0	50.0	35.6	35.6	35.6	49.6	49.6	49.6
Total Split (%)	17.8%	30.4%		17.8%	30.4%	30.4%	21.7%	21.7%	21.7%	30.2%	30.2%	30.2%
Maximum Green (s)	25.0	45.0		25.0	45.0	45.0	31.0	31.0	31.0	45.0	45.0	45.0
Yellow Time (s)	3.2	4.0		3.2	4.0	4.0	3.6	3.6	3.6	3.6	3.6	3.6
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)	4.2	5.0		4.2	5.0	5.0	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	3.0		2.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	None	Min		None	Min	Min	None	None	None	None	None	None
Walk Time (s)		7.0					7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		20.0					24.0	24.0	24.0	13.0	13.0	13.0
Pedestrian Calls (#/hr)		4					5	5	5	0	0	0
Act Effct Green (s)	6.6	28.4		26.1	52.5	52.5	12.5	12.5	12.5	13.7	13.7	13.7
Actuated g/C Ratio	0.07	0.28		0.26	0.52	0.52	0.12	0.12	0.12	0.14	0.14	0.14
v/c Ratio	0.27	0.78		0.80	0.17	0.25	0.20	0.42	0.58	0.37	0.61	0.11
Control Delay	57.6	45.2		52.3	17.1	3.5	43.9	48.1	12.0	48.3	55.1	0.8
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.6	45.2		52.3	17.1	3.5	43.9	48.1	12.0	48.3	55.1	0.8
LOS	E	D		D	B	A	D	D	B	D	E	A
Approach Delay		46.1			29.9			25.3			46.7	
Approach LOS		D			C			C			D	

STC::MB
Lanes, Volumes, Timings

Synchro 11 Report
Page 1

Intersection Summary

Area Type: Other

Cycle Length: 164.4

Actuated Cycle Length: 100

Natural Cycle: 115

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.80

Intersection Signal Delay: 35.2

Intersection LOS: D

Intersection Capacity Utilization 61.3%

ICU Level of Service B

Analysis Period (min) 15

Avenida Encinas CRT
2: Avenida Encinas & Poinsettia Lane

Existing Condition Plus Project
Timing Plan: AM Peak

											
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	39	299	353	206	306	23	80	400	272	82	52
v/c Ratio	0.27	0.31	0.59	0.16	0.49	0.18	0.31	0.66	0.61	0.12	0.08
Control Delay	54.0	29.0	42.6	25.6	7.7	54.6	42.3	10.6	41.5	22.8	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.0	29.0	42.6	25.6	7.7	54.6	42.3	10.6	41.5	22.8	0.2
Queue Length 50th (ft)	18	41	81	43	0	11	37	0	112	21	0
Queue Length 95th (ft)	71	93	218	108	83	49	100	62	300	75	0
Internal Link Dist (ft)	1109		1337		234		1079				
Turn Bay Length (ft)	225	230		200		205	205		215	230	
Base Capacity (vph)	452	2499	2192	2896	795	452	856	1155	678	1123	976
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.12	0.16	0.07	0.38	0.05	0.09	0.35	0.40	0.07	0.05
Intersection Summary											

Avenida Encinas CRT
2: Avenida Encinas & Poinsettia Lane

Existing Condition Plus Project

Timing Plan: AM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	183	68	332	194	288	19	67	336	215	65	41
Future Volume (veh/h)	33	183	68	332	194	288	19	67	336	215	65	41
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	39	218	81	353	206	306	23	80	400	272	82	52
Peak Hour Factor	0.84	0.84	0.84	0.94	0.94	0.94	0.84	0.84	0.84	0.79	0.79	0.79
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	49	628	213	444	957	687	35	512	633	311	802	675
Arrive On Green	0.03	0.17	0.17	0.13	0.27	0.27	0.02	0.27	0.27	0.17	0.43	0.43
Sat Flow, veh/h	1781	3728	1264	3456	3554	1526	1781	1870	1568	1781	1870	1574
Grp Volume(v), veh/h	39	197	102	353	206	306	23	80	400	272	82	52
Grp Sat Flow(s),veh/h/ln	1781	1702	1588	1728	1777	1526	1781	1870	1568	1781	1870	1574
Q Serve(g_s), s	2.0	4.6	5.1	8.9	4.1	12.6	1.2	2.9	18.5	13.4	2.4	1.8
Cycle Q Clear(g_c), s	2.0	4.6	5.1	8.9	4.1	12.6	1.2	2.9	18.5	13.4	2.4	1.8
Prop In Lane	1.00		0.80	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	49	573	267	444	957	687	35	512	633	311	802	675
V/C Ratio(X)	0.79	0.34	0.38	0.79	0.22	0.45	0.66	0.16	0.63	0.88	0.10	0.08
Avail Cap(c_a), veh/h	395	1510	704	1916	2758	1461	395	746	829	592	954	803
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(l)	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	43.6	33.1	33.3	38.1	25.6	17.5	43.9	24.9	21.6	36.3	15.4	15.2
Incr Delay (d2), s/veh	10.1	0.1	0.3	1.2	0.0	0.2	7.9	0.1	0.4	3.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	1.9	2.0	3.8	1.7	4.2	0.6	1.3	6.4	5.9	1.0	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.7	33.2	33.7	39.4	25.6	17.6	51.8	24.9	22.0	39.4	15.4	15.2
LnGrp LOS	D	C	C	D	C	B	D	C	C	D	B	B
Approach Vol, veh/h	338		865				503		406			
Approach Delay, s/veh	35.7		28.4				23.8		31.4			
Approach LOS	D		C				C		C			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.1	21.2	7.3	44.7	8.0	30.3	21.2	30.7				
Change Period (Y+Rc), s	5.5	6.0	5.5	6.0	5.5	6.0	5.5	6.0				
Max Green Setting (Gmax), s	50.0	40.0	20.0	46.0	20.0	70.0	30.0	36.0				
Max Q Clear Time (g_c+l1), s	10.9	7.1	3.2	4.4	4.0	14.6	15.4	20.5				
Green Ext Time (p_c), s	0.7	1.2	0.0	0.4	0.0	1.4	0.3	0.9				
Intersection Summary												
HCM 6th Ctrl Delay			29.1									
HCM 6th LOS			C									
Notes												

Avenida Encinas CRT
3: Carlsbad Blvd & Avenida Encinas

Existing Condition Plus Project
Timing Plan: AM Peak

					
Lane Group	WBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	112	210	102	18	527
v/c Ratio	0.18	0.13	0.07	0.04	0.28
Control Delay	12.2	8.8	1.1	11.2	6.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	12.2	8.8	1.1	11.2	6.0
Queue Length 50th (ft)	6	9	0	2	25
Queue Length 95th (ft)	27	41	13	15	47
Internal Link Dist (ft)	363	268			416
Turn Bay Length (ft)	180				
Base Capacity (vph)	3187	3539	1569	873	3539
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.04	0.06	0.07	0.02	0.15
Intersection Summary					

Avenida Encinas CRT
3: Carlsbad Blvd & Avenida Encinas

Existing Condition Plus Project

Timing Plan: AM Peak

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		W	W	W	W
Traffic Volume (veh/h)	99	6	195	95	16	480
Future Volume (veh/h)	99	6	195	95	16	480
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	112	0	210	102	18	527
Peak Hour Factor	0.93	0.93	0.93	0.93	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	284	126	1141	635	66	1901
Arrive On Green	0.08	0.00	0.32	0.32	0.04	0.53
Sat Flow, veh/h	3563	1585	3647	1585	1781	3647
Grp Volume(v), veh/h	112	0	210	102	18	527
Grp Sat Flow(s),veh/h/ln	1781	1585	1777	1585	1781	1777
Q Serve(g_s), s	0.9	0.0	1.3	1.3	0.3	2.5
Cycle Q Clear(g_c), s	0.9	0.0	1.3	1.3	0.3	2.5
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	284	126	1141	635	66	1901
V/C Ratio(X)	0.39	0.00	0.18	0.16	0.27	0.28
Avail Cap(c_a), veh/h	3433	1527	5136	2417	858	7476
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.6	0.0	7.6	6.0	14.6	4.0
Incr Delay (d2), s/veh	0.3	0.0	0.0	0.0	0.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.2	0.2	0.1	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	13.9	0.0	7.7	6.0	15.4	4.0
LnGrp LOS	B	A	A	A	B	A
Approach Vol, veh/h	112		312			545
Approach Delay, s/veh	13.9		7.1			4.4
Approach LOS	B		A			A
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	6.7	16.5		8.0		23.2
Change Period (Y+Rc), s	5.5	6.5		5.5		6.5
Max Green Setting (Gmax), s	15.0	45.0		30.0		65.5
Max Q Clear Time (g_c+l1), s	2.3	3.3		2.9		4.5
Green Ext Time (p_c), s	0.0	0.9		0.2		2.0
Intersection Summary						
HCM 6th Ctrl Delay			6.4			
HCM 6th LOS			A			
Notes						
User approved volume balancing among the lanes for turning movement.						



Lane Group	EBT	WBT	WBR	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	84	17	143	213	12	117	139	21
v/c Ratio	0.12	0.04	0.30	0.28	0.02	0.32	0.12	0.02
Control Delay	13.6	16.7	6.2	15.5	0.0	19.9	5.3	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.6	16.7	6.2	15.5	0.0	19.9	5.3	0.3
Queue Length 50th (ft)	6	4	0	47	0	28	16	0
Queue Length 95th (ft)	17	17	35	72	0	66	32	1
Internal Link Dist (ft)	44	146		758			484	
Turn Bay Length (ft)					155	300		185
Base Capacity (vph)	2338	1359	1342	1632	1341	1251	1847	1536
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.01	0.11	0.13	0.01	0.09	0.08	0.01
Intersection Summary								

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	9	15	6	9	126	0	147	8	102	121	18
Future Volume (veh/h)	35	9	15	6	9	126	0	147	8	102	121	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.99	0.99		0.99	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	50	13	21	7	10	143	0	213	12	117	139	21
Peak Hour Factor	0.70	0.70	0.70	0.88	0.88	0.88	0.69	0.69	0.69	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	487	154	249	254	311	415	4	399	331	252	887	747
Arrive On Green	0.26	0.26	0.26	0.26	0.26	0.26	0.00	0.21	0.21	0.14	0.47	0.47
Sat Flow, veh/h	1194	582	940	505	1177	1570	1781	1870	1552	1781	1870	1576
Grp Volume(v), veh/h	50	0	34	17	0	143	0	213	12	117	139	21
Grp Sat Flow(s),veh/h/ln	1194	0	1522	1682	0	1570	1781	1870	1552	1781	1870	1576
Q Serve(g_s), s	1.3	0.0	0.7	0.0	0.0	3.1	0.0	4.3	0.3	2.5	1.8	0.3
Cycle Q Clear(g_c), s	1.6	0.0	0.7	0.3	0.0	3.1	0.0	4.3	0.3	2.5	1.8	0.3
Prop In Lane	1.00		0.62	0.41		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	487	0	403	566	0	415	4	399	331	252	887	747
V/C Ratio(X)	0.10	0.00	0.08	0.03	0.00	0.34	0.00	0.53	0.04	0.46	0.16	0.03
Avail Cap(c_a), veh/h	1298	0	1411	1639	0	1455	847	1778	1475	1270	2222	1872
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.1	0.0	11.6	11.5	0.0	12.5	0.0	14.7	13.1	16.6	6.3	5.9
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.2	0.0	1.6	0.1	0.5	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.2	0.1	0.0	0.9	0.0	1.6	0.1	0.9	0.5	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.1	0.0	11.7	11.5	0.0	12.7	0.0	16.3	13.2	17.1	6.4	5.9
LnGrp LOS	B	A	B	B	A	B	A	B	B	B	A	A
Approach Vol, veh/h		84			160			225			277	
Approach Delay, s/veh		11.9			12.6			16.1			10.9	
Approach LOS		B			B			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	26.0		16.1	11.0	15.0		16.1				
Change Period (Y+Rc), s	5.0	6.0		5.0	5.0	6.0		5.0				
Max Green Setting (Gmax), s	20.0	50.0		39.0	30.0	40.0		39.0				
Max Q Clear Time (g_c+I1), s	0.0	3.8		5.1	4.5	6.3		3.6				
Green Ext Time (p_c), s	0.0	1.3		0.3	0.1	1.9		0.3				
Intersection Summary												
HCM 6th Ctrl Delay				12.9								
HCM 6th LOS				B								



Lane Group	WBT	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	140	378	9	260	280	6
v/c Ratio	0.20	0.28	0.01	0.31	0.18	0.00
Control Delay	0.6	6.4	5.9	2.8	2.1	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	0.6	6.4	5.9	2.8	2.1	0.8
Queue Length 50th (ft)	0	69	1	18	20	0
Queue Length 95th (ft)	0	153	8	64	68	2
Internal Link Dist (ft)	77	484			240	
Turn Bay Length (ft)			175	225		180
Base Capacity (vph)	815	1371	1114	1067	1586	1282
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.28	0.01	0.24	0.18	0.00
Intersection Summary						

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	0	0	115	0	302	7	226	244	5
Future Volume (veh/h)	0	0	0	0	0	115	0	302	7	226	244	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	0	1870	1870	0	1870	1870	0	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	0	0	0	0	140	0	378	9	260	280	6
Peak Hour Factor	0.92	0.92	0.92	0.82	0.82	0.82	0.80	0.80	0.80	0.87	0.87	0.87
Percent Heavy Veh, %	0	2	2	0	2	2	0	2	2	2	2	2
Cap, veh/h	0	203	0	0	0	172	0	1344	1134	810	1525	1285
Arrive On Green	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.72	0.72	0.06	0.82	0.82
Sat Flow, veh/h	0	1870	0	0	0	1585	0	1870	1577	1781	1870	1576
Grp Volume(v), veh/h	0	0	0	0	0	140	0	378	9	260	280	6
Grp Sat Flow(s),veh/h/ln	0	1870	0	0	0	1585	0	1870	1577	1781	1870	1576
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	10.2	0.0	8.4	0.2	4.2	3.8	0.1
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	10.2	0.0	8.4	0.2	4.2	3.8	0.1
Prop In Lane	0.00		0.00	0.00		1.00	0.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	0	203	0	0	0	172	0	1344	1134	810	1525	1285
V/C Ratio(X)	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.28	0.01	0.32	0.18	0.00
Avail Cap(c_a), veh/h	0	308	0	0	0	261	0	1344	1134	1285	1525	1285
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	51.6	0.0	5.9	4.7	3.6	2.4	2.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	11.0	0.0	0.5	0.0	0.2	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0	0.0	4.6	0.0	3.2	0.1	1.2	1.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	0.0	0.0	62.6	0.0	6.4	4.7	3.8	2.6	2.0
LnGrp LOS	A	A	A	A	A	E	A	A	A	A	A	A
Approach Vol, veh/h		0			140			387			546	
Approach Delay, s/veh		0.0			62.6			6.3			3.2	
Approach LOS					E			A			A	
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	11.4	89.6		17.3		101.0		17.3				
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s	38.5	53.5		19.5		96.5		19.5				
Max Q Clear Time (g_c+I1), s	6.2	10.4		0.0		5.8		12.2				
Green Ext Time (p_c), s	0.8	2.6		0.0		1.9		0.4				
Intersection Summary												
HCM 6th Ctrl Delay				12.1								
HCM 6th LOS				B								

