Brodiaea Avenue
Traffic Impact Analysis

City of Moreno Valley, California

July 25, 2025

Prepared by:

TJW ENGINEERING, INC.
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July 25, 2025

TJW ENGINEERING, INC.
TRAFFIC ENGINEERING &
TRANSPORTATION PLANNING
CONSULTANTS

Mr. Moses Kim
WARMINGTON RESIDENTIAL
3090 Pullman Street
Costa Mesa, CA 92626

Subject: Traffic Impact Analysis – Brodiaea Avenue, City of Moreno Valley, CA

Dear Mr. Kim:

TJW ENGINEERING, INC. (TJW) is pleased to present you with this traffic impact analysis for the proposed residential development located on Brodiaea Avenue east of Moreno Beach Drive in the City of Moreno Valley, California. The development is for the construction of 134 new single family detached residential units.

This traffic study has been prepared to meet the traffic study requirements for the City of Moreno Valley and assesses the forecast traffic operations associated with the proposed project and its impact on the local street network. This report is being submitted to you for review and forwarding to the City of Moreno Valley.

Please contact us at (949) 878-3509 if you have any questions regarding this analysis.

Sincerely,

Thomas Wheat, PE, TE
President
Registered Civil Engineer *#69467*
Registered Traffic Engineer *#2565*

David Chew, PTP
Transportation Planner

Travis Yokota
Assistant Transportation Planner

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1.0 EXECUTIVE SUMMARY

This traffic impact analysis (TIA) analyzes the projected traffic operations associated with the proposed residential development located on Brodiaea Avenue east of Moreno Beach Drive in the City of Moreno Valley, California. The purpose of this TIA is to evaluate potential circulation system deficiencies that may result from the development of the proposed project, and to recommend improvements to achieve acceptable operations, if applicable. This analysis has been prepared in coordination with the City of Moreno Valley via a scoping agreement (See **Appendix B**) and follows the *City of Moreno Valley General Plan 2040* (June 2021) and the *City of Moreno Valley Transportation Engineering Division Traffic Impact Analysis Preparation Guidelines for Vehicle Miles Traveled and Level of Service Assessment* (June 2020).

The proposed project is for the construction of 134 new single-family detached residential units. Site access will be via a proposed full-access two-lane roadway intersecting with Brodiaea Avenue. The project site is currently classified for R-3 (Residential – three (3) dwelling units per acre) with a plan to request a change to R-10. The site is zoned as Suburban Residential with a plan to request rezoning to Multifamily. The project site is vacant.

The proposed project is anticipated to be built and generating trips in 2027. The proposed project is projected to generate a net total of 1,264 daily trips which includes 94 AM peak hour trips and 126 PM peak hour trips.

Four (4) intersections in the vicinity of the project site have been included in the intersection level of service (LOS) analysis:

Study Intersections:

1. Moreno Beach Drive/Alessandro Boulevard
2. Moreno Beach Drive/Brodiaea Avenue
3. Moreno Beach Drive/Cactus Avenue
4. Project Access/Brodiaea Avenue.

The study intersections are analyzed for the following study scenarios:

- Existing Traffic Conditions;
- Opening Year (OY) Traffic Conditions (Existing + Ambient + Cumulative);
- Opening Year Plus Project (OYP) Traffic Conditions (Existing + Ambient + Cumulative + Project);
- General Plan Buildout (GP) Traffic Conditions;
- General Plan Buildout Plus Project (GPP) Traffic Conditions.

1.1 SUMMARY OF LEVEL OF SERVICE ANALYSIS RESULTS

Table ES-1 summarizes the results of the intersection level of service analysis based on the City of Moreno Valley thresholds of significance for analyzing transportation deficiencies.

Table ES-1

Summary of Transportation Deficiencies at Study Intersections

Intersection			Existing	Opening Year	Opening Year + Project	General Plan	General Plan + Project
1	Moreno Beach Drive	Alessandro Boulevard	-	-	-	Deficient	Deficient
2	Moreno Beach Drive	Brodiaea Avenue	-	Deficient	Deficient	-	-
3	Moreno Beach Drive	Cactus Avenue	-	-	-	-	-
4	Project Access	Brodiaea Avenue	N/A	N/A	-	N/A	-

Existing Traffic Conditions

The study intersections are projected to operate at an acceptable LOS during the AM and PM peak hours for *Existing* traffic conditions.

Opening Year (OY) Traffic Conditions (Existing + Ambient + Cumulative)

The study intersections are projected to operate at an acceptable LOS during the AM and PM peak hours for *Opening Year* traffic conditions with the exception of:

- Intersection 2: Moreno Beach Drive/Brodiaea Avenue during the PM peak hour only.

Opening Year Plus Project (OYP) Traffic Conditions (Existing + Ambient + Cumulative + Project)

The study intersections are projected to operate at an acceptable LOS during the AM and PM peak hours for *Opening Year Plus Project* traffic conditions with the exception of:

- Intersection 2: Moreno Beach Drive/Brodiaea Avenue during both AM and PM peak hours.

General Plan Buildout (GP) Traffic Conditions

The study intersections are projected to operate at an acceptable LOS during the AM and PM peak hours for *General Plan Buildout* traffic conditions with the exception of:

- Intersection 1: Moreno Beach Drive/Alessandro Boulevard during the PM peak hour only.

General Plan Buildout Plus Project (GPP) Traffic Conditions

The study intersections are projected to operate at an acceptable LOS during the AM and PM peak hours for *General Plan Buildout Plus Project* traffic conditions with the exception of:

- Intersection 1: Moreno Beach Drive/Alessandro Boulevard during the PM peak hour only.

1.2 FAIR SHARE ANALYSIS

The project's fair share percentage for each recommended improvement is identified in **Table ES-2** below. The percentage of project fair-share at affected intersections was calculated using the total trips generated by the project divided by the total "new" traffic, which is the net increase in traffic volume in the Cumulative conditions as a result of all other proposed projects.

Table ES-2
Fair Share Analysis

Intersection			Improvement	Peak Hour	Project Trips	Total Traffic	Existing Traffic	Project % of Fair Share
2	Moreno Beach Drive	Brodiaea Avenue	Add Signal	AM	89	1,574	1,244	26.97%
				PM	120	1,999	1,507	24.39%

2.0 INTRODUCTION

This traffic impact analysis (TIA) analyzes the projected traffic operations associated with the proposed residential development located on Brodiaea Avenue east of Moreno Beach Drive in the City of Moreno Valley, California. The purpose of this TIA is to evaluate potential circulation system deficiencies that may result from the development of the proposed project, and to recommend improvements to achieve acceptable operations, if applicable. This analysis has been prepared in coordination with the City of Moreno Valley via a scoping agreement (See **Appendix B**) and follows the *City of Moreno Valley General Plan 2040* (June 2021) and the *City of Moreno Valley Transportation Engineering Division Traffic Impact Analysis Preparation Guidelines for Vehicle Miles Traveled and Level of Service Assessment* (June 2020).

2.1 PROJECT DESCRIPTION

The proposed project is for the construction of 134 new single-family detached residential units. Site access will be via a proposed full-access two-lane roadway intersecting with Brodiaea Avenue. The project site is currently classified for R-3 (Residential – three (3) dwelling units per acre) with a plan to request a change to R-10. The site is zoned as Suburban Residential with a plan to request rezoning to Multifamily. The project site is vacant.

Exhibit 1 displays a map with the proposed project location. **Exhibit 2** shows the proposed project site plan.

2.2 STUDY AREA

Four (4) intersections in the vicinity of the project site have been included in the intersection level of service (LOS) analysis:

Study Intersections:

1. Moreno Beach Drive/Alessandro Boulevard
2. Moreno Beach Drive/Brodiaea Avenue
3. Moreno Beach Drive/Cactus Avenue
4. Project Access/Brodiaea Avenue.

Each intersection is located within the City of Moreno Valley. **Exhibit 3** displays a map with the location of each intersection.

The intersections are analyzed for the following study scenarios:

- Existing Traffic Conditions;
- Opening Year (OY) Traffic Conditions (Existing + Ambient + Cumulative);
- Opening Year Plus Project (OYP) Traffic Conditions (Existing + Ambient + Cumulative + Project);
- General Plan Buildout (GP) Traffic Conditions;
- General Plan Buildout Plus Project (GPP) Traffic Conditions.

Traffic operations are evaluated for the following time periods:

- Weekday AM Peak Hour occurring between 7:00 AM to 9:00 AM;
- Weekday PM Peak Hour occurring between 4:00 PM to 6:00 PM.

2.3 ANALYSIS METHODOLOGY

Level of Service (LOS) is commonly used to describe the quality of flow on roadways and at intersections using a range of LOS from LOS A (free flow with little congestion) to LOS F (severely congested conditions). The definitions for LOS for interruption of traffic flow differ depending on the type of traffic control (traffic signal, unsignalized intersection with side street stops, unsignalized intersection with all-way stops). The *Highway Capacity Manual 7th Edition* (HCM) (Transportation Research Board, 2022) methodology expresses the LOS of an intersection in terms of delay time for the intersection approaches. The HCM methodology utilizes different procedures for different types of intersection controls.

City Guidelines require signalized intersection operations to be analyzed utilizing the HCM methodology. Intersection LOS for signalized intersections is based on the intersections average control delay for all movements at the intersection during the peak hour. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. The procedure for stop-control analysis determines the average total delay, expressed in seconds of delay per vehicle, for left turns from the major street and from the stop-controlled minor street traffic stream. Delay values are calculated based on the relationship between traffic on the major street and the availability of acceptable "gaps" in this stream through which conflicting traffic movements can be made.

Table 1 describes the general characteristics of traffic flow and accompanying delay ranges at signalized intersections.

Table 1:
HCM – LOS & Delay Ranges – Signalized Intersections

Level of Service	Description	Delay (in seconds)
A	Very favorable progression; most vehicles arrive during green signal and do not stop. Short cycle lengths.	0 – 10.00
B	Good progression, short cycle lengths. More vehicles stop than for LOS A.	10.01 – 20.00
C	Fair progression; longer cycle lengths. Individual cycle failures may begin to appear. The number of vehicles stopping is significant, though many vehicles still pass through without stopping.	20.01 – 35.00
D	Progression less favorable, longer cycle length and high flow/capacity ratio. The proportion of vehicles that pass through without stopping diminishes. Individual cycle failures are obvious.	35.01 – 55.00
E	Severe congestion with some long-standing queues on critical approaches. Poor progression, long cycle lengths and high flow/capacity ratio. Individual cycle failures are frequent.	55.01 – 80.00
F	Very poor progression, long cycle lengths and many individual cycle failures. Arrival flow rates exceed capacity of intersection.	> 80.01

Source: *Highway Capacity Manual, 7th Edition* (Transportation Research Board, 2022).

Collected peak hour traffic volumes have been adjusted using a peak hour factor (PHF) to reflect peak 15-minute volumes. It is a common practice in LOS analysis to conservatively use a peak 15-minute flow rate applied to the entire hour to derive flow rates in vehicles per hour that are used in the LOS analysis. The PHF is the relationship between the peak 15-minute flow rate and the full hourly volume. PHF = [Hourly Volume]/ [4 * Peak 15-Minute Volume]. The use of a 15-minute PHF produces a more detailed and conservative analysis compared to analyzing vehicles per hour. Existing PHFs, obtained from the existing traffic counts have been used for all analysis scenarios in this study.

City Guidelines also require unsignalized intersection operations to be analyzed utilizing the HCM methodology. Intersection operation for unsignalized intersections is based on the weighted average control delay expressed in seconds per vehicle.

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

Table 2 describes the general characteristics of traffic flow and accompanying delay ranges at unsignalized intersections.

Table 2:
HCM – LOS & Delay Ranges – Unsignalized Intersections

Level of Service	Description[1]	Delay[2] (in seconds)
A	Free-flow travel with freedom to maneuver.	0 – 10.00
B	Stable operating conditions, but the presence of other road users causes a noticeable, though slight, reduction in convenience, and maneuvering freedom.	10.01 – 15.00
C	Stable operating conditions, but the operation of individual users is substantially affected by the interaction with others in the traffic stream.	15.01 – 25.00
D	High-density, but stable flow. Users may experience restriction in speed and freedom to maneuver, with poor levels of convenience.	25.01 – 35.00
E	Operating conditions at or near capacity. Speeds are reduced to a low but relatively uniform value. Freedom to maneuver is difficult with users experiencing frustration and poor convenience. Unstable operation is frequent, and minor disturbances in traffic flow can cause breakdown conditions.	35.01 – 45.00
F	Forced or breakdown conditions. This condition exists wherever the volume of traffic exceeds the capacity of the roadway. Long queues can form behind these bottleneck points with queued traffic traveling in a stop-and-go fashion.	> 45.01

1: Source: City of Moreno Valley General Plan 2040 (June 15, 2021).
1: Source: *Highway Capacity Manual, 7th Edition* (Transportation Research Board, 2022).

This analysis utilizes *PTV Vistro*, Version 2025 analysis software for all signalized and unsignalized intersections. Vistro is a macroscopic traffic software program that is based on the signalized intersection capacity analysis specified in Chapter 16 of the HCM. The level of service and capacity analysis performed within Vistro takes the optimization and coordination of signalized intersections within a network into consideration.

2.4 PERFORMANCE CRITERIA

The *City General Plan* notes that Policy C.3-1 establishes the City shall strive to maintain LOS "D" or better at intersections during peak hours.

Additionally, the *City Guidelines* indicate that any signalized intersection operating at an unacceptable LOS without project traffic where the project increased the delay by 5.0 or more seconds shall identify improvements to offset the delay.

Legend:

Proposed Project Site

Exhibit 1: Project Location

Brodiaea Avenue Traffic Impact Analysis

WRI-24-006

Not to Scale

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Exhibit 2: Site Plan

Brodiaea Avenue Traffic Impact Analysis

WRI-24-006

Not to Scale

Legend:

Proposed Project Site

Study Intersection Location

Exhibit 3: Project Study Area

Brodiaea Avenue Traffic Impact Analysis

WRI-24-006

Not to Scale

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3.0 EXISTING CONDITIONS

3.1 EXISTING CIRCULATION NETWORK/STUDY AREA CONDITIONS

The characteristics of the roadways in the vicinity of the proposed project site are described in **Table 3.** The *City General Plan* roadway classification descriptions are contained in **Appendix B**.

Table 3:
Roadway Characteristics within Study Area

Roadway	Classification[1]	Jurisdiction	Direction	Existing Travel Lanes	Median Type[2]	Speed Limit (mph)	On-Street Parking
Moreno Beach Drive	Divided Major Arterial	Moreno Valley	North-South	2-6	NM/RM	45-50	No
Alessandro Boulevard	Divided Arterial	Moreno Valley	East-West	2	NM	40-50	No
Brodiaea Avenue	Neighborhood Collector	Moreno Valley	East-West	2	NM	35	No
Cactus Avenue	Minor Arterial	Moreno Valley	East-West	4	NM	45-50	No

1: Source: City of Moreno Valley General Plan 2040 (June 2021).
2: RM= Raised Median, NM = No Median.

Exhibit 4 shows the *Existing* study area lane geometry and stop controls at the study intersections.

3.2 EXISTING PUBLIC TRANSIT SERVICES

The City of Moreno Valley is served by the Riverside Transit Agency (RTA) which provides bus service throughout the Riverside County region. RTA Route 20 has stops at Intersection #1: Moreno Beach Drive/Alessandro Boulevard and Intersection #3: Moreno Beach Drive/Cactus Avenue. This route connects Moreno Valley College with the City of Riverside and includes stops at the Moreno Valley/March Field Metrolink Station, Moreno Valley Civic Center, Kaiser Permanente Moreno Valley, and Riverside University Health System Medical Center. **Appendix B** contains a map and schedule of RTA Route 20.

3.3 PEDESTRIANS AND BICYCLES

Class II bicycle lanes are painted at each study intersection along Moreno Beach Drive. These lanes are shared with pedestrians. Per the *City General Plan*, Class II bicycle lanes are planned for Alessandro Boulevard and Cactus Avenue, and a Class III bicycle route for Brodiaea Avenue west of Moreno Beach Drive. Paved sidewalks exist along the frontages of all developed areas on the roadways between study intersections. A *City General Plan* map of the *Existing* and planned bicycle lanes is included in **Appendix B**.

3.4 EXISTING TRAFFIC VOLUMES

To determine the *Existing* operation of the study intersections, AM and PM peak period traffic volumes were collected on Wednesday, January 22, 2025. Detailed traffic count data is provided in **Appendix C**. The *Existing* AM and PM peak hour volumes at the study intersections are shown in **Exhibit 5**.

3.5 EXISTING CONDITIONS INTERSECTION LEVEL OF SERVICE ANALYSIS

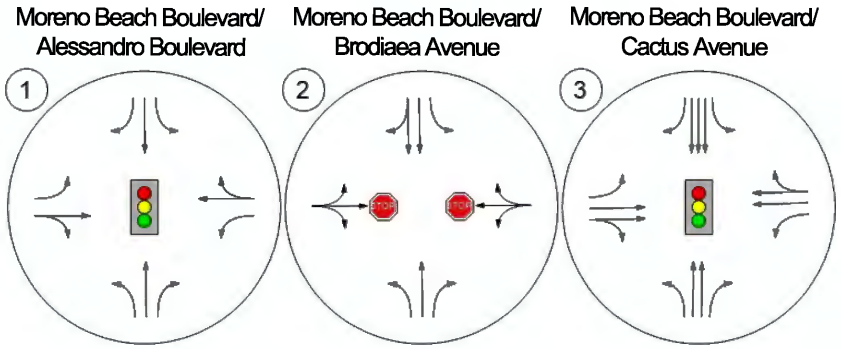
The intersection analysis of the AM and PM peak hours for *Existing* traffic conditions is shown in **Table 4.** Calculations are based on the *Existing* geometrics at the study area intersections as shown previously in **Exhibit 4** and the existing signal timing at Intersections 1 and 3 as provided by the City of Moreno Valley. HCM analysis sheets are provided in **Appendix D**.

Table 4:
Intersection Analysis – Existing Conditions

Intersection			Control Type[1]	Peak Hour	Existing Conditions	
					Delay[2]	LOS
1	Moreno Beach Drive	Alessandro Boulevard	Signal	AM	34.0	C
				PM	22.7	C
2	Moreno Beach Drive	Brodiaea Avenue	TWSC	AM	17.8	C
				PM	26.6	D
3	Moreno Beach Drive	Cactus Avenue	Signal	AM	27.9	C
				PM	27.9	C

1: TWSC = Two-Way Stop-Control.
2: Delay is shown in seconds per vehicle. Per the Highway Capacity Manual 7th Edition, overall average delay and LOS are shown for signalized and all-way stop-controlled intersections. For intersections with one-or-two-way stop-control, the delay and LOS for the worst individual movement is shown.

As shown in **Table 4**, the study intersections are currently operating at an acceptable LOS during the AM and PM peak hours.



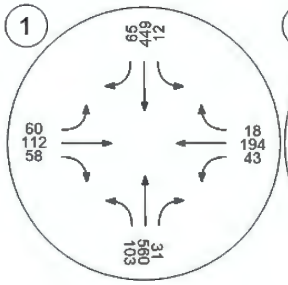
Legend:

Proposed Project Site

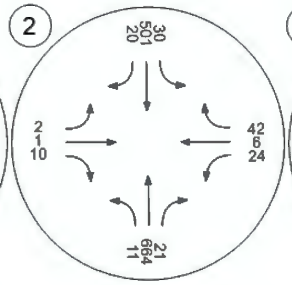
(#) Study Intersection Location

AM Peak Hour Volumes

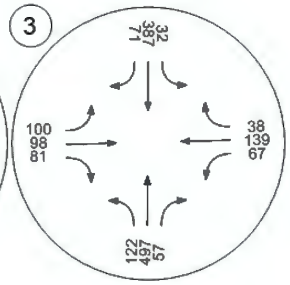
Moreno Beach Boulevard/ Alessandro Boulevard



Moreno Beach Boulevard/ Brodiaea Avenue

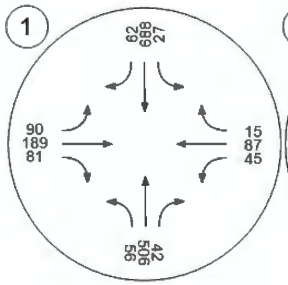


Moreno Beach Boulevard/ Cactus Avenue

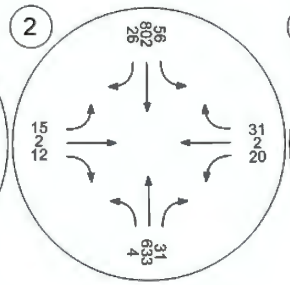


PM Peak Hour Volumes

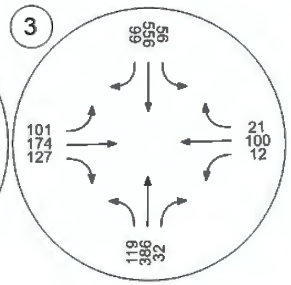
Moreno Beach Boulevard/ Alessandro Boulevard



Moreno Beach Boulevard/ Brodiaea Avenue



Moreno Beach Boulevard/ Cactus Avenue



Legend:

Proposed Project Site

(#) Study Intersection Location

Exhibit 5: Existing AM and PM Peak Hour Volumes

Brodiaea Avenue Traffic Impact Analysis

WRI-24-006

Not to Scale

TJW Engineering, Inc.

4.0 PROPOSED PROJECT

4.1 PROJECT DESCRIPTION

The proposed project is for the construction of 134 new single-family detached residential units. Site access will be via a proposed full-access two-lane roadway intersecting with Brodiaea Avenue. The project site is currently classified for R-3 (Residential – three (3) dwelling units per acre) land use with a plan to request a change to R-10. The site is zoned as Suburban Residential with a plan to request rezoning to Multifamily. The project site is vacant.

Exhibit 2 previously showed the proposed project site plan.

4.2 PROJECT TRIP GENERATION

Trip generation represents the amount of traffic, both inbound and outbound, produced by a development. Determining trip generation for a proposed project is based on projecting the amount of traffic that the specific land uses being proposed will produce. Industry standard *Institute of Transportation Engineers (ITE) Trip Generation Manual* (11th Edition, 2021) trip generation rates were used to determine trip generation of for the proposed project land uses.

The proposed project is projected to generate a net total of 1,264 daily trips which includes 94 AM peak hour trips and 126 PM peak hour trips. In addition, because the proposed project requires a change in the General Plan land use designation from R-3 to R-10, the trip generation was calculated for the maximum volume of dwelling units allowable under the current land use designation of R-3. **Table 5** summarizes the projected AM peak hour, PM peak hour and daily trip generation of the proposed project as well as the trip generation of the allowable number of dwelling units under R-3.

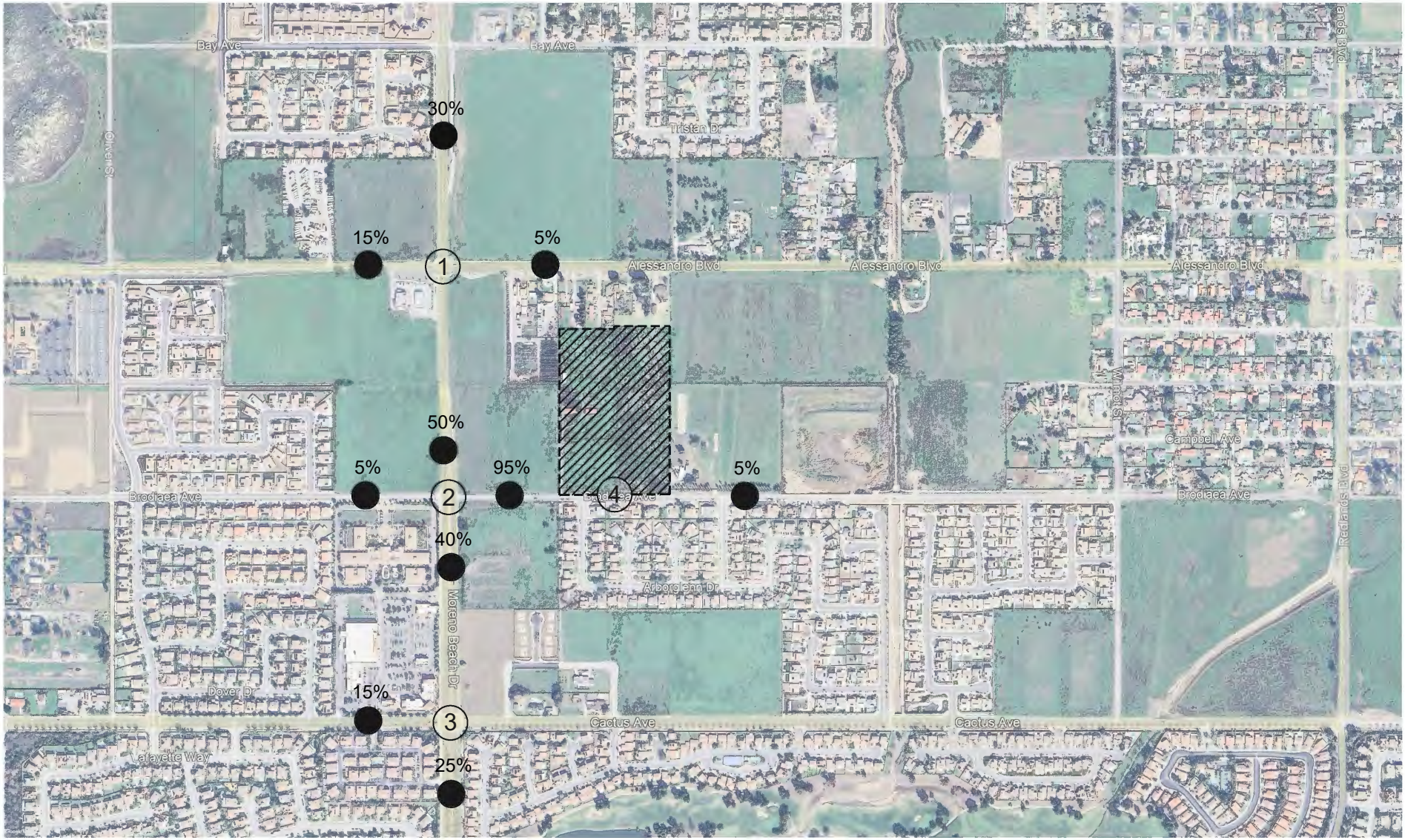
Table 5:
Proposed Project Trip Generation

Proposed Land Use[1]	ITE Code	Qty	Unit[2]	Daily		AM Peak Hour					PM Peak Hour				
				Rate	Volume	Rate	In:Out Split	Volume			Rate	In:Out Split	Volume		
								In	Out	Total			In	Out	Total
Proposed															
Single-Family Detached Housing	210	134	DU	9.43	1,264	0.7	26:74	24	70	94	0.94	63:37	79	47	126
R-3 Land Use															
Single-Family Detached Housing	210	43[3]	DU	9.43	407	0.7	26:74	8	22	30	0.94	63:37	26	15	41

1: Trip generation rates are from the ITE Trip Generation Manual (11th Edition, 2021).
2: DU = Dwelling Unit.
3: The total acreage of the project site is 14.4 acres. For R-3 land use of the current *City of Moreno Valley General Plan*, a maximum of 3 single-family detached housing units per acre, the total number of units allowable for the project site would be 43 units.

4.3 PROJECT TRIP DISTRIBUTION

Projecting trip distribution involves the process of identifying probable destinations and traffic routes that will be utilized by the proposed project's traffic. The potential interaction between the proposed land use and surrounding regional access routes are considered to identify the probable routes onto which project traffic would distribute. The projected trip distribution for the proposed project is based on anticipated travel patterns to and from the project site. **Exhibit 6** shows the trip distribution of the proposed project.



Legend:

▱	Proposed Project Site
(#)	Study Intersection Location
(XX%)	Percent Trip Distribution

Exhibit 6: Proposed Trip Distribution

Brodiaea Avenue Traffic Impact Analysis

WRI-24-006

Not to Scale

TJW ENGINEERING, INC.

5.0 OPENING YEAR (OY) TRAFFIC CONDITIONS

The *Opening Year (OY)* traffic conditions analysis is intended to identify the traffic conditions during the anticipated opening year of the project. This includes impacts from cumulative projects in the study area.

5.1 ROADWAY IMPROVEMENTS

The lane geometry and traffic controls for the *OY* traffic conditions scenario are assumed to be consistent with *Existing* traffic conditions as shown in **Exhibit 4**.

5.2 CUMULATIVE PROJECTS

City Guidelines require that other reasonably foreseeable development projects which are either approved or are currently under construction in the study area also be included as part of the *OY* analysis scenario. A list of cumulative projects was developed for this analysis through consultation with the City of Moreno Valley staff and obtainment of current development status reports. **Table 6** provides a summary of the cumulative projects including their land uses and trip generation. **Exhibit 7** displays a map of the approved cumulative projects located within a 2-mile radius of the proposed project.

Table 6:
Cumulative Projects List and Trip Generation

Project		Land Use[1]	ITE Code	Qty	Unit[2]	Daily		AM Peak Hour					PM Peak Hour				
						Rate	Volume	Rate	In:Out Split	Volume			Rate	In:Out Split	Volume		
										In	Out	Total			In	Out	Total
1	Rancho Bella Vista SP	Single-Family Detached Housing	210	234	DU	9.43	2,207	0.7	26:74	43	121	164	0.94	63:37	139	81	220
		Multifamily Housing (Low-Rise)	220	361	DU	6.74	2,433	0.4	24:76	35	109	144	0.51	63:37	116	68	184
		Senior Adult Housing - Multifamily	252	150	DU	3.24	486	0.2	34:66	10	20	30	0.25	56:44	21	17	38
		Recreational Community Center	495	6.0	TSF	28.82	173	1.91	66:34	7	4	11	2.5	47:43	7	8	15
2	PEN23-0103	Mini-Warehouse	151	107.7	TSF	1.45	156	0.09	59:41	6	4	10	0.15	47:53	8	8	16
3	PEN24-0064	Mini-Warehouse	151	127.9	TSF	1.45	185	0.09	59:41	7	5	12	0.15	47:53	9	10	19
4	PEN22-0261	Automated Car Wash	948	1.0	TL	0	0	0	50:50	0	0	0	77.5	50:50	39	39	78
5	TR 38236	Single-Family Detached Housing	210	204	DU	9.43	1,924	0.7	26:74	37	106	143	0.94	63:37	121	71	192
6	TR 38237	Single-Family Detached Housing	210	59	DU	9.43	556	0.7	26:74	11	30	41	0.94	63:37	35	20	55
7	TR 38442	Single-Family Detached Housing	210	108	DU	9.43	1,018	0.7	26:74	20	56	76	0.94	63:37	64	38	102
8	TR 38443	Single-Family Detached Housing	210	133	DU	9.43	1,254	0.7	26:74	24	69	93	0.94	63:37	79	46	125
9	Roca Grandes I	Single-Family Detached Housing	210	420	DU	9.43	3,961	0.7	26:74	76	218	294	0.94	63:37	249	146	395
10	Moreno Valley Town Center SP	Single-Family Detached Housing	210	800	DU	9.43	7,544	0.7	26:74	146	414	560	0.94	63:37	474	278	752
		Public Park	411	4.8	AC	0.78	4	0.02	59:41	0	0	0	0.11	55:45	1	0	1
		Hotel	310	106	RM	7.99	847	0.46	56:44	27	22	49	0.59	51:49	32	31	63
		General Office Building	710	15.0	TSF	10.84	163	1.52	88:12	20	3	23	1.44	17:83	4	18	22
		Library	590	30.0	TSF	72.05	2,162	1	71:29	21	9	30	8.16	48:52	118	127	245
		High-Turnover (Sit Down) Restaurant *Pass-By Trips (0.43 Daily/PM)*	932	16.0	TSF	107.2	1,715 *-737*	9.57	55:45	84 *0*	69 *0*	153 *0*	9.05	61:39	88 *-38*	57 *-25*	145 *-62*

		Fast Food Restaurant w/ Drive Through Window *Pass-By Trips* *(0.5 Daily/AM, 0.55 PM)*	934	3.5	TSF	467.48	1,636 *-818*	44.61	51:49	80 *-40*	76 *-38*	156 *-78*	33.03	52:48	60 *-33*	56 *-31*	116 *-64*
		Shopping Plaza (40-150k) *Pass-By Trips* *(0.40 Daily/PM)*	821	60.9	TSF	67.52	4,111 *-1,644*	1.73	62:38	65 *0*	40 *0*	105 *0*	5.19	49:51	155 *-62*	161 *-64*	316 *-126*
		Supermarket *Pass-By Trips* *(0.24 Daily/PM)*	850	45.0	TSF	93.84	4,223 *-1,014*	2.86	59:41	76 *0*	53 *0*	129 *0*	8.95	50:50	202 *-48*	201 *-48*	403 *-97*
11	Alessandro Walk	Single-Family Detached Housing	210	227.0	DU	9.43	2,141	0.7	26:74	41	118	159	0.94	63:37	134	79	213
		Single-Tenant Office Building	715	3.2	TSF	13.07	41	1.85	89:11	5	1	6	1.76	15:85	1	5	6
12	World Logistic Center SP	High-Cube Fulfillment Center Warehouse	155	40,400	TSF	1.81	73,124	0.15	81:19	4,909	1,151	6,060	0.16	39:61	2,521	3,943	6,464
		General Light Industrial	110	200.0	TSF	4.87	974	0.74	88:12	130	18	148	0.65	14:86	18	112	130
		Fire and Rescue Station	575	11.0	TSF	0	0	0	0	0	0	0	0.48	29:71	1	4	5
		Convenience Store/Gas Station GFA 2-4K, VFP >8 *Pass-By Trips* *(0.75 Daily/PM, 0.76 AM)*	945	12.0	VFP	265.12	3,181 *-2,386*	16.06	50:50	97 *-74*	96 *-73*	193 *-147*	18.42	50:50	111 *-83*	110 *-83*	221 *-166*
13	Merwin Warehouse & Residential	Multifamily Housing (Low Rise)	220	618.0	DU	6.74	4,165	0.4	24:76	59	188	247	0.51	63:37	198	117	315
		High-Cube Fulfillment Center Warehouse	155	1,100	TSF	1.81	1,991	0.15	81:19	134	31	165	0.16	39:61	69	107	176
14	PM 37942	Medical-Dental Office Building	720	32.0	TSF	36	1,152	3.1	79:21	78	21	99	3.93	30:70	38	88	126
		General Office Building	710	40.0	TSF	10.84	434	1.52	88:12	54	7	61	1.44	17:83	10	48	58
		Convenience Store/Gas Station GFA 2-4K, VFP >8 *Pass-By Trips* *(0.75 Daily/PM, 0.76 AM)*	945	12.0	VFP	265.12	3,181 *-2,386*	16.06	50:50	97 *-74*	96 *-73*	193 *-147*	18.42	50:50	111 *-83*	110 *-83*	221 *-166*
		Fast Food Restaurant w/ Drive Through Window *Pass-By Trips* *(0.5 Daily/AM, 0.55 PM)*	934	5.6	TSF	467.48	2,618 *-1,309*	44.61	51:49	128 *-64*	122 *-61*	250 *-125*	33.03	52:48	96 *-53*	89 *-49*	185 *-102*

		High-Turnover (Sit Down) Restaurant *Pass-By Trips (0.43 Daily/PM)*	932	3.5	TSF	107.2	375 *-161*	9.57	55:45	18 *0*	15 *0*	33 *0*	9.05	61:39	20 *-9*	12 *-5*	32 *-14*
		Strip-Retail Plaza <40K	822	4.50	TSF	54.45	245	2.36	60:40	7	4	11	6.59	50:50	15	15	30
15	Cresta Bella	Multifamily Housing (Low Rise)	220	376.0	DU	6.74	2,534	0.4	24:76	36	114	150	0.51	63:37	121	71	192
		Strip Retail Plaza <40k	822	8.3	TSF	54.45	449	2.36	60:40	11	8	19	6.59	50:50	27	27	54
		Fast Casual Restaurant	930	6.0	TSF	97.14	583	1.43	50:50	5	4	9	12.55	55:45	41	34	75
16	Beyond Food Mart	Convenience Store/Gas Station GFA 2-4K, VFP >8 *Pass-By Trips (0.75 Daily/PM, 0.76 AM)*	945	16.0	VFP	265.12	4,242 *-3,182*	16.06	50:50	129 *-98*	128 *-97*	257 *-195*	18.42	50:50	148 *-111*	147 *-110*	295 *-221*
		Automated Car Wash	948	1.0	TL	0	0	0	50:50	0	0	0	77.5	50:50	39	39	78
17	Nason Marketplace	Convenience Store/Gas Station GFA 2-4K, VFP >8	945	16.0	VFP	265.12	4,242	16.06	50:50	129	128	257	18.42	50:50	148	147	295
		Pass-By Trips (0.75 Daily/PM, 0.76 AM)					*-3,182*			*-98*	*-97*	*-195*			*-111*	*-110*	*-221*
		Hotel	310	84.0	RM	7.99	671	0.46	56:44	22	17	39	0.59	51:49	26	24	50
		Strip Retail Plaza <40k	822	24.5	TSF	54.45	1,337	2.36	60:40	35	23	58	6.59	50:50	81	81	162
		Coffee/Donut Shop w/ Drive Through Window	937	3.1	TSF	533.57	1,632	85.88	51:49	134	129	263	38.99	50:50	60	59	119
18	Belago Park	Single Family Detached Housing	210	314.0	DU	9.43	2,961	0.7	26:74	57	163	220	0.94	63:37	186	109	295
19	Kaiser expansion	Hospital	610	650.0	TSF	10.77	7,001	0.82	67:33	357	176	533	0.86	35:65	196	363	559

Results	Daily Volume	AM Peak Hour	In	Out	Total	PM Peak Hour	In	Out	Total
Subtotal	156,032		7,467	4,186	11,653		6,437	7,421	13,858
Pass-By Trips	*-16,818*		*-448*	*-439*	*-887*		*-631*	*-608*	*-1,239*
Net Total	**139,214**		**7,019**	**3,747**	**10,766**		**5,806**	**6,813**	**12,619**

1: Trip Generation and Pass-By Rates from the ITE Trip Generation Manual (11th Edition, 2021).