Avenida Encinas CRT
1: Avenida Encinas & Palomar Airport Road

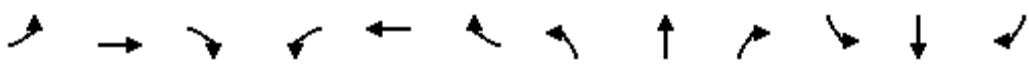
Existing Condition Plus Project
Timing Plan: PM Peak

											
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	81	334	203	386	305	90	315	432	146	151	63
v/c Ratio	0.48	0.73	0.67	0.59	0.42	0.21	0.69	0.61	0.61	0.61	0.22
Control Delay	59.6	47.6	54.5	34.4	7.7	36.6	46.6	7.8	56.5	56.2	10.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.6	47.6	54.5	34.4	7.7	36.6	46.6	7.8	56.5	56.2	10.7
Queue Length 50th (ft)	52	202	127	216	20	47	186	0	96	100	0
Queue Length 95th (ft)	121	363	250	383	97	91	280	9	192	197	32
Internal Link Dist (ft)		637		273			850			909	
Turn Bay Length (ft)	90		180			100		400	250		550
Base Capacity (vph)	456	849	456	869	878	565	595	791	779	804	772
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.39	0.45	0.44	0.35	0.16	0.53	0.55	0.19	0.19	0.08
Intersection Summary											

Avenida Encinas CRT
1: Avenida Encinas & Palomar Airport Road

Existing Condition Plus Project

Timing Plan: PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	76	280	34	191	363	287	66	230	315	178	80	55
Future Volume (vph)	76	280	34	191	363	287	66	230	315	178	80	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	90		0	180		0	100		400	250		550
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1770	1828	0	1770	1863	1583	1770	1863	1583	1681	1736	1583
Flt Permitted	0.950			0.950			0.950			0.950	0.981	
Satd. Flow (perm)	1770	1828	0	1766	1863	1583	1770	1863	1559	1678	1735	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4				262			432			72
Link Speed (mph)		35			35			40			35	
Link Distance (ft)		717			353			930			989	
Travel Time (s)		14.0			6.9			15.9			19.3	
Confl. Peds. (#/hr)			1	1					2	2		
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.73	0.73	0.73	0.87	0.87	0.87
Shared Lane Traffic (%)										29%		
Lane Group Flow (vph)	81	334	0	203	386	305	90	315	432	146	151	63
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		8	8		7	7	
Permitted Phases						6			8			7
Detector Phase	5	2		1	6	6	8	8	8	7	7	7
Switch Phase												
Minimum Initial (s)	4.0	8.0		4.0	8.0	8.0	6.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	8.2	32.0		8.2	13.0	13.0	35.6	35.6	35.6	24.6	24.6	24.6
Total Split (s)	29.2	50.0		29.2	50.0	50.0	35.6	35.6	35.6	49.6	49.6	49.6
Total Split (%)	17.8%	30.4%		17.8%	30.4%	30.4%	21.7%	21.7%	21.7%	30.2%	30.2%	30.2%
Maximum Green (s)	25.0	45.0		25.0	45.0	45.0	31.0	31.0	31.0	45.0	45.0	45.0
Yellow Time (s)	3.2	4.0		3.2	4.0	4.0	3.6	3.6	3.6	3.6	3.6	3.6
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)	4.2	5.0		4.2	5.0	5.0	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	3.0		2.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	None	Min		None	Min	Min	None	None	None	None	None	None
Walk Time (s)		7.0					7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		20.0					24.0	24.0	24.0	13.0	13.0	13.0
Pedestrian Calls (#/hr)		1					2	2	2	0	0	0
Act Effct Green (s)	9.9	25.4		17.7	36.3	36.3	25.3	25.3	25.3	14.7	14.7	14.7
Actuated g/C Ratio	0.10	0.25		0.17	0.35	0.35	0.25	0.25	0.25	0.14	0.14	0.14
v/c Ratio	0.48	0.73		0.67	0.59	0.42	0.21	0.69	0.61	0.61	0.61	0.22
Control Delay	59.6	47.6		54.5	34.4	7.7	36.6	46.6	7.8	56.5	56.2	10.7
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.6	47.6		54.5	34.4	7.7	36.6	46.6	7.8	56.5	56.2	10.7
LOS	E	D		D	C	A	D	D	A	E	E	B
Approach Delay		49.9			29.9			25.5			48.4	
Approach LOS		D			C			C			D	

STC::MB
Lanes, Volumes, Timings

Synchro 11 Report
Page 1

Intersection Summary

Area Type: Other

Cycle Length: 164.4

Actuated Cycle Length: 102.6

Natural Cycle: 105

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.73

Intersection Signal Delay: 34.4

Intersection LOS: C

Intersection Capacity Utilization 62.9%

ICU Level of Service B

Analysis Period (min) 15

Avenida Encinas CRT
2: Avenida Encinas & Poinsettia Lane

Existing Condition Plus Project
Timing Plan: PM Peak

											
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	59	332	480	285	329	34	104	484	267	127	52
v/c Ratio	0.42	0.33	0.70	0.23	0.33	0.30	0.36	0.71	0.70	0.19	0.08
Control Delay	69.5	35.2	52.0	30.0	2.4	69.9	49.9	23.2	56.9	30.5	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.5	35.2	52.0	30.0	2.4	69.9	49.9	23.2	56.9	30.5	0.2
Queue Length 50th (ft)	45	61	179	75	0	26	79	207	188	78	0
Queue Length 95th (ft)	95	103	295	148	43	72	143	323	323	125	0
Internal Link Dist (ft)	1109		1337		234		1079				
Turn Bay Length (ft)	225		230		200	205		205	215		230
Base Capacity (vph)	353	1946	1715	2430	1106	353	670	1098	530	908	818
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.17	0.28	0.12	0.30	0.10	0.16	0.44	0.50	0.14	0.06
Intersection Summary											

Avenida Encinas CRT
2: Avenida Encinas & Poinsettia Lane

Existing Condition Plus Project

Timing Plan: PM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰↰↰		↰↰	↰↰	↰	↰	↰	↰	↰	↰	↰
Traffic Volume (veh/h)	47	187	78	442	262	303	33	100	465	216	103	42
Future Volume (veh/h)	47	187	78	442	262	303	33	100	465	216	103	42
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	1.00		0.93	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	59	234	98	480	285	329	34	104	484	267	127	52
Peak Hour Factor	0.80	0.80	0.80	0.92	0.92	0.92	0.96	0.96	0.96	0.81	0.81	0.81
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	76	558	209	561	978	674	43	558	717	300	828	685
Arrive On Green	0.04	0.16	0.16	0.16	0.28	0.28	0.02	0.30	0.30	0.17	0.44	0.44
Sat Flow, veh/h	1781	3584	1343	3456	3554	1480	1781	1870	1540	1781	1870	1548
Grp Volume(v), veh/h	59	221	111	480	285	329	34	104	484	267	127	52
Grp Sat Flow(s),veh/h/ln	1781	1702	1523	1728	1777	1480	1781	1870	1540	1781	1870	1548
Q Serve(g_s), s	3.5	6.3	7.1	14.4	6.8	17.0	2.0	4.4	26.4	15.7	4.3	2.1
Cycle Q Clear(g_c), s	3.5	6.3	7.1	14.4	6.8	17.0	2.0	4.4	26.4	15.7	4.3	2.1
Prop In Lane	1.00		0.88	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	76	530	237	561	978	674	43	558	717	300	828	685
V/C Ratio(X)	0.77	0.42	0.47	0.86	0.29	0.49	0.79	0.19	0.68	0.89	0.15	0.08
Avail Cap(c_a), veh/h	333	1274	570	1617	2328	1236	333	630	776	500	828	685
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	50.6	40.7	41.1	43.5	30.5	21.3	51.9	27.8	22.6	43.5	17.8	17.2
Incr Delay (d2), s/veh	6.0	0.2	0.5	1.5	0.1	0.2	11.5	0.1	1.6	6.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	2.6	2.7	6.2	2.9	5.7	1.0	2.0	9.4	7.3	1.8	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.7	40.9	41.6	45.0	30.6	21.5	63.3	27.9	24.2	49.7	17.8	17.2
LnGrp LOS	E	D	D	D	C	C	E	C	C	D	B	B
Approach Vol, veh/h		391			1094			622			446	
Approach Delay, s/veh		43.5			34.2			27.0			36.8	
Approach LOS		D			C			C			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	22.8	22.6	8.1	53.3	10.1	35.4	23.5	37.9				
Change Period (Y+Rc), s	5.5	6.0	5.5	6.0	5.5	6.0	5.5	6.0				
Max Green Setting (Gmax), s	50.0	40.0	20.0	46.0	20.0	70.0	30.0	36.0				
Max Q Clear Time (g_c+I1), s	16.4	9.1	4.0	6.3	5.5	19.0	17.7	28.4				
Green Ext Time (p_c), s	0.9	1.4	0.0	0.5	0.0	1.9	0.3	0.9				
Intersection Summary												
HCM 6th Ctrl Delay			34.3									
HCM 6th LOS			C									
Notes												
User approved changes to right turn type.												

Avenida Encinas CRT
3: Carlsbad Blvd & Avenida Encinas

Existing Condition Plus Project
Timing Plan: PM Peak

					
Lane Group	WBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	160	661	198	15	465
v/c Ratio	0.24	0.50	0.19	0.03	0.31
Control Delay	13.9	10.5	1.1	14.8	6.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	13.9	10.5	1.1	14.8	6.5
Queue Length 50th (ft)	9	35	0	2	23
Queue Length 95th (ft)	42	124	15	17	45
Internal Link Dist (ft)	363	268			416
Turn Bay Length (ft)	180				
Base Capacity (vph)	3021	3446	1514	835	3539
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.05	0.19	0.13	0.02	0.13
Intersection Summary					

Avenida Encinas CRT
3: Carlsbad Blvd & Avenida Encinas

Existing Condition Plus Project

Timing Plan: PM Peak

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	136	14	588	176	14	428
Future Volume (veh/h)	136	14	588	176	14	428
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	159	0	661	198	15	465
Peak Hour Factor	0.94	0.94	0.89	0.89	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	339	151	1141	658	56	1869
Arrive On Green	0.10	0.00	0.32	0.32	0.03	0.53
Sat Flow, veh/h	3563	1585	3647	1580	1781	3647
Grp Volume(v), veh/h	159	0	661	198	15	465
Grp Sat Flow(s),veh/h/ln	1781	1585	1777	1580	1781	1777
Q Serve(g_s), s	1.3	0.0	4.9	2.6	0.3	2.3
Cycle Q Clear(g_c), s	1.3	0.0	4.9	2.6	0.3	2.3
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	339	151	1141	658	56	1869
V/C Ratio(X)	0.47	0.00	0.58	0.30	0.27	0.25
Avail Cap(c_a), veh/h	3375	1501	5049	2396	844	7349
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.6	0.0	9.0	6.2	15.0	4.1
Incr Delay (d2), s/veh	0.4	0.0	0.2	0.1	1.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	0.9	0.5	0.1	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	13.9	0.0	9.1	6.3	15.9	4.1
LnGrp LOS	B	A	A	A	B	A
Approach Vol, veh/h	159		859			480
Approach Delay, s/veh	13.9		8.5			4.5
Approach LOS	B		A			A
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	6.5	16.7		8.5		23.2
Change Period (Y+Rc), s	5.5	6.5		5.5		6.5
Max Green Setting (Gmax), s	15.0	45.0		30.0		65.5
Max Q Clear Time (g_c+l1), s	2.3	6.9		3.3		4.3
Green Ext Time (p_c), s	0.0	2.9		0.3		1.8
Intersection Summary						
HCM 6th Ctrl Delay			7.8			
HCM 6th LOS			A			
Notes						
User approved volume balancing among the lanes for turning movement.						



Lane Group	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	60	64	263	14	197	26	147	170	33
v/c Ratio	0.09	0.18	0.47	0.07	0.40	0.05	0.39	0.20	0.04
Control Delay	15.3	18.6	6.5	21.5	17.8	0.2	20.7	8.0	1.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.3	18.6	6.5	21.5	17.8	0.2	20.7	8.0	1.7
Queue Length 50th (ft)	5	14	0	3	44	0	35	20	0
Queue Length 95th (ft)	20	44	44	18	97	0	82	67	7
Internal Link Dist (ft)	44	146			758			484	
Turn Bay Length (ft)				155		155	300		185
Base Capacity (vph)	2323	1273	1335	828	1660	1391	1237	1830	1525
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.05	0.20	0.02	0.12	0.02	0.12	0.09	0.02
Intersection Summary									

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	13	8	32	23	226	13	181	24	131	151	29
Future Volume (veh/h)	32	13	8	32	23	226	13	181	24	131	151	29
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	0.98		0.98	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	36	15	9	37	27	263	14	197	26	147	170	33
Peak Hour Factor	0.88	0.88	0.88	0.86	0.86	0.86	0.92	0.92	0.92	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	456	296	178	364	234	466	32	362	302	267	609	513
Arrive On Green	0.30	0.30	0.30	0.30	0.30	0.30	0.02	0.19	0.19	0.15	0.33	0.33
Sat Flow, veh/h	988	990	594	794	783	1559	1781	1870	1560	1781	1870	1576
Grp Volume(v), veh/h	36	0	24	64	0	263	14	197	26	147	170	33
Grp Sat Flow(s),veh/h/ln	988	0	1583	1577	0	1559	1781	1870	1560	1781	1870	1576
Q Serve(g_s), s	1.1	0.0	0.5	0.0	0.0	6.4	0.3	4.2	0.6	3.4	3.0	0.6
Cycle Q Clear(g_c), s	2.2	0.0	0.5	1.1	0.0	6.4	0.3	4.2	0.6	3.4	3.0	0.6
Prop In Lane	1.00		0.38	0.58		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	456	0	473	598	0	466	32	362	302	267	609	513
V/C Ratio(X)	0.08	0.00	0.05	0.11	0.00	0.56	0.44	0.54	0.09	0.55	0.28	0.06
Avail Cap(c_a), veh/h	1073	0	1380	1480	0	1358	796	1672	1395	1194	2090	1761
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.2	0.0	11.2	11.4	0.0	13.2	21.8	16.3	14.8	17.6	11.2	10.4
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.4	3.5	1.8	0.2	0.7	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	0.2	0.0	0.1	0.4	0.0	1.9	0.2	1.7	0.2	1.2	1.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.2	0.0	11.2	11.4	0.0	13.6	25.3	18.1	15.0	18.3	11.5	10.5
LnGrp LOS	B	A	B	B	A	B	C	B	B	B	B	B
Approach Vol, veh/h		60			327			237			350	
Approach Delay, s/veh		11.8			13.2			18.2			14.3	
Approach LOS		B			B			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.8	20.6		18.4	11.7	14.7		18.4				
Change Period (Y+Rc), s	5.0	6.0		5.0	5.0	6.0		5.0				
Max Green Setting (Gmax), s	20.0	50.0		39.0	30.0	40.0		39.0				
Max Q Clear Time (g_c+I1), s	2.3	5.0		8.4	5.4	6.2		4.2				
Green Ext Time (p_c), s	0.0	1.6		0.7	0.2	1.8		0.2				
Intersection Summary												
HCM 6th Ctrl Delay			14.7									
HCM 6th LOS			B									