2: DU = Dwelling Units; TSF = Thousand Square Feet; AC = Acres; RM = Room; TL = Tunnel; VFP = Vehicle Fueling Pumps.

5.3 OPENING YEAR TRAFFIC VOLUMES

The *OY* traffic conditions scenario analyzes the impact of traffic anticipated at the time of the proposed project opening year including traffic generated by nearby cumulative projects. Since the proposed project is expected to be built and generating trips in 2027, *OY* volumes include an annual growth rate of 2% per year for two years applied to *Existing* volumes. The cumulative project trip generation volumes were then added. The *OY* scenario does not include the proposed project trip generation.

OY Volumes = (*Existing* (2025) Counts * 1.02^2) + Cumulative Projects

Exhibit 8 shows *OY* AM and PM peak hour volumes at the study intersections.

5.4 OPENING YEAR INTERSECTION LOS ANALYSIS

The intersection analysis for AM and PM peak hours under *OY* traffic conditions is shown in **Table 7**. HCM worksheets are shown in **Appendix D**.

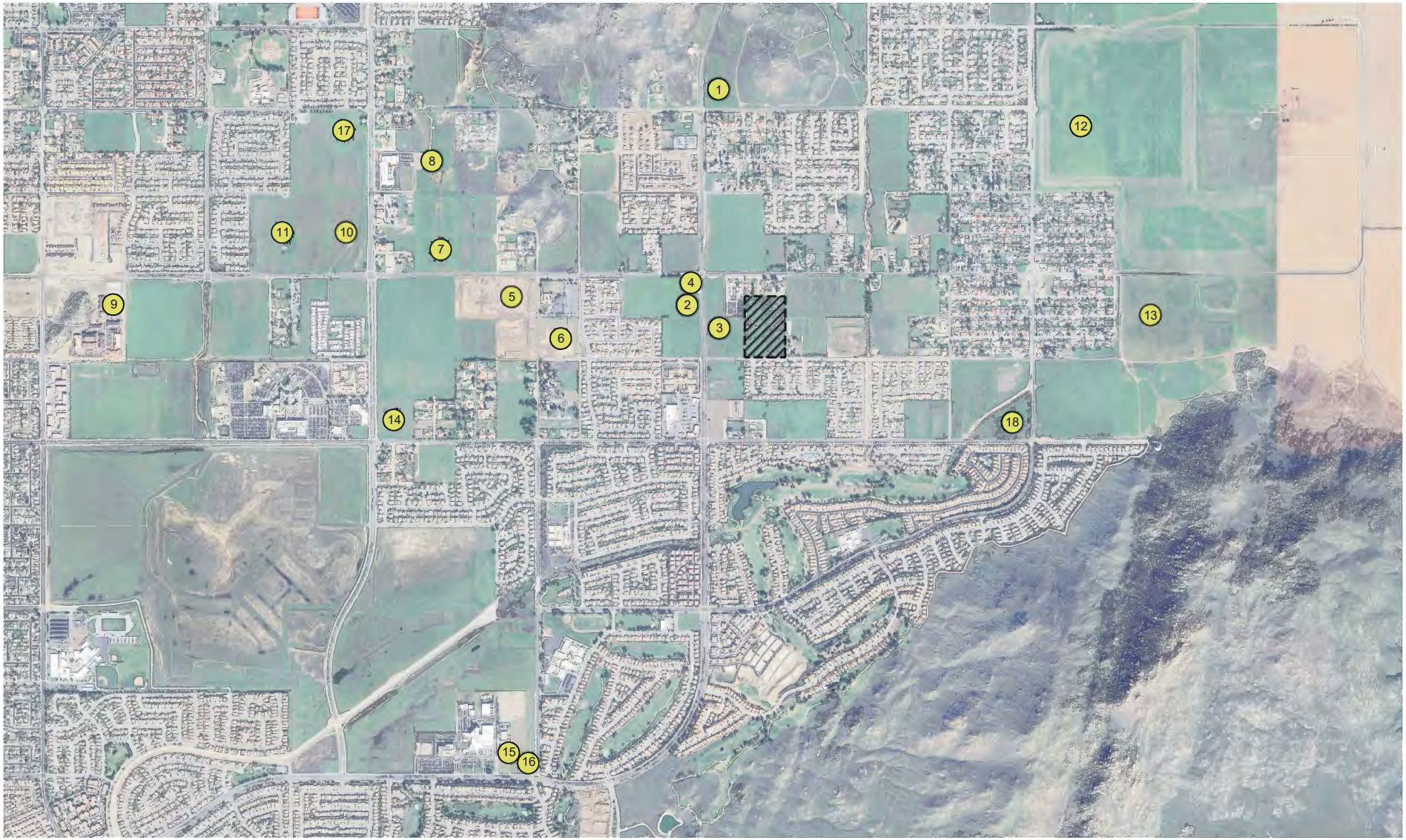
Table 7:
Intersection Analysis – Opening Year Conditions

Intersection			Control Type[1]	Peak Hour	OY Conditions	
					Delay[2]	LOS
1	Moreno Beach Drive	Alessandro Boulevard	Signal	AM	33.5	C
				PM	43.1	D
2	Moreno Beach Drive	Brodiaea Avenue	TWSC	AM	22.8	C
				PM	69.1	F
3	Moreno Beach Drive	Cactus Avenue	Signal	AM	30.5	C
				PM	30.9	C

1: TWSC = Two-Way Stop-Control.
2: Delay is shown in seconds per vehicle. Per the Highway Capacity Manual 7th Edition, overall average delay and LOS are shown for signalized and all-way stop-controlled intersections. For intersections with one- or two-way stop-control, the delay and LOS for the worst individual movement is shown.

As shown in **Table 7**, the study intersections are projected to operate at an acceptable LOS during the AM and PM peak hours for *OY* traffic conditions with the exception of:

- Intersection 2: Moreno Beach Drive/Brodiaea Avenue during the PM peak hour only.



Legend:

Project Site

(X) Approximate Cumulative Project Locations

Exhibit 7: Cumulative Project Locations

Brodiaea Avenue Traffic Impact Analysis

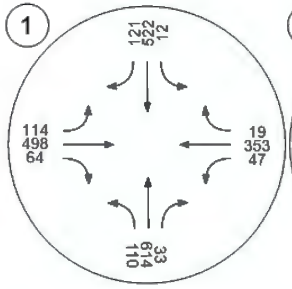
WRI-24-006

Not to Scale

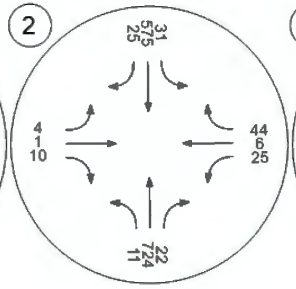
TJW Engineering, Inc.

AM Peak Hour Volumes

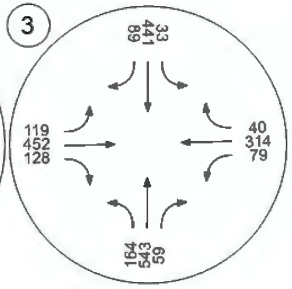
Moreno Beach Boulevard/ Alessandro Boulevard



Moreno Beach Boulevard/ Brodiaea Avenue

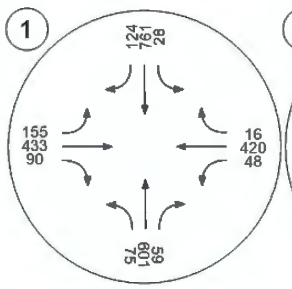


Moreno Beach Boulevard/ Cactus Avenue

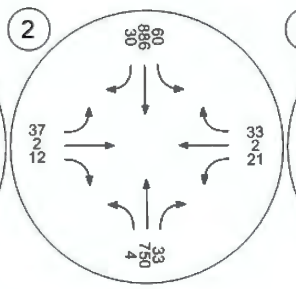


PM Peak Hour Volumes

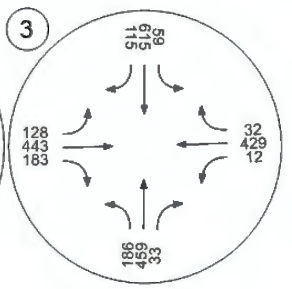
Moreno Beach Boulevard/ Alessandro Boulevard



Moreno Beach Boulevard/ Brodiaea Avenue



Moreno Beach Boulevard/ Cactus Avenue



Legend:

Proposed Project Site

(#) Study Intersection Location

Exhibit 8: Opening Year AM and PM Peak Hour Volumes

Brodiaea Avenue Traffic Impact Analysis

WRI-24-006

Not to Scale

TJW Engineering, Inc.

6.0 OPENING YEAR PLUS PROJECT (OYP) TRAFFIC CONDITIONS

The *Opening Year Plus Project (OYP)* traffic conditions analysis is intended to identify the traffic conditions during the anticipated opening year of the project. This includes impacts from the proposed project and cumulative projects in the study area.

6.1 ROADWAY IMPROVEMENTS

As shown in **Exhibit 9**, the lane geometry and traffic controls assumed to be in place for the *OYP* traffic conditions scenario are consistent with those under *OY* conditions with the addition of the project access roadway.

6.2 OPENING YEAR PLUS PROJECT TRAFFIC VOLUMES

The *OYP* traffic conditions scenario analyzes the impact of traffic anticipated at the time of the proposed project opening year including traffic generated by the proposed project itself and nearby cumulative projects. Since the proposed project is expected to be built and generating trips in 2027, *OYP* volumes include an annual growth rate of 2% per year for two years applied to *Existing* volumes. The trip generation volumes of the cumulative projects were then added.

OYP Volumes = (*Existing* (2025) Counts * 1.02^2) + Cumulative Projects + Proposed Project

Exhibit 10 shows the *OYP* AM and PM peak hour volumes at the study intersections.

6.3 OPENING YEAR PLUS PROJECT LEVEL OF SERVICE ANALYSIS

The *OYP* traffic conditions AM and PM peak hour intersection analysis is shown in **Table 8**. HCM worksheets are provided in **Appendix D**.

Table 8:
Intersection Analysis – Opening Year Plus Project Conditions

Intersection			Control Type[1]	Peak Hour	OY Conditions		OYP Conditions		Change
					Delay[2]	LOS	Delay[2]	LOS	
1	Moreno Beach Drive	Alessandro Boulevard	Signal	AM	33.5	C	35.5	D	2.0
				PM	43.1	D	47.1	D	3.9
2	Moreno Beach Drive	Brodiaea Avenue	TWSC	AM	22.8	C	36.2	E	13.5
				PM	69.1	F	132.7	F	63.6
3	Moreno Beach Drive	Cactus Avenue	Signal	AM	30.5	C	32.9	C	2.4
				PM	30.9	C	33.6	C	2.7
4	Project Access	Brodiaea Avenue	TWSC	AM	-	-	8.6	A	-
				PM	-	-	8.5	A	-

1: TWSC = Two-Way Stop-Control.
2: Delay is shown in seconds per vehicle. Per the Highway Capacity Manual 7th Edition, overall average delay and LOS are shown for signalized and all-way stop-controlled intersections. For intersections with one-or-two-way stop-control, the delay and LOS for the worst individual movement is shown.

As shown in **Table 8**, the study intersections are projected to operate at an acceptable LOS during the AM and PM peak hours for *OYP* traffic conditions with the exception of:

- Intersection 2: Moreno Beach Drive/Brodiaea Avenue for both AM and PM peak hours.

6.4 TRAFFIC SIGNAL WARRANT ANALYSIS

A traffic signal warrant analysis was conducted for the unsignalized Intersection 2: Moreno Beach Drive/Brodiaea Avenue. The *California Manual on Uniform Traffic Control Devices* (MUTCD) Figure 4C-3 was utilized to determine if traffic signals are warranted here. As shown in **Table 9**, based on AM and PM peak hour volumes under *OYP* traffic conditions, the traffic signal warrants was satisfied for the AM peak hour. Signal warrant analysis worksheets based on Figure 4C-3 are provided in **Appendix E**.

Table 9:
Signal Warrant Analysis – Opening Year Plus Project Conditions

Roadway Segment			Peak Hour	Signal Warrant Satisfied
2	Moreno Beach Drive	Brodiaea Avenue	AM	No
			PM	Yes

6.5 OPENING YEAR PLUS PROJECT & IMPROVEMENTS INTERSECTION LEVEL OF SERVICE ANALYSIS

Intersection 2: Moreno Beach Drive/Brodiaea Avenue with traffic signal control type was analyzed under *OYP* traffic conditions during the AM and PM peak hours. The results are shown in **Table 10**. HCM analysis sheets are provided in **Appendix D.**

Table 10:
Intersection Analysis – Opening Year Plus Project With Improvements Conditions

Intersection			Peak Hour	OYP Conditions			OYP Conditions w/ Improvements		
				Control	Delay[2]	LOS	Control	Delay[2]	LOS
2	Moreno Beach Drive	Brodiaea Avenue	AM	TWSC[1]	36.2	E	Signal	6.6	A
			PM		132.7	F		6.1	A

1: TWSC = Two-Way Stop-Control.
2: Delay is shown in seconds per vehicle. Per the Highway Capacity Manual 7th Edition, overall average delay and LOS are shown for signalized and all-way stop-controlled intersections. For intersections with one-or-two-way stop-control, the delay and LOS for the worst individual movement is shown.

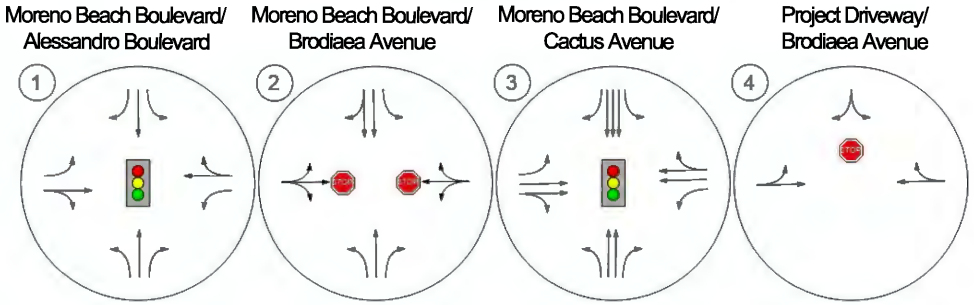
As shown in **Table 10**, Intersection 2: Moreno Beach Drive/Brodiaea Avenue with traffic signals is projected to operate at an acceptable LOS during the AM and PM peak hours for *OYP* traffic conditions.

6.6 FAIR SHARE ANALYSIS

The project's fair share percentage for each recommended improvement is identified in **Table 11** below. The percentage of project fair-share at affected intersections was calculated using the total trips generated by the project divided by the total "new" traffic, which is the net increase in traffic volume in the *OYP* traffic conditions scenario as a result of all other proposed projects.

Table 11:
Fair Share Analysis

Intersection			Improvement	Peak Hour	Project Trips	Total Traffic	Existing Traffic	Project % of Fair Share
2	Moreno Beach Drive	Brodiaea Avenue	Add Signal	AM	89	1,574	1,244	26.97%
				PM	120	1,999	1,507	24.39%



Legend:

Proposed Project Site

(#) Study Intersection Location

Exhibit 9: Lane Geometry and Intersection Controls Plus Project

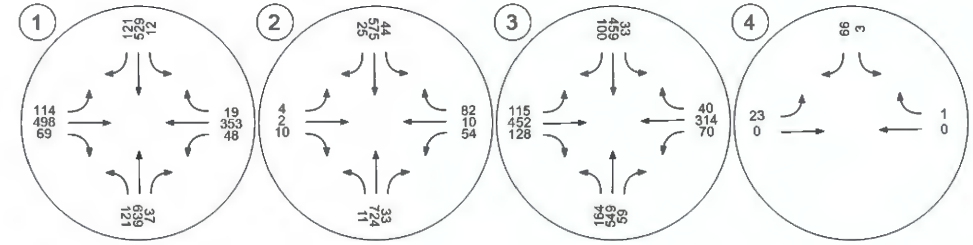
Brodiaea Avenue Traffic Impact Analysis

WRI-24-006

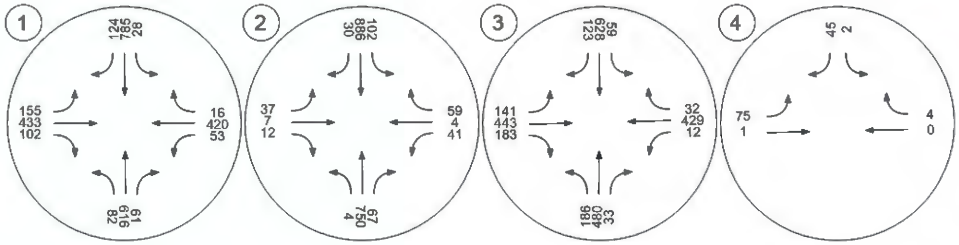
Not to Scale

TJW Engineering, Inc.

AM Peak Hour Volumes



PM Peak Hour Volumes



Legend:

Proposed Project Site

(#) Study Intersection Location

Exhibit 10: Opening Year Plus Project AM and PM Peak Hour Volumes

Brodiaea Avenue Traffic Impact Analysis

WRI-24-006

Not to Scale

TJW Engineering, Inc.

7.0 GENERAL PLAN BUILDOUT (GP) TRAFFIC CONDITIONS

The *General Plan Buildout (GP)* traffic conditions analysis is intended to identify conditions for the *City General Plan* horizon year, 2040, plus traffic generated by cumulative projects in the area.

7.1 ROADWAY IMPROVEMENTS

The *City General Plan* documents planned improvements for both Moreno Beach Drive and Alessandro Boulevard to be widened from the *Existing* two (2) lanes to four (4) lanes by the horizon year 2040. Additionally, as mitigated under *OYP* conditions, the signalization of Intersection 2: Moreno Beach Drive / Brodiaea Avenue is assumed. As shown in **Exhibit 11**, the lane geometry and traffic controls assumed to be in place for the *GP* traffic conditions scenario include this improvement.

7.2 GENERAL PLAN BUILDOUT TRAFFIC VOLUMES

GP traffic volumes are those volumes projected for the *City General Plan* horizon year, 2040, plus cumulative and proposed project volumes. To project traffic volumes in 2040, an annual growth rate was applied to the *Existing* traffic volumes. This rate was derived by finding the percentage of growth from baseline traffic volumes through forecasted horizon volumes from the RIVCOM travel demand forecasting model. From this, the annual growth rate was determined to be 3.49% per year for the 15 years between the current year, 2025, through 2040. These projected volumes are then added to volumes of the cumulative projects.

GP Volumes = (*Existing* (2025) * 1.0349^15) + Cumulative Projects

Exhibit 12 shows *GP* AM and PM peak hour volumes at the study intersections. **Appendix F** shows the worksheet for the *GP* annual growth rate calculations.

7.3 GENERAL PLAN BUILDOUT INTERSECTION LEVEL OF ANALYSIS

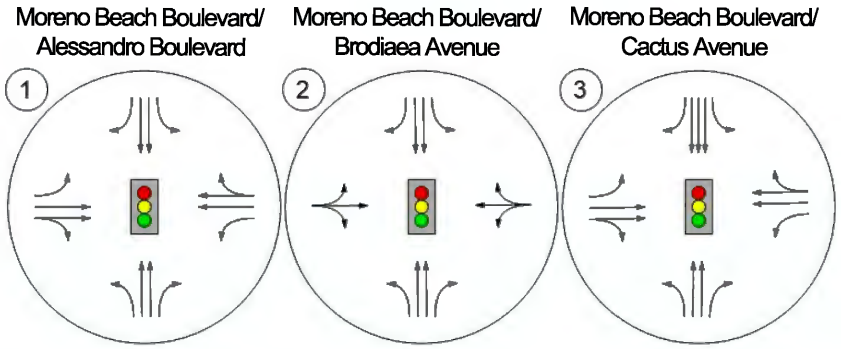
The *GP* traffic conditions AM and PM peak hour intersection analysis is shown in **Table 12**. HCM analysis sheets are provided in **Appendix D**.

Table 12:
Intersection Analysis – General Plan Buildout Conditions

Intersection			Control Type[1]	Peak Hour	GP Conditions	
					Delay[2]	LOS
1	Moreno Beach Drive	Alessandro Boulevard	Signal	AM	29.2	C
				PM	30.6	C
2	Moreno Beach Drive	Brodiaea Avenue	Signal	AM	4.9	A
				PM	4.8	A
3	Moreno Beach Drive	Cactus Avenue	Signal	AM	33.6	C
				PM	34.1	C

1: TWSC = Two-Way Stop-Control.
2: Delay is shown in seconds per vehicle. Per the Highway Capacity Manual 7th Edition, overall average delay and LOS are shown for signalized and all-way stop-controlled intersections. For intersections with one-or-two-way stop-control, the delay and LOS for the worst individual movement is shown.

As shown in **Table 12**, the study intersections are projected to operate at an acceptable LOS during the AM and PM peak hours for *GP* traffic conditions.



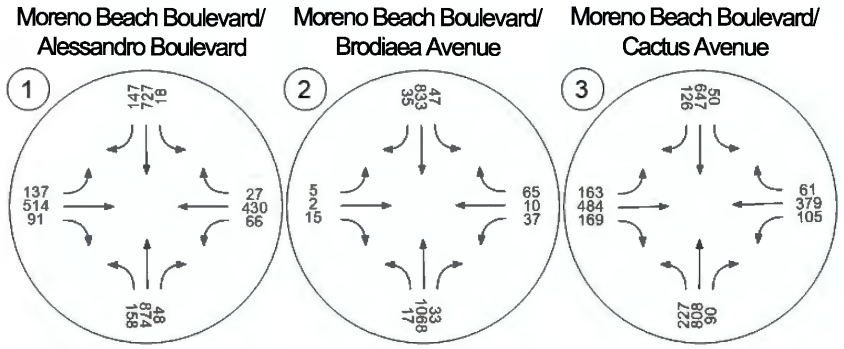
Legend:

Proposed Project Site

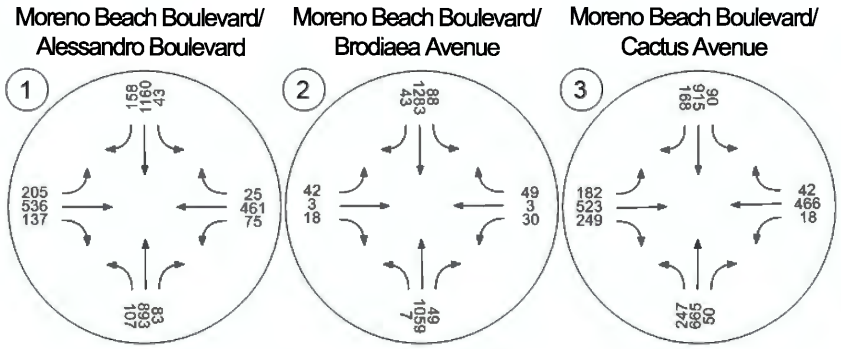
(#) Study Intersection Location

Exhibit 11: Lane Geometry and Intersection Controls With General Plan Buildout Improvements

AM Peak Hour Volumes



PM Peak Hour Volumes



Legend:

Proposed Project Site

Study Intersection Location

Exhibit 12: General Plan Buildout AM and PM Peak Hour Volumes

Brodiaea Avenue Traffic Impact Analysis

WRI-24-006

Not to Scale

TJW Engineering, Inc.

8.0 GENERAL PLAN BUILDOUT PLUS PROJECT (GPP) TRAFFIC CONDITIONS

The *General Plan Buildout Plus Project (GPP)* traffic conditions analysis is intended to identify conditions for the *City General Plan* horizon year, 2040, plus traffic generated by both the proposed project and cumulative projects in the area.

8.1 ROADWAY IMPROVEMENTS

The *City General Plan* documents planned improvements for both Moreno Beach Drive and Alessandro Boulevard to be widened from the *Existing* two (2) lanes to four (4) lanes by the horizon year 2040. Additionally, as mitigated under *OYP* conditions, the signalization of Intersection 2: Moreno Beach Drive / Brodiaea Avenue is assumed. The *GPP* traffic conditions scenario includes these improvements plus the addition of the project access roadway as shown in **Exhibit 13**.

8.2 GENERAL PLAN BUILDOUT PLUS PROJECT TRAFFIC VOLUMES

GPP traffic volumes are those volumes projected for the *City General Plan* horizon year, 2040, plus cumulative and proposed project volumes. To project traffic volumes in 2040, an annual growth rate was applied to the *Existing* traffic volumes. This rate was derived by finding the percentage of growth from baseline traffic volumes through forecasted horizon volumes from the RIVCOM travel demand forecasting model. From this, the annual growth rate was determined to be 3.49% per year for the 15 years between the current year, 2025, through 2040. These projected volumes are then added to volumes of both proposed and cumulative projects.

GPP Volumes = (*Existing* (2025) * 1.0349^15) + Proposed Project + Cumulative Projects

Exhibit 14 shows the *GPP* AM and PM peak hour volumes at the study intersections. **Appendix F** shows the worksheet for the *GP* annual growth rate calculations.

8.3 GENERAL PLAN BUILDOUT PLUS PROJECT INTERSECTION LEVEL OF SERVICE ANALYSIS

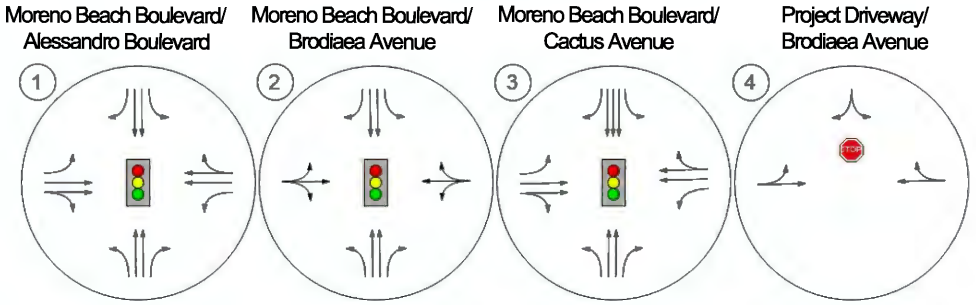
The intersection analysis of AM and PM peak hours under the *GPP* traffic conditions is shown in **Table 13**. HCM analysis sheets are provided in **Appendix D**.

Table 13:
Intersection Analysis – General Plan Buildout Plus Project Conditions

Intersection			Control Type[1]	Peak Hour	GP Conditions		GPP Conditions		Change
					Delay[2]	LOS	Delay[2]	LOS	
1	Moreno Beach Drive	Alessandro Boulevard	Signal	AM	29.2	C	29.4	C	0.1
				PM	30.6	C	35.0	C	4.4
2	Moreno Beach Drive	Brodiaea Avenue	Signal	AM	4.9	A	5.9	A	1.0
				PM	4.8	A	5.7	A	0.9
3	Moreno Beach Drive	Cactus Avenue	Signal	AM	33.6	C	36.0	D	2.4
				PM	34.1	C	36.5	D	2.4
4	Project Access	Brodiaea Avenue	TWSC	AM	-	-	9.2	A	
				PM	-	-	9.0	A	

1: TWSC = Two-Way Stop-Control.
2: Delay is shown in seconds per vehicle. Per the Highway Capacity Manual 7th Edition, overall average delay and LOS are shown for signalized and all-way stop-controlled intersections. For intersections with one-or-two-way stop-control, the delay and LOS for the worst individual movement is shown.

As shown in **Table 13**, the study intersections are projected to operate at an acceptable LOS during the AM and PM peak hours *GPP* traffic conditions.



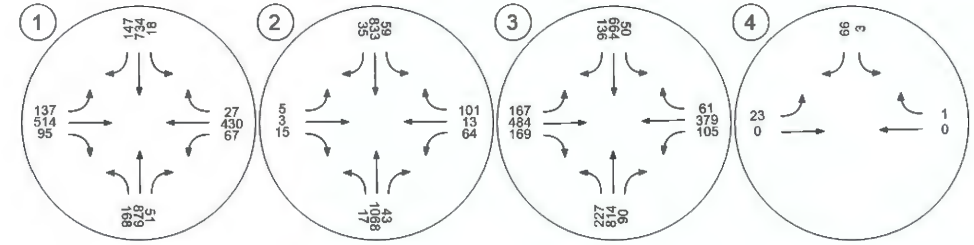
Legend:

Proposed Project Site

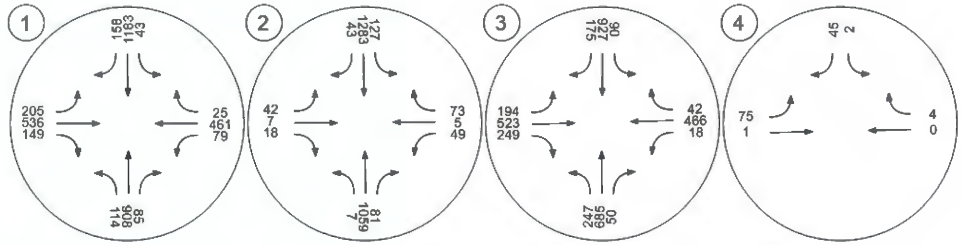
(#) Study Intersection Location

Exhibit 13: Lane Geometry and Intersection Controls with General Plan Buildout Plus Project

AM Peak Hour Volumes



PM Peak Hour Volumes



Legend:

Proposed Project Site

(#) Study Intersection Location

APPENDIX

Appendix A: Glossary of Terminology
Appendix B: Scoping Agreement
Appendix C: Existing Traffic Counts
Appendix D: HCM Analysis Sheets
Appendix E: Traffic Signal Warrant Analysis Sheets
Appendix F: General Plan Buildout Annual Growth Rate Calculations

APPENDIX A

GLOSSARY OF TERMINOLOGY

Glossary of Terminology

ACRONYMS:

AC	Acres
ADT	Average Daily Traffic
Caltrans	California Department of Transportation
DU	Dwelling Unit
ICU	Intersection Capacity Utilization
LOS	Level of Service
TSF	Thousand Square Feet
V/C	Volume/Capacity
VMT	Vehicle Miles Traveled

TERMS

AVERAGE DAILY TRAFFIC – *The average 24-hour volume for a stated period divided by the number of days in that period. For example, Annual Average Daily Traffic is the total volume during a year divided by 365 days.*

CAPACITY – T*he maximum number of vehicles that can be reasonably expected to pass over a given section of a lane or a roadway in a given time period.*

CYCLE LENGTH – *The time period in seconds required for a traffic signal to complete one full cycle of indications.*

DAILY CAPACITY – *A theoretical value representing the daily traffic volume that will typically result in a peak hour volume equal to the capacity of the roadway.*

DELAY – *The time consumed while traffic is impeded in its movement by some element over which it has no control, usually expressed in seconds per vehicle.*

DENSITY – *The number of vehicles occupying in a unit length of the through traffic lanes of a roadway at any given instant. Usually expressed in vehicles per mile.*

DESIGN SPEED – *A speed selected for purposes of design. Features of a highway, such as curvature, superelevation, and sight distance (upon which the safe operation of vehicles is dependent) are correlated to design speed.*

DIRECTIONAL SPLIT – *The percent of traffic in the peak direction at any point in time.*

FREE FLOW – *Volumes are well below capacity. Vehicles can maneuver freely and travel is unimpeded by other traffic.*

HEADWAY – *Time or distance spacing between successive vehicles in a traffic stream, front bumper to front bumper.*

LEVEL OF SERVICE – *A qualitative measure of a number of factors, which include speed and travel time, traffic interruptions, freedom to maneuver, safety, driving comfort and convenience, and operating costs.*

PASSENGER CAR EQUIVALENT (PCE) – *A metric used to assess the impact of larger vehicles, such as trucks, recreational vehicles, and buses, by converting the traffic volume of larger vehicles to an equivalent number of passenger cars.*

PEAK HOUR – *The 60 consecutive minutes with the highest number of vehicles.*

QUEUE LENGTH – *The length of vehicle queue, typically expressed in feet, waiting at a service area such as a Traffic signal, stop sign, or access gate.*

SIGHT DISTANCE – *The continuous length of roadway visible to a driver or roadway user.*

SIGNAL CYCLE – *The time period in seconds required for one complete sequence of signal indications.*

SIGNAL PHASE – *The part of the signal cycle allocated to one or more traffic movements.*

STARTING DELAY – *The delay experienced in initiating the movement of queued traffic from a stop to an average running speed through an intersection.*

TRAFFIC-ACTUATED SIGNAL – *A type of traffic signal that directs traffic to stop and go in accordance with the demands of traffic, as registered by the actuation of detectors.*

TRIP – *The movement of a person or vehicle from one location (origin) to another (destination). For example, from home to store to home is two trips, not one.*

TRIP GENERATION RATE – *The quantity of trips produced and/or attracted by a specific land use stated in terms of units such as per dwelling, per acre, and per 1,000 square feet of floor space.*

VEHICLE MILES OF TRAVEL – *A measure of the amount of usage of a section of highway, obtained by multiplying the average daily traffic by length of facility in miles.*

APPENDIX B

SCOPING AGREEMENT AND CITY DOCUMENTS

Project Scoping Form

This scoping form shall be submitted to the Lead Agency to assist in identifying infrastructure improvements that may be required to support traffic from the proposed project.

Project Identification:

Case Number:	PPA24-0031
Related Cases:	
SP No.	
EIR No.	
GPA No.	
CZ No.	
Project Name:	Brodiaea Avenue
Project Address:	Brodiaea Avenue east of Moreno Beach Drive
Project Opening Year:	2027
Project Description:	Net total 133 single-family detached residential units (Demolition of 1 existing unit, construction of 134 new units)

	Consultant:	**Developer:**
Name:	TJW Engineering, Inc.	Warmington Residential
Address:	9841 Irvine Center Dr., Suite 200	3090 Pullman Street
	Irvine, CA 92618	Costa Mesa, CA 92626
Telephone:	949-878-3509	
Email:		

Trip Generation Information:

Trip Generation Data Source: ITE Trip Generation Manual, 11th Edition

The City of Moreno Valley reserves the right to use, share, and reproduce information including, but not limited to, traffic counts, exhibits, and surveys provided in all submitted traffic studies and VMT assessments.

1/16/2025

Current General Plan Land Use:

R-3 (du/ac)

Proposed General Plan Land Use:

R-10 (du/ac)

Current Zoning:

Suburban Residential

Proposed Zoning:

Multifamily

	Existing Trip Generation			Proposed Trip Generation		
	In	Out	Total	In	Out	Total
AM Trips	0	1	1	24	70	94
PM Trips	1	0	1	79	47	126

Trip Internalization: ☐ Yes ☒ No (_____% Trip Discount)

Pass-By Allowance: ☐ Yes ☒ No (_____% Trip Discount)

Potential Screening Checks

Is your project screened from specific analyses (see Page 3 of the guidelines related to LOS assessment and Pages 22-23 for VMT screening criteria).

Is the project screened from LOS assessment? ☐ Yes ☒ No

LOS screening justification (see Page 3 of the guidelines): _____
The proposed project does not meet City of Moreno Valley Traffic Impact Preparation Guide (June 2020) criteria for LOS analysis exemption. Criteria not met are that the project generate less than 100 peak hour trips or that the project be local serving.

Is the project screened from VMT assessment? ☐ Yes ☒ No

VMT screening justification (see Pages 22-23 of the guidelines): _____
The proposed project does not screen for VMT analysis based on the City of Moreno Valley Traffic Impact Preparation Guide (June 2020) as it is not local serving. In addition, the WRCOG VMT Tool indicates that the project is not located within a Transit Priority Area (TPA) or a low VMT traffic analysis zone (TAZ).

Level of Service Scoping

- Proposed Trip Distribution (Attach Graphic for Detailed Distribution):

North	South	East	West
30 %	25 %	10 %	35 %

Link level of service and data collection:

____ will be required

____ will not be required

- Attach list of study intersections (and roadway segments if applicable)
- Attach site plan
- Other specific items to be addressed:
  - Site access
  - On-site circulation
  - Parking
  - Consistency with Plans supporting Bikes/Peds/Transit
  - Other: Signal warrant analysis for Moreno Beach Dr/Brodiaea Ave.
- Date of Traffic Counts TBA
- Attach proposed analysis scenarios (years plus proposed forecasting approach)
- Attach proposed phasing approach (if the project is phased)

VMT Scoping

For projects that are not screened, identify the following:

- Travel Demand Forecasting Model Used RIVCOM
- Attach WRCOG Screening VMT Assessment output or describe why it is not appropriate for use
- Attach proposed Model Land Use Inputs and Assumed Conversion Factors (attach)

For LOS analysis:

Study Intersections:

1) Moreno Beach Drive/Alessandro Boulevard
2) Moreno Beach Drive/Brodiaea Avenue
3) Moreno Beach Drive/Cactus Avenue
4) Brodiaea Avenue/Project Driveway

Study Scenarios:

1) Existing Traffic Conditions
2) Opening Year (Existing + Ambient + Cumulative) Traffic Conditions
3) Opening Year (Existing + Ambient + Cumulative) With Project Traffic Conditions
4) General Plan Buildout Traffic Conditions
5) General Plan Buildout With Project Traffic Conditions

For VMT analysis:

From the County of Riverside General Plan (Dec 2020) table E-2, the Reche Canyon/ Badlands Area Plan average household size is 3.03 persons. Using this factor, the project is assumed to have 407 total population across 134 residential units.

SITE INFORMATION
Address: Brodiaea Ave
APN(s): 47-080-003, -004, -005 and 47-070-013, -014-, -015
City: Moreno Valley
County: Riverside County
Current Zoning: R-3 (3 du/ac)
Proposed Zoning: R-10 (10 du/ac)

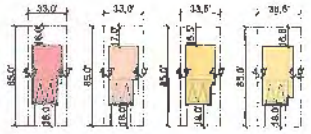
R-10 SFD DEVELOPMENT STANDARDS
Min Lot Size: 4500sf
Min Lot Width: 45'
Lot Depth: 85'
Setbacks:
Front: 20'
Side: 5'
Corner Side: 10'
Rear: 15'
Coverage: 50%

SITE SUMMARY
Site Area: ±14.4 ac (627,000sf)

Units:
26 units - P1 (Xgsf, Xbd, Xba)
41 units - P2 (1702gsf, 3bd + loft/bed4, 2.5ba)
41 units - P3 (1975gsf, 4bd + loft, 2.5ba)
26 units - P4 (2119gsf, up to 5bed, 3.5ba)
134 units - Total

Density: ±9.3 du/ac

Parking Provided:
268 spaces - Garages
268 spaces - Driveways
34 spaces - Open
570 spaces - Total (4.25 sp/unit)



ktgy
Architecture + Planning
17911 Von Karman Ave.
Suite 200
Irvine, CA 92614
949.851.2133
ktgy.com

Warmington
Warmington Residential
3090 Pullman Street
Costa Mesa, CA 92626

BRODIAEA AVENUE
MORENO VALLEY, CA # 2024-0351

OPTION 7
CONCEPTUAL DENSITY STUDY
NOVEMBER 19, 2024

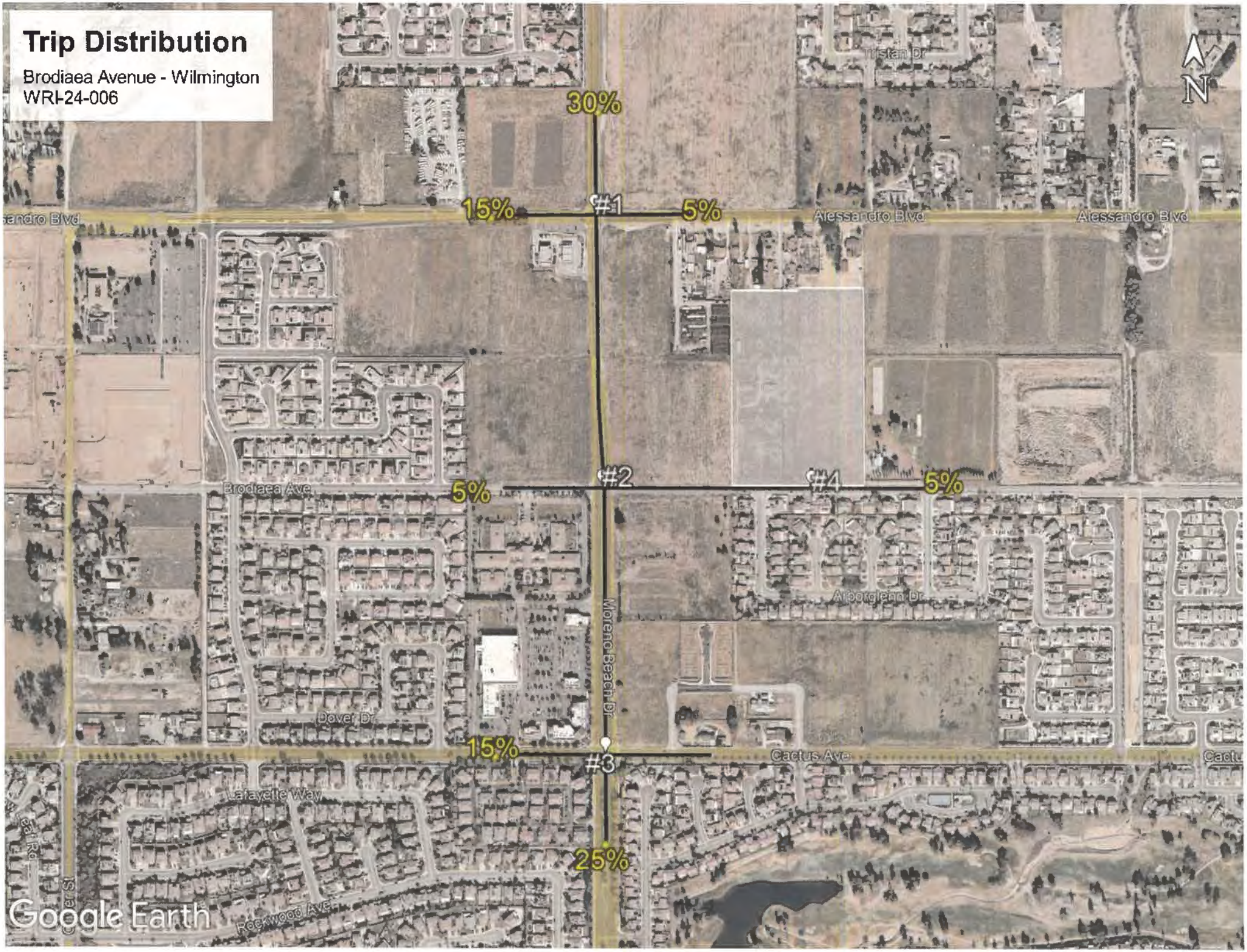
Table 1
Project Trip Generation

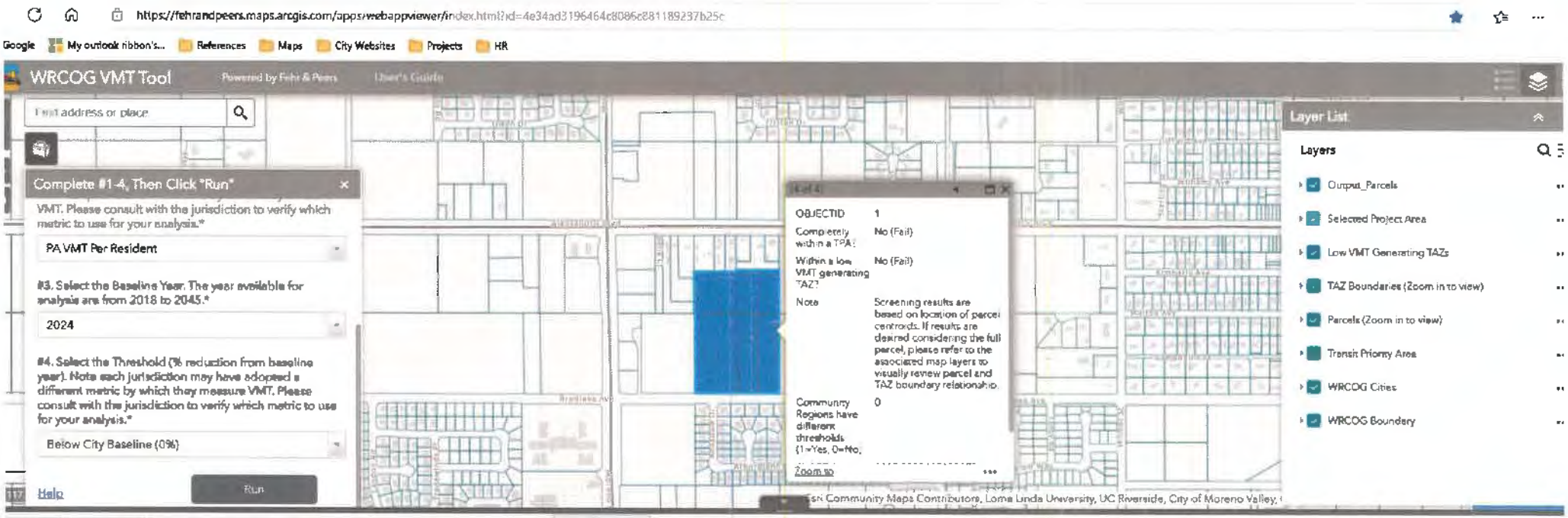
Proposed Land Use[1]	ITE Code	Qty	Unit[2]	Daily		AM Peak Hour					PM Peak Hour				
				Rate	Volume	Rate	In:Out Split	Volume			Rate	In:Out Split	Volume		
								In	Out	Total			In	Out	Total
Demolition															
Single-Family Detached Housing	210	1	DU	9.43	9	0.7	26:74	0	1	1	0.94	63:37	1	0	1
Construction															
Single-Family Detached Housing	210	134	DU	9.43	1,264	0.7	26:74	24	70	94	0.94	63:37	79	47	126

Results	Daily	Volume	AM Peak Hour	In	Out	Total	PM Peak Hour	In	Out	Total
Net Total		**1,255**		**24**	**69**	**93**		**78**	**47**	**125**

1: Trip generation rates from ITE Trip Generation (11th Edition, 2021).

2: DU = Dwelling Units.


Trip Distribution
Brodiaea Avenue - Wilmington
WRI-24-006
30%
15%
#1
5%
#2
#4
5%
5%
#3
15%
25%
Alessandro Blvd
Alessandro Blvd
Brodiaea Ave
Dover Dr
Moreno Beach Dr
Alborglenn Dr
Cactus Ave
Lafayette Way
Rockwood Ave
N
Google Earth



OBJECTID	Assessor Parcel Number (APN)	Traffic Analysis Zone (TAZ)	Community Region	Inside a Transit Priority Area (TPA)	TAZ VMT	Jurisdiction VMT	% Difference	VMT Metric	Threshold	Community Regions have different thresholds (1=Yes, 0=No)	Note	SHAPE_Length	SHAPE_A
	478,070,013	1,171.00	MORENO VALLEY	No	16.10	13.40	19.65%	PA VMT Per Resident	13.40	0	Screening results are based on location of parcel centroids. If results are desired considering the full parcel, please refer to the associated map layers to visually review parcel and TAZ boundary relationship.	366.67	7,381.74
	478,070,014	1,171.00	MORENO VALLEY	No	16.10	13.40	19.65%	PA VMT Per Resident	13.40	0	Screening results are based on location of parcel centroids. If results are desired considering the full parcel, please refer to the associated map layers to visually review parcel and TAZ boundary relationship.	370.24	7,565.73
	478,070,015	1,171.00	MORENO VALLEY	No	16.10	13.40	19.65%	PA VMT Per Resident	13.40	0	Screening results are based on location of parcel centroids. If results are desired considering the full parcel, please refer to the associated map layers to visually review parcel and TAZ boundary relationship.	481.32	14,480.32
	478,080,003	1,171.00	MORENO VALLEY	No	16.10	13.40	19.65%	PA VMT Per Resident	13.40	0	Screening results are based on location of parcel centroids. If results are desired considering the full parcel, please refer to the associated map layers to visually review parcel and TAZ boundary relationship.	692.72	27,031.36
	478,080,004	1,171.00	MORENO VALLEY	No	16.10	13.40	19.65%	PA VMT Per Resident	13.40	0	Screening results are based on location of parcel centroids. If results are desired considering the full parcel, please refer to the associated map layers to visually review parcel and TAZ boundary relationship.	573.28	13,358.29
	478,080,005	1,171.00	MORENO VALLEY	No	16.10	13.40	19.65%	PA VMT Per Resident	13.40	0	Screening results are based on location of parcel centroids. If results are desired considering the full parcel, please refer to the associated map layers to visually review parcel and TAZ boundary relationship.	579.25	14,030.99

tures 0 selected

COMPLETE STREETS

In 2008, the State passed the California Complete Streets Act (Assembly Bill 1358), requiring circulation elements to include a "Complete Streets" approach that balances the needs of all users of the street. Complete Streets are streets designed and operated to enable safe access for all users, including pedestrians, bicyclists, motorists, and transit riders of all ages and abilities. The precise definition of a Complete Street can vary depending on the context and primary roadway users, but there are some common elements found in successful Complete Streets policies. These policies consider the needs of all users of the street in the planning, design, construction, operation, and maintenance of transportation networks.[3] This framework allows policymakers to shift the goals, priorities, and vision of local transportation planning efforts by emphasizing a diversity of modes and users. Many of Moreno Valley's roads were designed primarily for car travel when they were first built. Rethinking Moreno Valley's roads as Complete Streets will allow people to safely walk, bicycle, drive, and take transit, sharing the street with other users.

ROADWAY CLASSIFICATIONS AND CIRCULATION DIAGRAM

Roadway Classifications

The roadway network in Moreno Valley consists of freeways, boulevards, arterials, collectors, and local streets. The roadway classifications of the network, described below, have been developed to guide long range transportation planning in Moreno Valley to balance access and capacity.

3 National Complete Streets Coalition, 2017

"Complete Streets" *are streets that have been designed to safely and comfortably accommodate all users, regardless of age, ability, or mode of travel. Many street designs historically privileged private vehicle travel above other transport modes; Complete Streets aim to correct past imbalances and ensure that roadways are safe and friendly for pedestrians, bicyclists, and transit riders, too.*

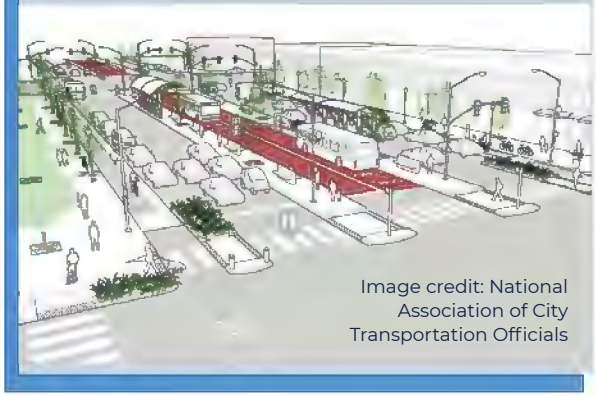


Image credit: National Association of City Transportation Officials

FREEWAYS

Freeways generally provide high speed, high capacity inter-regional access. Their primary function is to move vehicles through or around the city; thus, there is no access to adjacent land, and limited access to arterial streets. Freeways contain anywhere from four to 12 lanes with recommended design volumes from 80,000 to 210,000 vehicles per day. The City has no direct control over freeways as they are maintained by Caltrans and improvements are programmed through RCTC.

ARTERIALS

Arterial streets carry the majority of traffic traveling through the City. They serve two primary functions: to move vehicles into and through the city, and to serve adjacent commercial land uses. They provide access to freeways as well as major activity centers and residential areas. Driveways and other curb cuts along arterials are designed to minimize disruption to traffic flow. Sidewalks are typically included along arterials, and protected Class I or IV bike lanes are recommended. Truck routes are designated along arterials. The desired maximum roadway capacity on arterials averages from 30,000 to 55,000 vehicles per day depending on number of lanes, type and width of directional separation, presence of on-street parking or bicycle facilities, configuration and frequency of access to adjacent land uses, and intersection configurations. Moreno Valley has several designations of varying ROW, the widest Divided Major Arterial (134' ROW), Divided Arterial (110' ROW), Arterial (100' ROW) and down to a Minor Arterial (88' ROW).

BOULEVARDS

Boulevards are a type of arterial designed to connect major destinations within the City, and are highly visible and aesthetically landscaped with shade trees and wide sidewalks. Mixed-Use Boulevards in Moreno Valley provide for high volumes of vehicle flow (40,000-55,000 vehicles per day) including trucks, while providing a wide pedestrian parkway with access to residences along the length of the corridors and shops and services primarily at intersections.

COLLECTORS

Collectors are intended to carry traffic between the arterial street network and local streets or directly from the access drives of higher intensity land uses. Collectors serve commercial, residential, or public uses, and are generally two-lane roadways with sidewalks and bicycle facilities. The desired roadway capacity on a collector street is less than 12,000 vehicles per day. Moreno Valley has designated Industrial Collectors and Neighborhood Collectors. Industrial Collectors are designed primarily for access

Figure C-2: Illustrative Mixed Use Boulevard Cross Section

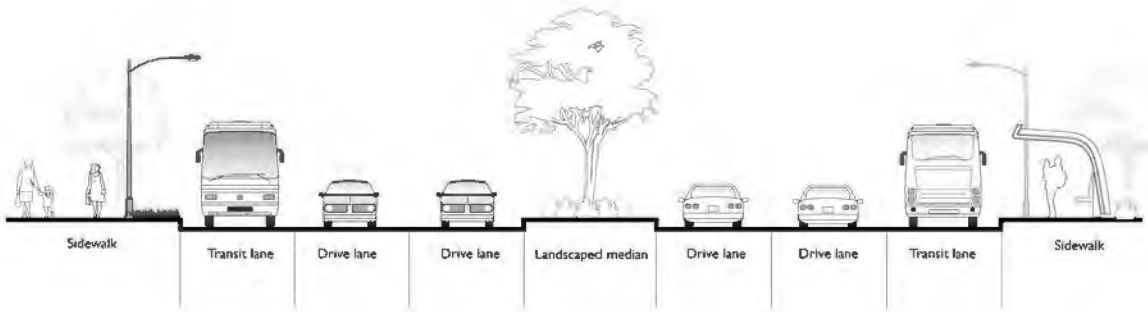
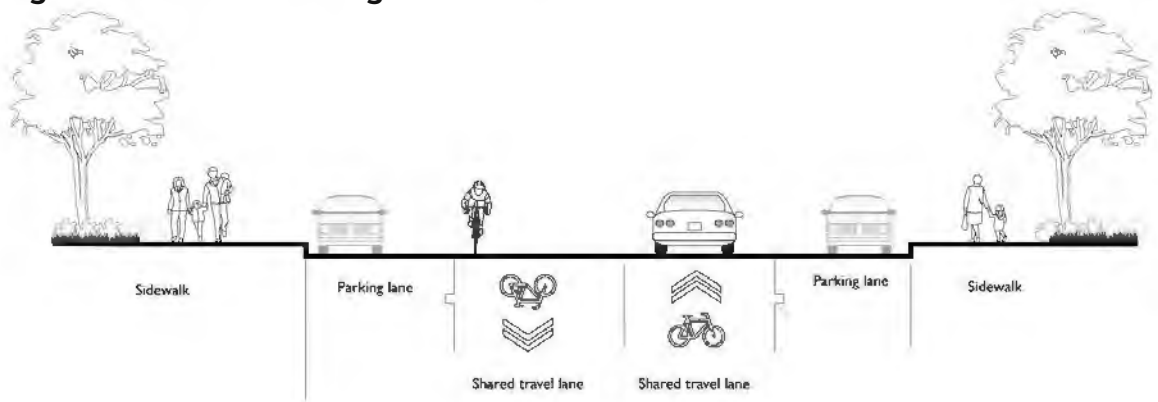


Figure C-3: Illustrative Neighborhood Collector Cross Section



to industrial and logistics uses that emphasize tuck access. Bike facilities on these roads are preferred off-street or with additional protective buffers and/or barriers. Neighborhood Collectors are residential streets that prioritize low vehicle speeds and low-stress bicycle and pedestrian use on parallel routes to arterials.

LOCAL STREETS

Local streets are designed to serve adjacent land uses only. They allow access to residential driveways and often provide parking for the neighborhood. They are not intended to serve through traffic traveling from one street to another, but solely local traffic. Sidewalks and shared bicycle facilities are appropriate on local streets. The desired roadway capacity on a residential street should not exceed about 2,500 vehicles per day and 200-300 vehicles per hour during peak periods. The maximum residential traffic volume that is acceptable to persons living along a street may vary from one street to another depending on roadway width, type of dwelling units (i.e., high density apartments versus single-family homes), presence of schools and other factors. The maximum volume of 2,500 is, therefore, to be used as a guide only, and a neighborhood's sensitivity to potential impacts need to be carefully considered.

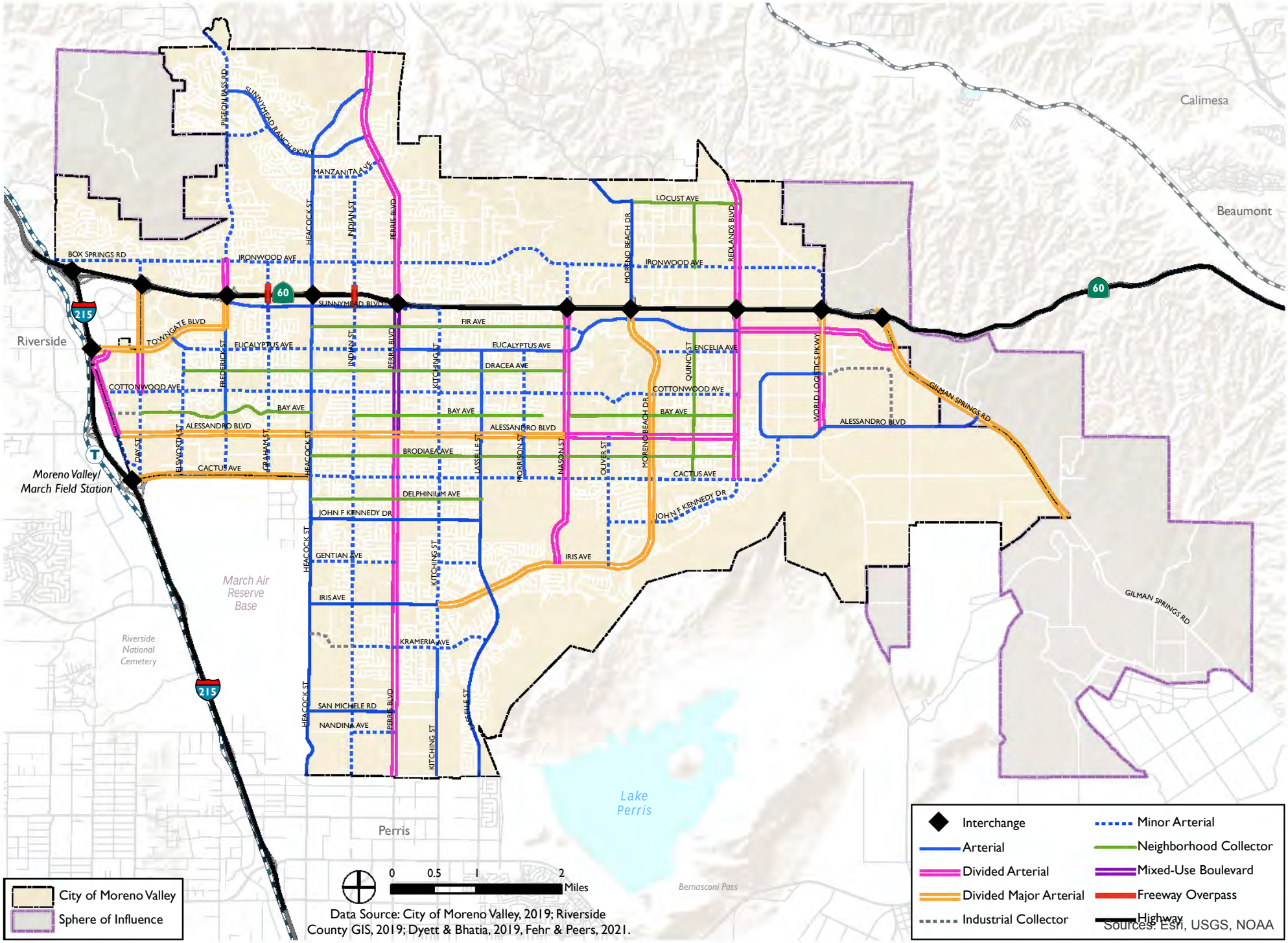
Circulation Diagram

The Circulation Diagram shown in Map C-1 depicts the proposed circulation system to support development under the Land Use Map (see Map LCC-4 in Chapter 2, Land Use and Community Character). As Moreno Valley continues to experience residential, employment, and commercial growth, a connected, multi-modal street network will be essential to ensure efficient commutes for work and goods movement, safe active transportation, and easy access to retail and entertainment.

The General Plan proposes a "layered network" approach, where traffic demands of Moreno Valley and system-wide needs of different modes can be used as inputs as streets are redesigned and configured to better meet the needs of bicyclists, pedestrians, and transit, and enable everyone to efficiently and safely navigate through the city. Considering system-wide needs means assessing whether the system as a whole is able to meet the needs of travelers. The layered network approach designates modal emphasis by street to create a comprehensive street network. The layered network approach recognizes the need to accommodate all forms of traffic, but with the understanding that certain streets will emphasize certain forms of transportation. Layered networks balance vehicular transportation with "active transportation," which is human-powered transportation that includes walking, cycling, using a wheelchair, in-line skating, or skateboarding. The layered network approach recognizes that not all modes can be accommodated acceptably on all streets within this city, but bicycle and pedestrian movement can be emphasized on specific streets. It also helps ensure consistency with the California Complete Streets Act, passed in 2008.

A portion of Heacock Street is located within an area that is currently identified as the Clear Zone

Map C-1: Circulation Diagram

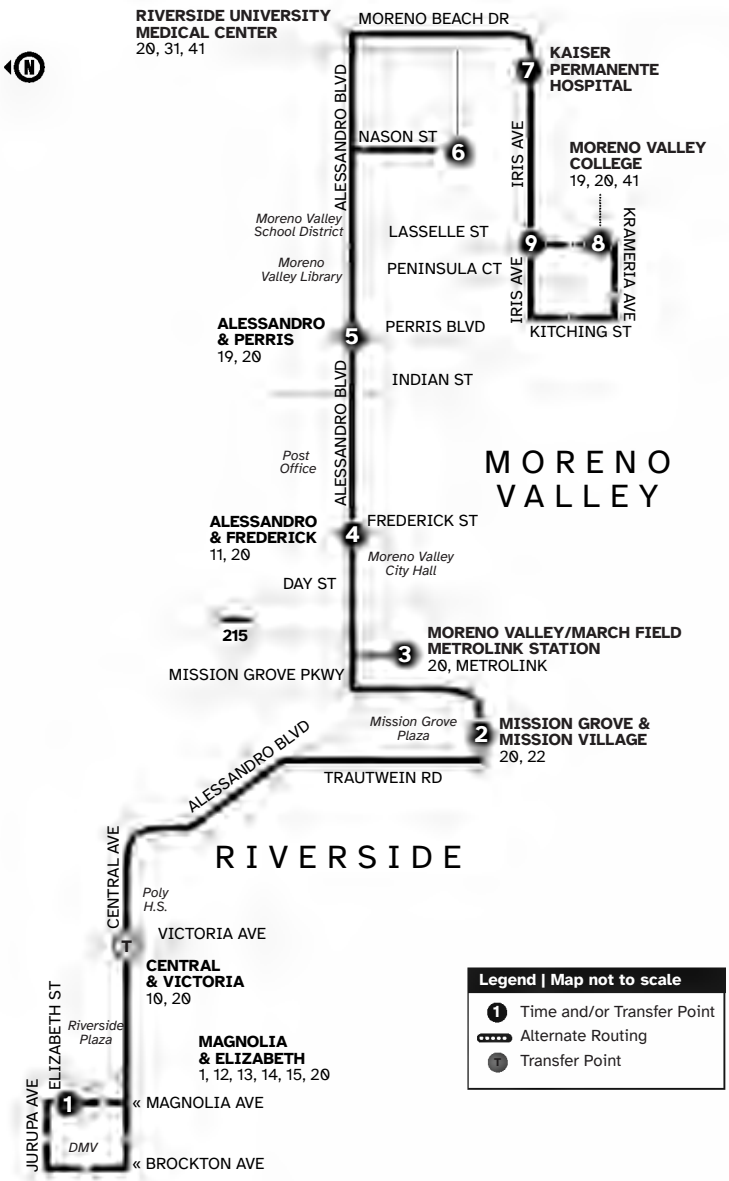


Data Source: City of Moreno Valley, 2019; Riverside County GIS, 2019; Dyett & Bhatia, 2019, Fehr & Peers, 2021.

Sources: Esri, USGS, NOAA

20 MAGNOLIA & ELIZABETH - METROLINK - RUMC - KAISER PERMANENTE - MOVAL COLLEGE

Routing and timetables subject to change.
Rutas y horarios son sujetos a cambios.