Lane Group	WBT	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	256	483	13	319	348	8
v/c Ratio	0.38	0.36	0.01	0.42	0.22	0.01
Control Delay	1.7	7.5	6.2	3.6	2.2	1.0
Queue Delay	0.0	0.7	0.0	0.0	0.0	0.0
Total Delay	1.7	8.1	6.2	3.6	2.2	1.0
Queue Length 50th (ft)	0	98	2	23	25	0
Queue Length 95th (ft)	0	247	11	83	90	3
Internal Link Dist (ft)	77	484			240	
Turn Bay Length (ft)			175	225		180
Base Capacity (vph)	767	1357	1119	1006	1586	1300
Starvation Cap Reductn	0	522	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.58	0.01	0.32	0.22	0.01
Intersection Summary						

Avenida Encinas CRT

Existing Condition Plus Project

5: Avenida Encinas & San Carlos Street/Shopping Center Dwy

Timing Plan: PM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	0	0	230	0	430	12	287	313	7
Future Volume (veh/h)	0	0	0	0	0	230	0	430	12	287	313	7
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	0	1870	1870	0	1870	1870	0	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	0	0	0	0	256	0	483	13	319	348	8
Peak Hour Factor	0.92	0.92	0.92	0.90	0.90	0.90	0.89	0.89	0.89	0.90	0.90	0.90
Percent Heavy Veh, %	0	2	2	0	2	2	0	2	2	2	2	2
Cap, veh/h	0	292	0	0	0	246	0	1231	1041	682	1444	1220
Arrive On Green	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.66	0.66	0.08	0.77	0.77
Sat Flow, veh/h	0	1870	0	0	0	1580	0	1870	1581	1781	1870	1580
Grp Volume(v), veh/h	0	0	0	0	0	256	0	483	13	319	348	8
Grp Sat Flow(s),veh/h/ln	0	1870	0	0	0	1580	0	1870	1581	1781	1870	1580
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	19.5	0.0	14.9	0.4	6.8	6.5	0.1
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	19.5	0.0	14.9	0.4	6.8	6.5	0.1
Prop In Lane	0.00		0.00	0.00		1.00	0.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	0	292	0	0	0	246	0	1231	1041	682	1444	1220
V/C Ratio(X)	0.00	0.00	0.00	0.00	0.00	1.04	0.00	0.39	0.01	0.47	0.24	0.01
Avail Cap(c_a), veh/h	0	292	0	0	0	246	0	1231	1041	1092	1444	1220
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	52.8	0.0	9.9	7.4	6.4	4.0	3.3
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	67.8	0.0	0.9	0.0	0.5	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0	0.0	12.3	0.0	6.2	0.1	2.3	2.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	0.0	0.0	120.5	0.0	10.8	7.4	6.9	4.4	3.3
LnGrp LOS	A	A	A	A	A	F	A	B	A	A	A	A
Approach Vol, veh/h		0			256			496			675	
Approach Delay, s/veh		0.0			120.5			10.7			5.6	
Approach LOS					F			B			A	
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	14.2	86.8		24.0		101.0		24.0				
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s	38.5	53.5		19.5		96.5		19.5				
Max Q Clear Time (g_c+I1), s	8.8	16.9		0.0		8.5		21.5				
Green Ext Time (p_c), s	1.0	3.5		0.0		2.4		0.0				
Intersection Summary												
HCM 6th Ctrl Delay			28.0									
HCM 6th LOS			C									

STC::MB

HCM 6th Signalized Intersection Summary

Synchro 11 Report

Page 2

D40

Appendix E:

MMLOS Analysis Worksheets

Existing Conditions:

Palomar Airport Road to 6200 Avenida Encinas.....	E1 - E2
6200 Avenida Encinas to Embarcadero Lane	E3 - E4
Embarcadero Lane to Poinsettia Lane	E5 - E6
Poinsettia Lane to Windrose Circle	E7 - E8
Windrose Circle to Carlsbad Boulevard	E9 - E10

Existing Conditions Plus Project Improvement:

Palomar Airport Road to 6200 Avenida Encinas.....	E11 - E12
6200 Avenida Encinas to Embarcadero Lane	E13 - E14
Embarcadero Lane to Poinsettia Lane	E15 - E16
Poinsettia Lane to Windrose Circle	E17 - E18
Windrose Circle to Carlsbad Boulevard	E19 - E20

Existing Conditions



ROADWAY INFO

Roadway Name

Avenida Encinas

From

Palomar Airport Rd

To

6200 Avenida Encinas

Street Typology from Mobility Element

Neighborhood Connector

Average Daily Traffic (ADT) volume (2 way total)

5,924

upgrades to fully support CAP goals!

NB

SB

* Do pedestrian crossings appear consistent with the CA MUTCD?	Yes	Yes
* Minimum Sidewalk Unobstructed Width in Feet (Minimum ADA unobstructed width requirement is 4')	5	0
* Do sidewalks appear to meet ADA requirements (e.g., cross-slope and trip hazards)?	No	No
* Do ramps and landings appear to meet ADA requirements?	No	No
* Do the street light locations appear adequate?	Yes	No
Speed limit (miles per hour - mph):	higher than 35 mph	higher than 35 mph
Number of Through Lanes:	1	1
Are there 3 lanes or less to be crossed without pedestrian refuge? (Include turn lanes in count)	Yes	Yes
Width (ft.) of landscaped buffer between pedestrian facility and vehicle travel way:	0' to 2'	0' to 2'
Does on-street parking or a bike lane provide 6' or more buffer between pedestrians and vehicle travel way?	No	No
Any apparent sight distance issues at intersections and pedestrian crossings?	No	No
Are there any permanent speed control devices installed?	No	No
Are there traffic calming measures that reduce crossing width (e.g., bulbouts, chokers, right-turn median island)?	No	No
Do crosswalks appear to be high visibility?	No	No
Are there intersection enhancements provided for pedestrians (e.g., pedestrian signal phasing, countdown heads)?	Yes	Yes
Are there Rectangular Rapid Flashing Beacons (RRFBs) at street crossings?	No	No
Is there pedestrian scale lighting?	No	No
Do active building frontages appear to be present on 80% of street curb line?	No	No
Does the street furniture appear to be oriented towards businesses or attractions?	No	No
Do the street trees appear to provide shade over more than 50% of the sidewalk length?	Yes	No

* Indicates an essential feature that strongly supports and promotes the goals identified in the Climate Action Plan (CAP).



Avenida Encinas

Palomar Airport Rd

6200 Avenida Encinas



Arterial Connector

5,924

**May require improvements and
upgrades to fully support CAP goals!**

Roadway Direction

NB

SB

* Do the roadway pavement conditions appear to be good (e.g., no pot holes)?

No

No

* Does bike facility on roadway appear to be free of obstructions (e.g., drainage grates)?

Yes

Yes

* Does the bicycle facility appear to meet MUTCD signing and striping design guidelines?

Yes

Yes

Is on-street parking provided?

No

No

Speed limit (miles per hour - mph):

higher than 35 mph

higher than 35 mph

Does the bikeway on the study segment and side streets meet and/or exceed the Bicycle Master Plan?



Study Segment Only

Study Segment Only

Is there enhanced bicycle detection or video detection provided at intersections?

No

No

Any bicycle racks are provided along segment?

No

No

Bicycle Facility Provided:

Bike Lane

Bike Lane

Lane Width (ft)

Lane Width (ft)

5

5

Bicycle Buffer Width (ft)

Bicycle Buffer Width (ft)

0

0

Bike lanes are striped continuously through the study segment?

Bike lanes are striped continuously through the study segment?

Yes

Yes

* Indicates an essential feature that strongly supports and promotes the goals identified in the Climate Action Plan (CAP).

Existing Conditions



ROADWAY INFO



Roadway Name	Avenida Encinas
From	6200 Avenida Encinas
To	Embarcadero Lane
Street Typology from Mobility Element	Neighborhood Connector
Average Daily Traffic (ADT) volume (2 way total)	5,924

PEDESTRIAN

NB SCORE | LOS
70 | C

SB SCORE | LOS
65 | D

May require improvements and
upgrades to fully support CAP goals!

Roadway Direction

	NB	SB
* Do pedestrian crossings appear consistent with the CA MUTCD?	Yes	Yes
* Minimum Sidewalk Unobstructed Width in Feet (Minimum ADA unobstructed width requirement is 4'):	5	5
* Do sidewalks appear to meet ADA requirements (e.g., cross-slope and trip hazards)?	No	Yes
* Do ramps and landings appear to meet ADA requirements?	No	No
* Do the street light locations appear adequate?	Yes	No
Speed limit (miles per hour - mph):	higher than 35 mph	higher than 35 mph
Number of Through Lanes:	1	1
Are there 3 lanes or less to be crossed without pedestrian refuge? (Include turn lanes in count)	Yes	Yes
Width (ft.) of landscaped buffer between pedestrian facility and vehicle travel way:	0' to 2'	0' to 2'
Does on-street parking or a bike lane provide 6' or more buffer between pedestrians and vehicle travel way?	Yes	Yes
Any apparent sight distance issues at intersections and pedestrian crossings?	No	No
Are there any permanent speed control devices installed?	No	No
Are there traffic calming measures that reduce crossing width (e.g., bulbouts, chokers, right-turn median island)?	No	No
Do crosswalks appear to be high visibility?	No	No
Are there intersection enhancements provided for pedestrians (e.g., pedestrian signal phasing, countdown heads)?	No	No
Are there Rectangular Rapid Flashing Beacons (RRFBs) at street crossings?	No	No
Is there pedestrian scale lighting?	No	No
Do active building frontages appear to be present on 80% of street curb line?	No	No
Does the street furniture appear to be oriented towards businesses or attractions?	No	No
Do the street trees appear to provide shade over more than 50% of the sidewalk length?	Yes	No

* Indicates an essential feature that strongly supports and promotes the goals identified in the Climate Action Plan (CAP).

ROADWAY INFO



Roadway Name	Avenida Encinas
From	6200 Avenida Encinas
To	Embarcadero Lane
Street Typology from Mobility Element 	Arterial Connector
Average Daily Traffic (ADT) volume (2-way total)	5,924

BICYCLE

NB SCORE | LOS

0 | F

SB SCORE | LOS

0 | F

May require improvements and upgrades to fully support CAP goals!

Roadway Direction

	NB	SB
* Do the roadway pavement conditions appear to be good (e.g., no pot holes)?	No	No
* Does bike facility on roadway appear to be free of obstructions (e.g., drainage grates)?	Yes	Yes
* Does the bicycle facility appear to meet MUTCD signing and striping design guidelines?	No	No
Is on-street parking provided?	Parallel parking	Parallel parking
Speed limit (miles per hour - mph):	higher than 35 mph	higher than 35 mph
Does the bikeway on the study segment and side streets meet and/or exceed the Bicycle Master Plan? 	Neither	Neither
Is there enhanced bicycle detection or video detection provided at intersections?	No	No
Any bicycle racks are provided along segment?	No	No
Bicycle Facility Provided:	Bike Route	Bike Route

Traffic calming features present?

No

Traffic calming features present?

No

* Indicates an essential feature that strongly supports and promotes the goals identified in the Climate Action Plan (CAP).

Existing Conditions



ROADWAY INFO



Roadway Name	Avenida Encinas
From	Embarcadero Lane
To	Poinsettia Boulevard
Street Typology from Mobility Element	Neighborhood Connector
Average Daily Traffic (ADT) volume (2 way total)	5,924

PEDESTRIAN

NB SCORE | LOS
90 | A

SB SCORE | LOS
100 | A

May require improvements and
upgrades to fully support CAP goals!

Roadway Direction

	NB	SB
* Do pedestrian crossings appear consistent with the CA MUTCD?	Yes	Yes
* Minimum Sidewalk Unobstructed Width in Feet (Minimum ADA unobstructed width requirement is 4'):	5	5
* Do sidewalks appear to meet ADA requirements (e.g., cross-slope and trip hazards)?	Yes	Yes
* Do ramps and landings appear to meet ADA requirements?	No	No
* Do the street light locations appear adequate?	Yes	Yes
Speed limit (miles per hour - mph):	35 mph	35 mph
Number of Through Lanes:	1	1
Are there 3 lanes or less to be crossed without pedestrian refuge? (Include turn lanes in count)	Yes	Yes
Width (ft.) of landscaped buffer between pedestrian facility and vehicle travel way:	0' to 2'	greater than 5'
Does on-street parking or a bike lane provide 6' or more buffer between pedestrians and vehicle travel way?	Yes	Yes
Any apparent sight distance issues at intersections and pedestrian crossings?	No	No
Are there any permanent speed control devices installed?	No	No
Are there traffic calming measures that reduce crossing width (e.g., bulbouts, chokers, right-turn median island)?	No	No
Do crosswalks appear to be high visibility?	No	No
Are there intersection enhancements provided for pedestrians (e.g., pedestrian signal phasing, countdown heads)?	Yes	Yes
Are there Rectangular Rapid Flashing Beacons (RRFBs) at street crossings?	No	No
Is there pedestrian scale lighting?	No	No
Do active building frontages appear to be present on 80% of street curb line?	No	No
Does the street furniture appear to be oriented towards businesses or attractions?	No	No
Do the street trees appear to provide shade over more than 50% of the sidewalk length?	Yes	Yes

* Indicates an essential feature that strongly supports and promotes the goals identified in the Climate Action Plan (CAP).

ROADWAY INFO



Roadway Name	Avenida Encinas
From	Embarcadero Lane
To	Poinsettia Boulevard
Street Typology from Mobility Element 	Arterial Connector
Average Daily Traffic (ADT) volume (2-way total)	5,924

BICYCLE

NB SCORE | LOS

90 | A

SB SCORE | LOS

90 | A

	Roadway Direction	
	NB	SB
* Do the roadway pavement conditions appear to be good (e.g., no pot holes)?	Yes	Yes
* Does bike facility on roadway appear to be free of obstructions (e.g., drainage grates)?	Yes	Yes
* Does the bicycle facility appear to meet MUTCD signing and striping design guidelines?	Yes	Yes
Is on-street parking provided?	Parallel parking	Parallel parking
Speed limit (miles per hour - mph):	35 mph	35 mph
Does the bikeway on the study segment and side streets meet and/or exceed the Bicycle Master Plan? 	Study Segment Only	Study Segment Only
Is there enhanced bicycle detection or video detection provided at intersections?	No	No
Any bicycle racks are provided along segment?	No	No
Bicycle Facility Provided:	Bike Lane	Bike Lane
	Lane Width (ft)	Lane Width (ft)
	5	5
	Bicycle Buffer Width (ft)	Bicycle Buffer Width (ft)
	0	0
	Bike lanes are striped continuously through the study segment?	Bike lanes are striped continuously through the study segment?
	Yes	Yes

* Indicates an essential feature that strongly supports and promotes the goals identified in the Climate Action Plan (CAP).

Existing Conditions



ROADWAY INFO



Roadway Name	Avenida Encinas
From	Poinsettia Boulevard
To	Windrose Circle
Street Typology from Mobility Element	Neighborhood Connector
Average Daily Traffic (ADT) volume (2 way total)	14,058

PEDESTRIAN

NB SCORE | LOS
80 | B

SB SCORE | LOS
80 | B

May require improvements and upgrades to fully support CAP goals!