20 EASTBOUND TO MORENO VALLEY COLLEGE | WEEKDAYS

A.M. times are in PLAIN, P.M. times are in BOLD | Times are approximate

MAGNOLIA & ELIZABETH	MISSION GROVE & MISSION VILLAGE	MORENO VALLEY MARCH FIELD METROLINK STATION	ALESSANDRO & FREDERICK	ALESSANDRO & PERRIS	RIVERSIDE UNIVERSITY MEDICAL CENTER	IRIS AT KAISER PERMANENTE HOSPITAL	MORENO VALLEY COLLEGE	IRIS & LASSELLE
1	2	3	4	5	6	7	8	9
4:20	4:36	4:48	4:55	5:03	5:11	5:21	5:27	5:38
5:22	5:38	5:49	5:56	6:04	6:16	6:26	6:31	6:42
6:36	6:53	7:04	7:13	7:21	7:30	7:41	7:48	7:59
7:33	7:54	8:04	8:13	8:21	8:30	8:40	8:46	8:57
8:38	8:56	9:06	9:14	9:22	9:31	9:41	9:47	9:58
9:43	10:01	10:11	10:19	10:27	10:36	10:46	10:52	11:03
10:42	11:01	11:11	11:19	11:27	11:36	11:46	11:52	**12:03**
11:36	11:59	**12:08**	**12:17**	**12:26**	**12:35**	**12:45**	**12:51**	**1:02**
12:44	**1:05**	**1:14**	**1:23**	**1:32**	**1:41**	**1:51**	**1:57**	**2:08**
1:45	**2:07**	**2:16**	**2:26**	**2:36**	**2:46**	**2:56**	**3:02**	**3:13**
2:45	**3:10**	**3:19**	**3:29**	**3:39**	**3:49**	**3:59**	**4:05**	**4:15**
3:49	**4:16**	**4:25**	**4:35**	**4:45**	**4:55**	**5:05**	**5:11**	**5:22**
5:00	**5:26**	**5:36**	**5:45**	**5:54**	**6:04**	**6:13**	**6:19**	**6:29**
5:58	**6:22**	**6:32**	**6:40**	**6:49**	**6:58**	**7:08**	**7:13**	**7:24**
7:03	**7:22**	**7:31**	**7:39**	**7:47**	**7:56**	**8:05**	**8:10**	**8:21**
8:13	**8:30**	**8:39**	**8:47**	**8:55**	**9:04**	**9:13**	**9:18**	**9:29**
8:57	**9:14**	**9:23**	**9:31**	**9:39**	**9:48**	**9:57**	**10:02**	**10:13**
9:54	**10:10**	**10:19**	**10:27**	**10:35**	**10:44**	**10:53**	**10:58**	**11:09**

20 WESTBOUND TO MAGNOLIA & ELIZABETH | WEEKDAYS

A.M. times are in PLAIN, P.M. times are in BOLD | Times are approximate

IRIS & LASSELLE	IRIS AT KAISER PERMANENTE HOSPITAL	RIVERSIDE UNIVERSITY MEDICAL CENTER	ALESSANDRO & PERRIS	ALESSANDRO & FREDERICK	MORENO VALLEY MARCH FIELD METROLINK STATION	MISSION GROVE & MISSION VILLAGE	MAGNOLIA & ELIZABETH
9	7	6	5	4	3	2	1
4:00	4:03	4:13	4:24	4:31	4:39	4:49	5:12
5:10	5:13	5:23	5:34	5:41	5:53	6:03	6:26
5:55	5:58	6:11	6:22	6:29	6:40	6:50	7:19
6:54	6:57	7:10	7:23	7:32	7:43	7:53	8:22
8:09	8:12	8:24	8:35	8:44	8:55	9:04	9:33
9:09	9:12	9:24	9:35	9:43	9:54	10:03	10:32
10:08	10:11	10:23	10:34	10:42	10:52	11:01	11:26
11:13	11:16	11:28	11:39	11:47	**12:00**	**12:09**	**12:34**
12:16	**12:19**	**12:31**	**12:43**	**12:51**	**1:01**	**1:10**	**1:35**
1:12	**1:15**	**1:27**	**1:39**	**1:47**	**1:57**	**2:06**	**2:35**
2:18	**2:21**	**2:33**	**2:45**	**2:53**	**3:03**	**3:14**	**3:39**
3:23	**3:26**	**3:39**	**3:51**	**3:59**	**4:09**	**4:20**	**4:46**
4:25	**4:28**	**4:41**	**4:52**	**5:00**	**5:10**	**5:19**	**5:48**
5:32	**5:35**	**5:48**	**5:59**	**6:07**	**6:17**	**6:27**	**6:53**
6:44	**6:47**	**6:58**	**7:08**	**7:16**	**7:26**	**7:35**	**8:01**
7:34	**7:37**	**7:47**	**7:57**	**8:05**	**8:14**	**8:24**	**8:47**
8:31	**8:34**	**8:44**	**8:54**	**9:02**	**9:11**	**9:21**	**9:44**
9:39	**9:42**	**9:52**	**10:02**	**10:10**	**10:19**	**10:29**	**10:52**

20 EASTBOUND TO MORENO VALLEY COLLEGE | WEEKENDS

A.M. times are in PLAIN, P.M. times are in BOLD | Times are approximate

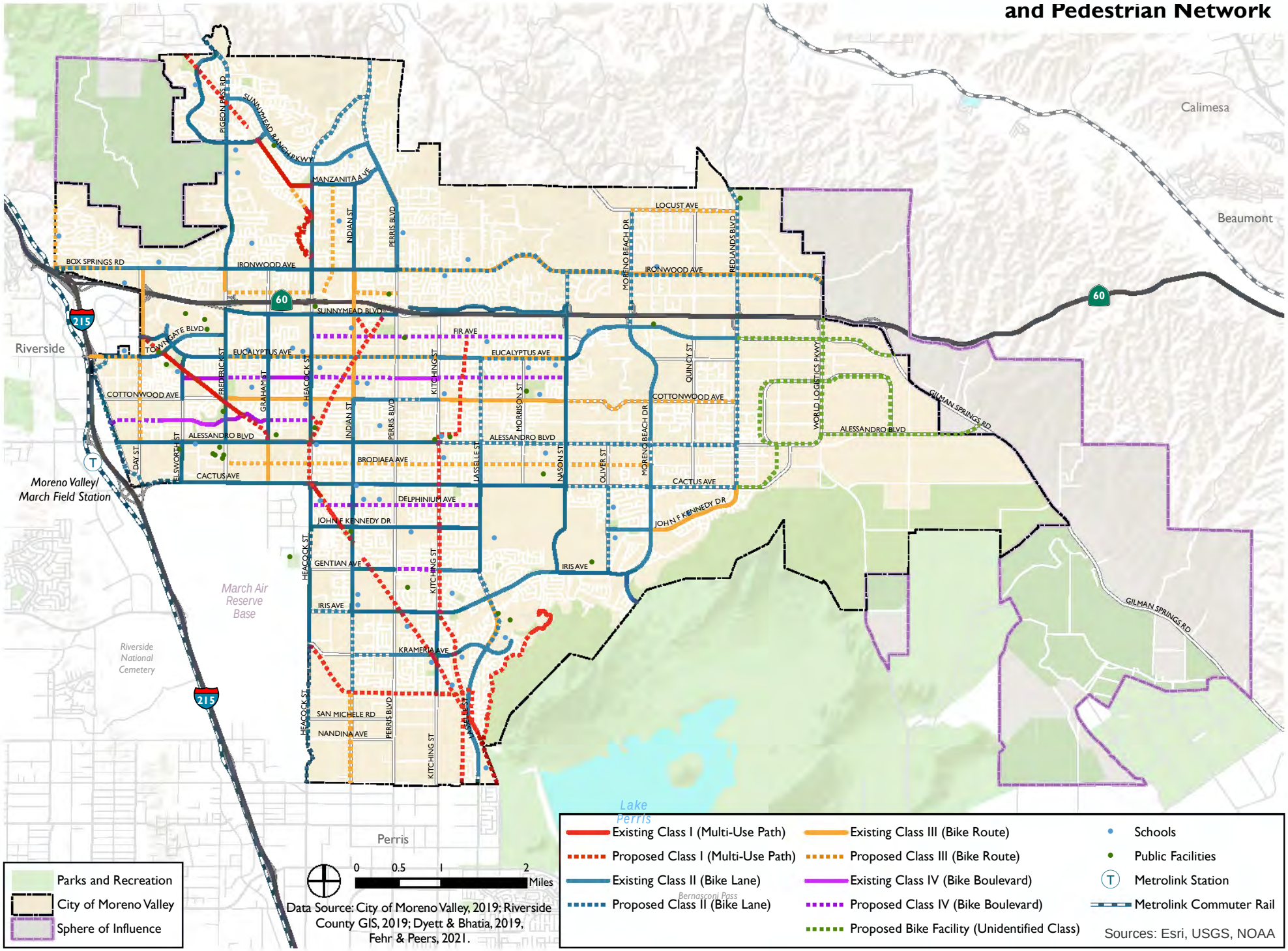
MAGNOLIA & ELIZABETH	MISSION GROVE & MISSION VILLAGE	MORENO VALLEY MARCH FIELD METROLINK STATION	ALESSANDRO & FREDERICK	ALESSANDRO & PERRIS	RIVERSIDE UNIVERSITY MEDICAL CENTER	IRIS AT KAISER PERMANENTE HOSPITAL	MORENO VALLEY COLLEGE	IRIS & LASSELLE
1	2	3	4	5	6	7	8	9
6:49	7:06	7:16	7:24	7:32	7:39	7:49	7:54	8:03
7:40	7:57	8:07	8:15	8:23	8:31	8:41	8:46	8:55
8:28	8:45	—	8:57	9:07	9:15	9:25	9:30	9:39
9:31	9:48	—	10:01	10:11	10:19	10:29	10:34	10:43
10:31	10:50	—	11:03	11:13	11:21	11:31	11:36	11:45
11:31	11:50	—	**12:03**	**12:13**	**12:21**	**12:31**	**12:36**	**12:45**
12:31	**12:50**	**—**	**1:03**	**1:13**	**1:21**	**1:31**	**1:36**	**1:45**
1:34	**1:53**	**—**	**2:06**	**2:16**	**2:24**	**2:34**	**2:39**	**2:48**
2:36	**2:55**	**—**	**3:08**	**3:18**	**3:26**	**3:36**	**3:41**	**3:50**
3:36	**3:55**	**—**	**4:08**	**4:18**	**4:26**	**4:36**	**4:41**	**4:50**
4:31	**4:50**	**—**	**5:03**	**5:13**	**5:21**	**5:31**	**5:36**	**5:45**
5:22	**5:41**	**5:51**	**5:59**	**6:09**	**6:17**	**6:27**	**6:32**	**6:41**
6:28	**6:47**	**—**	**6:59**	**7:07**	**7:15**	**7:25**	**7:30**	**7:39**
7:26	**7:44**	**—**	**7:56**	**8:04**	**8:11**	**8:21**	**8:26**	**8:35**

20 WESTBOUND TO MAGNOLIA & ELIZABETH | WEEKENDS

A.M. times are in PLAIN, P.M. times are in BOLD | Times are approximate

IRIS & LASSELLE	IRIS AT KAISER PERMANENTE HOSPITAL	RIVERSIDE UNIVERSITY MEDICAL CENTER	ALESSANDRO & PERRIS	ALESSANDRO & FREDERICK	MORENO VALLEY MARCH FIELD METROLINK STATION	MISSION GROVE & MISSION VILLAGE	MAGNOLIA & ELIZABETH
9	7	6	5	4	3	2	1
7:05	7:09	7:19	7:30	7:37	7:47	7:57	8:18
8:16	8:20	8:30	8:41	8:48	—	9:00	9:21
9:05	9:09	9:20	9:32	9:40	—	9:54	10:17
9:49	9:53	10:04	10:16	10:24	—	10:38	11:01
10:53	10:57	11:08	11:20	11:28	—	11:42	**12:05**
11:55	11:59	**12:10**	**12:22**	**12:30**	**—**	**12:44**	**1:07**
12:55	**12:59**	**1:10**	**1:22**	**1:30**	**—**	**1:44**	**2:07**
1:55	**1:59**	**2:10**	**2:22**	**2:30**	**—**	**2:44**	**3:07**
2:58	**3:02**	**3:13**	**3:25**	**3:33**	**—**	**3:47**	**4:10**
4:00	**4:04**	**4:15**	**4:27**	**4:35**	**—**	**4:49**	**5:12**
5:00	**5:04**	**5:15**	**5:27**	**5:35**	**5:45**	**5:55**	**6:18**
6:05	**6:09**	**6:20**	**6:32**	**6:39**	**—**	**6:53**	**7:16**
7:00	**7:04**	**7:15**	**7:27**	**7:34**	**—**	**7:45**	**8:06**

Map C-2: Existing and Planned Bicycle and Pedestrian Network



APPENDIX C

EXISTING TRAFFIC COUNTS

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

City of Moreno Valley
N/S: Moreno Beach Drive
E/W: Alessandro Boulevard
Weather: Clear

File Name : 01_MRV_MB_Ales AM
Site Code : 23625059
Start Date : 1/22/2025
Page No : 1

Groups Printed- Total Volume

	Moreno Beach Drive Southbound				Alessandro Boulevard Westbound				Moreno Beach Drive Northbound				Alessandro Boulevard 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	76	8	84	9	34	2	45	12	110	8	130	11	18	13	42	301
07:15 AM	1	95	12	108	8	42	5	55	15	114	4	133	11	15	8	34	330
07:30 AM	0	107	23	130	11	41	3	55	30	110	6	146	14	29	9	52	383
07:45 AM	4	107	12	123	6	45	7	58	23	165	12	200	13	23	9	45	426
Total	5	385	55	445	34	162	17	213	80	499	30	609	49	85	39	173	1440
08:00 AM	2	92	15	109	17	48	5	70	23	116	3	142	15	17	16	48	369
08:15 AM	5	99	9	113	5	41	1	47	17	115	7	139	12	32	18	62	361
08:30 AM	1	91	9	101	11	26	3	40	10	107	6	123	14	25	14	53	317
08:45 AM	1	65	11	77	6	25	2	33	12	86	8	106	12	22	4	38	254
Total	9	347	44	400	39	140	11	190	62	424	24	510	53	96	52	201	1301
Grand Total	14	732	99	845	73	302	28	403	142	923	54	1119	102	181	91	374	2741
Apprch %	1.7	86.6	11.7		18.1	74.9	6.9		12.7	82.5	4.8		27.3	48.4	24.3		
Total %	0.5	26.7	3.6	30.8	2.7	11	1	14.7	5.2	33.7	2	40.8	3.7	6.6	3.3	13.6	

	Moreno Beach Drive Southbound				Alessandro Boulevard Westbound				Moreno Beach Drive Northbound				Alessandro Boulevard 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 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	**107**	**23**	**130**	11	41	3	55	**30**	110	6	146	14	29	9	52	383
07:45 AM	4	107	12	123	6	45	**7**	58	23	**165**	**12**	**200**	13	23	9	45	**426**
08:00 AM	2	92	15	109	**17**	**48**	5	**70**	23	116	3	142	**15**	17	16	48	369
08:15 AM	**5**	99	9	113	5	41	1	47	17	115	7	139	12	**32**	**18**	**62**	361
Total Volume	11	405	59	475	39	175	16	230	93	506	28	627	54	101	52	207	1539
% App. Total	2.3	85.3	12.4		17	76.1	7		14.8	80.7	4.5		26.1	48.8	25.1		
PHF	.550	.946	.641	.913	.574	.911	.571	.821	.775	.767	.583	.784	.900	.789	.722	.835	.903

Counts Unlimited, Inc.
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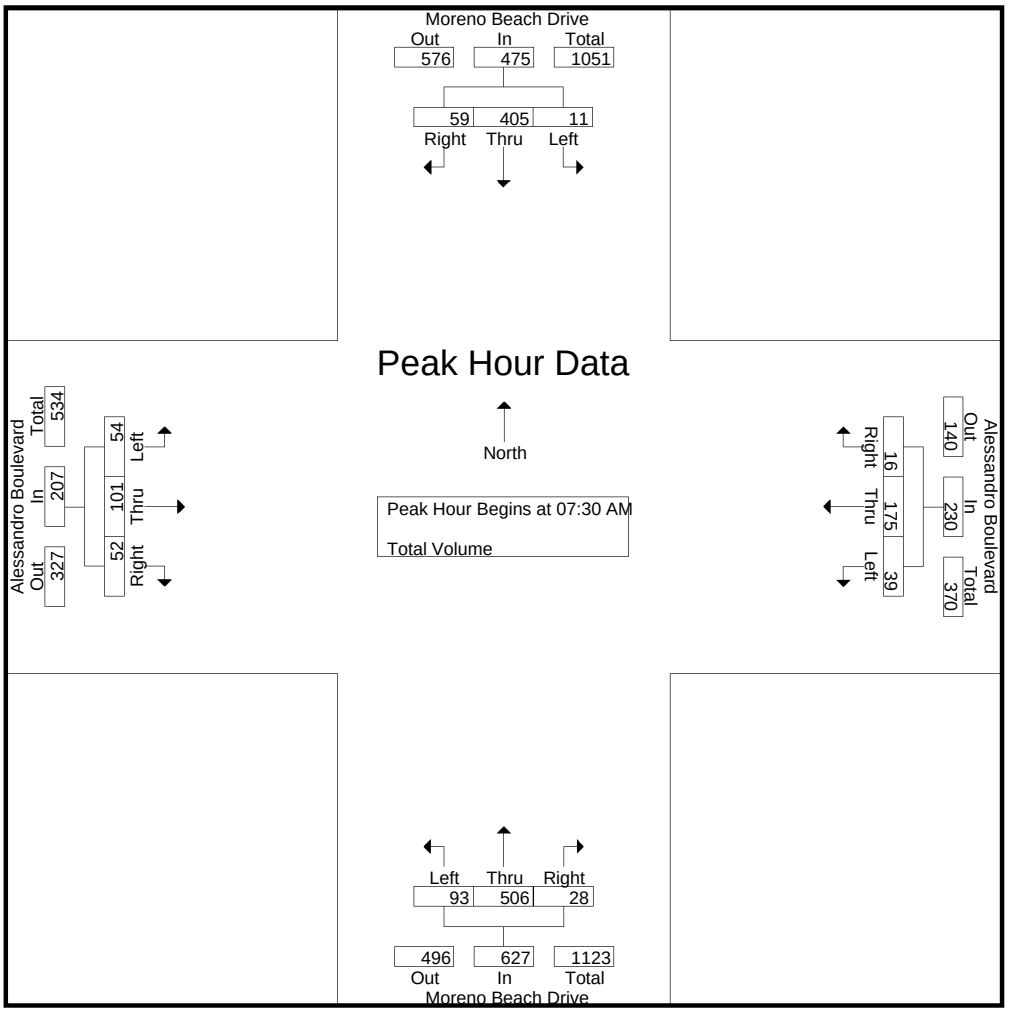
City of Moreno Valley
N/S: Moreno Beach Drive
E/W: Alessandro Boulevard
Weather: Clear

File Name : 01_MRV_MB_Ales AM
Site Code : 23625059
Start Date : 1/22/2025
Page No : 2



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

	07:30 AM				07:15 AM				07:30 AM				07:45 AM			
+0 mins.	0	**107**	**23**	**130**	8	42	5	55	**30**	110	6	146	13	23	9	45
+15 mins.	4	107	12	123	11	41	3	55	23	**165**	**12**	**200**	**15**	17	16	48
+30 mins.	2	92	15	109	6	45	**7**	58	23	116	3	142	12	**32**	**18**	**62**
+45 mins.	**5**	99	9	113	**17**	**48**	5	**70**	17	115	7	139	14	25	14	53
Total Volume	11	405	59	475	42	176	20	238	93	506	28	627	54	97	57	208
% App. Total	2.3	85.3	12.4		17.6	73.9	8.4		14.8	80.7	4.5		26	46.6	27.4	
PHF	.550	.946	.641	.913	.618	.917	.714	.850	.775	.767	.583	.784	.900	.758	.792	.839

Counts Unlimited, Inc.
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City of Moreno Valley
N/S: Moreno Beach Drive
E/W: Alessandro Boulevard
Weather: Clear

File Name : 01_MRV_MB_Ales PM
Site Code : 23625059
Start Date : 1/22/2025
Page No : 1

Groups Printed- Total Volume

	Moreno Beach Drive Southbound				Alessandro Boulevard Westbound				Moreno Beach Drive Northbound				Alessandro Boulevard 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	5	156	16	177	15	15	4	34	14	103	6	123	28	27	22	77	411
04:15 PM	9	159	18	186	11	16	4	31	15	127	8	150	20	43	22	85	452
04:30 PM	7	161	11	179	13	31	4	48	18	116	14	148	21	58	18	97	472
04:45 PM	5	187	17	209	9	17	2	28	12	139	8	159	16	38	21	75	471
Total	26	663	62	751	48	79	14	141	59	485	36	580	85	166	83	334	1806
05:00 PM	5	160	14	179	11	20	5	36	9	109	11	129	30	44	18	92	436
05:15 PM	5	178	11	194	10	13	5	28	14	108	10	132	17	42	19	78	432
05:30 PM	6	166	11	183	12	23	7	42	8	93	13	114	14	38	15	67	406
05:45 PM	4	145	9	158	8	23	7	38	16	101	5	122	21	38	18	77	395
Total	20	649	45	714	41	79	24	144	47	411	39	497	82	162	70	314	1669
Grand Total	46	1312	107	1465	89	158	38	285	106	896	75	1077	167	328	153	648	3475
Apprch %	3.1	89.6	7.3		31.2	55.4	13.3		9.8	83.2	7		25.8	50.6	23.6		
Total %	1.3	37.8	3.1	42.2	2.6	4.5	1.1	8.2	3.1	25.8	2.2	31	4.8	9.4	4.4	18.6	

	Moreno Beach Drive Southbound				Alessandro Boulevard Westbound				Moreno Beach Drive Northbound				Alessandro Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	**9**	159	**18**	186	11	16	4	31	15	127	8	150	20	43	**22**	85	452
04:30 PM	7	161	11	179	**13**	**31**	4	**48**	**18**	116	**14**	148	21	**58**	18	**97**	**472**
04:45 PM	5	**187**	17	**209**	9	17	2	28	12	**139**	8	**159**	16	38	21	75	471
05:00 PM	5	160	14	179	11	20	**5**	36	9	109	11	129	**30**	44	18	92	436
Total Volume	26	667	60	753	44	84	15	143	54	491	41	586	87	183	79	349	1831
% App. Total	3.5	88.6	8		30.8	58.7	10.5		9.2	83.8	7		24.9	52.4	22.6		
PHF	.722	.892	.833	.901	.846	.677	.750	.745	.750	.883	.732	.921	.725	.789	.898	.899	.970

Counts Unlimited, Inc.
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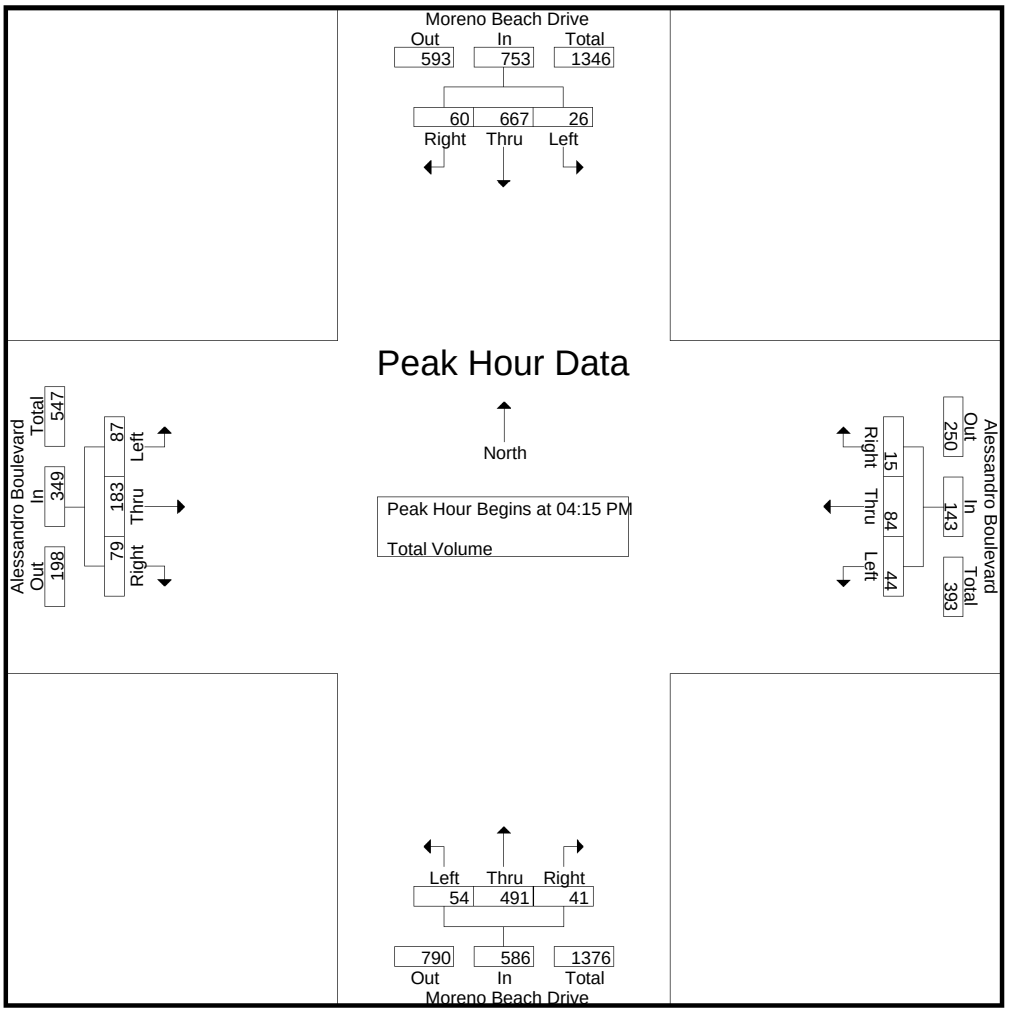
City of Moreno Valley
N/S: Moreno Beach Drive
E/W: Alessandro Boulevard
Weather: Clear

File Name : 01_MRV_MB_Ales PM
Site Code : 23625059
Start Date : 1/22/2025
Page No : 2



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

	04:45 PM				05:00 PM				04:15 PM				04:15 PM			
+0 mins.	5	**187**	**17**	**209**	11	20	5	36	15	127	8	150	20	43	**22**	85
+15 mins.	5	160	14	179	10	13	5	28	**18**	116	**14**	148	21	**58**	18	**97**
+30 mins.	5	178	11	194	**12**	**23**	**7**	**42**	12	**139**	8	**159**	16	38	21	75
+45 mins.	**6**	166	11	183	8	23	7	38	9	109	11	129	**30**	44	18	92
Total Volume	21	691	53	765	41	79	24	144	54	491	41	586	87	183	79	349
% App. Total	2.7	90.3	6.9		28.5	54.9	16.7		9.2	83.8	7		24.9	52.4	22.6	
PHF	.875	.924	.779	.915	.854	.859	.857	.857	.750	.883	.732	.921	.725	.789	.898	.899

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

City of Moreno Valley
N/S: Moreno Beach Drive
E/W: Brodiaea Avenue
Weather: Clear

File Name : 02_MRV_MB_Bro AM
Site Code : 23625059
Start Date : 1/22/2025
Page No : 1

Groups Printed- Total Volume

	Moreno Beach Drive Southbound				Brodiaea Avenue Westbound				Moreno Beach Drive Northbound				Brodiaea Avenue 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	1	96	2	99	1	0	7	8	1	126	1	128	3	1	1	5	240
07:15 AM	1	114	3	118	2	1	11	14	2	137	7	146	3	0	4	7	285
07:30 AM	5	121	2	128	8	2	13	23	3	148	3	154	1	0	2	3	308
07:45 AM	7	112	7	126	1	1	12	14	3	183	4	190	0	1	2	3	333
Total	14	443	14	471	12	4	43	59	9	594	15	618	7	2	9	18	1166
08:00 AM	9	122	3	134	10	1	8	19	1	146	7	154	0	0	2	2	309
08:15 AM	7	113	7	127	3	2	6	11	3	143	6	152	1	0	3	4	294
08:30 AM	9	103	2	114	3	0	0	3	1	120	5	126	3	0	2	5	248
08:45 AM	6	73	2	81	6	2	5	13	4	106	1	111	0	0	5	5	210
Total	31	411	14	456	22	5	19	46	9	515	19	543	4	0	12	16	1061
Grand Total	45	854	28	927	34	9	62	105	18	1109	34	1161	11	2	21	34	2227
Apprch %	4.9	92.1	3		32.4	8.6	59		1.6	95.5	2.9		32.4	5.9	61.8		
Total %	2	38.3	1.3	41.6	1.5	0.4	2.8	4.7	0.8	49.8	1.5	52.1	0.5	0.1	0.9	1.5	

	Moreno Beach Drive Southbound				Brodiaea Avenue Westbound				Moreno Beach Drive Northbound				Brodiaea Avenue 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 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	5	121	2	128	8	**2**	**13**	**23**	**3**	148	3	154	**1**	0	2	3	308
07:45 AM	7	112	**7**	126	1	1	12	14	3	**183**	4	**190**	0	**1**	2	3	**333**
08:00 AM	**9**	**122**	3	**134**	**10**	1	8	19	1	146	**7**	154	0	0	2	2	309
08:15 AM	7	113	7	127	3	2	6	11	3	143	6	152	1	0	**3**	**4**	294
Total Volume	28	468	19	515	22	6	39	67	10	620	20	650	2	1	9	12	1244
% App. Total	5.4	90.9	3.7		32.8	9	58.2		1.5	95.4	3.1		16.7	8.3	75		
PHF	.778	.959	.679	.961	.550	.750	.750	.728	.833	.847	.714	.855	.500	.250	.750	.750	.934

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City of Moreno Valley
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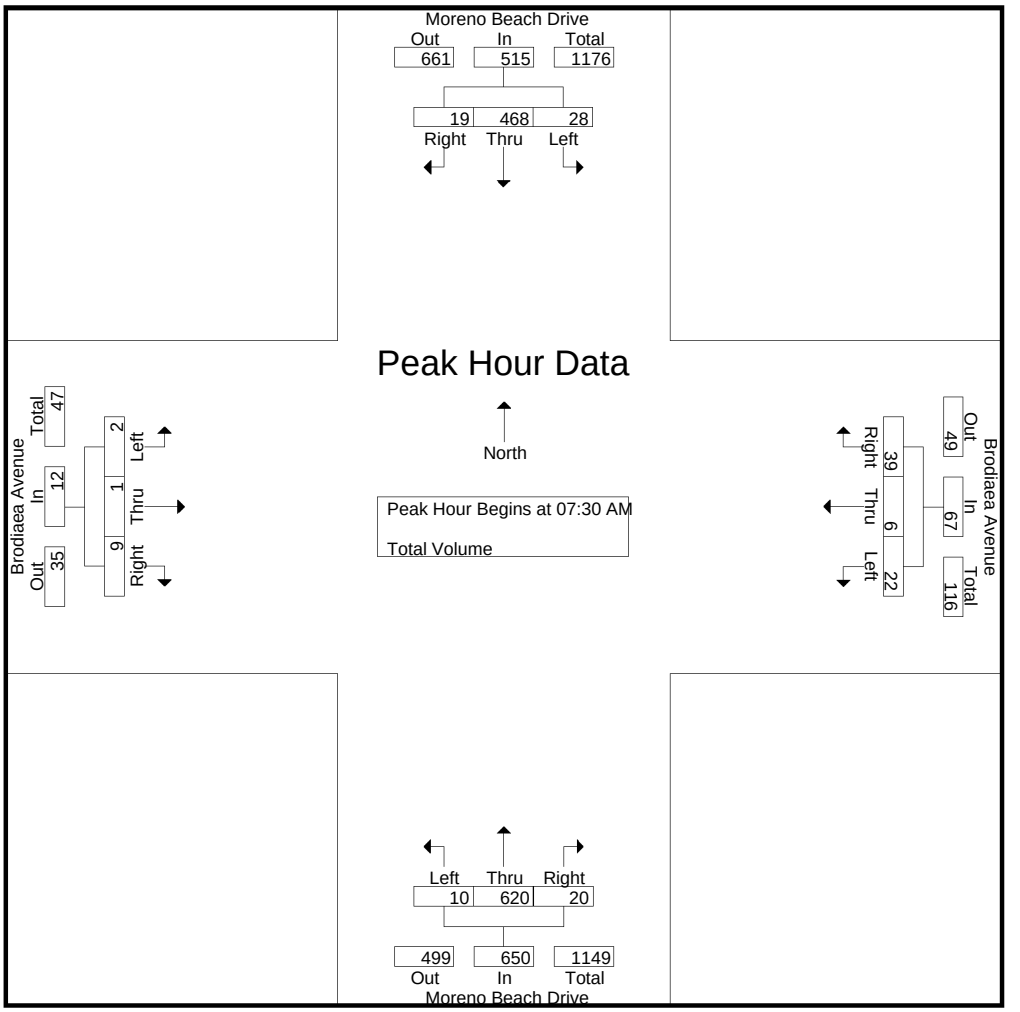
Weather: Clear

File Name : 02_MRV_MB_Bro AM
Site Code : 23625059
Start Date : 1/22/2025
Page No : 2



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

	07:30 AM				07:15 AM				07:30 AM				07:00 AM			
+0 mins.	5	121	2	128	2	1	11	14	**3**	148	3	154	**3**	**1**	1	5
+15 mins.	7	112	**7**	126	8	**2**	**13**	**23**	3	**183**	4	**190**	3	0	**4**	**7**
+30 mins.	**9**	**122**	3	**134**	1	1	12	14	1	146	**7**	154	1	0	2	3
+45 mins.	7	113	7	127	**10**	1	8	19	3	143	6	152	0	1	2	3
Total Volume	28	468	19	515	21	5	44	70	10	620	20	650	7	2	9	18
% App. Total	5.4	90.9	3.7		30	7.1	62.9		1.5	95.4	3.1		38.9	11.1	50	
PHF	.778	.959	.679	.961	.525	.625	.846	.761	.833	.847	.714	.855	.583	.500	.563	.643

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File Name : 02_MRV_MB_Bro PM
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Start Date : 1/22/2025

Groups Printed- Total Volume

	Moreno Beach Drive Southbound				Brodiaea Avenue Westbound				Moreno Beach Drive Northbound				Brodiaea Avenue 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	7	186	7	200	6	1	7	14	1	126	9	136	3	0	2	5	355
04:15 PM	19	164	10	193	6	1	6	13	0	144	7	151	3	0	3	6	363
04:30 PM	13	175	9	197	1	1	7	9	1	145	6	152	3	0	2	5	363
04:45 PM	13	203	5	221	7	0	11	18	0	155	5	160	4	2	4	10	409
Total	52	728	31	811	20	3	31	54	2	570	27	599	13	2	11	26	1490
05:00 PM	7	197	0	204	4	0	5	9	3	139	11	153	4	0	2	6	372
05:15 PM	12	182	7	201	1	1	1	3	1	133	5	139	1	0	3	4	347
05:30 PM	12	180	4	196	7	0	7	14	2	120	7	129	4	0	3	7	346
05:45 PM	12	172	7	191	2	2	5	9	0	121	9	130	2	1	1	4	334
Total	43	731	18	792	14	3	18	35	6	513	32	551	11	1	9	21	1399
Grand Total	95	1459	49	1603	34	6	49	89	8	1083	59	1150	24	3	20	47	2889
Apprch %	5.9	91	3.1		38.2	6.7	55.1		0.7	94.2	5.1		51.1	6.4	42.6		
Total %	3.3	50.5	1.7	55.5	1.2	0.2	1.7	3.1	0.3	37.5	2	39.8	0.8	0.1	0.7	1.6	

	Moreno Beach Drive Southbound				Brodiaea Avenue Westbound				Moreno Beach Drive Northbound				Brodiaea Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	**19**	164	**10**	193	6	**1**	6	13	0	144	7	151	3	0	3	6	363
04:30 PM	13	175	9	197	1	1	7	9	1	145	6	152	3	0	2	5	363
04:45 PM	13	**203**	5	**221**	**7**	0	**11**	**18**	0	**155**	5	**160**	**4**	**2**	**4**	**10**	**409**
05:00 PM	7	197	0	204	4	0	5	9	**3**	139	**11**	153	4	0	2	6	372
Total Volume	52	739	24	815	18	2	29	49	4	583	29	616	14	2	11	27	1507
% App. Total	6.4	90.7	2.9		36.7	4.1	59.2		0.6	94.6	4.7		51.9	7.4	40.7		
PHF	.684	.910	.600	.922	.643	.500	.659	.681	.333	.940	.659	.963	.875	.250	.688	.675	.921

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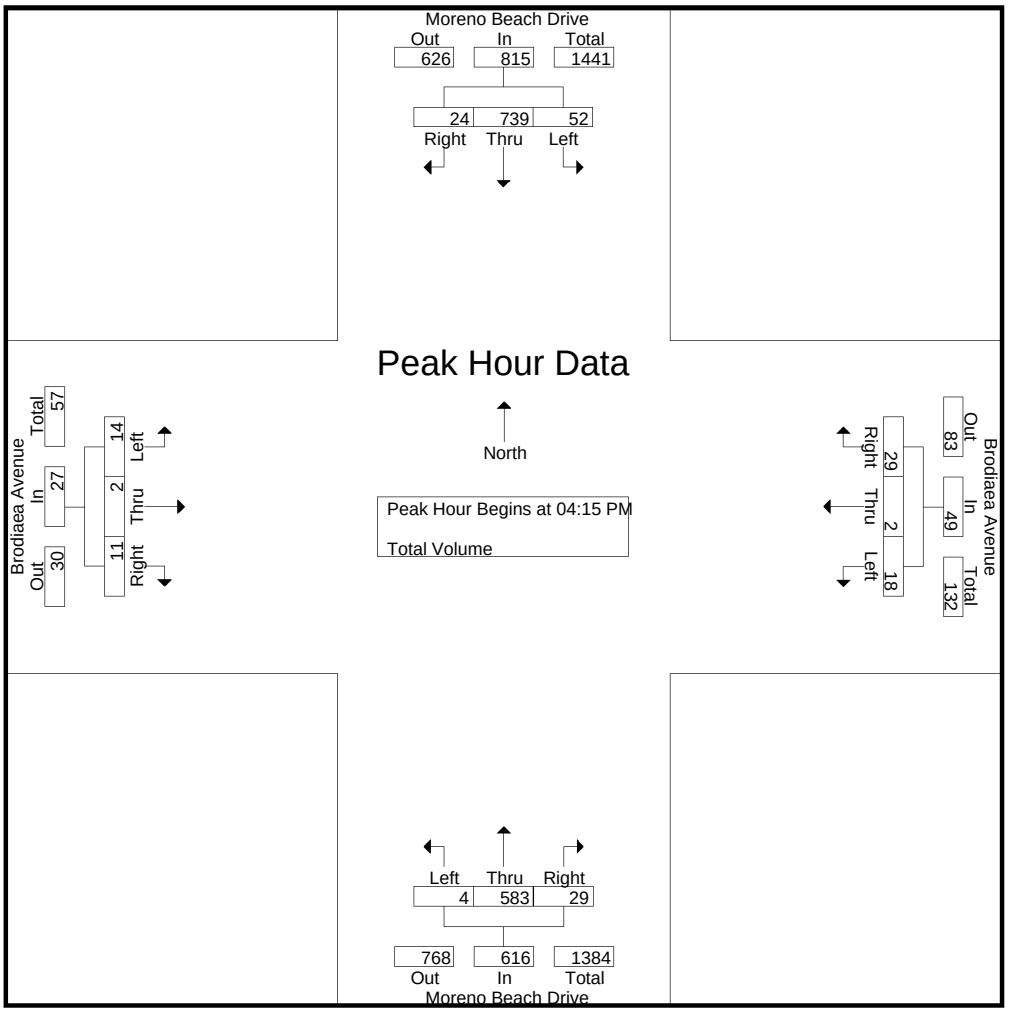