Roadway Direction

	NB	SB
* Do pedestrian crossings appear consistent with the CA MUTCD?	Yes	Yes
* Minimum Sidewalk Unobstructed Width in Feet (Minimum ADA unobstructed width requirement is 4'):	5	5
* Do sidewalks appear to meet ADA requirements (e.g., cross-slope and trip hazards)?	No	No
* Do ramps and landings appear to meet ADA requirements?	No	No
* Do the street light locations appear adequate?	Yes	Yes
Speed limit (miles per hour - mph):	35 mph	35 mph
Number of Through Lanes:	2	2
Are there 3 lanes or less to be crossed without pedestrian refuge? (Include turn lanes in count)	No	No
Width (ft.) of landscaped buffer between pedestrian facility and vehicle travel way:	0' to 2'	0' to 2'
Does on-street parking or a bike lane provide 6' or more buffer between pedestrians and vehicle travel way?	No	No
Any apparent sight distance issues at intersections and pedestrian crossings?	No	No
Are there any permanent speed control devices installed?	Yes	Yes
Are there traffic calming measures that reduce crossing width (e.g., bulbouts, chokers, right-turn median island)?	Yes	Yes
Do crosswalks appear to be high visibility?	No	No
Are there intersection enhancements provided for pedestrians (e.g., pedestrian signal phasing, countdown heads)?	Yes	Yes
Are there Rectangular Rapid Flashing Beacons (RRFBs) at street crossings?	No	No
Is there pedestrian scale lighting?	No	No
Do active building frontages appear to be present on 80% of street curb line?	No	No
Does the street furniture appear to be oriented towards businesses or attractions?	No	No
Do the street trees appear to provide shade over more than 50% of the sidewalk length?	Yes	Yes

* Indicates an essential feature that strongly supports and promotes the goals identified in the Climate Action Plan (CAP).

ROADWAY INFO



Roadway Name	Avenida Encinas
From	Poinsettia Boulevard
To	Windrose Circle
Street Typology from Mobility Element 	Arterial Connector
Average Daily Traffic (ADT) volume (2-way total)	14,058

BICYCLE

NB SCORE | LOS

SB SCORE | LOS

Roadway Direction

	NB	SB
* Do the roadway pavement conditions appear to be good (e.g., no pot holes)?	Yes	Yes
* Does bike facility on roadway appear to be free of obstructions (e.g., drainage grates)?	Yes	Yes
* Does the bicycle facility appear to meet MUTCD signing and striping design guidelines?	Yes	Yes
Is on-street parking provided?	No	No
Speed limit (miles per hour - mph):	35 mph	35 mph
Does the bikeway on the study segment and side streets meet and/or exceed the Bicycle Master Plan? 	Study Segment Only	Study Segment Only
Is there enhanced bicycle detection or video detection provided at intersections?	No	No
Any bicycle racks are provided along segment?	No	No
Bicycle Facility Provided:	Bike Lane	Bike Lane
	Lane Width (ft)	Lane Width (ft)
	5	5
	Bicycle Buffer Width (ft)	Bicycle Buffer Width (ft)
	0	0
	Bike lanes are striped continuously through the study segment?	Bike lanes are striped continuously through the study segment?
	No	Yes

* Indicates an essential feature that strongly supports and promotes the goals identified in the Climate Action Plan (CAP).

Existing Conditions



ROADWAY INFO



Roadway Name Avenida Encinas

From Windrose Circle

To Carlsbad Boulevard

Street Typology from Mobility Element  Neighborhood Connector

Average Daily Traffic (ADT) volume (2 way total) 2,850

PEDESTRIAN

NB SCORE | LOS
85 | B

SB SCORE | LOS
85 | B

May require improvements and
upgrades to fully support CAP goals!

Roadway Direction

	NB	SB
* Do pedestrian crossings appear consistent with the CA MUTCD?	Yes	Yes
* Minimum Sidewalk Unobstructed Width in Feet (Minimum ADA unobstructed width requirement is 4'):	5	5
* Do sidewalks appear to meet ADA requirements (e.g., cross-slope and trip hazards)?	No	No
* Do ramps and landings appear to meet ADA requirements?	No	No
* Do the street light locations appear adequate?	Yes	Yes
Speed limit (miles per hour - mph):	35 mph	35 mph
Number of Through Lanes:	1	1
Are there 3 lanes or less to be crossed without pedestrian refuge? (Include turn lanes in count)	Yes	Yes
Width (ft.) of landscaped buffer between pedestrian facility and vehicle travel way:	0' to 2'	0' to 2'
Does on-street parking or a bike lane provide 6' or more buffer between pedestrians and vehicle travel way?	No	No
Any apparent sight distance issues at intersections and pedestrian crossings?	No	No
Are there any permanent speed control devices installed?	Yes	Yes
Are there traffic calming measures that reduce crossing width (e.g., bulbouts, chokers, right-turn median island)?	No	No
Do crosswalks appear to be high visibility?	No	No
Are there intersection enhancements provided for pedestrians (e.g., pedestrian signal phasing, countdown heads)?	Yes	Yes
Are there Rectangular Rapid Flashing Beacons (RRFBs) at street crossings?	No	No
Is there pedestrian scale lighting?	No	No
Do active building frontages appear to be present on 80% of street curb line?	No	No
Does the street furniture appear to be oriented towards businesses or attractions?	No	No
Do the street trees appear to provide shade over more than 50% of the sidewalk length?	Yes	Yes

* Indicates an essential feature that strongly supports and promotes the goals identified in the Climate Action Plan (CAP).

ROADWAY INFO



Roadway Name	Avenida Encinas
From	Windrose Circle
To	Carlsbad Boulevard
Street Typology from Mobility Element 	Arterial Connector
Average Daily Traffic (ADT) volume (2-way total)	2,850

BICYCLE

NB SCORE | LOS

SB SCORE | LOS

Roadway Direction

	NB	SB
* Do the roadway pavement conditions appear to be good (e.g., no pot holes)?	Yes	Yes
* Does bike facility on roadway appear to be free of obstructions (e.g., drainage grates)?	Yes	Yes
* Does the bicycle facility appear to meet MUTCD signing and striping design guidelines?	Yes	Yes
Is on-street parking provided?	No	No
Speed limit (miles per hour - mph):	35 mph	35 mph
Does the bikeway on the study segment and side streets meet and/or exceed the Bicycle Master Plan? 	Study Segment Only	Study Segment Only
Is there enhanced bicycle detection or video detection provided at intersections?	No	No
Any bicycle racks are provided along segment?	No	No
Bicycle Facility Provided:	Bike Lane	Bike Lane
	Lane Width (ft)	Lane Width (ft)
	5	5
	Bicycle Buffer Width (ft)	Bicycle Buffer Width (ft)
	0	0
	Bike lanes are striped continuously through the study segment?	Bike lanes are striped continuously through the study segment?
	Yes	Yes

* Indicates an essential feature that strongly supports and promotes the goals identified in the Climate Action Plan (CAP).

Project Improvement Condition



ROADWAY INFO



Roadway Name	Avenida Encinas
From	Palomar Airport Rd
To	6200 Avenida Encinas
Street Typology from Mobility Element	Neighborhood Connector
Average Daily Traffic (ADT) volume (2 way total)	5,924

PEDESTRIAN

NB SCORE | LOS
100 | A

SB SCORE | LOS
90 | A

May require improvements and upgrades to fully support CAP goals!

Roadway Direction

	NB	SB
* Do pedestrian crossings appear consistent with the CA MUTCD?	Yes	Yes
* Minimum Sidewalk Unobstructed Width in Feet (Minimum ADA unobstructed width requirement is 4'):	5	5
* Do sidewalks appear to meet ADA requirements (e.g., cross-slope and trip hazards)?	Yes	Yes
* Do ramps and landings appear to meet ADA requirements?	Yes	Yes
* Do the street light locations appear adequate?	Yes	No
Speed limit (miles per hour - mph):	higher than 35 mph	higher than 35 mph
Number of Through Lanes:	1	1
Are there 3 lanes or less to be crossed without pedestrian refuge? (Include turn lanes in count)	Yes	Yes
Width (ft.) of landscaped buffer between pedestrian facility and vehicle travel way:	0' to 2'	0' to 2'
Does on-street parking or a bike lane provide 6' or more buffer between pedestrians and vehicle travel way?	Yes	Yes
Any apparent sight distance issues at intersections and pedestrian crossings?	No	No
Are there any permanent speed control devices installed?	No	No
Are there traffic calming measures that reduce crossing width (e.g., bulbouts, chokers, right-turn median island)?	No	No
Do crosswalks appear to be high visibility?	Yes	Yes
Are there intersection enhancements provided for pedestrians (e.g., pedestrian signal phasing, countdown heads)?	Yes	Yes
Are there Rectangular Rapid Flashing Beacons (RRFBs) at street crossings?	No	No
Is there pedestrian scale lighting?	No	No
Do active building frontages appear to be present on 80% of street curb line?	No	No
Does the street furniture appear to be oriented towards businesses or attractions?	No	No
Do the street trees appear to provide shade over more than 50% of the sidewalk length?	Yes	No

* Indicates an essential feature that strongly supports and promotes the goals identified in the Climate Action Plan (CAP).

ROADWAY INFO



Roadway Name	Avenida Encinas
From	Palomar Airport Rd
To	6200 Avenida Encinas
Street Typology from Mobility Element 	Arterial Connector
Average Daily Traffic (ADT) volume (2-way total)	5,924

BICYCLE

NB SCORE | LOS

SB SCORE | LOS

Roadway Direction

	NB	SB
* Do the roadway pavement conditions appear to be good (e.g., no pot holes)?	Yes	Yes
* Does bike facility on roadway appear to be free of obstructions (e.g., drainage grates)?	Yes	Yes
* Does the bicycle facility appear to meet MUTCD signing and striping design guidelines?	Yes	Yes
Is on-street parking provided?	No	No
Speed limit (miles per hour - mph):	higher than 35 mph	higher than 35 mph
Does the bikeway on the study segment and side streets meet and/or exceed the Bicycle Master Plan? 	Study Segment Only	Study Segment Only
Is there enhanced bicycle detection or video detection provided at intersections?	No	No
Any bicycle racks are provided along segment?	No	No
Bicycle Facility Provided:	Bike Lane	Bike Lane
	Lane Width (ft)	Lane Width (ft)
	5	5
	Bicycle Buffer Width (ft)	Bicycle Buffer Width (ft)
	3	3
	Bike lanes are striped continuously through the study segment?	Bike lanes are striped continuously through the study segment?
	Yes	Yes

* Indicates an essential feature that strongly supports and promotes the goals identified in the Climate Action Plan (CAP).

Project Improvement Condition



ROADWAY INFO



Roadway Name	Avenida Encinas
From	6200 Avenida Encinas
To	Embarcadero Lane
Street Typology from Mobility Element	Neighborhood Connector
Average Daily Traffic (ADT) volume (2 way total)	5,924

PEDESTRIAN

NB SCORE | LOS
100 | A

SB SCORE | LOS
90 | A

May require improvements and
upgrades to fully support CAP goals!

Roadway Direction

	NB	SB
* Do pedestrian crossings appear consistent with the CA MUTCD?	Yes	Yes
* Minimum Sidewalk Unobstructed Width in Feet (Minimum ADA unobstructed width requirement is 4'):	5	5
* Do sidewalks appear to meet ADA requirements (e.g., cross-slope and trip hazards)?	Yes	Yes
* Do ramps and landings appear to meet ADA requirements?	Yes	Yes
* Do the street light locations appear adequate?	Yes	No
Speed limit (miles per hour - mph):	higher than 35 mph	higher than 35 mph
Number of Through Lanes:	1	1
Are there 3 lanes or less to be crossed without pedestrian refuge? (Include turn lanes in count)	Yes	Yes
Width (ft.) of landscaped buffer between pedestrian facility and vehicle travel way:	0' to 2'	0' to 2'
Does on-street parking or a bike lane provide 6' or more buffer between pedestrians and vehicle travel way?	Yes	Yes
Any apparent sight distance issues at intersections and pedestrian crossings?	No	No
Are there any permanent speed control devices installed?	No	No
Are there traffic calming measures that reduce crossing width (e.g., bulbouts, chokers, right-turn median island)?	Yes	Yes
Do crosswalks appear to be high visibility?	Yes	Yes
Are there intersection enhancements provided for pedestrians (e.g., pedestrian signal phasing, countdown heads)?	No	No
Are there Rectangular Rapid Flashing Beacons (RRFBs) at street crossings?	No	No
Is there pedestrian scale lighting?	No	No
Do active building frontages appear to be present on 80% of street curb line?	No	No
Does the street furniture appear to be oriented towards businesses or attractions?	No	No
Do the street trees appear to provide shade over more than 50% of the sidewalk length?	Yes	No

* Indicates an essential feature that strongly supports and promotes the goals identified in the Climate Action Plan (CAP).

ROADWAY INFO



Roadway Name Avenida Encinas

From 6200 Avenida Encinas

To Embarcadero Lane

Street Typology from Mobility Element  Neighborhood Connector

Average Daily Traffic (ADT) volume (2 way total) 5,924

BICYCLE

NB SCORE | LOS

SB SCORE | LOS

Roadway Direction

NB

SB

* Do the roadway pavement conditions appear to be good (e.g., no pot holes)?

Yes

Yes

* Does bike facility on roadway appear to be free of obstructions (e.g., drainage grates)?

Yes

Yes

* Does the bicycle facility appear to meet MUTCD signing and striping design guidelines?

Yes

Yes

Is on-street parking provided?

Parallel parking with door-side buffered bike lane

Parallel parking with door-side buffered bike lane

Speed limit (miles per hour - mph):

higher than 35 mph

higher than 35 mph

Does the bikeway on the study segment and side streets meet and/or exceed the Bicycle Master Plan? 

Study Segment Only

Study Segment Only

Is there enhanced bicycle detection or video detection provided at intersections?

No

No

Any bicycle racks are provided along segment?

No

No

Bicycle Facility Provided:

Bike Lane

Bike Lane

Lane Width (ft)

Lane Width (ft)

5

5

Bicycle Buffer Width (ft)

Bicycle Buffer Width (ft)

2

2

Bike lanes are striped continuously through the study segment?

Bike lanes are striped continuously through the study segment?

Yes

Yes

* Indicates an essential feature that strongly supports and promotes the goals identified in the Climate Action Plan (CAP).



ROADWAY INFO



Roadway Name	Avenida Encinas
From	Embarcadero Lane
To	Poinsettia Boulevard
Street Typology from Mobility Element	Neighborhood Connector
Average Daily Traffic (ADT) volume (2 way total)	5,924

PEDESTRIAN

NB SCORE | LOS
100 | A

SB SCORE | LOS
100 | A

Roadway Direction

	NB	SB
* Do pedestrian crossings appear consistent with the CA MUTCD?	Yes	Yes
* Minimum Sidewalk Unobstructed Width in Feet (Minimum ADA unobstructed width requirement is 4'):	5	5
* Do sidewalks appear to meet ADA requirements (e.g., cross-slope and trip hazards)?	Yes	Yes
* Do ramps and landings appear to meet ADA requirements?	Yes	Yes
* Do the street light locations appear adequate?	Yes	Yes
Speed limit (miles per hour - mph):	35 mph	35 mph
Number of Through Lanes:	1	1
Are there 3 lanes or less to be crossed without pedestrian refuge? (Include turn lanes in count)	Yes	Yes
Width (ft.) of landscaped buffer between pedestrian facility and vehicle travel way:	0' to 2'	greater than 5'
Does on-street parking or a bike lane provide 6' or more buffer between pedestrians and vehicle travel way?	Yes	Yes
Any apparent sight distance issues at intersections and pedestrian crossings?	No	No
Are there any permanent speed control devices installed?	No	No
Are there traffic calming measures that reduce crossing width (e.g., bulbouts, chokers, right-turn median island)?	Yes	Yes
Do crosswalks appear to be high visibility?	Yes	Yes
Are there intersection enhancements provided for pedestrians (e.g., pedestrian signal phasing, countdown heads)?	Yes	Yes
Are there Rectangular Rapid Flashing Beacons (RRFBs) at street crossings?	No	No
Is there pedestrian scale lighting?	No	No
Do active building frontages appear to be present on 80% of street curb line?	No	No
Does the street furniture appear to be oriented towards businesses or attractions?	No	No
Do the street trees appear to provide shade over more than 50% of the sidewalk length?	Yes	Yes

* Indicates an essential feature that strongly supports and promotes the goals identified in the Climate Action Plan (CAP).

ROADWAY INFO



Roadway Name Avenida Encinas

From Embarcadero Lane

To Poinsettia Boulevard

Street Typology from Mobility Element  Neighborhood Connector

Average Daily Traffic (ADT) volume (2 way total) 5,924

BICYCLE

NB SCORE | LOS

SB SCORE | LOS

Roadway Direction

NB

SB

* Do the roadway pavement conditions appear to be good (e.g., no pot holes)?

Yes

Yes

* Does bike facility on roadway appear to be free of obstructions (e.g., drainage grates)?

Yes

Yes

* Does the bicycle facility appear to meet MUTCD signing and striping design guidelines?

Yes

Yes

Is on-street parking provided?

Parallel parking with door-side buffered bike lane

Parallel parking with door-side buffered bike lane

Speed limit (miles per hour - mph):

35 mph

35 mph

Does the bikeway on the study segment and side streets meet and/or exceed the Bicycle Master Plan? 

Study Segment Only

Study Segment Only

Is there enhanced bicycle detection or video detection provided at intersections?

No

No

Any bicycle racks are provided along segment?

No

No

Bicycle Facility Provided:

Bike Lane

Bike Lane

Lane Width (ft)

5

Lane Width (ft)

5

Bicycle Buffer Width (ft)

2

Bicycle Buffer Width (ft)

2

Bike lanes are striped continuously through the study segment?

Yes

Bike lanes are striped continuously through the study segment?

Yes

* Indicates an essential feature that strongly supports and promotes the goals identified in the Climate Action Plan (CAP).

Project Improvement Condition



ROADWAY INFO



Roadway Name	Avenida Encinas
From	Poinsettia Boulevard
To	Windrose Circle
Street Typology from Mobility Element	Neighborhood Connector
Average Daily Traffic (ADT) volume (2 way total)	14,058

PEDESTRIAN

NB SCORE | LOS
100 | A

SB SCORE | LOS
100 | A

Roadway Direction

	NB	SB
* Do pedestrian crossings appear consistent with the CA MUTCD?	Yes	Yes
* Minimum Sidewalk Unobstructed Width in Feet (Minimum ADA unobstructed width requirement is 4'):	5	5
* Do sidewalks appear to meet ADA requirements (e.g., cross-slope and trip hazards)?	Yes	Yes
* Do ramps and landings appear to meet ADA requirements?	Yes	Yes
* Do the street light locations appear adequate?	Yes	Yes
Speed limit (miles per hour - mph):	35 mph	35 mph
Number of Through Lanes:	1	1
Are there 3 lanes or less to be crossed without pedestrian refuge? (Include turn lanes in count)	Yes	Yes
Width (ft.) of landscaped buffer between pedestrian facility and vehicle travel way:	0' to 2'	0' to 2'
Does on-street parking or a bike lane provide 6' or more buffer between pedestrians and vehicle travel way?	Yes	Yes
Any apparent sight distance issues at intersections and pedestrian crossings?	No	No
Are there any permanent speed control devices installed?	No	No
Are there traffic calming measures that reduce crossing width (e.g., bulbouts, chokers, right-turn median island)?	Yes	Yes
Do crosswalks appear to be high visibility?	Yes	Yes
Are there intersection enhancements provided for pedestrians (e.g., pedestrian signal phasing, countdown heads)?	Yes	Yes
Are there Rectangular Rapid Flashing Beacons (RRFBs) at street crossings?	No	No
Is there pedestrian scale lighting?	No	No
Do active building frontages appear to be present on 80% of street curb line?	No	No
Does the street furniture appear to be oriented towards businesses or attractions?	No	No
Do the street trees appear to provide shade over more than 50% of the sidewalk length?	Yes	Yes

* Indicates an essential feature that strongly supports and promotes the goals identified in the Climate Action Plan (CAP).

ROADWAY INFO



Roadway Name	Avenida Encinas
From	Poinsettia Boulevard
To	Windrose Circle
Street Typology from Mobility Element 	Arterial Connector
Average Daily Traffic (ADT) volume (2-way total)	14,058

BICYCLE

NB SCORE | LOS

SB SCORE | LOS

Roadway Direction

	NB	SB
* Do the roadway pavement conditions appear to be good (e.g., no pot holes)?	Yes	Yes
* Does bike facility on roadway appear to be free of obstructions (e.g., drainage grates)?	Yes	Yes
* Does the bicycle facility appear to meet MUTCD signing and striping design guidelines?	Yes	Yes
Is on-street parking provided?	No	No
Speed limit (miles per hour - mph):	35 mph	35 mph
Does the bikeway on the study segment and side streets meet and/or exceed the Bicycle Master Plan? 	Study Segment Only	Study Segment Only
Is there enhanced bicycle detection or video detection provided at intersections?	No	No
Any bicycle racks are provided along segment?	No	No
Bicycle Facility Provided:	Bike Lane	Bike Lane
	Lane Width (ft)	Lane Width (ft)
	8	8
	Bicycle Buffer Width (ft)	Bicycle Buffer Width (ft)
	3	3
	Bike lanes are striped continuously through the study segment?	Bike lanes are striped continuously through the study segment?
	Yes	Yes

* Indicates an essential feature that strongly supports and promotes the goals identified in the Climate Action Plan (CAP).



ROADWAY INFO



Roadway Name	Avenida Encinas
From	Windrose Circle
To	Carlsbad Boulevard
Street Typology from Mobility Element	Neighborhood Connector
Average Daily Traffic (ADT) volume (2 way total)	2,850

PEDESTRIAN

NB SCORE | LOS
100 | A

SB SCORE | LOS
100 | A

Roadway Direction

	NB	SB
* Do pedestrian crossings appear consistent with the CA MUTCD?	Yes	Yes
* Minimum Sidewalk Unobstructed Width in Feet (Minimum ADA unobstructed width requirement is 4'):	5	5
* Do sidewalks appear to meet ADA requirements (e.g., cross-slope and trip hazards)?	Yes	Yes
* Do ramps and landings appear to meet ADA requirements?	Yes	Yes
* Do the street light locations appear adequate?	Yes	Yes
Speed limit (miles per hour - mph):	35 mph	35 mph
Number of Through Lanes:	1	1
Are there 3 lanes or less to be crossed without pedestrian refuge? (Include turn lanes in count)	Yes	Yes
Width (ft.) of landscaped buffer between pedestrian facility and vehicle travel way:	0' to 2'	0' to 2'
Does on-street parking or a bike lane provide 6' or more buffer between pedestrians and vehicle travel way?	Yes	Yes
Any apparent sight distance issues at intersections and pedestrian crossings?	No	No
Are there any permanent speed control devices installed?	No	No
Are there traffic calming measures that reduce crossing width (e.g., bulbouts, chokers, right-turn median island)?	Yes	Yes
Do crosswalks appear to be high visibility?	Yes	Yes
Are there intersection enhancements provided for pedestrians (e.g., pedestrian signal phasing, countdown heads)?	Yes	Yes
Are there Rectangular Rapid Flashing Beacons (RRFBs) at street crossings?	No	No
Is there pedestrian scale lighting?	No	No
Do active building frontages appear to be present on 80% of street curb line?	No	No
Does the street furniture appear to be oriented towards businesses or attractions?	No	No
Do the street trees appear to provide shade over more than 50% of the sidewalk length?	Yes	Yes

* Indicates an essential feature that strongly supports and promotes the goals identified in the Climate Action Plan (CAP).

ROADWAY INFO



Roadway Name	Avenida Encinas
From	Windrose Circle
To	Carlsbad Boulevard
Street Typology from Mobility Element 	Arterial Connector
Average Daily Traffic (ADT) volume (2-way total)	2,850

BICYCLE

NB SCORE | LOS

SB SCORE | LOS

Roadway Direction

	NB	SB
* Do the roadway pavement conditions appear to be good (e.g., no pot holes)?	Yes	Yes
* Does bike facility on roadway appear to be free of obstructions (e.g., drainage grates)?	Yes	Yes
* Does the bicycle facility appear to meet MUTCD signing and striping design guidelines?	Yes	Yes
Is on-street parking provided?	No	No
Speed limit (miles per hour - mph):	35 mph	35 mph
Does the bikeway on the study segment and side streets meet and/or exceed the Bicycle Master Plan? 	Study Segment Only	Study Segment Only
Is there enhanced bicycle detection or video detection provided at intersections?	No	No
Any bicycle racks are provided along segment?	No	No
Bicycle Facility Provided:	Bike Lane	Bike Lane
	Lane Width (ft)	Lane Width (ft)
	7	7
	Bicycle Buffer Width (ft)	Bicycle Buffer Width (ft)
	5	5
	Bike lanes are striped continuously through the study segment?	Bike lanes are striped continuously through the study segment?
	Yes	Yes

* Indicates an essential feature that strongly supports and promotes the goals identified in the Climate Action Plan (CAP).

Appendix F:

FHWA Guide for Improving Pedestrian Safety at Unsignalized Crossing Locations - Analysis Worksheets

Avenida Encinas & Ponto Drive	F1
Avenida Encinas & San Carlos Street / Shopping Plaza driveway (north)	F2
Avenida Encinas & Embarcadero Lane (north)	F3
Avenida Encinas & Embarcadero Lane (south)	F4
Avenida Encinas & Macadamia Drive	F5
Avenida Encinas & Raintree Drive	F6
Avenida Encinas & Shopping Plaza driveway (south)	F7
Avenida Encinas & Windrose Circle	F8
Avenida Encinas & Dory Lane / Meridian Way	F9
Avenida Encinas & Carlsbad Poinsettia Coaster Station driveway	F10

Avenida Encinas & Ponto Drive

Guide for Improving Pedestrian Safety at Uncontrolled Crossing Locations

Table 1 provides initial countermeasure options for various roadway conditions. Each matrix cell indicates possibilities that may be appropriate for designated pedestrian crossings. Not all of the countermeasures listed in the matrix cell should necessarily be installed at a crossing.

For multi-lane roadway crossings with vehicle AADTs exceeding 10,000, a marked crosswalk alone is typically insufficient (Zegeer, 2005). Under such conditions, more substantial crossing improvements (such as the refuge island, PHB, and RRFB) are also needed to prevent an increase in pedestrian crash potential.

Table 1. Application of pedestrian crash countermeasures by roadway feature.

Roadway Configuration	Posted Speed Limit and AADT								
	Vehicle AADT <9,000			Vehicle AADT 9,000–15,000			Vehicle AADT >15,000		
	≤30 mph	35 mph	≥40 mph	≤30 mph	35 mph	≥40 mph	≤30 mph	35 mph	≥40 mph
2 lanes (1 lane in each direction)	① 2 4 5 6	① 5 6 7 9	① 5 6 ⑦ ⑨	① 4 5 6 7 9	① 5 6 7 9	① 5 6 ⑦ ⑨	① 4 5 6 7 9	① 5 6 7 9	① 5 6 ⑨
3 lanes with raised median (1 lane in each direction)	① 2 3 4 5	① ③ 5 7 9	① ③ 5 ⑦ ⑨	① ③ 4 5 7 9	① ③ 5 ⑦ ⑨	① ③ 5 ⑦ ⑨	① ③ 4 5 7 9	① ③ 5 ⑦ ⑨	① ③ 5 ⑨
3 lanes w/o raised median (1 lane in each direction with a two-way left-turn lane)	① 2 3 4 5 6 7 9	① ③ 5 6 7 9	① ③ 5 6 ⑨	① ③ 4 5 6 7 9	① ③ 5 6 ⑦ ⑨	① ③ 5 6 ⑨	① ③ 4 5 6 7 9	① ③ 5 6 ⑨	① ③ 5 6 ⑨
4+ lanes with raised median (2 or more lanes in each direction)	① ③ 5 7 8 9	① ③ 5 7 8 9	① ③ 5 8 ⑨	① ③ 5 7 8 9	① ③ 5 ⑦ 8 ⑨	① ③ 5 8 ⑨	① ③ 5 ⑦ 8 ⑨	① ③ 5 8 ⑨	① ③ 5 8 ⑨
4+ lanes w/o raised median (2 or more lanes in each direction)	① ③ 5 6 7 8 9	① ③ 5 6 7 8 9	① ③ 5 6 8 ⑨	① ③ 5 6 7 8 9	① ③ 5 6 ⑦ 8 ⑨	① ③ 5 6 8 ⑨	① ③ 5 6 ⑦ 8 ⑨	① ③ 5 6 8 ⑨	① ③ 5 6 8 ⑨
Given the set of conditions in a cell, # Signifies that the countermeasure is a candidate treatment at a marked uncontrolled crossing location. ● Signifies that the countermeasure should always be considered, but not mandated or required, based upon engineering judgment at a marked uncontrolled crossing location. ○ Signifies that crosswalk visibility enhancements should always occur in conjunction with other identified countermeasures.* The absence of a number signifies that the countermeasure is generally not an appropriate treatment, but exceptions may be considered following engineering judgment.					1 High-visibility crosswalk markings, parking restrictions on crosswalk approach, adequate nighttime lighting levels, and crossing warning signs 2 Raised crosswalk 3 Advance Yield Here To (Stop Here For) Pedestrians sign and yield (stop) line 4 In-Street Pedestrian Crossing sign 5 Curb extension 6 Pedestrian refuge island 7 Rectangular Rapid-Flashing Beacon (RRFB)** 8 Road Diet 9 Pedestrian Hybrid Beacon (PHB)**				

*Refer to Chapter 4, "Using Table 1 and Table 2 to Select Countermeasures," for more information about using multiple countermeasures.

**It should be noted that the PHB and RRFB are not both installed at the same crossing location.

This table was developed using information from: Zegeer, C.V., J.R. Stewart, H.H. Huang, P.A. Lagerwey, J. Feaganes, and B.J. Campbell. (2005). Safety effects of marked versus unmarked crosswalks at uncontrolled locations: Final report and recommended guidelines. FHWA, No. FHWA-HRT-04-100, Washington, D.C.; FHWA. Manual on Uniform Traffic Control Devices, 2009 Edition. (revised 2012). Chapter 4F, Pedestrian Hybrid Beacons. FHWA, Washington, D.C.; FHWA. Crash Modification Factors (CMF) Clearinghouse. <http://www.cmfclearinghouse.org/>; FHWA. Pedestrian Safety Guide and Countermeasure Selection System (PEDSAFE). <http://www.pedbikesafe.org/PEDSAFE/>; Zegeer, C., R. Srinivasan, B. Lan, D. Carter, S. Smith, C. Sundstrom, N.J. Thirsk, J. Zegeer, C. Lyon, E. Ferguson, and R. Van Houten. (2017). NCHRP Report 841: Development of Crash Modification Factors for Uncontrolled Pedestrian Crossing Treatments. Transportation Research Board, Washington, D.C.; Thomas, Thirsk, and Zegeer. (2016). NCHRP Synthesis 498: Application of Pedestrian Crossing Treatments for Streets and Highways. Transportation Research Board, Washington, D.C.; and personal interviews with selected pedestrian safety practitioners.