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:00 PM				04:15 PM				04:15 PM			
+0 mins.	**13**	175	**9**	197	6	**1**	7	14	0	144	7	151	3	0	3	6
+15 mins.	13	**203**	5	**221**	6	1	6	13	1	145	6	152	3	0	2	5
+30 mins.	7	197	0	204	1	1	7	9	0	**155**	5	**160**	**4**	**2**	**4**	**10**
+45 mins.	12	182	7	201	**7**	0	**11**	**18**	**3**	139	**11**	153	4	0	2	6
Total Volume	45	757	21	823	20	3	31	54	4	583	29	616	14	2	11	27
% App. Total	5.5	92	2.6		37	5.6	57.4		0.6	94.6	4.7		51.9	7.4	40.7	
PHF	.865	.932	.583	.931	.714	.750	.705	.750	.333	.940	.659	.963	.875	.250	.688	.675

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Groups Printed- Total Volume

	Moreno Beach Drive Southbound				Cactus Avenue Westbound				Moreno Beach Drive Northbound				Cactus Avenue 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	4	68	14	86	6	32	7	45	18	93	9	120	16	31	13	60	311
07:15 AM	5	72	21	98	14	52	12	78	29	110	7	146	18	25	14	57	379
07:30 AM	4	105	20	129	21	27	8	56	36	126	16	178	10	25	24	59	422
07:45 AM	8	85	14	107	16	37	10	63	35	132	16	183	31	22	15	68	421
Total	21	330	69	420	57	148	37	242	118	461	48	627	75	103	66	244	1533
08:00 AM	9	84	17	110	13	33	9	55	14	104	15	133	28	19	18	65	363
08:15 AM	9	91	16	116	13	34	9	56	30	107	7	144	25	26	19	70	386
08:30 AM	6	65	14	85	8	27	5	40	17	69	6	92	29	28	11	68	285
08:45 AM	5	47	10	62	8	21	10	39	21	73	5	99	12	25	15	52	252
Total	29	287	57	373	42	115	33	190	82	353	33	468	94	98	63	255	1286
Grand Total	50	617	126	793	99	263	70	432	200	814	81	1095	169	201	129	499	2819
Apprch %	6.3	77.8	15.9		22.9	60.9	16.2		18.3	74.3	7.4		33.9	40.3	25.9		
Total %	1.8	21.9	4.5	28.1	3.5	9.3	2.5	15.3	7.1	28.9	2.9	38.8	6	7.1	4.6	17.7	

	Moreno Beach Drive Southbound				Cactus Avenue Westbound				Moreno Beach Drive Northbound				Cactus Avenue 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 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	4	**105**	**20**	**129**	**21**	27	8	56	**36**	126	**16**	178	10	25	**24**	59	**422**
07:45 AM	8	85	14	107	16	**37**	**10**	**63**	35	**132**	16	**183**	**31**	22	15	68	421
08:00 AM	**9**	84	17	110	13	33	9	55	14	104	15	133	28	19	18	65	363
08:15 AM	9	91	16	116	13	34	9	56	30	107	7	144	25	**26**	19	**70**	386
Total Volume	30	365	67	462	63	131	36	230	115	469	54	638	94	92	76	262	1592
% App. Total	6.5	79	14.5		27.4	57	15.7		18	73.5	8.5		35.9	35.1	29		
PHF	.833	.869	.838	.895	.750	.885	.900	.913	.799	.888	.844	.872	.758	.885	.792	.936	.943

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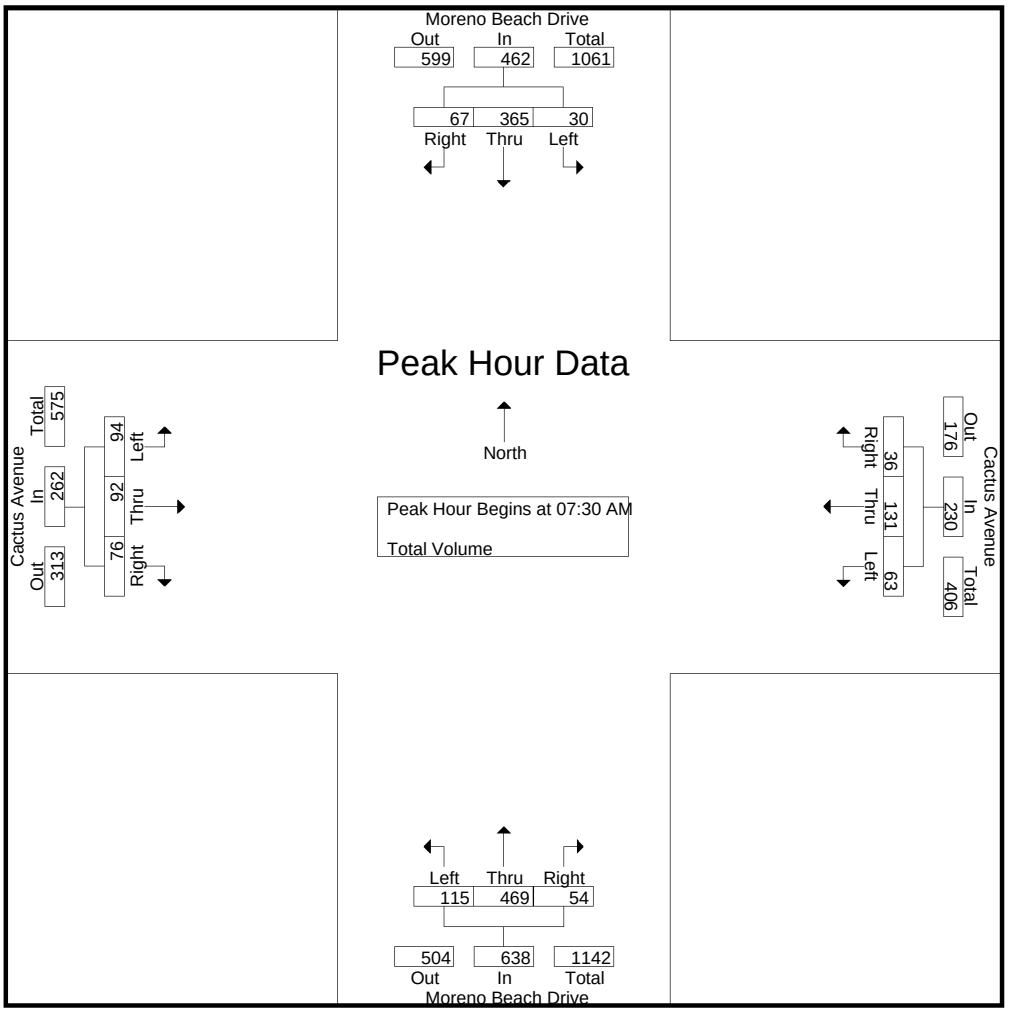

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:15 AM				07:15 AM				07:45 AM			
+0 mins.	4	**105**	**20**	**129**	14	**52**	**12**	**78**	29	110	7	146	**31**	22	15	68
+15 mins.	8	85	14	107	**21**	27	8	56	**36**	126	**16**	178	28	19	18	65
+30 mins.	**9**	84	17	110	16	37	10	63	35	**132**	16	**183**	25	26	**19**	**70**
+45 mins.	9	91	16	116	13	33	9	55	14	104	15	133	29	**28**	11	68
Total Volume	30	365	67	462	64	149	39	252	114	472	54	640	113	95	63	271
% App. Total	6.5	79	14.5		25.4	59.1	15.5		17.8	73.8	8.4		41.7	35.1	23.2	
PHF	.833	.869	.838	.895	.762	.716	.813	.808	.792	.894	.844	.874	.911	.848	.829	.968

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Groups Printed- Total Volume

	Moreno Beach Drive Southbound				Cactus Avenue Westbound				Moreno Beach Drive Northbound				Cactus Avenue 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	12	127	38	177	3	22	8	33	28	102	12	142	22	34	29	85	437
04:15 PM	9	113	28	150	4	20	5	29	27	85	10	122	25	44	20	89	390
04:30 PM	4	116	17	137	7	9	5	21	26	101	10	137	14	66	26	106	401
04:45 PM	20	114	27	161	1	13	4	18	22	107	10	139	26	45	26	97	415
Total	45	470	110	625	15	64	22	101	103	395	42	540	87	189	101	377	1643
05:00 PM	11	143	25	179	4	19	4	27	33	92	9	134	23	45	38	106	446
05:15 PM	8	129	17	154	4	31	5	40	23	86	4	113	22	40	33	95	402
05:30 PM	14	140	25	179	2	32	7	41	35	80	7	122	25	35	23	83	425
05:45 PM	5	127	26	158	6	38	6	50	19	75	10	104	23	38	38	99	411
Total	38	539	93	670	16	120	22	158	110	333	30	473	93	158	132	383	1684
Grand Total	83	1009	203	1295	31	184	44	259	213	728	72	1013	180	347	233	760	3327
Apprch %	6.4	77.9	15.7		12	71	17		21	71.9	7.1		23.7	45.7	30.7		
Total %	2.5	30.3	6.1	38.9	0.9	5.5	1.3	7.8	6.4	21.9	2.2	30.4	5.4	10.4	7	22.8	

	Moreno Beach Drive Southbound				Cactus Avenue Westbound				Moreno Beach Drive Northbound				Cactus Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	**20**	114	**27**	161	1	13	4	18	22	**107**	**10**	**139**	**26**	**45**	26	97	415
05:00 PM	11	**143**	25	**179**	**4**	19	4	27	33	92	9	134	23	45	**38**	**106**	**446**
05:15 PM	8	129	17	154	4	31	5	40	23	86	4	113	22	40	33	95	402
05:30 PM	14	140	25	179	2	**32**	**7**	**41**	**35**	80	7	122	25	35	23	83	425
Total Volume	53	526	94	673	11	95	20	126	113	365	30	508	96	165	120	381	1688
% App. Total	7.9	78.2	14		8.7	75.4	15.9		22.2	71.9	5.9		25.2	43.3	31.5		
PHF	.663	.920	.870	.940	.688	.742	.714	.768	.807	.853	.750	.914	.923	.917	.789	.899	.946

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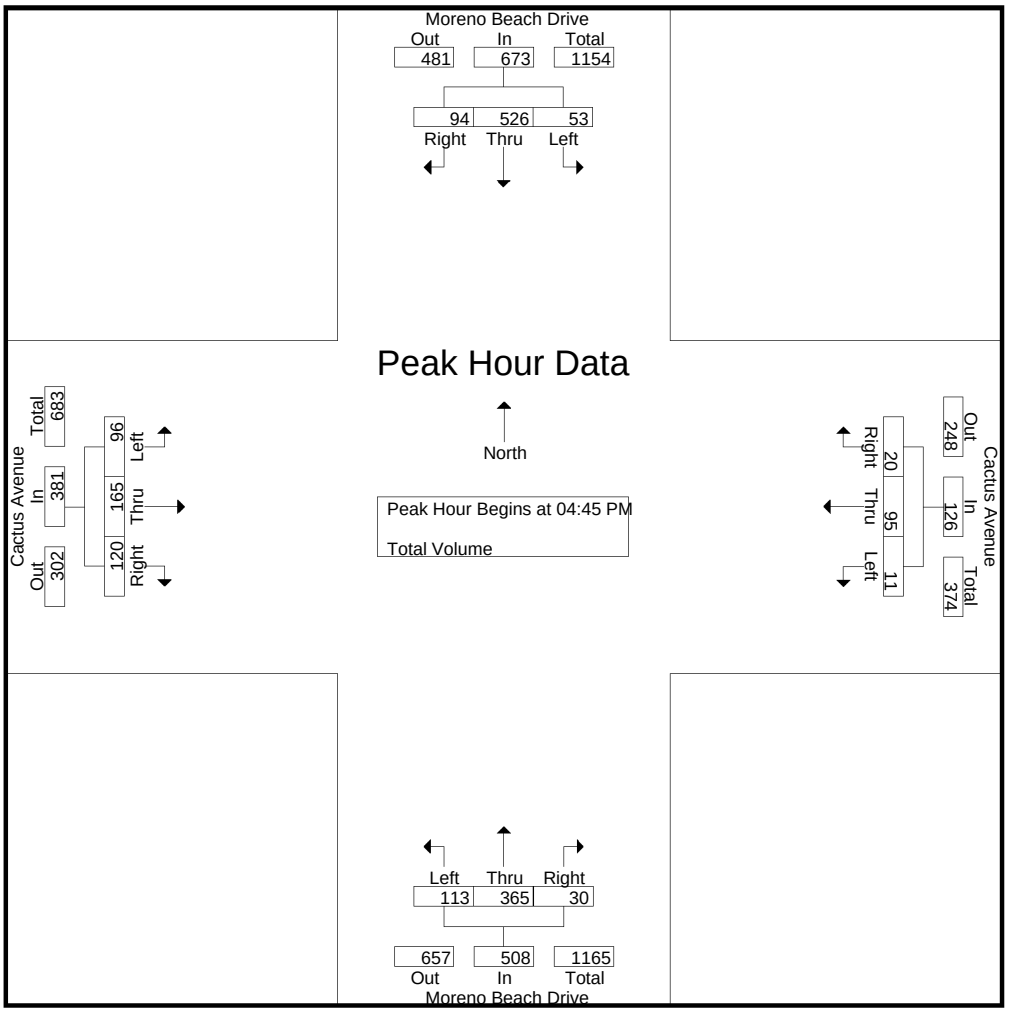


Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				05:00 PM				04:00 PM				04:30 PM			
+0 mins.	**20**	114	**27**	161	4	19	4	27	**28**	102	**12**	**142**	14	**66**	26	**106**
+15 mins.	11	**143**	25	**179**	4	31	5	40	27	85	10	122	**26**	45	26	97
+30 mins.	8	129	17	154	2	32	**7**	41	26	101	10	137	23	45	**38**	106
+45 mins.	14	140	25	179	**6**	**38**	6	**50**	22	**107**	10	139	22	40	33	95
Total Volume	53	526	94	673	16	120	22	158	103	395	42	540	85	196	123	404
% App. Total	7.9	78.2	14		10.1	75.9	13.9		19.1	73.1	7.8		21	48.5	30.4	
PHF	.663	.920	.870	.940	.667	.789	.786	.790	.920	.923	.875	.951	.817	.742	.809	.953

APPENDIX D

HCM ANALYSIS WORKSHEETS

EXISTING
TRAFFIC CONDITIONS

Intersection Level Of Service Report
Intersection 1: Moreno Beach Dr/ Alessandro Blvd

Control Type:	Signalized	Delay (sec / veh):	34.0
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.764

Intersection Setup

Name	Moreno Beach Drive			Moreno Beach Drive			Alessandro Boulevard			Alessandro Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	0	1	0	0
Entry Pocket Length [ft]	110.00	100.00	100.00	150.00	100.00	100.00	100.00	100.00	100.00	200.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			40.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Moreno Beach Drive			Moreno Beach Drive			Alessandro Boulevard			Alessandro Boulevard		
Base Volume Input [veh/h]	93	506	28	11	405	59	54	101	52	39	175	16
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	93	506	28	11	405	59	54	101	52	39	175	16
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	23	127	7	3	101	15	14	25	13	10	44	4
Total Analysis Volume [veh/h]	93	506	28	11	405	59	54	101	52	39	175	16
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	5	2	0	6	1	0	7	4	0	3	8	0
Auxiliary Signal Groups												
Maximum Green [s]	7	24	0	29	12	0	9	19	0	9	19	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0.0	7.0	0.0	5.0	7.0	0.0	0.0	7.0	0.0	0.0	7.0	0.0
Pedestrian Clearance [s]	0.0	10.0	0.0	10.0	0.0	0.0	0.0	14.0	0.0	0.0	14.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	27.0	25.0	0.0	20.0	22.0	0.0	8.0	25.0	0.0	8.0	25.0	0.0
Lead / Lag	Lead	-	-	Lag	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	4	8	0	8	4	0	4	5	0	4	5	0
Vehicle Extension [s]	2.0	4.0	0.0	4.0	2.0	0.0	2.0	4.0	0.0	2.0	4.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C
C, Calculated Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	15.9	31.7	31.7	34.8	18.9	18.9	3.1	11.0	2.3	10.3
g / C, Green / Cycle	0.20	0.40	0.40	0.43	0.24	0.24	0.04	0.14	0.03	0.13
(v / s)_i Volume / Saturation Flow Rate	0.10	0.27	0.02	0.02	0.21	0.04	0.03	0.09	0.02	0.10
s, saturation flow rate [veh/h]	943	1900	1615	452	1900	1615	1810	1792	1810	1872
c, Capacity [veh/h]	90	753	640	239	449	382	69	247	53	241
d1, Uniform Delay [s]	40.00	19.86	14.83	14.94	29.64	24.21	38.14	32.50	38.53	33.80
k, delay calibration	0.04	0.50	0.50	0.50	0.04	0.04	0.04	0.15	0.04	0.15
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	35.83	4.74	0.13	0.36	2.78	0.07	6.94	3.56	7.32	8.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.03	0.67	0.04	0.05	0.90	0.15	0.78	0.62	0.74	0.79
d, Delay for Lane Group [s/veh]	75.83	24.60	14.96	15.31	32.42	24.28	45.08	36.05	45.85	41.82
Lane Group LOS	F	C	B	B	C	C	D	D	D	D
Critical Lane Group	No	Yes	No	No	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.57	7.78	0.30	0.12	7.25	0.83	1.14	2.89	0.82	3.85
50th-Percentile Queue Length [ft/ln]	64.37	194.46	7.58	3.09	181.13	20.70	28.43	72.28	20.40	96.23
95th-Percentile Queue Length [veh/ln]	4.63	12.35	0.55	0.22	11.66	1.49	2.05	5.20	1.47	6.93
95th-Percentile Queue Length [ft/ln]	115.87	308.81	13.65	5.57	291.50	37.27	51.18	130.11	36.72	173.22

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	75.83	24.60	14.96	15.31	32.42	24.28	45.08	36.05	36.05	45.85	41.82	41.82
Movement LOS	F	C	B	B	C	C	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	31.77			31.01			38.41			42.50		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	34.03											
Intersection LOS	C											
Intersection V/C	0.764											

Emissions

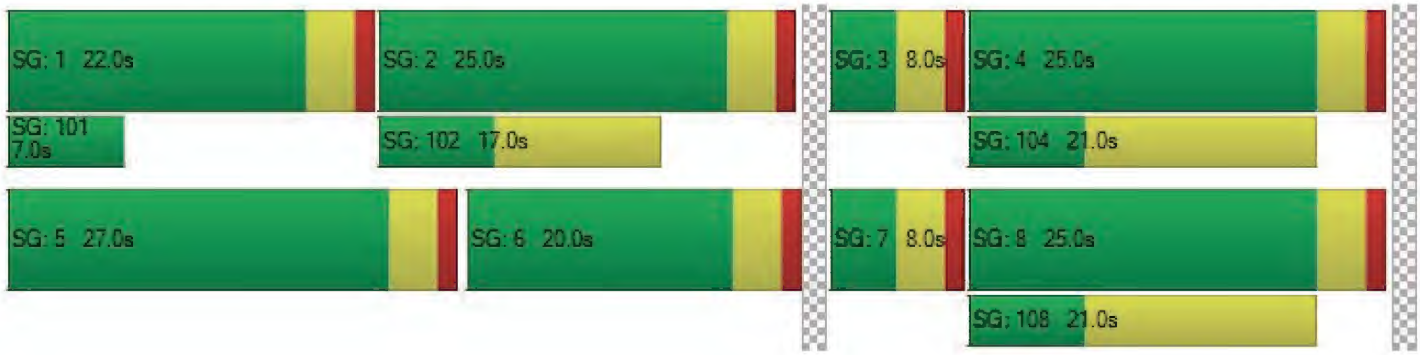
Vehicle Miles Traveled [mph]	11.18	60.83	3.37	0.91	33.38	4.86	4.00	11.33	3.07	15.05
Stops [stops/h]	115.87	350.03	13.65	5.57	326.04	37.27	51.18	130.11	36.72	173.22
Fuel consumption [US gal/h]	3.26	8.97	0.37	0.13	7.87	0.92	1.14	2.81	1.03	4.79
CO [g/h]	227.79	627.00	25.88	9.41	550.12	64.42	79.78	196.16	72.03	334.71
NOx [g/h]	44.32	121.99	5.04	1.83	107.03	12.53	15.52	38.17	14.01	65.12
VOC [g/h]	52.79	145.31	6.00	2.18	127.50	14.93	18.49	45.46	16.69	77.57

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	29.76	29.76	29.76	29.76
l_p,int, Pedestrian LOS Score for Intersectio	2.535	2.509	2.297	2.141
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	525	450	525	525
d_b, Bicycle Delay [s]	21.76	24.03	21.76	21.76
l_b,int, Bicycle LOS Score for Intersection	2.594	2.343	1.901	1.939
Bicycle LOS	B	B	A	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Moreno Beach Dr/ Brodiaea Ave

Control Type:	Two-way stop	Delay (sec / veh):	27.0
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.033

Intersection Setup

Name	Moreno Beach Drive			Moreno Beach Drive			Brodiaea Avenue			Brodiaea Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	0	0	0	0	0	0
Entry Pocket Length [ft]	150.00	100.00	200.00	150.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name	Moreno Beach Drive			Moreno Beach Drive			Brodiaea Avenue			Brodiaea Avenue		
Base Volume Input [veh/h]	10	620	20	28	468	19	2	1	9	22	6	39
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	620	20	28	468	19	2	1	9	22	6	39
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	155	5	7	117	5	1	0	2	6	2	10
Total Analysis Volume [veh/h]	10	620	20	28	468	19	2	1	9	22	6	39
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.01	0.00	0.03	0.00	0.00	0.01	0.01	0.01	0.10	0.03	0.06
d_M, Delay for Movement [s/veh]	8.34	0.00	0.00	8.89	0.00	0.00	22.13	25.09	9.94	24.38	27.04	12.65
Movement LOS	A	A	A	A	A	A	C	D	A	C	D	B
95th-Percentile Queue Length [veh/ln]	0.03	0.00	0.00	0.09	0.00	0.00	0.08	0.08	0.08	0.70	0.70	0.70
95th-Percentile Queue Length [ft/ln]	0.70	0.00	0.00	2.27	0.00	0.00	2.05	2.05	2.05	17.53	17.53	17.53
d_A, Approach Delay [s/veh]	0.13			0.48			13.23			17.79		
Approach LOS	A			A			B			C		
d_I, Intersection Delay [s/veh]	1.35											
Intersection LOS	D											

Intersection Level Of Service Report
Intersection 3: Moreno Beach Dr/ Cactus Ave

Control Type:	Signalized	Delay (sec / veh):	27.9
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.282

Intersection Setup

Name	Moreno Beach Drive			Moreno Beach Drive			Cactus Avenue			Cactus Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	210.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	2	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	132.11	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			30.00			45.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Moreno Beach Drive			Moreno Beach Drive			Cactus Avenue			Cactus Avenue		
Base Volume Input [veh/h]	115	469	54	30	365	67	94	92	76	63	131	36
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	115	469	54	30	365	67	94	92	76	63	131	36
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	29	117	14	8	91	17	24	23	19	16	33	9
Total Analysis Volume [veh/h]	115	469	54	30	365	67	94	92	76	63	131	36
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	5	2	2	1	6	6	7	4	0	3	8	0
Auxiliary Signal Groups			2,3			6,7						
Maximum Green [s]	17	22	22	21	26	26	22	32	0	19	29	0
Amber [s]	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0.0	14.0	14.0	0.0	7.0	7.0	0.0	8.0	0.0	0.0	8.0	0.0
Pedestrian Clearance [s]	0.0	17.0	17.0	0.0	17.0	17.0	0.0	27.0	0.0	0.0	24.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	29.0	35.0	35.0	22.0	28.0	28.0	27.0	39.0	0.0	24.0	36.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	4	10	10	4	10	10	4	6	0	4	6	0
Vehicle Extension [s]	2.0	4.0	4.0	2.0	4.0	4.0	2.0	4.0	0.0	2.0	4.0	0.0
Minimum Recall	No	No	No	No	No	No	No	No		No	No	
Maximum Recall	No	No	No	No	No	No	No	No		No	No	
Pedestrian Recall	No	No	No	No	No	No	No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Calculated Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	9.4	85.3	94.8	2.6	78.4	90.5	8.0	10.6	10.6	5.6	8.1	8.1
g / C, Green / Cycle	0.08	0.71	0.79	0.02	0.65	0.75	0.07	0.09	0.09	0.05	0.07	0.07
(v / s)_i Volume / Saturation Flow Rate	0.06	0.13	0.03	0.02	0.07	0.04	0.05	0.05	0.05	0.03	0.04	0.05
s, saturation flow rate [veh/h]	1810	3618	1615	1810	5176	1615	1810	1900	1630	1810	1900	1764
c, Capacity [veh/h]	142	2569	1276	39	3380	1217	122	168	144	84	129	120
d1, Uniform Delay [s]	54.39	5.80	2.74	58.41	7.77	3.80	55.07	52.23	52.44	56.52	54.57	54.68
k, delay calibration	0.04	0.50	0.50	0.04	0.50	0.50	0.04	0.15	0.15	0.04	0.15	0.15
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.09	0.16	0.06	11.09	0.06	0.09	3.89	3.47	4.77	4.93	7.87	9.52
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, 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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.81	0.18	0.04	0.77	0.11	0.06	0.77	0.52	0.56	0.75	0.66	0.69
d, Delay for Lane Group [s/veh]	58.49	5.95	2.80	69.49	7.84	3.89	58.96	55.71	57.21	61.46	62.45	64.20
Lane Group LOS	E	A	A	E	A	A	E	E	E	E	E	E
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	3.47	1.63	0.20	1.03	1.15	0.40	2.86	2.61	2.47	1.94	2.70	2.67
50th-Percentile Queue Length [ft/ln]	86.71	40.80	5.02	25.69	28.85	10.02	71.54	65.29	61.85	48.57	67.62	66.71
95th-Percentile Queue Length [veh/ln]	6.24	2.94	0.36	1.85	2.08	0.72	5.15	4.70	4.45	3.50	4.87	4.80
95th-Percentile Queue Length [ft/ln]	156.07	73.44	9.03	46.23	51.93	18.03	128.77	117.53	111.33	87.42	121.71	120.07

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	58.49	5.95	2.80	69.49	7.84	3.89	58.96	55.79	57.21	61.46	63.06	64.20
Movement LOS	E	A	A	E	A	A	E	E	E	E	E	E
d_A, Approach Delay [s/veh]	15.16			11.27			57.34			62.80		
Approach LOS	B			B			E			E		
d_I, Intersection Delay [s/veh]	27.85											
Intersection LOS	C											
Intersection V/C	0.282											

Emissions

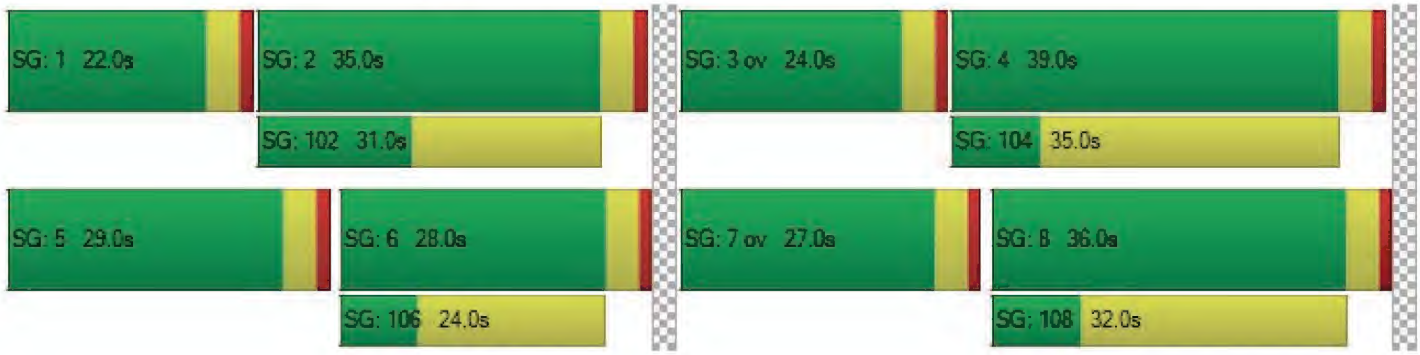
Vehicle Miles Traveled [mph]	10.12	41.28	4.75	7.50	91.23	16.75	7.26	6.73	6.25	4.82	6.49	6.29
Stops [stops/h]	104.05	97.92	6.02	30.82	103.87	12.02	85.84	78.35	74.22	58.28	81.14	80.05
Fuel consumption [US gal/h]	3.30	3.45	0.28	0.90	4.91	0.81	2.44	2.19	2.08	1.84	2.54	2.51
CO [g/h]	231.00	241.41	19.74	63.13	343.33	56.54	170.83	153.25	145.28	128.88	177.59	175.64
NOx [g/h]	44.94	46.97	3.84	12.28	66.80	11.00	33.24	29.82	28.27	25.08	34.55	34.17
VOC [g/h]	53.54	55.95	4.58	14.63	79.57	13.10	39.59	35.52	33.67	29.87	41.16	40.71

Other Modes

g_Walk,mi, Effective Walk Time [s]	12.0	12.0	11.0	18.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	48.60	48.60	49.50	43.35
l_p,int, Pedestrian LOS Score for Intersectio	2.872	2.868	2.482	2.440
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	517	400	583	533
d_b, Bicycle Delay [s]	33.00	38.40	30.10	32.27
l_b,int, Bicycle LOS Score for Intersection	2.086	1.814	1.776	1.749
Bicycle LOS	B	A	A	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 1: Moreno Beach Dr/ Alessandro Blvd

Control Type:	Signalized	Delay (sec / veh):	22.7
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.669

Intersection Setup

Name	Moreno Beach Drive			Moreno Beach Drive			Alessandro Boulevard			Alessandro Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	0	1	0	0
Entry Pocket Length [ft]	110.00	100.00	100.00	150.00	100.00	100.00	100.00	100.00	100.00	200.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			40.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Moreno Beach Drive			Moreno Beach Drive			Alessandro Boulevard			Alessandro Boulevard		
Base Volume Input [veh/h]	54	491	41	26	667	60	87	183	79	44	84	15
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	54	491	41	26	667	60	87	183	79	44	84	15
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	123	10	7	167	15	22	46	20	11	21	4
Total Analysis Volume [veh/h]	54	491	41	26	667	60	87	183	79	44	84	15
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	5	2	0	1	6	0	7	4	0	3	8	0
Auxiliary Signal Groups												
Maximum Green [s]	9	31	0	6	28	0	8	19	0	8	19	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0.0	7.0	0.0	0.0	7.0	0.0	0.0	7.0	0.0	0.0	7.0	0.0
Pedestrian Clearance [s]	0.0	10.0	0.0	0.0	10.0	0.0	0.0	14.0	0.0	0.0	14.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	12.0	35.0	0.0	16.0	39.0	0.0	14.0	25.0	0.0	14.0	25.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	4	8	0	4	8	0	4	5	0	4	5	0
Vehicle Extension [s]	2.0	4.0	0.0	2.0	4.0	0.0	2.0	4.0	0.0	2.0	4.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C
C, Calculated Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3.5	53.7	53.7	2.0	52.2	52.2	5.6	15.5	2.8	12.7
g / C, Green / Cycle	0.04	0.60	0.60	0.02	0.58	0.58	0.06	0.17	0.03	0.14
(v / s)_i Volume / Saturation Flow Rate	0.03	0.26	0.03	0.01	0.35	0.04	0.05	0.15	0.02	0.05
s, saturation flow rate [veh/h]	1810	1900	1615	1810	1900	1615	1810	1804	1810	1851
c, Capacity [veh/h]	70	1133	963	40	1101	936	112	311	57	262
d1, Uniform Delay [s]	42.84	9.88	7.52	43.66	12.26	8.26	41.58	36.08	43.26	35.04
k, delay calibration	0.04	0.50	0.50	0.04	0.50	0.50	0.04	0.15	0.04	0.15
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.35	1.21	0.08	6.43	2.48	0.13	4.21	8.59	7.89	1.28
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.77	0.43	0.04	0.65	0.61	0.06	0.77	0.84	0.77	0.38
d, Delay for Lane Group [s/veh]	49.20	11.09	7.60	50.09	14.73	8.39	45.79	44.67	51.14	36.32
Lane Group LOS	D	B	A	D	B	A	D	D	D	D
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	1.26	4.69	0.30	0.62	7.88	0.47	1.97	6.06	1.05	1.94
50th-Percentile Queue Length [ft/ln]	31.59	117.20	7.40	15.57	197.07	11.66	49.24	151.55	26.16	48.54
95th-Percentile Queue Length [veh/ln]	2.27	8.24	0.53	1.12	12.49	0.84	3.55	10.10	1.88	3.50
95th-Percentile Queue Length [ft/ln]	56.86	205.97	13.32	28.02	312.18	20.98	88.63	252.49	47.08	87.38

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	49.20	11.09	7.60	50.09	14.73	8.39	45.79	44.67	44.67	51.14	36.32	36.32
Movement LOS	D	B	A	D	B	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	14.36			15.45			44.95			40.88		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	22.71											
Intersection LOS	C											
Intersection V/C	0.669											

Emissions

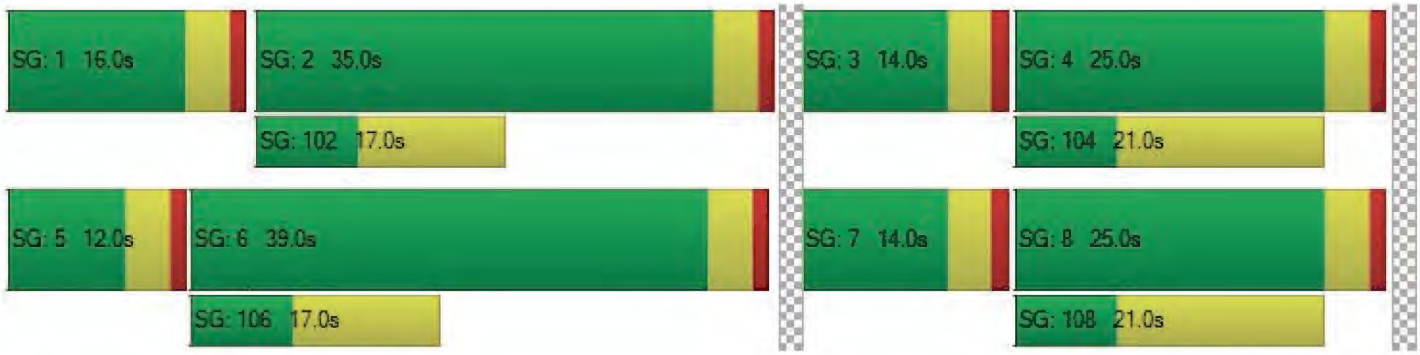
Vehicle Miles Traveled [mph]	6.49	59.02	4.93	2.14	54.98	4.95	6.44	19.39	3.47	7.80
Stops [stops/h]	50.54	187.51	11.84	24.90	315.31	18.65	78.78	242.47	41.85	77.67
Fuel consumption [US gal/h]	1.39	5.46	0.38	0.65	7.80	0.50	1.82	5.46	1.22	2.19
CO [g/h]	97.26	381.87	26.53	45.30	545.55	35.22	126.88	381.53	85.03	152.75
NOx [g/h]	18.92	74.30	5.16	8.81	106.14	6.85	24.69	74.23	16.54	29.72
VOC [g/h]	22.54	88.50	6.15	10.50	126.44	8.16	29.41	88.42	19.71	35.40