Avenida Encinas & San Carlos Street / Shopping Plaza driveway

Guide for Improving Pedestrian Safety at Uncontrolled Crossing Locations

Table 1 provides initial countermeasure options for various roadway conditions. Each matrix cell indicates possibilities that may be appropriate for designated pedestrian crossings. Not all of the countermeasures listed in the matrix cell should necessarily be installed at a crossing.

For multi-lane roadway crossings with vehicle AADTs exceeding 10,000, a marked crosswalk alone is typically insufficient (Zegeer, 2005). Under such conditions, more substantial crossing improvements (such as the refuge island, PHB, and RRFB) are also needed to prevent an increase in pedestrian crash potential.

Table 1. Application of pedestrian crash countermeasures by roadway feature.

Roadway Configuration	Posted Speed Limit and AADT								
	Vehicle AADT <9,000			Vehicle AADT 9,000–15,000			Vehicle AADT >15,000		
	≤30 mph	35 mph	≥40 mph	≤30 mph	35 mph	≥40 mph	≤30 mph	35 mph	≥40 mph
2 lanes (1 lane in each direction)	① 2 4 5 6	① 5 6 7 9	① 5 6 ⑦ ⑨	① 4 5 6 7 9	① 5 6 7 9	① 5 6 ⑦ ⑨	① 4 5 6 7 9	① 5 6 7 9	① 5 6 ⑨
3 lanes with raised median (1 lane in each direction)	① 2 3 4 5	① ③ 5 7 9	① ③ 5 ⑦ ⑨	① ③ 4 5 7 9	① ③ 5 ⑦ ⑨	① ③ 5 ⑦ ⑨	① ③ 4 5 7 9	① ③ 5 ⑦ ⑨	① ③ 5 ⑨
3 lanes w/o raised median (1 lane in each direction with a two-way left-turn lane)	① 2 3 4 5 6 7 9	① ③ 5 6 7 9	① ③ 5 6 ⑨	① ③ 4 5 6 7 9	① ③ 5 6 ⑦ ⑨	① ③ 5 6 ⑨	① ③ 4 5 6 7 9	① ③ 5 6 ⑨	① ③ 5 6 ⑨
4+ lanes with raised median (2 or more lanes in each direction)	① ③ 5 7 8 9	① ③ 5 7 8 9	① ③ 5 8 ⑨	① ③ 5 7 8 9	① ③ 5 ⑦ 8 ⑨	① ③ 5 8 ⑨	① ③ 5 ⑦ 8 ⑨	① ③ 5 8 ⑨	① ③ 5 8 ⑨
4+ lanes w/o raised median (2 or more lanes in each direction)	① ③ 5 6 7 8 9	① ③ 5 ⑥ 7 8 9	① ③ 5 ⑥ 8 ⑨	① ③ 5 ⑥ 7 8 9	① ③ 5 ⑥ ⑦ 8 ⑨	① ③ 5 ⑥ 8 ⑨	① ③ 5 ⑥ ⑦ 8 ⑨	① ③ 5 ⑥ 8 ⑨	① ③ 5 ⑥ 8 ⑨
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Select Countermeasure(s)

Avenida Encinas & Embarcadero Lane (north)

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2 lanes (1 lane in each direction)	① 2 4 5 6	① 5 6 7 9	① 5 6 ⑦ ⑨	① 4 5 6 7 9	① 5 6 7 9	① 5 6 ⑦ ⑨	① 4 5 6 7 9	① 5 6 7 9	① 5 6 ⑨
3 lanes with raised median (1 lane in each direction)	① 2 3 4 5	① ③ 5 7 9	① ③ 5 ⑦ ⑨	① 3 4 5 7 9	① ③ 5 ⑦ ⑨	① ③ 5 ⑦ ⑨	① ③ 4 5 7 9	① ③ 5 ⑦ ⑨	① ③ 5 ⑨
3 lanes w/o raised median (1 lane in each direction with a two-way left-turn lane)	① 2 3 4 5 6 7 9	① ③ 5 6 7 9	① ③ 5 6 ⑨	① 3 4 5 6 7 9	① ③ 5 6 ⑦ ⑨	① ③ 5 6 ⑨	① ③ 4 5 6 7 9	① ③ 5 6 ⑨	① ③ 5 6 ⑨
4+ lanes with raised median (2 or more lanes in each direction)	① ③ 5 7 8 9	① ③ 5 7 8 9	① ③ 5 8 ⑨	① ③ 5 7 8 9	① ③ 5 ⑦ 8 ⑨	① ③ 5 8 ⑨	① ③ 5 ⑦ 8 ⑨	① ③ 5 8 ⑨	① ③ 5 8 ⑨
4+ lanes w/o raised median (2 or more lanes in each direction)	① ③ 5 6 7 8 9	① ③ 5 6 7 8 9	① ③ 5 6 8 ⑨	① ③ 5 6 7 8 9	① ③ 5 6 ⑦ 8 ⑨	① ③ 5 6 8 ⑨	① ③ 5 6 ⑦ 8 ⑨	① ③ 5 6 8 ⑨	① ③ 5 6 8 ⑨
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2 lanes (1 lane in each direction)	① 2 4 5 6	① 5 6 7 9	① 5 6 ⑦ ⑨	① 4 5 6 7 9	① 5 6 7 9	① 5 6 ⑦ ⑨	① 4 5 6 7 9	① 5 6 7 9	① 5 6 ⑨
3 lanes with raised median (1 lane in each direction)	① 2 3 4 5	① ③ 5 7 9	① ③ 5 ⑦ ⑨	① ③ 4 5 7 9	① ③ 5 ⑦ ⑨	① ③ 5 ⑦ ⑨	① ③ 4 5 7 9	① ③ 5 ⑦ ⑨	① ③ 5 ⑨
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4+ lanes with raised median (2 or more lanes in each direction)	① ③ 5 7 8 9	① ③ 5 7 8 9	① ③ 5 8 ⑨	① ③ 5 7 8 9	① ③ 5 ⑦ 8 ⑨	① ③ 5 8 ⑨	① ③ 5 ⑦ 8 ⑨	① ③ 5 8 ⑨	① ③ 5 8 ⑨
4+ lanes w/o raised median (2 or more lanes in each direction)	① ③ 5 6 7 8 9	① ③ 5 6 7 8 9	① ③ 5 6 8 ⑨	① ③ 5 6 7 8 9	① ③ 5 6 ⑦ 8 ⑨	① ③ 5 6 8 ⑨	① ③ 5 6 ⑦ 8 ⑨	① ③ 5 6 8 ⑨	① ③ 5 6 8 ⑨
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2 lanes (1 lane in each direction)	① 2 4 5 6	① 5 6 7 9	① 5 6 7 9	① 4 5 6 7 9	① 5 6 7 9	① 5 6 7 9	① 4 5 6 7 9	① 5 6 7 9	① 5 6 9
3 lanes with raised median (1 lane in each direction)	① 2 3 4 5	① 3 5 6 7 9	① 3 5 6 7 9	① 3 4 5 7 9	① 3 5 6 7 9	① 3 5 6 7 9	① 3 4 5 7 9	① 3 5 6 7 9	① 3 5 6 9
3 lanes w/o raised median (1 lane in each direction with a two-way left-turn lane)	① 2 3 4 5 6 7 9	① 3 5 6 7 9	① 3 5 6 9	① 3 4 5 7 9	① 3 5 6 7 9	① 3 5 6 9	① 3 4 5 7 9	① 3 5 6 9	① 3 5 6 9
4+ lanes with raised median (2 or more lanes in each direction)	① 3 5 7 8 9	① 3 5 7 8 9	① 3 5 8 9	① 3 5 7 8 9	① 3 5 7 8 9	① 3 5 8 9	① 3 5 7 8 9	① 3 5 8 9	① 3 5 8 9
4+ lanes w/o raised median (2 or more lanes in each direction)	① 3 5 6 7 8 9	① 3 5 6 7 8 9	① 3 5 6 8 9	① 3 5 6 7 8 9	① 3 5 6 7 8 9	① 3 5 6 8 9	① 3 5 6 7 8 9	① 3 5 6 8 9	① 3 5 6 8 9
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4+ lanes w/o raised median (2 or more lanes in each direction)	① ③ 5 6 7 8 9	① ③ 5 ⑥ 7 8 9	① ③ 5 ⑥ 8 ⑨	① ③ 5 ⑥ 7 8 9	① ③ 5 ⑥ ⑦ 8 ⑨	① ③ 5 ⑥ 8 ⑨	① ③ 5 ⑥ ⑦ 8 ⑨	① ③ 5 ⑥ 8 ⑨	① ③ 5 ⑥ 8 ⑨
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Avenida Encinas & Shopping Plaza (South)

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3 lanes with raised median (1 lane in each direction)	① 2 3 4 5	① 3 5 6 7 9	① 3 5 6 7 9	① 3 4 5 7 9	① 3 5 6 7 9	① 3 5 6 7 9	① 3 4 5 7 9	① 3 5 6 7 9	① 3 5 6 9
3 lanes w/o raised median (1 lane in each direction with a two-way left-turn lane)	① 2 3 4 5 6 7 9	① 3 5 6 7 9	① 3 5 6 9	① 3 4 5 6 7 9	① 3 5 6 7 9	① 3 5 6 9	① 3 4 5 6 7 9	① 3 5 6 9	① 3 5 6 9
4+ lanes with raised median (2 or more lanes in each direction)	① 3 5 7 8 9	① 3 5 7 8 9	① 3 5 8 9	① 3 5 7 8 9	① 3 5 7 8 9	① 3 5 8 9	① 3 5 7 8 9	① 3 5 8 9	① 3 5 8 9
4+ lanes w/o raised median (2 or more lanes in each direction)	① 3 5 6 7 8 9	① 3 5 6 7 8 9	① 3 5 6 8 9	① 3 5 6 7 8 9	① 3 5 6 7 8 9	① 3 5 6 8 9	① 3 5 6 7 8 9	① 3 5 6 8 9	① 3 5 6 8 9

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	Vehicle AADT <9,000			Vehicle AADT 9,000–15,000			Vehicle AADT >15,000		
	≤30 mph	35 mph	≥40 mph	≤30 mph	35 mph	≥40 mph	≤30 mph	35 mph	≥40 mph
2 lanes (1 lane in each direction)	① 2 4 5 6	① 5 6 7 9	① 5 6 ⑦ ⑨	① 4 5 6 7 9	① 5 6 7 9	① 5 6 ⑦ ⑨	① 4 5 6 7 9	① 5 6 7 9	① 5 6 ⑨
3 lanes with raised median (1 lane in each direction)	① 2 3 4 5	① ③ 5 7 9	① ③ 5 ⑦ ⑨	① ③ 4 5 7 9	① ③ 5 ⑦ ⑨	① ③ 5 ⑦ ⑨	① ③ 4 5 7 9	① ③ 5 ⑦ ⑨	① ③ 5 ⑨
3 lanes w/o raised median (1 lane in each direction with a two-way left-turn lane)	① 2 3 4 5 6 7 9	① ③ 5 6 7 9	① ③ 5 6 ⑨	① ③ 4 5 6 7 9	① ③ 5 6 ⑦ ⑨	① ③ 5 6 ⑨	① ③ 4 5 6 7 9	① ③ 5 6 ⑨	① ③ 5 6 ⑨
4+ lanes with raised median (2 or more lanes in each direction)	① ③ 5 7 8 9	① ③ 5 7 8 9	① ③ 5 8 ⑨	① ③ 5 7 8 9	① ③ 5 ⑦ 8 ⑨	① ③ 5 8 ⑨	① ③ 5 ⑦ 8 ⑨	① ③ 5 8 ⑨	① ③ 5 8 ⑨
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3 lanes with raised median (1 lane in each direction)	① 2 3 4 5	① ③ 5 7 9	① ③ 5 ⑦ ⑨	① ③ 4 5 7 9	① ③ 5 ⑦ ⑨	① ③ 5 ⑦ ⑨	① ③ 4 5 7 9	① ③ 5 ⑦ ⑨	① ③ 5 ⑨
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Guide for Improving Pedestrian Safety at Uncontrolled Crossing Locations

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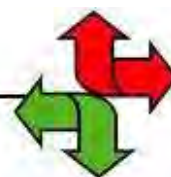
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Appendix G:

CA MUTCD Pedestrian Hybrid Beacon Warrant Analysis Worksheet G1-G2

Manual on Uniform Traffic Control Devices (MUTCD)


[Back to Chapter 4F](#)

2009 Edition Part 4 Figure 4F-2. Guidelines for the Installation of Pedestrian Hybrid Beacons on High-Speed Roadways

Figure 4F-2. Guidelines for the Installation of Pedestrian Hybrid Beacons on High-Speed Roadways

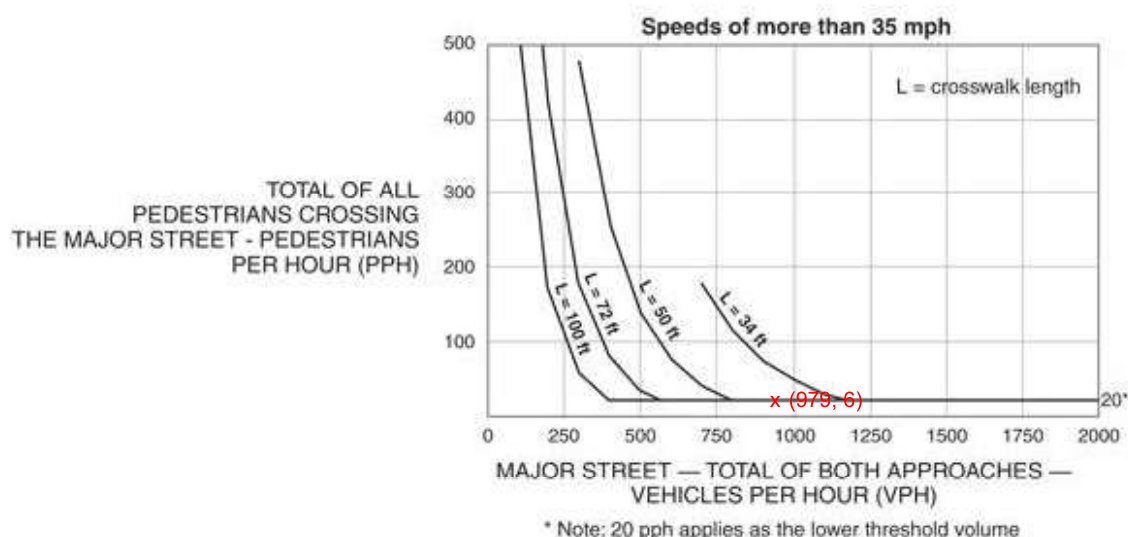


Figure 4F-2. Guidelines for the Installation of Pedestrian Hybrid Beacons on High-Speed Roadways

This figure shows a graph depicting guidelines for the installation of pedestrian hybrid beacons on high-speed roadways at speeds of more than 35 mph. The figure displays four curves for different crosswalk lengths: 34 ft, 50 ft, 72 ft, and 100 ft.