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	34.67	34.67	34.67
l_p,int, Pedestrian LOS Score for Intersectio	2.634	2.623	2.177	2.153
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	689	778	467	467
d_b, Bicycle Delay [s]	19.34	16.81	26.45	26.45
l_b,int, Bicycle LOS Score for Intersection	2.527	2.802	2.135	1.796
Bicycle LOS	B	C	B	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Moreno Beach Dr/ Brodiaea Ave

Control Type:	Two-way stop	Delay (sec / veh):	37.9
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.017

Intersection Setup

Name	Moreno Beach Drive			Moreno Beach Drive			Brodiaea Avenue			Brodiaea Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	0	0	0	0	0	0
Entry Pocket Length [ft]	150.00	100.00	200.00	150.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name	Moreno Beach Drive			Moreno Beach Drive			Brodiaea Avenue			Brodiaea Avenue		
Base Volume Input [veh/h]	4	583	29	52	739	24	14	2	11	18	2	29
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	4	583	29	52	739	24	14	2	11	18	2	29
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	146	7	13	185	6	4	1	3	5	1	7
Total Analysis Volume [veh/h]	4	583	29	52	739	24	14	2	11	18	2	29
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.01	0.00	0.05	0.01	0.00	0.10	0.02	0.02	0.11	0.02	0.04
d_M, Delay for Movement [s/veh]	9.21	0.00	0.00	8.89	0.00	0.00	34.84	37.89	13.75	29.47	36.68	12.51
Movement LOS	A	A	A	A	A	A	D	E	B	D	E	B
95th-Percentile Queue Length [veh/ln]	0.01	0.00	0.00	0.17	0.00	0.00	0.47	0.47	0.47	0.59	0.59	0.59
95th-Percentile Queue Length [ft/ln]	0.35	0.00	0.00	4.21	0.00	0.00	11.82	11.82	11.82	14.76	14.76	14.76
d_A, Approach Delay [s/veh]	0.06			0.57			26.47			19.73		
Approach LOS	A			A			D			C		
d_I, Intersection Delay [s/veh]	1.45											
Intersection LOS	E											

Intersection Level Of Service Report
Intersection 3: Moreno Beach Dr/ Cactus Ave

Control Type:	Signalized	Delay (sec / veh):	27.9
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.292

Intersection Setup

Name	Moreno Beach Drive			Moreno Beach Drive			Cactus Avenue			Cactus Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	210.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	2	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	132.11	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			30.00			45.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Moreno Beach Drive			Moreno Beach Drive			Cactus Avenue			Cactus Avenue		
Base Volume Input [veh/h]	113	365	30	53	526	94	96	165	120	11	95	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	113	365	30	53	526	94	96	165	120	11	95	20
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	28	91	8	13	132	24	24	41	30	3	24	5
Total Analysis Volume [veh/h]	113	365	30	53	526	94	96	165	120	11	95	20
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	5	2	2	1	6	6	7	4	0	3	8	0
Auxiliary Signal Groups			2,3			6,7						
Maximum Green [s]	19	22	22	20	23	23	23	32	0	20	29	0
Amber [s]	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0.0	7.0	7.0	0.0	8.0	8.0	0.0	7.0	0.0	0.0	8.0	0.0
Pedestrian Clearance [s]	0.0	17.0	17.0	0.0	17.0	17.0	0.0	27.0	0.0	0.0	24.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	28.0	31.0	31.0	26.0	29.0	29.0	27.0	38.0	0.0	25.0	36.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	4	10	10	4	10	10	4	6	0	4	6	0
Vehicle Extension [s]	2.0	4.0	4.0	2.0	4.0	4.0	2.0	4.0	0.0	2.0	4.0	0.0
Minimum Recall	No	No	No	No	No	No	No	No		No	No	
Maximum Recall	No	No	No	No	No	No	No	No		No	No	
Pedestrian Recall	No	No	No	No	No	No	No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Calculated Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	9.3	85.0	90.3	4.6	80.4	92.6	8.3	13.1	13.1	1.3	6.1	6.1
g / C, Green / Cycle	0.08	0.71	0.75	0.04	0.67	0.77	0.07	0.11	0.11	0.01	0.05	0.05
(v / s)_i Volume / Saturation Flow Rate	0.06	0.10	0.02	0.03	0.10	0.06	0.05	0.08	0.08	0.01	0.03	0.03
s, saturation flow rate [veh/h]	1810	3618	1615	1810	5176	1615	1810	1900	1644	1810	1900	1789
c, Capacity [veh/h]	140	2560	1214	70	3463	1246	125	208	180	20	97	91
d1, Uniform Delay [s]	54.47	5.70	3.76	57.12	7.32	3.33	54.90	51.65	51.88	59.06	55.73	55.81
k, delay calibration	0.04	0.50	0.50	0.04	0.50	0.50	0.04	0.15	0.15	0.04	0.15	0.15
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.11	0.12	0.04	6.11	0.09	0.12	3.67	6.46	8.83	8.90	8.11	9.56
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, 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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.81	0.14	0.02	0.76	0.15	0.08	0.77	0.72	0.76	0.56	0.60	0.62
d, Delay for Lane Group [s/veh]	58.58	5.82	3.80	63.23	7.41	3.44	58.57	58.11	60.71	67.96	63.84	65.37
Lane Group LOS	E	A	A	E	A	A	E	E	E	E	E	E
Critical Lane Group	Yes	No	No	No	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.41	1.24	0.15	1.71	1.62	0.51	2.91	4.60	4.31	0.37	1.88	1.88
50th-Percentile Queue Length [ft/ln]	85.25	31.10	3.73	42.78	40.40	12.78	72.80	115.07	107.74	9.29	47.06	47.11
95th-Percentile Queue Length [veh/ln]	6.14	2.24	0.27	3.08	2.91	0.92	5.24	8.12	7.71	0.67	3.39	3.39
95th-Percentile Queue Length [ft/ln]	153.45	55.97	6.71	77.01	72.71	23.01	131.05	203.03	192.86	16.73	84.71	84.80

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	58.58	5.82	3.80	63.23	7.41	3.44	58.57	58.36	60.71	67.96	64.44	65.37
Movement LOS	E	A	A	E	A	A	E	E	E	E	E	E
d_A, Approach Delay [s/veh]	17.43			11.25			59.15			64.89		
Approach LOS	B			B			E			E		
d_I, Intersection Delay [s/veh]	27.93											
Intersection LOS	C											
Intersection V/C	0.292											

Emissions

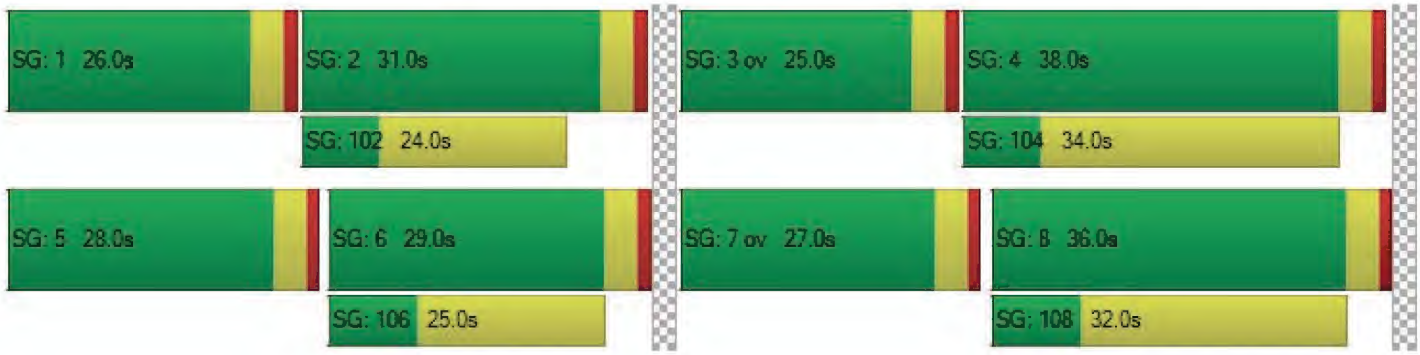
Vehicle Miles Traveled [mph]	9.95	32.13	2.64	13.25	131.47	23.50	7.41	11.52	10.49	0.84	4.43	4.37
Stops [stops/h]	102.30	74.63	4.47	51.34	145.42	15.34	87.36	138.08	129.29	11.15	56.48	56.53
Fuel consumption [US gal/h]	3.25	2.65	0.18	1.51	7.01	1.12	2.48	3.88	3.65	0.35	1.77	1.77
CO [g/h]	227.20	185.48	12.60	105.61	489.93	78.14	173.66	270.90	254.79	24.57	123.57	123.95
NOx [g/h]	44.21	36.09	2.45	20.55	95.32	15.20	33.79	52.71	49.57	4.78	24.04	24.12
VOC [g/h]	52.66	42.99	2.92	24.48	113.55	18.11	40.25	62.78	59.05	5.69	28.64	28.73

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	12.0	12.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	49.50	48.60	48.60	49.50
l_p,int, Pedestrian LOS Score for Intersectio	2.878	2.879	2.513	2.435
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	450	417	567	533
d_b, Bicycle Delay [s]	36.04	37.60	30.82	32.27
l_b,int, Bicycle LOS Score for Intersection	1.979	1.930	1.874	1.664
Bicycle LOS	A	A	A	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



OPENING YEAR
TRAFFIC CONDITIONS

Intersection Level Of Service Report
Intersection 1: Moreno Beach Dr/ Alessandro Blvd

Control Type:	Signalized	Delay (sec / veh):	33.5
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.829

Intersection Setup

Name	Moreno Beach Drive			Moreno Beach Drive			Alessandro Boulevard			Alessandro Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	0	1	0	0
Entry Pocket Length [ft]	110.00	100.00	100.00	150.00	100.00	100.00	100.00	100.00	100.00	200.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			40.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Moreno Beach Drive			Moreno Beach Drive			Alessandro Boulevard			Alessandro Boulevard		
Base Volume Input [veh/h]	93	506	28	11	405	59	54	101	52	39	175	16
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	2	28	1	0	50	48	47	345	4	1	137	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	99	554	30	11	471	109	103	450	58	42	319	17
Peak Hour Factor	0.9030	0.9030	0.9030	0.9030	0.9030	0.9030	0.9030	0.9030	0.9030	0.9030	0.9030	0.9030
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	27	153	8	3	130	30	29	125	16	12	88	5
Total Analysis Volume [veh/h]	110	614	33	12	522	121	114	498	64	47	353	19
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	8	28	0	5	25	0	10	26	0	5	21	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	10.0	0.0	0.0	10.0	0.0	0.0	14.0	0.0	0.0	14.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	12.0	32.0	0.0	9.0	29.0	0.0	14.0	30.0	0.0	9.0	25.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C
C, Calculated Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6.3	33.7	33.7	1.2	28.7	28.7	6.5	25.8	3.3	22.6
g / C, Green / Cycle	0.08	0.42	0.42	0.02	0.36	0.36	0.08	0.32	0.04	0.28
(v / s)_i Volume / Saturation Flow Rate	0.06	0.32	0.02	0.01	0.27	0.07	0.06	0.30	0.03	0.20
s, saturation flow rate [veh/h]	1810	1900	1615	1810	1900	1615	1810	1863	1810	1883
c, Capacity [veh/h]	142	798	678	29	680	578	148	601	75	532
d1, Uniform Delay [s]	36.17	19.88	13.74	38.98	22.75	17.84	36.01	26.28	37.75	25.68
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.35	0.11	0.19
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.71	7.05	0.14	9.00	8.13	0.82	8.28	18.66	8.47	2.87
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.78	0.77	0.05	0.41	0.77	0.21	0.77	0.94	0.63	0.70
d, Delay for Lane Group [s/veh]	44.89	26.93	13.87	47.98	30.88	18.66	44.29	44.94	46.22	28.54
Lane Group LOS	D	C	B	D	C	B	D	D	D	C
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	2.33	10.00	0.34	0.29	9.23	1.53	2.42	12.54	1.02	6.06
50th-Percentile Queue Length [ft/ln]	58.13	250.02	8.47	7.36	230.86	38.28	60.45	313.51	25.52	151.39
95th-Percentile Queue Length [veh/ln]	4.19	15.19	0.61	0.53	14.22	2.76	4.35	18.35	1.84	10.09
95th-Percentile Queue Length [ft/ln]	104.63	379.68	15.25	13.24	355.46	68.91	108.80	458.70	45.94	252.29

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	44.89	26.93	13.87	47.98	30.88	18.66	44.29	44.94	44.94	46.22	28.54	28.54
Movement LOS	D	C	B	D	C	B	D	D	D	D	C	C
d_A, Approach Delay [s/veh]	28.97			28.94			44.83			30.53		
Approach LOS	C			C			D			C		
d_I, Intersection Delay [s/veh]	33.50											
Intersection LOS	C											
Intersection V/C	0.829											

Emissions

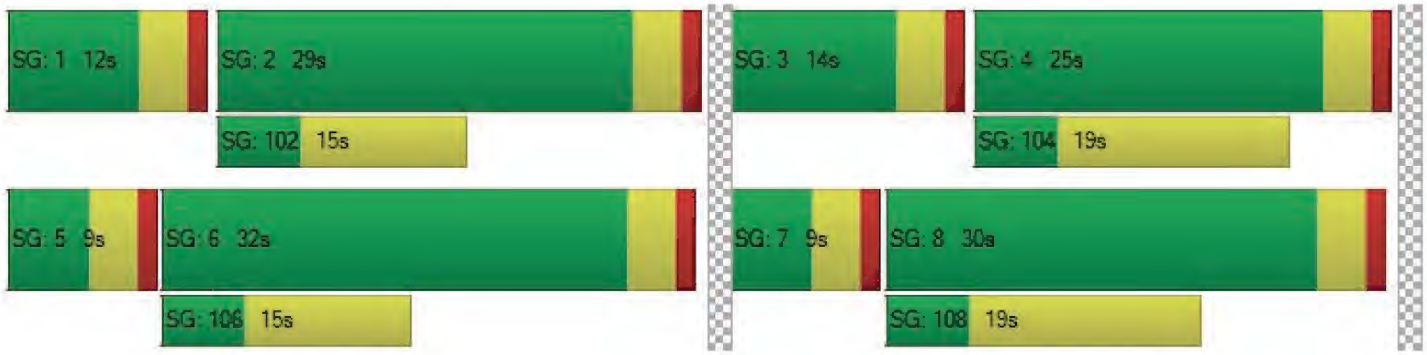
Vehicle Miles Traveled [mph]	13.22	73.81	3.97	0.99	43.03	9.97	8.44	41.60	3.70	29.32
Stops [stops/h]	104.63	450.04	15.25	13.24	415.56	68.91	108.80	564.32	45.94	272.50
Fuel consumption [US gal/h]	2.76	11.49	0.42	0.32	9.92	1.66	2.40	12.17	1.27	7.33
CO [g/h]	192.85	803.17	29.27	22.07	693.58	115.91	167.66	850.90	88.87	512.08
NOx [g/h]	37.52	156.27	5.70	4.29	134.94	22.55	32.62	165.55	17.29	99.63
VOC [g/h]	44.69	186.14	6.78	5.11	160.74	26.86	38.86	197.20	20.60	118.68

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.51	31.51	31.51	31.51
l_p,int, Pedestrian LOS Score for Intersectio	2.635	2.639	2.482	2.457
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	700	625	650	525
d_b, Bicycle Delay [s]	16.90	18.91	18.23	21.76
l_b,int, Bicycle LOS Score for Intersection	2.809	2.640	2.675	2.251
Bicycle LOS	C	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Moreno Beach Dr/ Brodiaea Ave

Control Type:	Two-way stop	Delay (sec / veh):	36.7
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.045

Intersection Setup

Name	Moreno Beach Drive			Moreno Beach Drive			Brodiaea Avenue			Brodiaea Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	0	0	0	0	0	0
Entry Pocket Length [ft]	150.00	100.00	200.00	150.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name	Moreno Beach Drive			Moreno Beach Drive			Brodiaea Avenue			Brodiaea Avenue		
Base Volume Input [veh/h]	10	620	20	28	468	19	2	1	9	22	6	39
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	31	0	0	50	3	2	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	676	21	29	537	23	4	1	9	23	6	41
Peak Hour Factor	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	181	6	8	144	6	1	0	2	6	2	11
Total Analysis Volume [veh/h]	11	724	22	31	575	25	4	1	10	25	6	44
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.01	0.00	0.04	0.01	0.00	0.03	0.01	0.01	0.16	0.04	0.07
d_M, Delay for Movement [s/veh]	8.69	0.00	0.00	9.28	0.00	0.00	28.90	32.87	10.70	32.38	36.70	15.38
Movement LOS	A	A	A	A	A	A	D	D	B	D	E	C
95th-Percentile Queue Length [veh/ln]	0.03	0.00	0.00	0.11	0.00	0.00	0.15	0.15	0.15	1.07	1.07	1.07
95th-Percentile Queue Length [ft/ln]	0.85	0.00	0.00	2.76	0.00	0.00	3.75	3.75	3.75	26.71	26.71	26.71
d_A, Approach Delay [s/veh]	0.13			0.46			17.03			22.75		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	1.59											
Intersection LOS	E											

Intersection Level Of Service Report
Intersection 3: Moreno Beach Dr/ Cactus Ave

Control Type:	Signalized	Delay (sec / veh):	30.4
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.445

Intersection Setup

Name	Moreno Beach Drive			Moreno Beach Drive			Cactus Avenue			Cactus Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	210.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	2	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	132.11	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			30.00			45.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Moreno Beach Drive			Moreno Beach Drive			Cactus Avenue			Cactus Avenue		
Base Volume Input [veh/h]	115	469	54	30	365	67	94	92	76	63	131	36
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	35	24	0	0	36	14	6	330	42	0	160	1
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	155	512	56	31	416	84	104	426	121	66	296	38
Peak Hour Factor	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	41	136	15	8	110	22	28	113	32	17	78	10
Total Analysis Volume [veh/h]	164	543	59	33	441	89	110	452	128	70	314	40
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	6	5	2	2	3	8	0	7	4	0
Auxiliary Signal Groups			6,7			2,3						
Maximum Green [s]	21	26	26	17	22	22	19	30	0	21	32	0
Amber [s]	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0.0	5.0	5.0	0.0	5.0	5.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	17.0	17.0	0.0	17.0	17.0	0.0	24.0	0.0	0.0	27.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	20.0	28.0	28.0	18.0	26.0	26.0	18.0	33.0	0.0	21.0	36.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	10	5	10	10	5	10	0	5	10	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No	No	No	No	No	No	No		No	No	
Maximum Recall	No	No	No	No	No	No	No	No		No	No	
Pedestrian Recall	No	No	No	No	No	No	No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Calculated Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	11.1	57.1	66.3	3.0	49.0	60.9	7.8	18.7	18.7	5.2	16.1	16.1
g / C, Green / Cycle	0.11	0.57	0.66	0.03	0.49	0.61	0.08	0.19	0.19	0.05	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.09	0.15	0.04	0.02	0.09	0.06	0.06	0.16	0.16	0.04	0.09	0.10
s, saturation flow rate [veh/h]	1810	3618	1615	1810	5176	1615	1810	1900	1758	1810	1900	1826
c, Capacity [veh/h]	201	2062	1069	56	2535	982	142	355	329	94	306	294
d1, Uniform Delay [s]	43.46	10.88	5.93	47.83	14.22	8.12	45.22	39.25	39.29	46.73	38.88	38.93
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.88	0.31	0.10	9.56	0.15	0.18	8.73	5.53	6.16	10.85	1.79	1.92
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, 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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.82	0.26	0.06	0.59	0.17	0.09	0.78	0.85	0.85	0.74	0.59	0.59
d, Delay for Lane Group [s/veh]	51.34	11.19	6.02	57.39	14.37	8.30	53.95	44.78	45.45	57.58	40.67	40.85
Lane Group LOS	D	B	A	E	B	A	D	D	D	E	D	D
Critical Lane Group	Yes	No	No	No	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	4.21	2.69	0.37	0.96	1.85	0.80	2.93	7.33	6.89	1.93	4.02	3.93
50th-Percentile Queue Length [ft/ln]	105.25	67.15	9.27	23.92	46.16	20.05	73.13	183.26	172.19	48.15	100.51	98.16
95th-Percentile Queue Length [veh/ln]	7.57	4.83	0.67	1.72	3.32	1.44	5.27	11.77	11.19	3.47	7.24	7.07
95th-Percentile Queue Length [ft/ln]	189.37	120.86	16.69	43.05	83.08	36.10	131.63	294.27	279.80	86.67	180.92	176.68

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	51.34	11.19	6.02	57.39	14.37	8.30	53.95	45.00	45.45	57.58	40.75	40.85
Movement LOS	D	B	A	E	B	A	D	D	D	E	D	D
d_A, Approach Delay [s/veh]	19.39			15.94			46.51			43.54		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	30.45											
Intersection LOS	C											
Intersection V/C	0.445											

Emissions

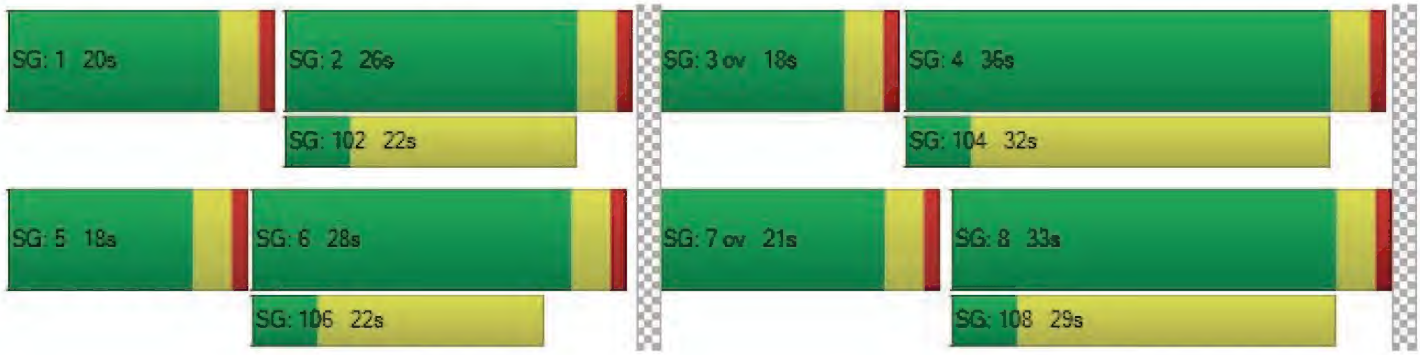
Vehicle Miles Traveled [mph]	14.44	47.79	5.19	8.25	110.23	22.25	8.50	23.20	21.60	5.35	13.72	13.36
Stops [stops/h]	151.55	193.38	13.35	34.44	199.39	28.88	105.31	263.90	247.96	69.34	144.74	141.35
Fuel consumption [US gal/h]	4.52	5.81	0.45	0.92	6.93	1.23	2.81	6.81	6.41	2.06	4.17	4.07
CO [g/h]	316.17	405.83	31.54	63.97	484.36	85.68	196.28	476.21	448.06	144.26	291.23	284.38
NOx [g/h]	61.51	78.96	6.14	12.45	94.24	16.67	38.19	92.65	87.18	28.07	56.66	55.33
VOC [g/h]	73.28	94.06	7.31	14.83	112.26	19.86	45.49	110.37	103.84	33.43	67.49	65.91

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersectio	2.927	2.885	2.674	2.621
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	480	440	580	640
d_b, Bicycle Delay [s]	28.88	30.42	25.21	23.12
l_b,int, Bicycle LOS Score for Intersection	2.192	1.869	2.129	1.909
Bicycle LOS	B	A	B	A

Sequence

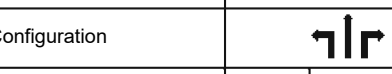
Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 1: Moreno Beach Dr/ Alessandro Blvd

Control Type:	Signalized	Delay (sec / veh):	43.1
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.923

Intersection Setup

Name	Moreno Beach Drive			Moreno Beach Drive			Alessandro Boulevard			Alessandro Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	0	1	0	0
Entry Pocket Length [ft]	110.00	100.00	100.00	150.00	100.00	100.00	100.00	100.00	100.00	200.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			40.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Moreno Beach Drive			Moreno Beach Drive			Alessandro Boulevard			Alessandro Boulevard		
Base Volume Input [veh/h]	54	491	41	26	667	60	87	183	79	44	84	15
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	17	72	14	0	44	58	59	230	5	1	320	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	73	583	57	27	738	120	150	420	87	47	407	16
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	150	15	7	190	31	39	108	22	12	105	4
Total Analysis Volume [veh/h]	75	601	59	28	761	124	155	433	90	48	420	16
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	6	33	0	9	36	0	10	27	0	5	22	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	10.0	0.0	0.0	10.0	0.0	0.0	14.0	0.0	0.0	14.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	10.0	37.0	0.0	13.0	40.0	0.0	14.0	31.0	0.0	9.0	26.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C
C, Calculated Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	4.8	39.7	39.7	2.6	37.4	37.4	9.4	28.2	3.5	22.4
g / C, Green / Cycle	0.05	0.44	0.44	0.03	0.42	0.42	0.10	0.31	0.04	0.25
(v / s)_i Volume / Saturation Flow Rate	0.04	0.32	0.04	0.02	0.40	0.08	0.09	0.28	0.03	0.23
s, saturation flow rate [veh/h]	1810	1900	1615	1810	1900	1615	1810	1844	1810	1888
c, Capacity [veh/h]	97	837	712	53	790	672	188	578	71	469
d1, Uniform Delay [s]	42.04	20.60	14.62	43.09	25.60	16.62	39.50	29.61	42.68	33.06
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.22	0.37	0.11	0.38
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	12.13	5.26	0.23	8.08	24.13	0.61	16.16	16.07	10.81	22.48
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.77	0.72	0.08	0.53	0.96	0.18	0.82	0.90	0.68	0.93
d, Delay for Lane Group [s/veh]	54.17	25.85	14.84	51.17	49.74	17.23	55.65	45.67	53.49	55.54
Lane Group LOS	D	C	B	D	D	B	E	D	D	E
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.90	10.37	0.68	0.71	19.30	1.59	4.08	12.67	1.21	11.43
50th-Percentile Queue Length [ft/ln]	47.49	259.24	17.06	17.69	482.61	39.87	101.92	316.77	30.25	285.76
95th-Percentile Queue Length [veh/ln]	3.42	15.65	1.23	1.27	26.51	2.87	7.34	18.51	2.18	16.97
95th-Percentile Queue Length [ft/ln]	85.48	391.27	30.71	31.84	662.75	71.77	183.45	462.72	54.45	424.37

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	54.17	25.85	14.84	51.17	49.74	17.23	55.65	45.67	45.67	53.49	55.54	55.54
Movement LOS	D	C	B	D	D	B	E	D	D	D	E	E
d_A, Approach Delay [s/veh]	27.86			45.36			47.96			55.34		
Approach LOS	C			D			D			E		
d_I, Intersection Delay [s/veh]	43.13											
Intersection LOS	D											
Intersection V/C	0.923											

Emissions

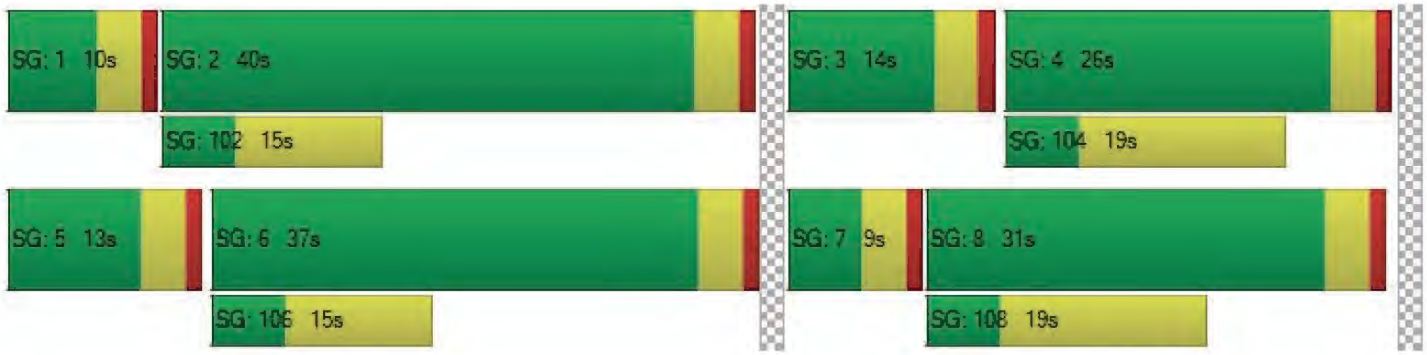
Vehicle Miles Traveled [mph]	9.02	72.25	7.09	2.31	62.73	10.22	11.47	38.72	3.78	34.37
Stops [stops/h]	75.98	414.78	27.30	28.30	772.18	63.79	163.07	506.83	48.40	457.21
Fuel consumption [US gal/h]	2.08	10.80	0.76	0.72	19.45	1.58	3.77	11.23	1.39	13.10
CO [g/h]	145.43	754.61	53.18	50.51	1359.76	110.32	263.40	784.74	97.31	915.45
NOx [g/h]	28.29	146.82	10.35	9.83	264.56	21.46	51.25	152.68	18.93	178.11
VOC [g/h]	33.70	174.89	12.32	11.71	315.14	25.57	61.04	181.87	22.55	212.16

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersectio	2.730	2.749	2.504	2.486
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	733	800	600	489
d_b, Bicycle Delay [s]	18.05	16.20	22.05	25.69
l_b,int, Bicycle LOS Score for Intersection	2.772	3.066	2.678	2.358
Bicycle LOS	C	C	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Moreno Beach Dr/ Brodiaea Ave

Control Type:	Two-way stop	Delay (sec / veh):	83.6
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.027

Intersection Setup

Name	Moreno Beach Drive			Moreno Beach Drive			Brodiaea Avenue			Brodiaea Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	0	0	0	0	0	0
Entry Pocket Length [ft]	150.00	100.00	200.00	150.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name	Moreno Beach Drive			Moreno Beach Drive			Brodiaea Avenue			Brodiaea Avenue		
Base Volume Input [veh/h]	4	583	29	52	739	24	14	2	11	18	2	29
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	84	0	1	47	3	19	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	4	691	30	55	816	28	34	2	11	19	2	30
Peak Hour Factor	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	188	8	15	221	8	9	1	3	5	1	8
Total Analysis Volume [veh/h]	4	750	33	60	886	30	37	2	12	21	2	33
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.01	0.00	0.07	0.01	0.00	0.44	0.03	0.02	0.20	0.03	0.05
d_M, Delay for Movement [s/veh]	9.81	0.00	0.00	9.59	0.00	0.00	77.39	83.57	40.95	47.20	59.94	17.81
Movement LOS	A	A	A	A	A	A	F	F	E	E	F	C
95th-Percentile Queue Length [veh/ln]	0.02	0.00	0.00	0.23	0.00	0.00	2.17	2.17	2.17	1.12	1.12	1.12
95th-Percentile Queue Length [ft/ln]	0.40	0.00	0.00	5.73	0.00	0.00	54.30	54.30	54.30	27.97	27.97	27.97
d_A, Approach Delay [s/veh]	0.05			0.59			69.06			30.34		
Approach LOS	A			A			F			D		
d_I, Intersection Delay [s/veh]	3.12											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 3: Moreno Beach Dr/ Cactus Ave

Control Type:	Signalized	Delay (sec / veh):	30.9
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.495

Intersection Setup

Name	Moreno Beach Drive			Moreno Beach Drive			Cactus Avenue			Cactus Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	210.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	2	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	132.11	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			30.00			45.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Moreno Beach Drive			Moreno Beach Drive			Cactus Avenue			Cactus Avenue		
Base Volume Input [veh/h]	113	365	30	53	526	94	96	165	120	11	95	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	58	54	0	1	35	11	21	247	48	0	307	9
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	176	434	31	56	582	109	121	419	173	11	406	30
Peak Hour Factor	0.9460	0.9460	0.9460	0.9460	0.9460	0.9460	0.9460	0.9460	0.9460	0.9460	0.9460	0.9460
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	47	115	8	15	154	29	32	111	46	3	107	8
Total Analysis Volume [veh/h]	186	459	33	59	615	115	128	443	183	12	429	32
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	6	5	2	2	3	8	0	7	4	0
Auxiliary Signal Groups			6,7			2,3						
Maximum Green [s]	22	25	25	19	22	22	18	32	0	18	32	0
Amber [s]	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0.0	5.0	5.0	0.0	5.0	5.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	17.0	17.0	0.0	17.0	17.0	0.0	24.0	0.0	0.0	27.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	21.0	26.0	26.0	21.0	26.0	26.0	17.0	33.0	0.0	20.0	36.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	10	5	10	10	5	10	0	5	10	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No	No	No	No	No	No	No		No	No	
Maximum Recall	No	No	No	No	No	No	No	No		No	No	
Pedestrian Recall	No	No	No	No	No	No	No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Calculated Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	12.4	55.8	61.3	4.3	47.8	60.7	8.9	22.4	22.4	1.5	14.9	14.9
g / C, Green / Cycle	0.12	0.56	0.61	0.04	0.48	0.61	0.09	0.22	0.22	0.01	0.15	0.15
(v / s)_i Volume / Saturation Flow Rate	0.10	0.13	0.02	0.03	0.12	0.07	0.07	0.17	0.17	0.01	0.12	0.12
s, saturation flow rate [veh/h]	1810	3618	1615	1810	5176	1615	1810	1900	1714	1810	1900	1854
c, Capacity [veh/h]	224	2017	990	79	2472	980	161	424	383	28	284	277
d1, Uniform Delay [s]	42.80	11.21	7.65	47.26	15.48	8.33	44.64	36.45	36.49	48.80	41.20	41.24
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.76	0.26	0.06	12.87	0.24	0.24	8.49	3.04	3.43	10.31	5.76	6.08
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, 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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.83	0.23	0.03	0.74	0.25	0.12	0.79	0.77	0.78	0.43	0.82	0.82
d, Delay for Lane Group [s/veh]	50.56	11.48	7.72	60.13	15.73	8.57	53.13	39.49	39.92	59.11	46.96	47.32
Lane Group LOS	D	B	A	E	B	A	D	D	D	E	D	D
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	4.74	2.30	0.25	1.73	2.76	1.06	3.37	7.50	6.85	0.36	5.71	5.64
50th-Percentile Queue Length [ft/ln]	118.57	57.55	6.29	43.20	68.93	26.52	84.37	187.58	171.23	9.10	142.80	140.91
95th-Percentile Queue Length [veh/ln]	8.31	4.14	0.45	3.11	4.96	1.91	6.07	12.00	11.14	0.66	9.63	9.53
95th-Percentile Queue Length [ft/ln]	207.86	103.58	11.32	77.76	124.08	47.73	151.87	299.89	278.53	16.39	240.79	238.25

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	50.56	11.48	7.72	60.13	15.73	8.57	53.13	39.60	39.92	59.11	47.13	47.32
Movement LOS	D	B	A	E	B	A	D	D	D	E	D	D
d_A, Approach Delay [s/veh]	22.01			18.00			41.98			47.45		
Approach LOS	C			B			D			D		
d_I, Intersection Delay [s/veh]	30.89											
Intersection LOS	C											
Intersection V/C	0.495											

Emissions

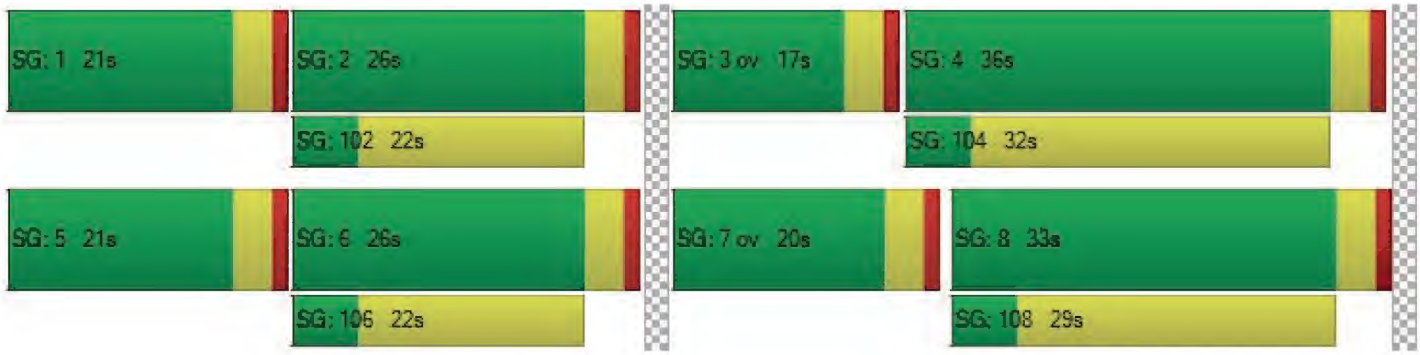
Vehicle Miles Traveled [mph]	16.37	40.40	2.90	14.75	153.72	28.74	9.89	25.36	22.99	0.92	17.79	17.47
Stops [stops/h]	170.74	165.73	9.06	62.21	297.78	38.19	121.50	270.12	246.57	13.11	205.63	202.91
Fuel consumption [US gal/h]	5.08	4.97	0.29	1.67	9.94	1.59	3.23	6.87	6.27	0.38	5.97	5.90
CO [g/h]	355.28	347.34	20.14	116.92	694.91	111.48	226.01	479.95	438.41	26.30	417.65	412.37
NOx [g/h]	69.12	67.58	3.92	22.75	135.20	21.69	43.97	93.38	85.30	5.12	81.26	80.23
VOC [g/h]	82.34	80.50	4.67	27.10	161.05	25.84	52.38	111.23	101.61	6.10	96.79	95.57

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersectio	2.946	2.904	2.741	2.634
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	440	440	580	640
d_b, Bicycle Delay [s]	30.42	30.42	25.21	23.12
l_b,int, Bicycle LOS Score for Intersection	2.119	1.994	2.182	1.950
Bicycle LOS	B	A	B	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



OPENING YEAR PLUS PROJECT
TRAFFIC CONDITIONS

Intersection Level Of Service Report
Intersection 1: Moreno Beach Dr/ Alessandro Blvd

Control Type:	Signalized	Delay (sec / veh):	35.5
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.823

Intersection Setup

Name	Moreno Beach Drive			Moreno Beach Drive			Alessandro Boulevard			Alessandro Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	0	1	0	0
Entry Pocket Length [ft]	110.00	100.00	100.00	150.00	100.00	100.00	100.00	100.00	100.00	200.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			40.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Moreno Beach Drive			Moreno Beach Drive			Alessandro Boulevard			Alessandro Boulevard		
Base Volume Input [veh/h]	93	506	28	11	405	59	54	101	52	39	175	16
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	12	51	4	0	57	48	47	345	8	2	137	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	109	577	33	11	478	109	103	450	62	43	319	17
Peak Hour Factor	0.9030	0.9030	0.9030	0.9030	0.9030	0.9030	0.9030	0.9030	0.9030	0.9030	0.9030	0.9030
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	30	160	9	3	132	30	29	125	17	12	88	5
Total Analysis Volume [veh/h]	121	639	37	12	529	121	114	498	69	48	353	19
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	12	37	0	6	31	0	15	34	0	7	26	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	10.0	0.0	0.0	10.0	0.0	0.0	17.0	0.0	0.0	14.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	14.0	37.0	0.0	9.0	32.0	0.0	17.0	34.0	0.0	10.0	27.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C
C, Calculated Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	7.6	39.9	39.9	1.4	33.6	33.6	7.3	29.3	3.5	25.5
g / C, Green / Cycle	0.08	0.44	0.44	0.02	0.37	0.37	0.08	0.33	0.04	0.28
(v / s)_i Volume / Saturation Flow Rate	0.07	0.34	0.02	0.01	0.28	0.07	0.06	0.30	0.03	0.20
s, saturation flow rate [veh/h]	1810	1900	1615	1810	1900	1615	1810	1860	1810	1883
c, Capacity [veh/h]	154	839	714	28	708	602	148	605	72	533
d1, Uniform Delay [s]	40.37	21.12	14.35	43.89	24.56	19.16	40.51	29.49	42.63	28.82
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.34	0.11	0.17
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.52	6.45	0.14	9.68	7.09	0.75	8.27	18.52	10.21	2.64
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.79	0.76	0.05	0.42	0.75	0.20	0.77	0.94	0.67	0.70
d, Delay for Lane Group [s/veh]	48.89	27.57	14.49	53.57	31.65	19.91	48.78	48.01	52.84	31.46
Lane Group LOS	D	C	B	D	C	B	D	D	D	C
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	2.87	11.48	0.42	0.33	10.27	1.71	2.73	14.15	1.20	6.94
50th-Percentile Queue Length [ft/ln]	71.73	287.06	10.50	8.27	256.76	42.74	68.22	353.71	30.03	173.41
95th-Percentile Queue Length [veh/ln]	5.16	17.04	0.76	0.60	15.53	3.08	4.91	20.32	2.16	11.26
95th-Percentile Queue Length [ft/ln]	129.11	426.00	18.89	14.88	388.16	76.92	122.80	507.93	54.05	281.39

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	48.89	27.57	14.49	53.57	31.65	19.91	48.78	48.01	48.01	52.84	31.46	31.46
Movement LOS	D	C	B	D	C	B	D	D	D	D	C	C
d_A, Approach Delay [s/veh]	30.20			29.90			48.14			33.91		
Approach LOS	C			C			D			C		
d_I, Intersection Delay [s/veh]	35.50											
Intersection LOS	D											
Intersection V/C	0.823											

Emissions

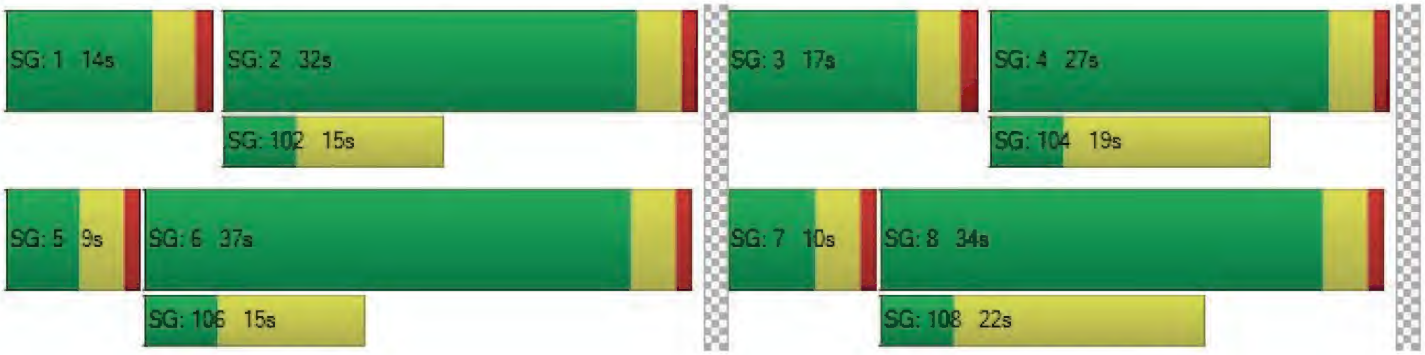
Vehicle Miles Traveled [mph]	14.55	76.82	4.45	0.99	43.61	9.97	8.44	41.97	3.78	29.32
Stops [stops/h]	114.76	459.30	16.79	13.23	410.82	68.38	109.15	565.94	48.04	277.46
Fuel consumption [US gal/h]	3.13	11.93	0.47	0.33	10.01	1.68	2.51	12.60	1.38	7.62
CO [g/h]	218.73	833.83	32.88	23.01	699.68	117.59	175.17	880.90	96.48	532.84
NOx [g/h]	42.56	162.23	6.40	4.48	136.13	22.88	34.08	171.39	18.77	103.67
VOC [g/h]	50.69	193.25	7.62	5.33	162.16	27.25	40.60	204.16	22.36	123.49

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersectio	2.723	2.657	2.495	2.465
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	733	622	667	511
d_b, Bicycle Delay [s]	18.05	21.36	20.00	24.94
l_b,int, Bicycle LOS Score for Intersection	2.875	2.652	2.683	2.253
Bicycle LOS	C	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Moreno Beach Dr/ Brodiaea Ave

Control Type:	Two-way stop	Delay (sec / veh):	50.5
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.079

Intersection Setup

Name	Moreno Beach Drive			Moreno Beach Drive			Brodiaea Avenue			Brodiaea Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	0	0	0	0	0	0
Entry Pocket Length [ft]	150.00	100.00	200.00	150.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name	Moreno Beach Drive			Moreno Beach Drive			Brodiaea Avenue			Brodiaea Avenue		
Base Volume Input [veh/h]	10	620	20	28	468	19	2	1	9	22	6	39
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	31	10	12	50	3	2	1	0	27	3	36
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	676	31	41	537	23	4	2	9	50	9	77
Peak Hour Factor	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	181	8	11	144	6	1	1	2	13	2	21
Total Analysis Volume [veh/h]	11	724	33	44	575	25	4	2	10	54	10	82
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.01	0.00	0.05	0.01	0.00	0.03	0.02	0.01	0.36	0.08	0.13
d_M, Delay for Movement [s/veh]	8.69	0.00	0.00	9.40	0.00	0.00	34.25	35.13	11.05	46.40	50.55	27.78
Movement LOS	A	A	A	A	A	A	D	E	B	E	F	D
95th-Percentile Queue Length [veh/ln]	0.03	0.00	0.00	0.16	0.00	0.00	0.20	0.20	0.20	3.23	3.23	3.23
95th-Percentile Queue Length [ft/ln]	0.85	0.00	0.00	4.02	0.00	0.00	4.92	4.92	4.92	80.67	80.67	80.67
d_A, Approach Delay [s/veh]	0.12			0.64			19.86			36.23		
Approach LOS	A			A			C			E		
d_I, Intersection Delay [s/veh]	3.89											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 3: Moreno Beach Dr/ Cactus Ave

Control Type:	Signalized	Delay (sec / veh):	32.9
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.441

Intersection Setup

Name	Moreno Beach Drive			Moreno Beach Drive			Cactus Avenue			Cactus Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	210.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	2	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	132.11	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			30.00			45.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Moreno Beach Drive			Moreno Beach Drive			Cactus Avenue			Cactus Avenue		
Base Volume Input [veh/h]	115	469	54	30	365	67	94	92	76	63	131	36
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	35	30	0	0	53	24	10	330	42	0	160	1
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	155	518	56	31	433	94	108	426	121	66	296	38
Peak Hour Factor	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	41	137	15	8	115	25	29	113	32	17	78	10
Total Analysis Volume [veh/h]	164	549	59	33	459	100	115	452	128	70	314	40
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	110
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	6	5	2	2	3	8	0	7	4	0
Auxiliary Signal Groups			6,7			2,3						
Maximum Green [s]	21	26	26	17	22	22	19	30	0	21	32	0
Amber [s]	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0.0	5.0	5.0	0.0	5.0	5.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	17.0	17.0	0.0	17.0	17.0	0.0	24.0	0.0	0.0	27.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	25.0	30.0	30.0	21.0	26.0	26.0	23.0	34.0	0.0	25.0	36.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	10	5	10	10	5	10	0	5	10	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No	No	No	No	No	No	No		No	No	
Maximum Recall	No	No	No	No	No	No	No	No		No	No	
Pedestrian Recall	No	No	No	No	No	No	No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Calculated Cycle Length [s]	110	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	12.0	64.8	74.5	3.2	56.0	68.9	8.9	20.3	20.3	5.7	17.0	17.0
g / C, Green / Cycle	0.11	0.59	0.68	0.03	0.51	0.63	0.08	0.18	0.18	0.05	0.15	0.15
(v / s)_i Volume / Saturation Flow Rate	0.09	0.15	0.04	0.02	0.09	0.06	0.06	0.16	0.16	0.04	0.09	0.10
s, saturation flow rate [veh/h]	1810	3618	1615	1810	5176	1615	1810	1900	1758	1810	1900	1826
c, Capacity [veh/h]	198	2130	1093	53	2633	1012	147	351	324	94	294	283
d1, Uniform Delay [s]	47.96	10.96	5.95	52.78	14.57	8.18	49.56	43.45	43.50	51.44	43.38	43.43
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.49	0.29	0.09	11.26	0.14	0.20	8.64	6.07	6.76	11.12	2.04	2.19
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, 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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.83	0.26	0.05	0.62	0.17	0.10	0.78	0.86	0.86	0.75	0.61	0.62
d, Delay for Lane Group [s/veh]	56.46	11.25	6.05	64.04	14.71	8.37	58.20	49.52	50.26	62.56	45.41	45.62
Lane Group LOS	E	B	A	E	B	A	E	D	D	E	D	D
Critical Lane Group	Yes	No	No	No	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	4.69	2.92	0.40	1.07	2.07	0.96	3.36	8.21	7.71	2.12	4.53	4.43
50th-Percentile Queue Length [ft/ln]	117.28	73.00	10.00	26.66	51.74	24.08	84.07	205.24	192.75	53.09	113.30	110.64
95th-Percentile Queue Length [veh/ln]	8.24	5.26	0.72	1.92	3.73	1.73	6.05	12.91	12.26	3.82	8.02	7.88
95th-Percentile Queue Length [ft/ln]	206.08	131.39	18.00	47.98	93.13	43.35	151.33	322.72	306.59	95.57	200.58	196.89

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	56.46	11.25	6.05	64.04	14.71	8.37	58.20	49.77	50.26	62.56	45.50	45.62
Movement LOS	E	B	A	E	B	A	E	D	D	E	D	D
d_A, Approach Delay [s/veh]	20.46			16.39			51.25			48.33		
Approach LOS	C			B			D			D		
d_I, Intersection Delay [s/veh]	32.87											
Intersection LOS	C											
Intersection V/C	0.441											

Emissions

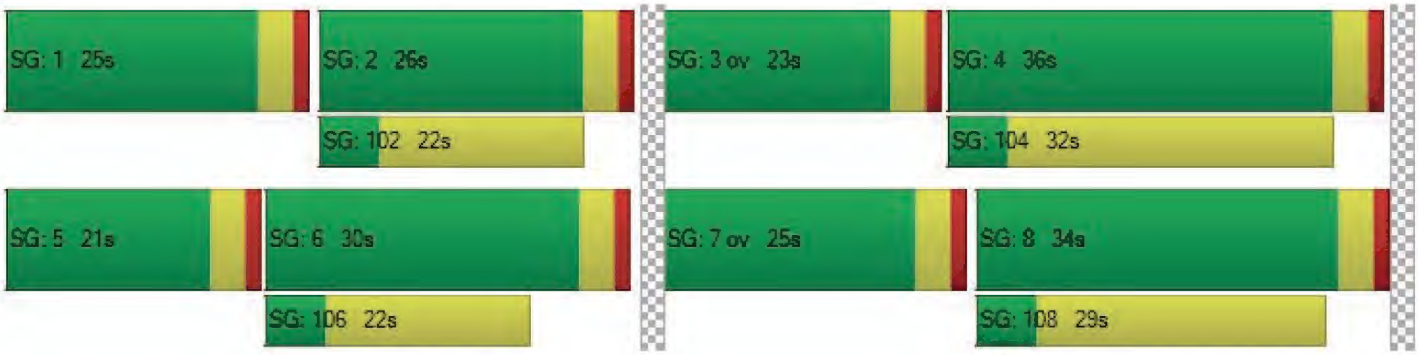
Vehicle Miles Traveled [mph]	14.44	48.32	5.19	8.25	114.73	25.00	8.88	23.20	21.60	5.35	13.72	13.36
Stops [stops/h]	153.53	191.12	13.09	34.90	203.19	31.53	110.06	268.68	252.32	69.50	148.31	144.84
Fuel consumption [US gal/h]	4.72	5.81	0.45	0.96	7.22	1.37	3.03	7.16	6.74	2.14	4.39	4.29
CO [g/h]	330.21	406.07	31.28	67.27	504.65	96.01	212.13	500.65	470.93	149.40	307.15	299.97
NOx [g/h]	64.25	79.01	6.09	13.09	98.19	18.68	41.27	97.41	91.63	29.07	59.76	58.36
VOC [g/h]	76.53	94.11	7.25	15.59	116.96	22.25	49.16	116.03	109.14	34.62	71.19	69.52

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	46.37	46.37	46.37	46.37
l_p,int, Pedestrian LOS Score for Intersectio	2.937	2.895	2.683	2.626
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	473	400	545	582
d_b, Bicycle Delay [s]	32.07	35.20	29.09	27.65
l_b,int, Bicycle LOS Score for Intersection	2.197	1.885	2.133	1.909
Bicycle LOS	B	A	B	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: Project Access/ Brodiaea Ave

Control Type:	Two-way stop	Delay (sec / veh):	9.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.003

Intersection Setup

Name	Project Access		Brodiaea Avenue		Brodiaea Avenue	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Project Access		Brodiaea Avenue		Brodiaea Avenue	
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	3	66	23	0	0	1
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	66	23	0	0	1
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	17	6	0	0	0
Total Analysis Volume [veh/h]	3	66	23	0	0	1
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.06	0.01	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	9.00	8.53	7.23	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.20	0.20	0.04	0.04	0.00	0.00
95th-Percentile Queue Length [ft/ln]	5.09	5.09	1.07	1.07	0.00	0.00
d_A, Approach Delay [s/veh]	8.55		7.23		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	8.13					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 1: Moreno Beach Dr/ Alessandro Blvd

Control Type:	Signalized	Delay (sec / veh):	47.1
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.947

Intersection Setup

Name	Moreno Beach Drive			Moreno Beach Drive			Alessandro Boulevard			Alessandro Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	0	1	0	0
Entry Pocket Length [ft]	110.00	100.00	100.00	150.00	100.00	100.00	100.00	100.00	100.00	200.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			40.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Moreno Beach Drive			Moreno Beach Drive			Alessandro Boulevard			Alessandro Boulevard		
Base Volume Input [veh/h]	54	491	41	26	667	60	87	183	79	44	84	15
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	24	87	16	0	67	58	59	230	17	5	320	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	80	598	59	27	761	120	150	420	99	51	407	16
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	21	154	15	7	196	31	39	108	26	13	105	4
Total Analysis Volume [veh/h]	82	616	61	28	785	124	155	433	102	53	420	16
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	6	34	0	8	36	0	10	27	0	5	22	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	10.0	0.0	0.0	10.0	0.0	0.0	14.0	0.0	0.0	14.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	10.0	38.0	0.0	12.0	40.0	0.0	14.0	31.0	0.0	9.0	26.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C
C, Calculated Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	5.3	39.7	39.7	2.6	37.0	37.0	9.4	28.0	3.7	22.4
g / C, Green / Cycle	0.06	0.44	0.44	0.03	0.41	0.41	0.10	0.31	0.04	0.25
(v / s)_i Volume / Saturation Flow Rate	0.05	0.32	0.04	0.02	0.41	0.08	0.09	0.29	0.03	0.23
s, saturation flow rate [veh/h]	1810	1900	1615	1810	1900	1615	1810	1838	1810	1888
c, Capacity [veh/h]	106	836	710	54	781	664	189	572	75	469
d1, Uniform Delay [s]	41.78	20.89	14.67	43.02	26.50	16.90	39.49	30.11	42.61	33.07
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.22	0.39	0.11	0.38
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	11.32	5.76	0.24	7.48	33.39	0.62	16.10	20.87	11.71	22.55
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.77	0.74	0.09	0.52	1.00	0.19	0.82	0.94	0.71	0.93
d, Delay for Lane Group [s/veh]	53.09	26.65	14.91	50.49	59.89	17.52	55.59	50.98	54.32	55.62
Lane Group LOS	D	C	B	D	F	B	E	D	D	E
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	2.05	10.83	0.71	0.70	22.04	1.61	4.07	13.79	1.34	11.44
50th-Percentile Queue Length [ft/ln]	51.22	270.78	17.68	17.53	551.07	40.32	101.85	344.69	33.62	285.98
95th-Percentile Queue Length [veh/ln]	3.69	16.23	1.27	1.26	29.85	2.90	7.33	19.88	2.42	16.99
95th-Percentile Queue Length [ft/ln]	92.19	405.71	31.83	31.56	746.25	72.57	183.34	496.94	60.51	424.65

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	53.09	26.65	14.91	50.49	59.89	17.52	55.59	50.98	50.98	54.32	55.62	55.62
Movement LOS	D	C	B	D	F	B	E	D	D	D	E	E
d_A, Approach Delay [s/veh]	28.57			54.00			52.02			55.48		
Approach LOS	C			D			D			E		
d_I, Intersection Delay [s/veh]	47.06											
Intersection LOS	D											
Intersection V/C	0.947											

Emissions

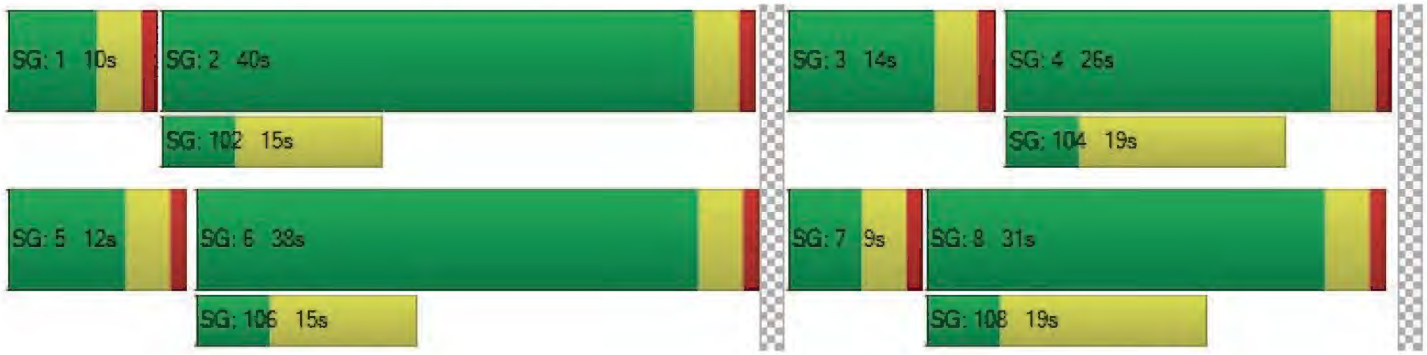
Vehicle Miles Traveled [mph]	9.86	74.05	7.33	2.31	64.71	10.22	11.47	39.60	4.18	34.37
Stops [stops/h]	81.94	433.24	28.29	28.05	881.72	64.51	162.97	551.51	53.79	457.57
Fuel consumption [US gal/h]	2.24	11.27	0.79	0.72	22.75	1.59	3.77	12.39	1.55	13.11
CO [g/h]	156.76	787.51	55.10	50.02	1590.02	111.46	263.18	865.83	108.44	916.34
NOx [g/h]	30.50	153.22	10.72	9.73	309.36	21.69	51.21	168.46	21.10	178.29
VOC [g/h]	36.33	182.51	12.77	11.59	368.50	25.83	61.00	200.67	25.13	212.37

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersectio	2.754	2.763	2.512	2.489
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	756	800	600	489
d_b, Bicycle Delay [s]	17.42	16.20	22.05	25.69
l_b,int, Bicycle LOS Score for Intersection	2.812	3.106	2.698	2.366
Bicycle LOS	C	C	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Moreno Beach Dr/ Brodiaea Ave

Control Type:	Two-way stop	Delay (sec / veh):	146.8
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.120

Intersection Setup

Name	Moreno Beach Drive			Moreno Beach Drive			Brodiaea Avenue			Brodiaea Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	0	0	0	0	0	0
Entry Pocket Length [ft]	150.00	100.00	200.00	150.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name	Moreno Beach Drive			Moreno Beach Drive			Brodiaea Avenue			Brodiaea Avenue		
Base Volume Input [veh/h]	4	583	29	52	739	24	14	2	11	18	2	29
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	84	32	40	47	3	19	4	0	19	2	24
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	4	691	62	94	816	28	34	6	11	38	4	54
Peak Hour Factor	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	188	17	26	221	8	9	2	3	10	1	15
Total Analysis Volume [veh/h]	4	750	67	102	886	30	37	7	12	41	4	59
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.01	0.00	0.12	0.01	0.00	0.60	0.12	0.02	0.54	0.06	0.09
d_M, Delay for Movement [s/veh]	9.81	0.00	0.00	10.01	0.00	0.00	143.28	146.78	91.60	93.78	103.96	52.45
Movement LOS	A	A	A	B	A	A	F	F	F	F	F	F
95th-Percentile Queue Length [veh/ln]	0.02	0.00	0.00	0.42	0.00	0.00	3.51	3.51	3.51	4.00	4.00	4.00
95th-Percentile Queue Length [ft/ln]	0.40	0.00	0.00	10.61	0.00	0.00	87.80	87.80	87.80	100.04	100.04	100.04
d_A, Approach Delay [s/veh]	0.05			1.00			132.65			70.72		
Approach LOS	A			A			F			F		
d_I, Intersection Delay [s/veh]	7.93											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 3: Moreno Beach Dr/ Cactus Ave

Control Type:	Signalized	Delay (sec / veh):	33.6
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.498

Intersection Setup

Name	Moreno Beach Drive			Moreno Beach Drive			Cactus Avenue			Cactus Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	210.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	2	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	132.11	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			30.00			45.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Moreno Beach Drive			Moreno Beach Drive			Cactus Avenue			Cactus Avenue		
Base Volume Input [veh/h]	113	365	30	53	526	94	96	165	120	11	95	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	58	74	0	1	47	18	33	247	48	0	307	9
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	176	454	31	56	594	116	133	419	173	11	406	30
Peak Hour Factor	0.9460	0.9460	0.9460	0.9460	0.9460	0.9460	0.9460	0.9460	0.9460	0.9460	0.9460	0.9460
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	47	120	8	15	157	31	35	111	46	3	107	8
Total Analysis Volume [veh/h]	186	480	33	59	628	123	141	443	183	12	429	32
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	110
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	6	5	2	2	3	8	0	7	4	0
Auxiliary Signal Groups			6,7			2,3						
Maximum Green [s]	21	25	25	18	22	22	19	32	0	19	32	0
Amber [s]	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0.0	5.0	5.0	0.0	5.0	5.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	17.0	17.0	0.0	17.0	17.0	0.0	24.0	0.0	0.0	27.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	25.0	29.0	29.0	22.0	26.0	26.0	23.0	36.0	0.0	23.0	36.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	10	5	10	10	5	10	0	5	10	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No	No	No	No	No	No	No		No	No	
Maximum Recall	No	No	No	No	No	No	No	No		No	No	
Pedestrian Recall	No	No	No	No	No	No	No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Calculated Cycle Length [s]	110	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	13.4	62.6	68.2	4.8	53.9	53.9	10.5	25.0	25.0	1.6	16.2	16.2
g / C, Green / Cycle	0.12	0.57	0.62	0.04	0.49	0.49	0.10	0.23	0.23	0.01	0.15	0.15
(v / s)_i Volume / Saturation Flow Rate	0.10	0.13	0.02	0.03	0.12	0.08	0.08	0.17	0.17	0.01	0.12	0.12
s, saturation flow rate [veh/h]	1810	3618	1615	1810	5176	1615	1810	1900	1714	1810	1900	1854
c, Capacity [veh/h]	221	2056	1001	79	2536	791	172	432	390	27	280	273
d1, Uniform Delay [s]	47.24	11.82	8.11	51.99	16.29	15.49	48.83	39.70	39.74	53.70	45.57	45.61
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.35	0.27	0.06	12.94	0.23	0.42	9.15	2.79	3.14	10.52	6.32	6.69
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, 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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.84	0.23	0.03	0.75	0.25	0.16	0.82	0.76	0.76	0.44	0.83	0.84
d, Delay for Lane Group [s/veh]	55.58	12.08	8.17	64.93	16.52	15.91	57.98	42.49	42.88	64.22	51.90	52.30
Lane Group LOS	E	B	A	E	B	B	E	D	D	E	D	D
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	5.29	2.67	0.28	1.89	3.08	1.78	4.12	8.29	7.56	0.40	6.39	6.31
50th-Percentile Queue Length [ft/ln]	132.19	66.74	7.01	47.28	76.93	44.53	103.02	207.28	188.89	9.96	159.84	157.72
95th-Percentile Queue Length [veh/ln]	9.06	4.81	0.50	3.40	5.54	3.21	7.42	13.01	12.06	0.72	10.54	10.43
95th-Percentile Queue Length [ft/ln]	226.47	120.13	12.62	85.11	138.48	80.15	185.44	325.34	301.59	17.92	263.51	260.70

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	55.58	12.08	8.17	64.93	16.52	15.91	57.98	42.59	42.88	64.22	52.08	52.30
Movement LOS	E	B	A	E	B	B	E	D	D	E	D	D
d_A, Approach Delay [s/veh]	23.47			19.95			45.49			52.41		
Approach LOS	C			B			D			D		
d_I, Intersection Delay [s/veh]	33.56											
Intersection LOS	C											
Intersection V/C	0.498											

Emissions

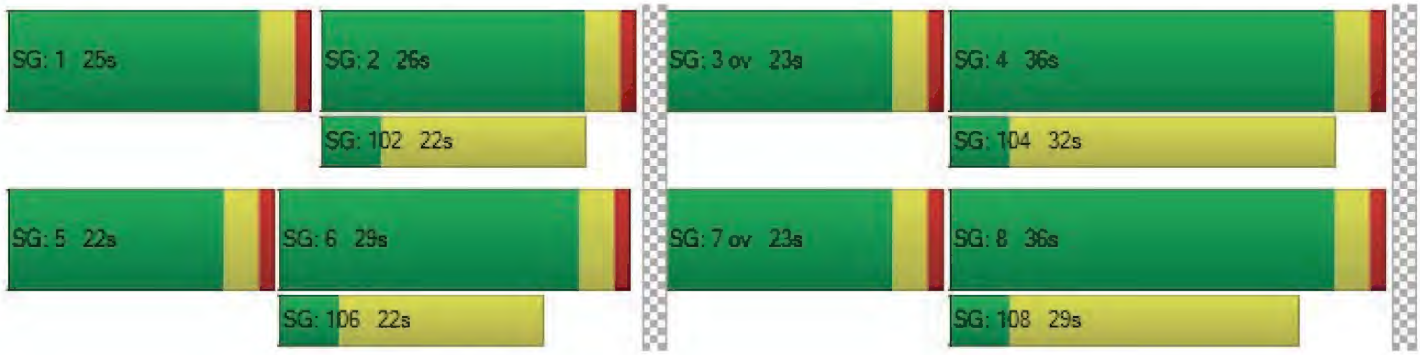
Vehicle Miles Traveled [mph]	16.37	42.25	2.90	14.75	156.97	30.74	10.89	25.36	22.98	0.92	17.79	17.47
Stops [stops/h]	173.05	174.73	9.18	61.89	302.13	58.29	134.87	271.35	247.27	13.03	209.24	206.47
Fuel consumption [US gal/h]	5.31	5.28	0.29	1.73	10.24	1.99	3.71	7.08	6.46	0.39	6.26	6.19
CO [g/h]	371.05	368.89	20.48	120.82	715.95	138.81	259.58	495.11	451.46	27.09	437.84	432.37
NOx [g/h]	72.19	71.77	3.98	23.51	139.30	27.01	50.50	96.33	87.84	5.27	85.19	84.12
VOC [g/h]	85.99	85.49	4.75	28.00	165.93	32.17	60.16	114.75	104.63	6.28	101.47	100.21

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	46.37	46.37	46.37	46.37
l_p,int, Pedestrian LOS Score for Intersectio	2.958	2.915	2.751	2.639
Crosswalk LOS	C	C	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	455	400	582	582
d_b, Bicycle Delay [s]	32.84	35.20	27.65	27.65
l_b,int, Bicycle LOS Score for Intersection	2.136	2.005	2.192	1.950
Bicycle LOS	B	B	B	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: Project Access/ Brodiaea Ave

Control Type:	Two-way stop	Delay (sec / veh):	9.6
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.002

Intersection Setup

Name	Project Access		Brodiaea Avenue		Brodiaea Avenue	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Project Access		Brodiaea Avenue		Brodiaea Avenue	
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	2	45	75	1	0	4
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	45	75	1	0	4
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	11	19	0	0	1
Total Analysis Volume [veh/h]	2	45	75	1	0	4
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.04	0.05	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	9.63	8.46	7.31	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.14	0.14	0.14	0.14	0.00	0.00
95th-Percentile Queue Length [ft/ln]	3.44	3.44	3.56	3.56	0.00	0.00
d_A, Approach Delay [s/veh]	8.51		7.21		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	7.47					
Intersection LOS	A					

OPENING YEAR PLUS PROJECT PLUS IMPROVEMENTS
TRAFFIC CONDITIONS

Intersection Level Of Service Report
Intersection 2: Moreno Beach Dr/ Brodiaea Ave

Control Type:	Signalized	Delay (sec / veh):	6.6
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.473

Intersection Setup

Name	Moreno Beach Drive			Moreno Beach Drive			Brodiaea Avenue			Brodiaea Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	0	0	0	0	0	0
Entry Pocket Length [ft]	150.00	100.00	200.00	150.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			No			Yes			Yes		