The table below shows the approximate vehicles per hour (VPH) on the major street and corresponding pedestrians per hour (PPH) for the total of all pedestrians crossing the major street.

Table for Figure 4F-2

Crosswalk length = 34 ft		Crosswalk length = 50 ft		Crosswalk length = 72 ft		Crosswalk length = 100 ft	
VPH on the major street (Total of both approaches)	PPH for total of all pedestrians crossing the major street	VPH on the major street (Total of both approaches)	PPH for total of all pedestrians crossing the major street	VPH on the major street (Total of both approaches)	PPH for total of all pedestrians crossing the major street	VPH on the major street (Total of both approaches)	PPH for total of all pedestrians crossing the major street
2000	20*	2000	20*	2000	20*	2000	20*
1750	20*	1750	20*	1750	20*	1750	20*
1500	20*	1500	20*	1500	20*	1500	20*
1250	20*	1250	20*	1250	20*	1250	20*
1000	50	1000	20*	1000	20*	1000	20*

750	150	750	25	750	20*	750	20*
500	—	500	150	500	25	500	20*
250	—	250	—	250	300	250	100
225	—	225	—	175	500	100	500

* Note: 20 pph applies as the lower threshold volume.

[Back to Chapter 4F](#)



Appendix H:

CA MUTCD Traffic Signal Warrant Analysis Worksheets H1-H10

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 1 of 5)

COUNT DATE 03/09/2022

DIST CO RTE PM

Major St: Avenida Encinas Critical Approach Speed 38 mph

Minor St: San Carlos & Shopping Center Dwy Critical Approach Speed mph

Speed limit or critical speed on major street traffic > 40 mph..... ☐ or ☐ } **RURAL (R)**

In built up area of isolated community of < 10,000 population..... ☒ } **URBAN (U)**

WARRANT 1 - Eight Hour Vehicular Volume SATISFIED YES ☒ NO ☐
(Condition A or Condition B or combination of A and B must be satisfied)

Condition A - Minimum Vehicle Volume 100% SATISFIED YES ☒ NO ☐
80% SATISFIED YES ☒ NO ☐

APPROACH LANES	MINIMUM REQUIREMENTS (80% SHOWN IN BRACKETS)											
	U	R	U	R								
	1		2 or More		11AM	12PM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM
Both Approaches Major Street	500 (400)	350 (280)	600 (480)	420 (336)	993	1038	1005	1008	1003	1029	1026	813
Highest Approach Minor Street	150 (120)	105 (84)	200 (160)	140 (112)	189	241	230	199	195	198	222	193

Condition B - Interruption of Continuous Traffic 100% SATISFIED YES ☐ NO ☒
80% SATISFIED YES ☒ NO ☐

APPROACH LANES	MINIMUM REQUIREMENTS (80% SHOWN IN BRACKETS)											
	U	R	U	R								
	1		2 or More		11AM	12PM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM
Both Approaches Major Street	750 (600)	525 (420)	900 (720)	630 (504)	993	1038	1005	1008	1003	1029	1026	813
Highest Approach Minor Street	75 (60)	53 (42)	100 (80)	70 (56)	189	241	230	199	195	198	222	193

Combination of Conditions A & B SATISFIED YES ☒ NO ☐

REQUIREMENT	CONDITION	✓	FULFILLED
TWO CONDITIONS SATISFIED 80%	A. MINIMUM VEHICULAR VOLUME	x	Yes ☒ No ☐
	AND, B. INTERRUPTION OF CONTINUOUS TRAFFIC	x	
AND, AN ADEQUATE TRIAL OF OTHER ALTERNATIVES THAT COULD CAUSE LESS DELAY AND INCONVENIENCE TO TRAFFIC HAS FAILED TO SOLVE THE TRAFFIC PROBLEMS			Yes ☐ No ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 2 of 5)

WARRANT 2 - Four Hour Vehicular Volume

SATISFIED* YES ☒ NO ☐

Record hourly vehicular volumes for any four hours of an average day.

APPROACH LANES	One	2 or More	12 PM	1 PM	2 PM	5 PM	Hour
Both Approaches - Major Street		x	1038	1005	1008	1026	
Higher Approach - Minor Street	x		241	230	199	222	

*All plotted points fall above the applicable curve in Figure 4C-1. (URBAN AREAS)	Yes ☒	No ☐
<u>OR</u> , All plotted points fall above the applicable curve in Figure 4C-2. (RURAL AREAS)	Yes ☐	No ☐

**WARRANT 3 - Peak Hour
(Part A or Part B must be satisfied)**

SATISFIED YES ☐ NO ☒

PART A

SATISFIED YES ☐ NO ☐

(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

Not Analyzed

1. The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; <u>AND</u>	Yes ☐	No ☐
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; <u>AND</u>	Yes ☐	No ☐
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	Yes ☐	No ☐

PART B

SATISFIED YES ☐ NO ☒

APPROACH LANES	One	2 or More	12 PM	Hour
Both Approaches - Major Street		x	1038	
Higher Approach - Minor Street	x		241	

The plotted point falls above the applicable curve in Figure 4C-3. (URBAN AREAS)	Yes ☐	No ☒
<u>OR</u> , The plotted point falls above the applicable curve in Figure 4C-4. (RURAL AREAS)	Yes ☐	No ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 3 of 5)

WARRANT 4 - Pedestrian Volume
(Parts 1 and 2 Must Be Satisfied)

SATISFIED YES ☐ NO ☒

Part 1 (Parts A or B must be satisfied)

Hours -->		8:00 AM	10:00 AM	2:00 PM	4:15 PM
A.	Vehicles per hour for any 4 hours	784	874	1008	979
	Pedestrians per hour for any 4 hours	4	3	4	6

Figure 4C-5 or Figure 4C-6
SATISFIED YES ☐ NO ☒

Hours -->		4:15 PM			
B.	Vehicles per hour for any 1 hour	979			
	Pedestrians per hour for any 1 hour	6			

Figure 4C-7 or Figure 4C-8
SATISFIED YES ☐ NO ☒

Part 2

SATISFIED YES ☒ NO ☐

<u>AND</u> , The distance to the nearest traffic signal along the major street is greater than 300 ft	Yes ☒ No ☐
<u>OR</u> , The proposed traffic signal will not restrict progressive traffic flow along the major street.	Yes ☐ No ☐

WARRANT 5 - School Crossing
(Parts A and B Must Be Satisfied)

SATISFIED YES ☐ NO ☐ N/A

Part A

Gap/Minutes and # of Children

SATISFIED YES ☐ NO ☐

Gaps vs Minutes	Minutes Children Using Crossing	Hour	Gaps < Minutes	YES ☐ NO ☐
	Number of Adequate Gaps		<u>AND</u> Children > 20/hr	YES ☐ NO ☐
School Age Pedestrians Crossing Street / hr				

<u>AND</u> , Consideration has been given to less restrictive remedial measures.	Yes ☐ No ☐
--	--

Part B

SATISFIED YES ☐ NO ☐

The distance to the nearest traffic signal along the major street is greater than 300 ft	Yes ☐ No ☐
<u>OR</u> , The proposed signal will not restrict the progressive movement of traffic.	Yes ☐ No ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 4 of 5)

**WARRANT 6 - Coordinated Signal System
(All Parts Must Be Satisfied)**

SATISFIED YES ☐ NO ☒

MINIMUM REQUIREMENTS	DISTANCE TO NEAREST SIGNAL	
≥ 1000 ft	N <u>585</u> ft, S <u>565</u> ft, E _____ ft, W _____ ft	Yes ☐ No ☒
On a one-way street or a street that has traffic predominantly in one direction, the adjacent traffic control signals are so far apart that they do not provide the necessary degree of vehicular platooning.		Yes ☐ No ☒
OR, On a two-way street, adjacent traffic control signals do not provide the necessary degree of platooning and the proposed and adjacent traffic control signals will collectively provide a progressive operation.		

**WARRANT 7 - Crash Experience Warrant
(All Parts Must Be Satisfied)**

SATISFIED YES ☐ NO ☒

Adequate trial of alternatives with satisfactory observance and enforcement has failed to reduce the crash frequency.		Yes ☐ No ☒	
REQUIREMENTS	Number of crashes reported within a 12 month period susceptible to correction by a traffic signal, and involving injury or damage exceeding the requirements for a reportable crash.	Yes ☐ No ☒	
5 OR MORE			
REQUIREMENTS	CONDITIONS	Yes ☒ No ☐	
ONE CONDITION SATISFIED 80%	Warrant 1, Condition A - Minimum Vehicular Volume		✓
	OR, Warrant 1, Condition B - Interruption of Continuous Traffic		
	OR, Warrant 4, Pedestrian Volume Condition Ped Vol ≥ 80% of Figure 4C-5 through Figure 4C-8		

**WARRANT 8 - Roadway Network
(All Parts Must Be Satisfied)**

SATISFIED YES ☐ NO ☐

N/A

MINIMUM VOLUME REQUIREMENTS	ENTERING VOLUMES - ALL APPROACHES	✓	FULFILLED
1000 Veh/Hr	During Typical Weekday Peak Hour _____ Veh/Hr and has 5-year projected traffic volumes that meet one or more of Warrants 1, 2, and 3 during an average weekday.		Yes ☐ No ☐
	OR During Each of Any 5 Hrs. of a Sat. or Sun _____ Veh/Hr		
CHARACTERISTICS OF MAJOR ROUTES		MAJOR ROUTE A	MAJOR ROUTE B
Hwy. System Serving as Principal Network for Through Traffic			
Rural or Suburban Highway Outside Of, Entering, or Traversing a City			
Appears as Major Route on an Official Plan			
Any Major Route Characteristics Met, Both Streets			Yes ☐ No ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 5 of 5)

**WARRANT 9 - Intersection Near a Grade Crossing
(Both Parts A and B Must Be Satisfied)**

SATISFIED YES ☐ NO ☐ **N/A**

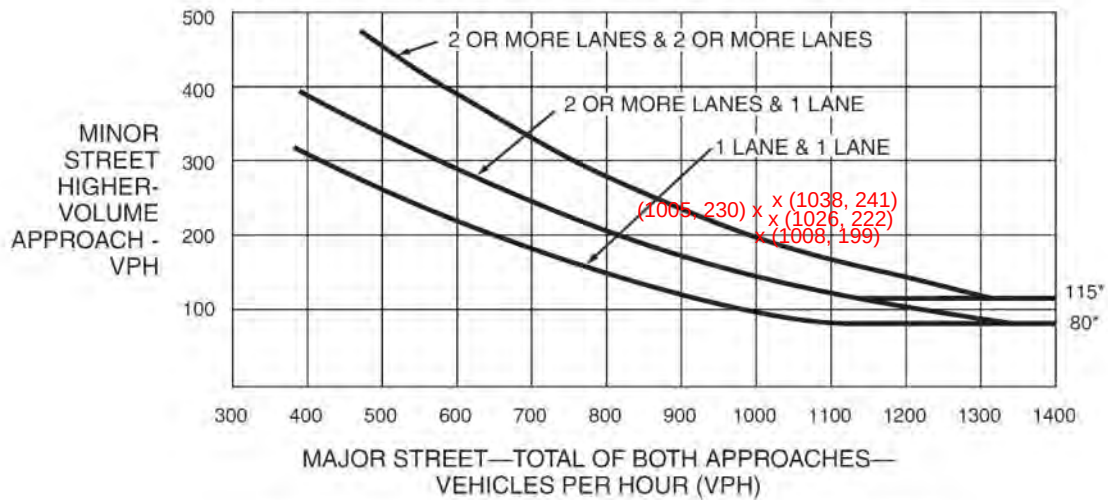
PART A A grade crossing exists on an approach controlled by a STOP or YIELD sign and the center of the track nearest to the intersection is within 140 feet of the stop line or yield line on the approach. Track Center Line to Limit Line _____ ft	Yes ☐ No ☐
PART B There is one minor street approach lane at the track crossing - During the highest traffic volume hour during which rail traffic uses the crossing, the plotted point falls above the applicable curve in Figure 4C-9. Major Street - Total of both approaches: _____ VPH Minor Street - Crosses the track (one direction only, approaching the intersection): _____ VPH X AF (Use Tables 4C-2, 3, & 4 below to calculate AF) = _____ VPH OR, There are two or more minor street approach lanes at the track crossing - During the highest traffic volume hour during which rail traffic uses the crossing, the plotted point falls above the applicable curve in Figure 4C-10. Major Street - Total of both approaches : _____ VPH Minor Street - Crosses the track (one direction only, approaching the intersection): _____ VPH X AF (Use Tables 4C-2, 3, & 4 below to calculate AF) = _____ VPH	Yes ☐ No ☐

The minor street approach volume may be multiplied by up to three following adjustment factors (AF) as described in Section 4C.10.

- 1- Number of Rail Traffic per Day _____ Adjustment factor from table 4C-2 _____
- 2- Percentage of High-Occupancy Buses on Minor Street Approach _____ Adjustment factor from table 4C-3 _____
- 3- Percentage of Tractor-Trailer Trucks on Minor Street Approach _____ Adjustment factor from table 4C-4 _____

NOTE: If no data is available or known, then use AF = 1 (no adjustment)

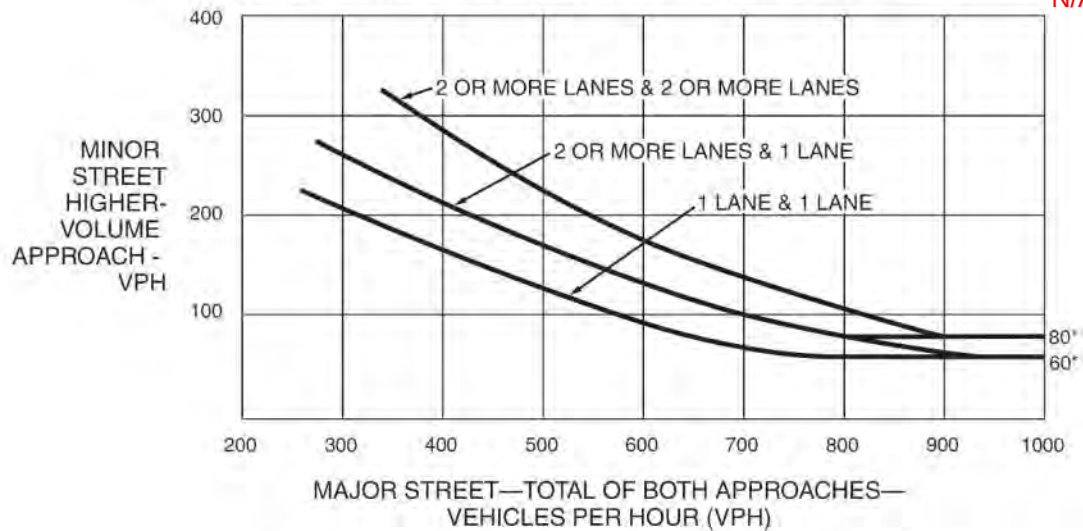
Figure 4C-1. Warrant 2, Four-Hour Vehicular Volume



*Note: 115 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 80 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-2. Warrant 2, Four-Hour Vehicular Volume (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 80 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor-street approach with one lane.

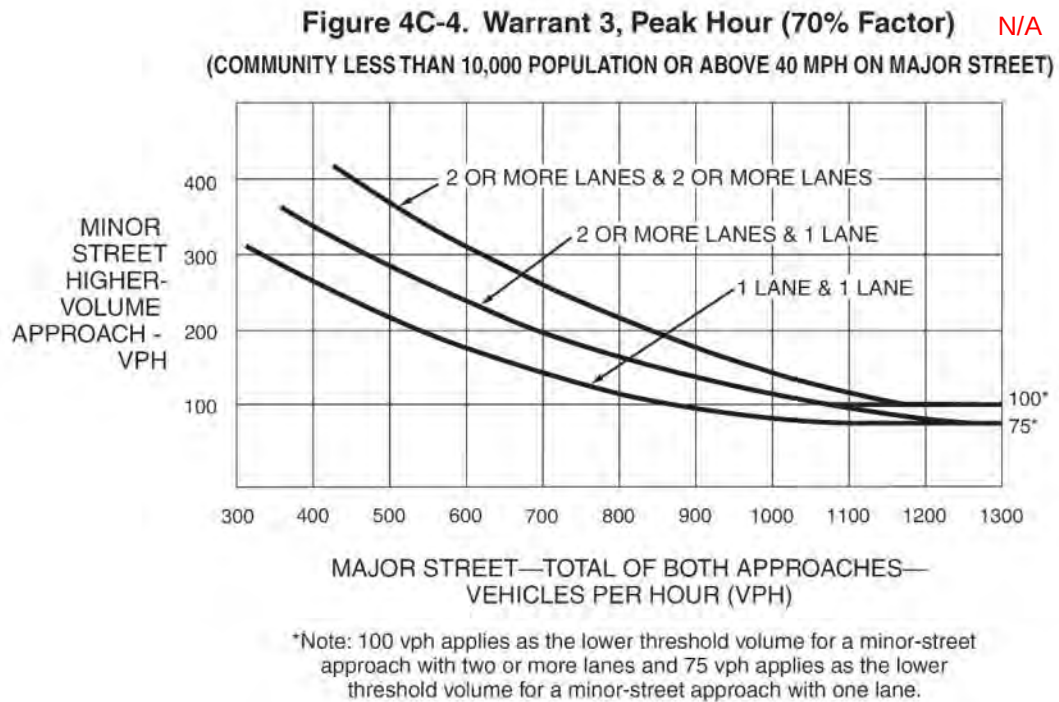
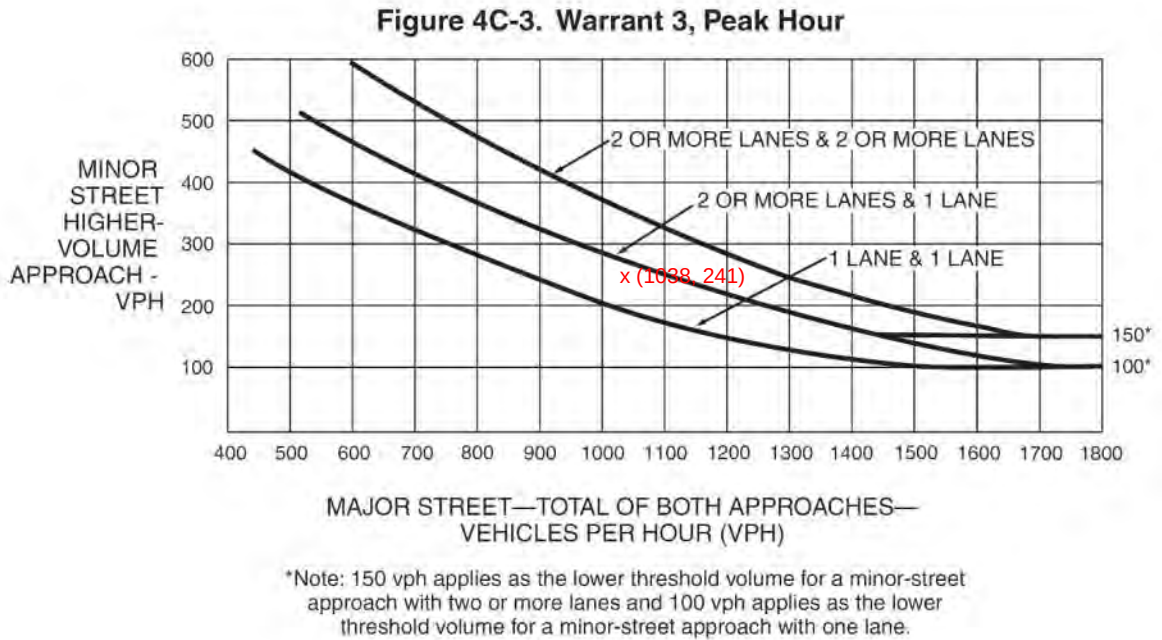
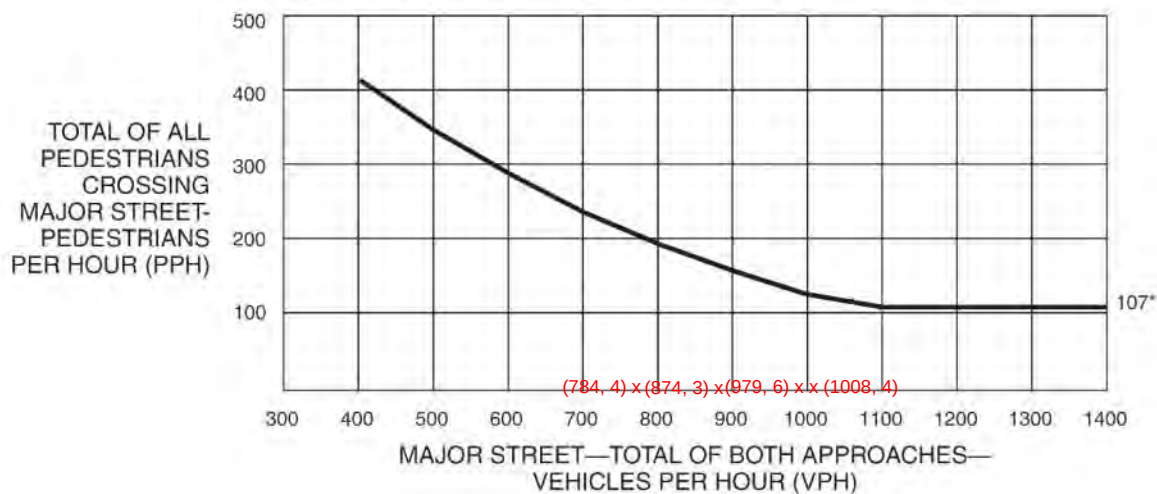


Figure 4C-5. Warrant 4, Pedestrian Four-Hour Volume



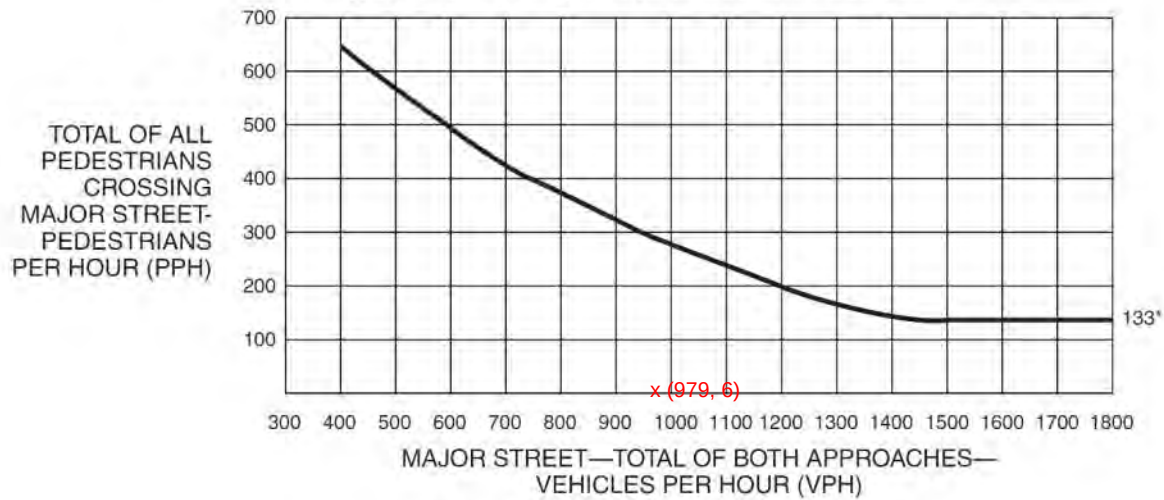
*Note: 107 pph applies as the lower threshold volume.

Figure 4C-6. Warrant 4, Pedestrian Four-Hour Volume (70% Factor)



*Note: 75 pph applies as the lower threshold volume.

Figure 4C-7. Warrant 4, Pedestrian Peak Hour



*Note: 133 pph applies as the lower threshold volume.

Figure 4C-8. Warrant 4, Pedestrian Peak Hour (70% Factor)

N/A



*Note: 93 pph applies as the lower threshold volume.

**Figure 4C-9. Warrant 9, Intersection Near a Grade Crossing
(One Approach Lane at the Track Crossing)**

N/A

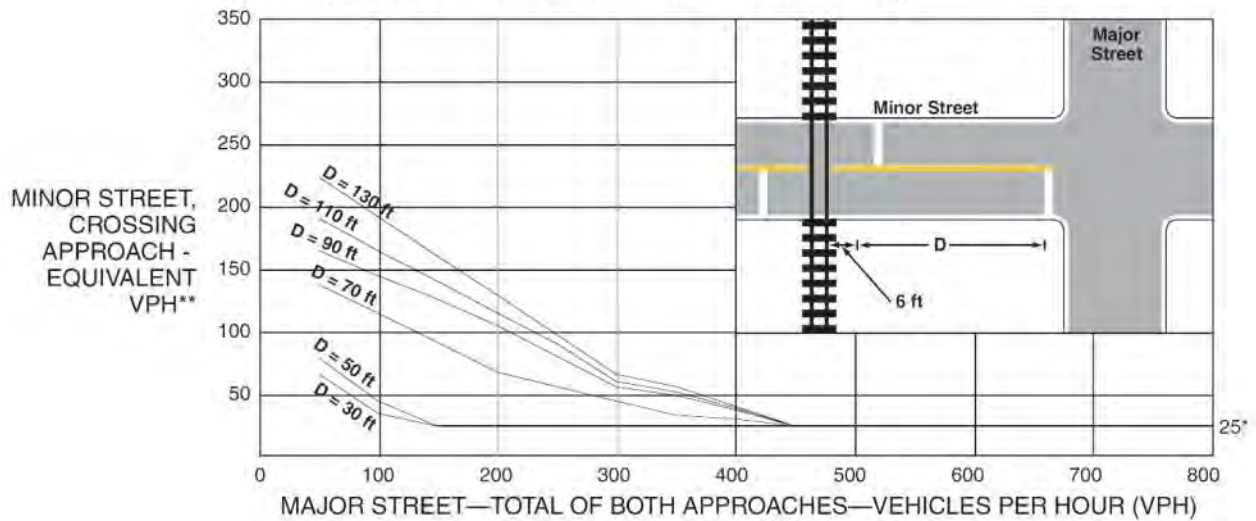
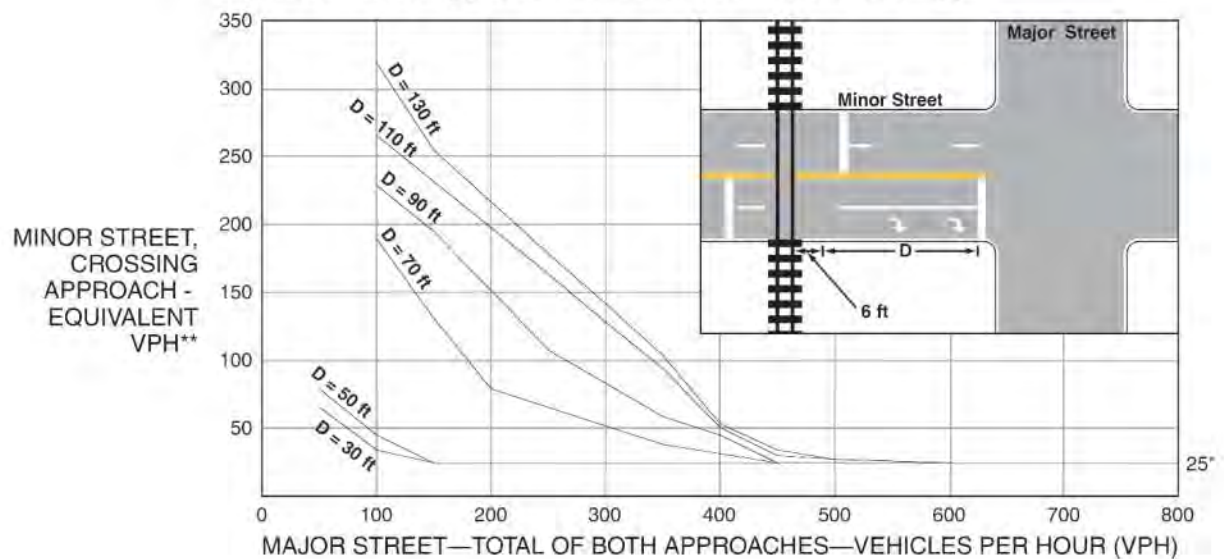


**Figure 4C-10. Warrant 9, Intersection Near a Grade Crossing
(Two or More Approach Lanes at the Track Crossing)**

N/A



Appendix I:

SWITRS Collision Data

Avenida Encinas Corridor

CASE_ID	Year	COLLISION_DATE	COLLISION_TIME	DAY_OF_WEEK	PRIMARY_RD	SECONDARY_RD	DISTANCE	DIRECTION	WEATHER_1	COLLISION_SEVERITY	TYPE_OF_COLLISION	MVIW	LATITUDE	LONGITUDE
81450876	2021	20210324	210	Wed.	AVENIDA ENCINAS	PALOMAR AIRPORT RD	1476	N	Clear	Complaint of Pain	Hit Object	Fixed Object	33.12247	117.32497
81515376	2021	20210609	2151	Wed.	AVENIDA ENCINAS	EMBARCADERO LN (W)	600	N	Clear	Complaint of Pain	Hit Object	Fixed Object	33.11035	117.31741
81589003	2021	20210913	2000	Mon.	AVENIDA ENCINAS	WINDROSE CR	150	N	Clear	PDO	Hit Object	Fixed Object	33.09609	117.30745
81625507	2021	20211114	1730	Sun.	AVENIDA ENCINAS	PALOMAR AIRPORT RD	12	N	Clear	Complaint of Pain	Rear-End	Other Motor Vehicle	33.12247	117.32497
81704683	2021	20211020	2216	Wed.	AVENIDA ENCINAS	POINSETTIA VILLAGE DY (W)	46	S	Clear	Other Visible Injury	Overturned	Non-Collision	33.1013	117.31242

Source: Statewide Integrated Traffic Records System (SWITRS). Accessed March 28, 2022