Volumes

Name	Moreno Beach Drive			Moreno Beach Drive			Brodiaea Avenue			Brodiaea Avenue		
Base Volume Input [veh/h]	10	620	20	28	468	19	2	1	9	22	6	39
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	31	10	12	50	3	2	1	0	27	3	36
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	676	31	41	537	23	4	2	9	50	9	77
Peak Hour Factor	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	181	8	11	144	6	1	1	2	13	2	21
Total Analysis Volume [veh/h]	11	724	33	44	575	25	4	2	10	54	10	82
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	0	35	0	0	35	0	0	17	0	0	17	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	7.0	0.0	0.0	7.0	0.0	0.0	10.0	0.0	0.0	10.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0.0	39.0	0.0	0.0	39.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	10	0	0	10	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	C	C
C, Calculated Cycle Length [s]	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	42.8	42.8	42.8	42.8	42.8	42.8	9.2	9.2
g / C, Green / Cycle	0.71	0.71	0.71	0.71	0.71	0.71	0.15	0.15
(v / s)_i Volume / Saturation Flow Rate	0.01	0.38	0.02	0.06	0.16	0.16	0.01	0.09
s, saturation flow rate [veh/h]	832	1900	1615	719	1900	1872	1704	1596
c, Capacity [veh/h]	633	1354	1151	471	1354	1334	338	328
d1, Uniform Delay [s]	4.47	4.00	2.53	8.36	2.95	2.95	21.67	23.51
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.05	1.52	0.05	0.39	0.38	0.39	0.06	0.95
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.02	0.53	0.03	0.09	0.22	0.22	0.05	0.44
d, Delay for Lane Group [s/veh]	4.52	5.52	2.58	8.75	3.33	3.34	21.73	24.46
Lane Group LOS	A	A	A	A	A	A	C	C
Critical Lane Group	No	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.04	1.98	0.06	0.31	0.82	0.81	0.18	1.85
50th-Percentile Queue Length [ft/ln]	1.00	49.60	1.39	7.87	20.54	20.33	4.58	46.21
95th-Percentile Queue Length [veh/ln]	0.07	3.57	0.10	0.57	1.48	1.46	0.33	3.33
95th-Percentile Queue Length [ft/ln]	1.81	89.28	2.50	14.17	36.97	36.60	8.24	83.18

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	4.52	5.52	2.58	8.75	3.33	3.34	21.73	21.73	21.73	24.46	24.46	24.46
Movement LOS	A	A	A	A	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	5.38			3.70			21.73			24.46		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	6.63											
Intersection LOS	A											
Intersection V/C	0.473											

Emissions

Vehicle Miles Traveled [mph]	2.75	180.97	8.25	6.04	41.48	40.94	1.10	27.00
Stops [stops/h]	2.41	119.04	3.33	18.90	49.30	48.80	10.99	110.90
Fuel consumption [US gal/h]	0.13	8.50	0.34	0.43	2.18	2.16	0.20	2.59
CO [g/h]	9.39	593.91	23.87	30.17	152.68	150.80	13.64	181.04
NOx [g/h]	1.83	115.55	4.64	5.87	29.71	29.34	2.65	35.22
VOC [g/h]	2.18	137.65	5.53	6.99	35.39	34.95	3.16	41.96

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	1.746	1.886
Crosswalk LOS	F	F	A	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1167	1167	567	567
d_b, Bicycle Delay [s]	5.21	5.21	15.41	15.41
l_b,int, Bicycle LOS Score for Intersection	2.827	2.091	1.586	1.801
Bicycle LOS	C	B	A	A

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 2: Moreno Beach Dr/ Brodiaea Ave

Control Type:	Signalized	Delay (sec / veh):	6.1
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.459

Intersection Setup

Name	Moreno Beach Drive			Moreno Beach Drive			Brodiaea Avenue			Brodiaea Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	0	0	0	0	0	0
Entry Pocket Length [ft]	150.00	100.00	200.00	150.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			No			Yes			Yes		

Volumes

Name	Moreno Beach Drive			Moreno Beach Drive			Brodiaea Avenue			Brodiaea Avenue		
Base Volume Input [veh/h]	4	583	29	52	739	24	14	2	11	18	2	29
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	84	32	40	47	3	19	4	0	19	2	24
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	4	691	62	94	816	28	34	6	11	38	4	54
Peak Hour Factor	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	188	17	26	221	8	9	2	3	10	1	15
Total Analysis Volume [veh/h]	4	750	67	102	886	30	37	7	12	41	4	59
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	0	37	0	0	37	0	0	15	0	0	15	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	7.0	0.0	0.0	7.0	0.0	0.0	10.0	0.0	0.0	10.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0.0	41.0	0.0	0.0	41.0	0.0	0.0	19.0	0.0	0.0	19.0	0.0
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	10	0	0	10	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	C	C
C, Calculated Cycle Length [s]	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	43.7	43.7	43.7	43.7	43.7	43.7	8.3	8.3
g / C, Green / Cycle	0.73	0.73	0.73	0.73	0.73	0.73	0.14	0.14
(v / s)_i Volume / Saturation Flow Rate	0.01	0.39	0.04	0.15	0.24	0.24	0.03	0.06
s, saturation flow rate [veh/h]	619	1900	1615	680	1900	1878	1673	1630
c, Capacity [veh/h]	491	1383	1175	463	1383	1367	332	310
d1, Uniform Delay [s]	4.87	3.68	2.32	8.66	2.94	2.94	22.94	23.65
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.03	1.53	0.09	1.10	0.65	0.66	0.24	0.63
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.01	0.54	0.06	0.22	0.33	0.33	0.17	0.34
d, Delay for Lane Group [s/veh]	4.90	5.21	2.41	9.76	3.59	3.59	23.18	24.29
Lane Group LOS	A	A	A	A	A	A	C	C
Critical Lane Group	No	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.02	1.78	0.10	0.78	1.25	1.23	0.67	1.30
50th-Percentile Queue Length [ft/ln]	0.42	44.41	2.43	19.60	31.16	30.87	16.80	32.48
95th-Percentile Queue Length [veh/ln]	0.03	3.20	0.18	1.41	2.24	2.22	1.21	2.34
95th-Percentile Queue Length [ft/ln]	0.75	79.94	4.38	35.28	56.08	55.57	30.24	58.46

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	4.90	5.21	2.41	9.76	3.59	3.59	23.18	23.18	23.18	24.29	24.29	24.29
Movement LOS	A	A	A	A	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	4.98			4.21			23.18			24.29		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	6.10											
Intersection LOS	A											
Intersection V/C	0.459											

Emissions

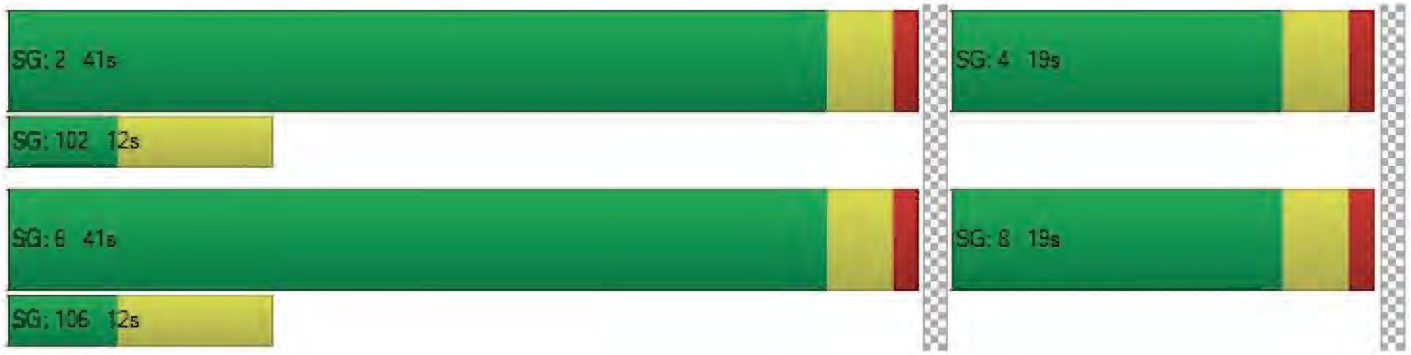
Vehicle Miles Traveled [mph]	1.00	187.46	16.75	14.01	63.27	62.55	3.83	19.23
Stops [stops/h]	1.00	106.59	5.83	47.04	74.78	74.09	40.32	77.94
Fuel consumption [US gal/h]	0.05	8.55	0.68	1.04	3.35	3.32	0.71	1.83
CO [g/h]	3.54	597.36	47.50	72.64	234.45	231.88	49.88	128.14
NOx [g/h]	0.69	116.22	9.24	14.13	45.62	45.11	9.70	24.93
VOC [g/h]	0.82	138.44	11.01	16.84	54.34	53.74	11.56	29.70

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	1.755	2.000
Crosswalk LOS	F	F	A	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1233	1233	500	500
d_b, Bicycle Delay [s]	4.41	4.41	16.88	16.88
l_b,int, Bicycle LOS Score for Intersection	2.914	2.399	1.652	1.731
Bicycle LOS	C	B	A	A

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



GENERAL PLAN BUILDOUT
TRAFFIC CONDITIONS

Intersection Level Of Service Report
Intersection 1: Moreno Beach Dr/ Alessandro Blvd

Control Type:	Signalized	Delay (sec / veh):	29.2
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.581

Intersection Setup

Name	Moreno Beach Drive			Moreno Beach Drive			Alessandro Boulevard			Alessandro Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	0	1	0	0
Entry Pocket Length [ft]	110.00	100.00	100.00	150.00	100.00	100.00	100.00	100.00	100.00	200.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			40.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Moreno Beach Drive			Moreno Beach Drive			Alessandro Boulevard			Alessandro Boulevard		
Base Volume Input [veh/h]	93	506	28	11	405	59	54	101	52	39	175	16
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	2	28	1	0	50	48	47	345	4	1	137	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	158	874	48	18	727	147	137	514	91	66	430	27
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	40	219	12	5	182	37	34	129	23	17	108	7
Total Analysis Volume [veh/h]	158	874	48	18	727	147	137	514	91	66	430	27
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	17	30	0	12	25	0	16	26	0	16	26	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	17.0	0.0	0.0	17.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	21.0	34.0	0.0	16.0	29.0	0.0	20.0	30.0	0.0	20.0	30.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Calculated Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	10.7	57.9	57.9	2.0	49.2	49.2	9.4	19.3	19.3	4.8	14.8	14.8
g / C, Green / Cycle	0.11	0.58	0.58	0.02	0.49	0.49	0.09	0.19	0.19	0.05	0.15	0.15
(v / s)_i Volume / Saturation Flow Rate	0.09	0.24	0.03	0.01	0.20	0.09	0.08	0.16	0.16	0.04	0.12	0.12
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1810	1900	1802	1810	1900	1861
c, Capacity [veh/h]	194	2091	934	37	1776	793	170	367	348	87	281	275
d1, Uniform Delay [s]	43.64	11.74	9.18	48.46	16.21	14.25	44.43	38.89	38.92	47.00	41.33	41.35
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.93	0.62	0.10	9.55	0.70	0.52	8.74	5.35	5.72	12.33	5.90	6.15
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, 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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.81	0.42	0.05	0.49	0.41	0.19	0.81	0.84	0.85	0.76	0.82	0.82
d, Delay for Lane Group [s/veh]	51.58	12.36	9.28	58.01	16.91	14.76	53.17	44.25	44.63	59.33	47.23	47.50
Lane Group LOS	D	B	A	E	B	B	D	D	D	E	D	D
Critical Lane Group	Yes	No	No	No	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	4.10	4.87	0.43	0.53	4.98	1.82	3.65	7.61	7.28	1.85	5.67	5.60
50th-Percentile Queue Length [ft/ln]	102.60	121.68	10.74	13.21	124.42	45.53	91.23	190.33	181.97	46.28	141.84	140.04
95th-Percentile Queue Length [veh/ln]	7.39	8.49	0.77	0.95	8.64	3.28	6.57	12.14	11.70	3.33	9.58	9.48
95th-Percentile Queue Length [ft/ln]	184.68	212.14	19.33	23.77	215.88	81.96	164.21	303.45	292.58	83.30	239.50	237.07

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	51.58	12.36	9.28	58.01	16.91	14.76	53.17	44.40	44.63	59.33	47.36	47.50
Movement LOS	D	B	A	E	B	B	D	D	D	E	D	D
d_A, Approach Delay [s/veh]	17.96			17.38			46.05			48.88		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	29.23											
Intersection LOS	C											
Intersection V/C	0.581											

Emissions

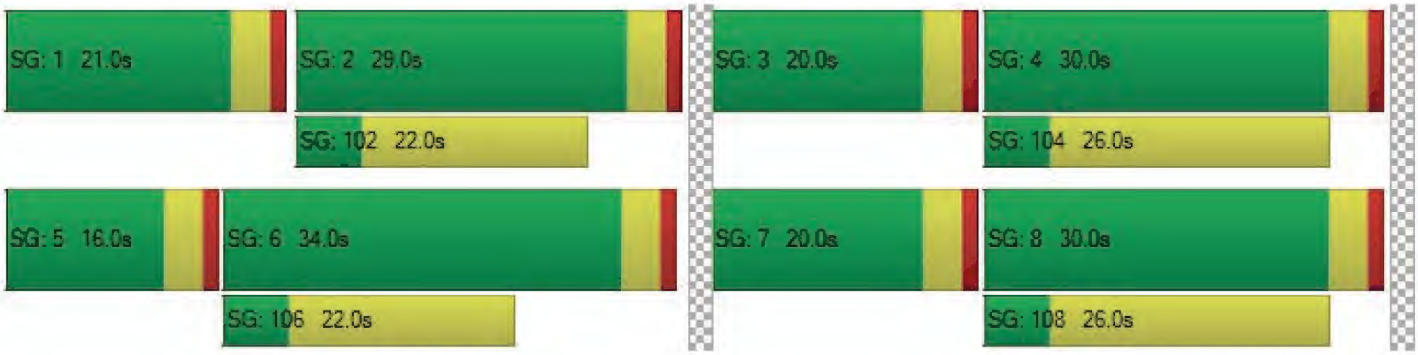
Vehicle Miles Traveled [mph]	18.99	105.07	5.77	1.48	59.93	12.12	10.14	22.95	21.83	5.20	18.16	17.86
Stops [stops/h]	147.74	350.45	15.47	19.02	358.32	65.57	131.36	274.07	262.03	66.64	204.25	201.65
Fuel consumption [US gal/h]	4.15	10.16	0.48	0.50	9.01	1.67	3.14	6.31	6.03	1.99	5.96	5.88
CO [g/h]	289.82	709.93	33.60	34.93	629.87	116.89	219.20	440.81	421.82	139.38	416.42	411.31
NOx [g/h]	56.39	138.13	6.54	6.80	122.55	22.74	42.65	85.77	82.07	27.12	81.02	80.03
VOC [g/h]	67.17	164.53	7.79	8.10	145.98	27.09	50.80	102.16	97.76	32.30	96.51	95.33

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersectio	2.938	2.930	2.690	2.665
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	600	500	520	520
d_b, Bicycle Delay [s]	24.50	28.13	27.38	27.38
l_b,int, Bicycle LOS Score for Intersection	2.451	2.296	2.172	1.991
Bicycle LOS	B	B	B	A

Sequence

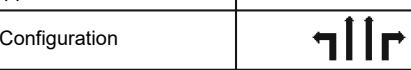
Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Moreno Beach Dr/ Brodiaea Ave

Control Type:	Signalized	Delay (sec / veh):	4.9
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.365

Intersection Setup

Name	Moreno Beach Drive			Moreno Beach Drive			Brodiaea Avenue			Brodiaea Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	0	0	0	0	0	0
Entry Pocket Length [ft]	150.00	100.00	200.00	150.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			No			Yes			Yes		

Volumes

Name	Moreno Beach Drive			Moreno Beach Drive			Brodiaea Avenue			Brodiaea Avenue		
Base Volume Input [veh/h]	10	620	20	28	468	19	2	1	9	22	6	39
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	31	0	0	50	3	2	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	17	1068	33	47	833	35	5	2	15	37	10	65
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	267	8	12	208	9	1	1	4	9	3	16
Total Analysis Volume [veh/h]	17	1068	33	47	833	35	5	2	15	37	10	65
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow	No			No								
Signal Group	0	6	0	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	0	33	0	0	33	0	0	19	0	0	19	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	7.0	0.0	0.0	7.0	0.0	0.0	10.0	0.0	0.0	10.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0.0	37.0	0.0	0.0	37.0	0.0	0.0	23.0	0.0	0.0	23.0	0.0
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	10	0	0	10	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	C	C
C, Calculated Cycle Length [s]	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	43.5	43.5	43.5	43.5	43.5	43.5	8.5	8.5
g / C, Green / Cycle	0.72	0.72	0.72	0.72	0.72	0.72	0.14	0.14
(v / s)_i Volume / Saturation Flow Rate	0.03	0.30	0.02	0.09	0.23	0.02	0.01	0.07
s, saturation flow rate [veh/h]	648	3618	1615	520	3618	1615	1655	1612
c, Capacity [veh/h]	505	2616	1168	411	2616	1168	311	311
d1, Uniform Delay [s]	5.08	3.27	2.35	6.42	2.99	2.35	22.29	23.54
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.12	0.47	0.04	0.57	0.32	0.05	0.09	0.70
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.03	0.41	0.03	0.11	0.32	0.03	0.07	0.36
d, Delay for Lane Group [s/veh]	5.21	3.74	2.39	6.99	3.31	2.40	22.38	24.24
Lane Group LOS	A	A	A	A	A	A	C	C
Critical Lane Group	No	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.07	0.95	0.05	0.29	1.04	0.08	0.26	1.40
50th-Percentile Queue Length [ft/ln]	1.82	23.78	1.23	7.36	26.04	1.91	6.44	35.03
95th-Percentile Queue Length [veh/ln]	0.13	1.71	0.09	0.53	1.87	0.14	0.46	2.52
95th-Percentile Queue Length [ft/ln]	3.28	42.81	2.21	13.25	46.87	3.45	11.59	63.05

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	5.21	3.74	2.39	6.99	3.31	2.40	22.38	22.38	22.38	24.24	24.24	24.24
Movement LOS	A	A	A	A	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	3.72			3.47			22.38			24.24		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	4.86											
Intersection LOS	A											
Intersection V/C	0.365											

Emissions

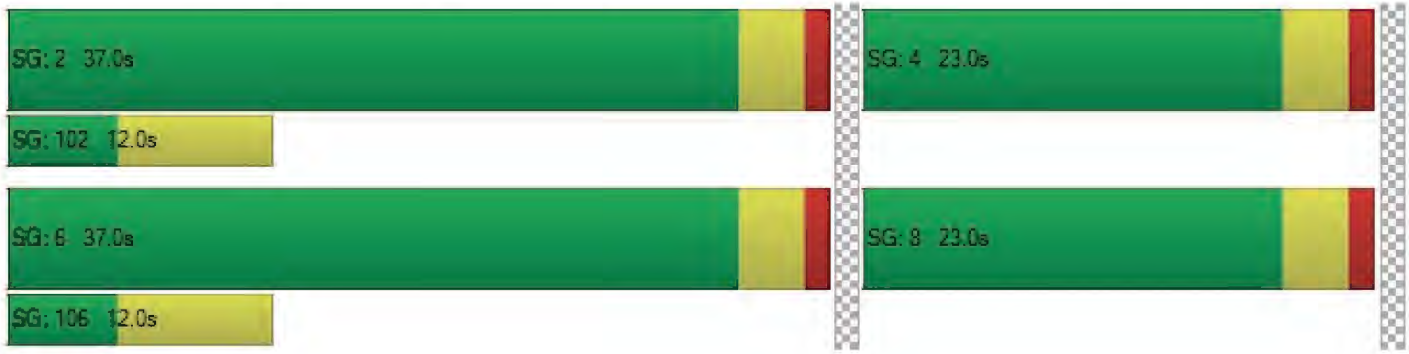
Vehicle Miles Traveled [mph]	4.25	266.95	8.25	6.46	114.42	4.81	1.51	20.71
Stops [stops/h]	4.38	114.16	2.95	17.67	124.98	4.60	15.45	84.07
Fuel consumption [US gal/h]	0.22	11.38	0.34	0.43	5.96	0.24	0.27	1.97
CO [g/h]	15.25	795.64	23.45	30.07	416.76	16.80	19.14	138.00
NOx [g/h]	2.97	154.80	4.56	5.85	81.09	3.27	3.72	26.85
VOC [g/h]	3.53	184.40	5.44	6.97	96.59	3.89	4.44	31.98

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	1.767	1.873
Crosswalk LOS	F	F	A	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1100	1100	633	633
d_b, Bicycle Delay [s]	6.08	6.08	14.01	14.01
l_b,int, Bicycle LOS Score for Intersection	2.482	2.314	1.596	1.744
Bicycle LOS	B	B	A	A

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Moreno Beach Dr/ Cactus Ave

Control Type:	Signalized	Delay (sec / veh):	33.6
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.572

Intersection Setup

Name	Moreno Beach Drive			Moreno Beach Drive			Cactus Avenue			Cactus Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	210.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			30.00			45.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Moreno Beach Drive			Moreno Beach Drive			Cactus Avenue			Cactus Avenue		
Base Volume Input [veh/h]	115	469	54	30	365	67	94	92	76	63	131	36
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	35	24	0	0	36	14	6	330	42	0	160	1
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	227	808	90	50	647	126	163	484	169	105	379	61
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	57	202	23	13	162	32	41	121	42	26	95	15
Total Analysis Volume [veh/h]	227	808	90	50	647	126	163	484	169	105	379	61
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	110
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	1	6	6	5	2	2	3	8	0	7	4	0
Auxiliary Signal Groups			6,7			2,3						
Maximum Green [s]	23	30	30	15	22	22	20	30	0	19	29	0
Amber [s]	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0.0	5.0	5.0	0.0	5.0	5.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	17.0	17.0	0.0	17.0	17.0	0.0	24.0	0.0	0.0	24.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	27.0	34.0	34.0	19.0	26.0	26.0	24.0	34.0	0.0	23.0	33.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	10	5	10	10	5	10	0	5	10	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No	No	No	No	No	No	No		No	No	
Maximum Recall	No	No	No	No	No	No	No	No		No	No	
Pedestrian Recall	No	No	No	No	No	No	No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Calculated Cycle Length [s]	110	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	16.0	59.1	71.3	4.0	47.1	63.2	12.1	22.6	22.6	8.3	18.8	18.8
g / C, Green / Cycle	0.15	0.54	0.65	0.04	0.43	0.57	0.11	0.21	0.21	0.08	0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.13	0.22	0.06	0.03	0.13	0.08	0.09	0.18	0.18	0.06	0.12	0.12
s, saturation flow rate [veh/h]	1810	3618	1615	1810	5176	1615	1810	1900	1734	1810	1900	1810
c, Capacity [veh/h]	263	1940	1047	67	2216	928	199	391	357	136	325	310
d1, Uniform Delay [s]	45.95	15.22	7.22	52.46	20.56	10.81	47.88	42.27	42.29	49.92	42.83	42.88
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.28	0.66	0.16	15.24	0.33	0.30	8.06	6.10	6.73	8.82	2.60	2.81
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, 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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.86	0.42	0.09	0.75	0.29	0.14	0.82	0.87	0.87	0.77	0.69	0.70
d, Delay for Lane Group [s/veh]	54.23	15.88	7.38	67.70	20.90	11.11	55.94	48.37	49.02	58.74	45.43	45.69
Lane Group LOS	D	B	A	E	C	B	E	D	D	E	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	6.40	5.56	0.71	1.65	3.66	1.46	4.68	9.27	8.54	3.06	5.71	5.51
50th-Percentile Queue Length [ft/ln]	160.00	139.10	17.73	41.21	91.55	36.51	116.98	231.66	213.54	76.53	142.82	137.85
95th-Percentile Queue Length [veh/ln]	10.55	9.43	1.28	2.97	6.59	2.63	8.23	14.26	13.33	5.51	9.63	9.37
95th-Percentile Queue Length [ft/ln]	263.72	235.81	31.92	74.17	164.80	65.72	205.67	356.46	333.37	137.76	240.82	234.13

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	54.23	15.88	7.38	67.70	20.90	11.11	55.94	48.56	49.02	58.74	45.54	45.69
Movement LOS	D	B	A	E	C	B	E	D	D	E	D	D
d_A, Approach Delay [s/veh]	22.94			22.24			50.13			48.10		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	33.61											
Intersection LOS	C											
Intersection V/C	0.572											

Emissions

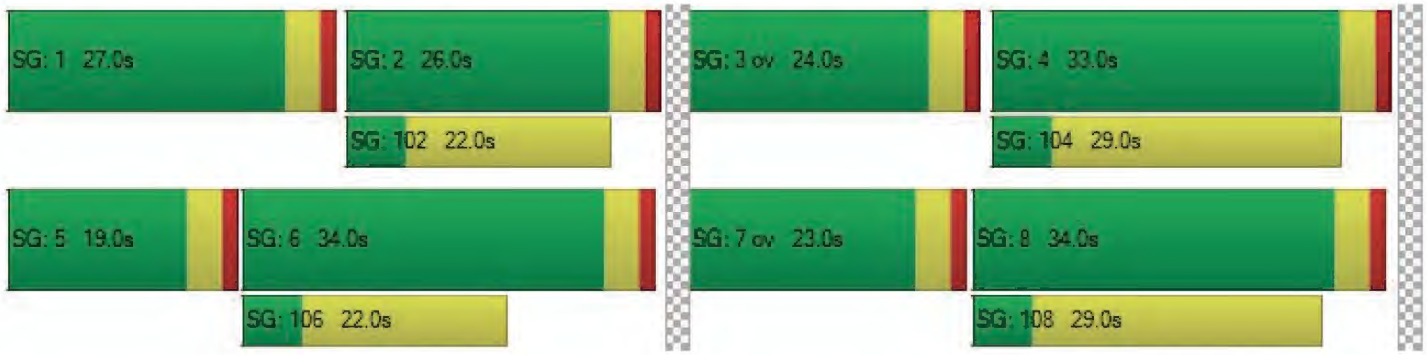
Vehicle Miles Traveled [mph]	19.98	71.12	7.92	12.50	161.72	31.49	12.59	26.34	24.09	8.03	17.16	16.50
Stops [stops/h]	209.45	364.19	23.22	53.95	359.55	47.80	153.14	303.26	279.55	100.19	186.97	180.46
Fuel consumption [US gal/h]	6.39	10.58	0.76	1.50	11.40	1.85	4.19	8.03	7.41	3.06	5.52	5.33
CO [g/h]	446.60	739.82	52.90	104.94	796.51	129.00	292.94	561.28	518.18	214.03	385.75	372.41
NOx [g/h]	86.89	143.94	10.29	20.42	154.97	25.10	57.00	109.20	100.82	41.64	75.05	72.46
VOC [g/h]	103.50	171.46	12.26	24.32	184.60	29.90	67.89	130.08	120.09	49.60	89.40	86.31

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	46.37	46.37	46.37	46.37
l_p,int, Pedestrian LOS Score for Intersectio	3.080	2.863	2.764	2.691
Crosswalk LOS	C	C	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	545	400	545	527
d_b, Bicycle Delay [s]	29.09	35.20	29.09	29.82
l_b,int, Bicycle LOS Score for Intersection	2.488	2.012	2.233	2.009
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 1: Moreno Beach Dr/ Alessandro Blvd

Control Type:	Signalized	Delay (sec / veh):	30.6
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.741

Intersection Setup

Name	Moreno Beach Drive			Moreno Beach Drive			Alessandro Boulevard			Alessandro Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	0	1	0	0
Entry Pocket Length [ft]	110.00	100.00	100.00	150.00	100.00	100.00	100.00	100.00	100.00	200.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			40.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Moreno Beach Drive			Moreno Beach Drive			Alessandro Boulevard			Alessandro Boulevard		
Base Volume Input [veh/h]	54	491	41	26	667	60	87	183	79	44	84	15
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	17	72	14	0	44	58	59	230	5	1	320	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	107	893	83	43	1160	158	205	536	137	75	461	25
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	27	223	21	11	290	40	51	134	34	19	115	6
Total Analysis Volume [veh/h]	107	893	83	43	1160	158	205	536	137	75	461	25
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	11	29	0	15	33	0	14	29	0	11	26	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	17.0	0.0	0.0	17.0	0.0	0.0	24.0	0.0	0.0	21.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	15.0	33.0	0.0	19.0	37.0	0.0	18.0	33.0	0.0	15.0	30.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Calculated Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	7.6	51.9	51.9	3.5	47.9	47.9	13.1	23.2	23.2	5.4	15.5	15.5
g / C, Green / Cycle	0.08	0.52	0.52	0.04	0.48	0.48	0.13	0.23	0.23	0.05	0.15	0.15
(v / s)_i Volume / Saturation Flow Rate	0.06	0.25	0.05	0.02	0.32	0.10	0.11	0.18	0.18	0.04	0.13	0.13
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1810	1900	1768	1810	1900	1866
c, Capacity [veh/h]	137	1876	837	65	1731	773	237	440	410	98	294	289
d1, Uniform Delay [s]	45.40	15.39	12.22	47.62	20.02	15.07	42.58	36.14	36.14	46.68	41.01	41.03
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.27	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.24	0.87	0.24	11.09	2.08	0.60	19.82	3.28	3.53	11.78	6.09	6.30
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, 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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.78	0.48	0.10	0.66	0.67	0.20	0.86	0.79	0.79	0.77	0.83	0.84
d, Delay for Lane Group [s/veh]	54.64	16.26	12.46	58.71	22.10	15.67	62.40	39.42	39.68	58.46	47.10	47.33
Lane Group LOS	D	B	B	E	C	B	E	D	D	E	D	D
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.87	6.03	0.91	1.22	9.82	2.04	6.11	8.08	7.56	2.08	6.03	5.96
50th-Percentile Queue Length [ft/ln]	71.66	150.81	22.80	30.57	245.47	50.99	152.87	202.08	188.94	51.99	150.78	148.99
95th-Percentile Queue Length [veh/ln]	5.16	10.06	1.64	2.20	14.96	3.67	10.17	12.75	12.07	3.74	10.06	9.96
95th-Percentile Queue Length [ft/ln]	128.99	251.51	41.03	55.02	373.95	91.79	254.25	318.65	301.65	93.58	251.47	249.09

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	54.64	16.26	12.46	58.71	22.10	15.67	62.40	39.51	39.68	58.46	47.21	47.33
Movement LOS	D	B	B	E	C	B	E	D	D	E	D	D
d_A, Approach Delay [s/veh]	19.76			22.51			44.88			48.72		
Approach LOS	B			C			D			D		
d_I, Intersection Delay [s/veh]	30.59											
Intersection LOS	C											
Intersection V/C	0.741											

Emissions

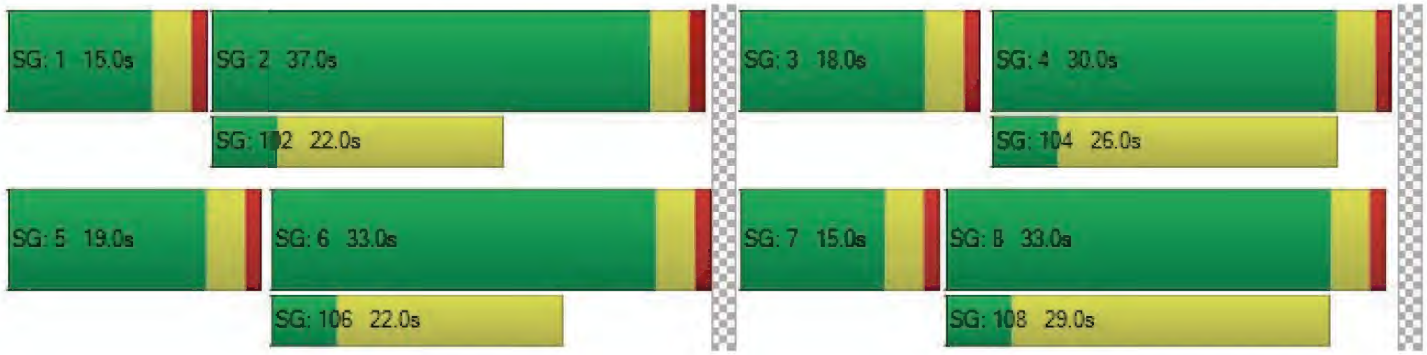
Vehicle Miles Traveled [mph]	12.86	107.35	9.98	3.54	95.62	13.02	15.18	25.80	24.02	5.91	19.30	19.01
Stops [stops/h]	103.19	434.33	32.83	44.02	706.96	73.43	220.13	291.00	272.07	74.86	217.12	214.55
Fuel consumption [US gal/h]	2.91	12.04	0.96	1.18	17.28	1.86	5.31	6.58	6.15	2.24	6.33	6.25
CO [g/h]	203.66	841.27	67.15	82.66	1208.20	130.24	371.10	459.78	430.12	156.53	442.15	437.08
NOx [g/h]	39.62	163.68	13.06	16.08	235.07	25.34	72.20	89.46	83.69	30.45	86.03	85.04
VOC [g/h]	47.20	194.97	15.56	19.16	280.01	30.19	86.01	106.56	99.68	36.28	102.47	101.30

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersectio	3.113	3.065	2.724	2.704
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	580	660	580	520
d_b, Bicycle Delay [s]	25.21	22.45	25.21	27.38
l_b,int, Bicycle LOS Score for Intersection	2.453	2.682	2.284	2.022
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Moreno Beach Dr/ Brodiaea Ave

Control Type:	Signalized	Delay (sec / veh):	4.8
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.405

Intersection Setup

Name	Moreno Beach Drive			Moreno Beach Drive			Brodiaea Avenue			Brodiaea Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	0	0	0	0	0	0
Entry Pocket Length [ft]	150.00	100.00	200.00	150.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			No			Yes			Yes		

Volumes

Name	Moreno Beach Drive			Moreno Beach Drive			Brodiaea Avenue			Brodiaea Avenue		
Base Volume Input [veh/h]	4	583	29	52	739	24	14	2	11	18	2	29
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	84	0	1	47	3	19	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	1059	49	88	1283	43	42	3	18	30	3	49
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	265	12	22	321	11	11	1	5	8	1	12
Total Analysis Volume [veh/h]	7	1059	49	88	1283	43	42	3	18	30	3	49
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow	No			No								
Signal Group	0	6	0	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	0	34	0	0	34	0	0	18	0	0	18	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	7.0	0.0	0.0	7.0	0.0	0.0	10.0	0.0	0.0	10.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0.0	38.0	0.0	0.0	38.0	0.0	0.0	22.0	0.0	0.0	22.0	0.0
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	10	0	0	10	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	C	C
C, Calculated Cycle Length [s]	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	44.5	44.5	44.5	44.5	44.5	44.5	7.5	7.5
g / C, Green / Cycle	0.74	0.74	0.74	0.74	0.74	0.74	0.13	0.13
(v / s)_i Volume / Saturation Flow Rate	0.02	0.29	0.03	0.17	0.35	0.03	0.04	0.05
s, saturation flow rate [veh/h]	420	3618	1615	517	3618	1615	1656	1639
c, Capacity [veh/h]	349	2676	1195	422	2676	1195	310	290
d1, Uniform Delay [s]	6.28	2.87	2.10	6.27	3.15	2.09	23.69	24.01
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.11	0.44	0.06	1.12	0.62	0.06	0.32	0.53
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.02	0.40	0.04	0.21	0.48	0.04	0.20	0.28
d, Delay for Lane Group [s/veh]	6.39	3.31	2.16	7.39	3.77	2.14	24.01	24.54
Lane Group LOS	A	A	A	A	A	A	C	C
Critical Lane Group	No	No	No	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.04	0.72	0.06	0.56	1.65	0.08	0.78	1.03
50th-Percentile Queue Length [ft/ln]	0.96	18.12	1.48	13.97	41.29	2.05	19.39	25.74
95th-Percentile Queue Length [veh/ln]	0.07	1.30	0.11	1.01	2.97	0.15	1.40	1.85
95th-Percentile Queue Length [ft/ln]	1.73	32.61	2.67	25.15	74.32	3.68	34.90	46.33

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	6.39	3.31	2.16	7.39	3.77	2.14	24.01	24.01	24.01	24.54	24.54	24.54
Movement LOS	A	A	A	A	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	3.28			3.94			24.01			24.54		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	4.77											
Intersection LOS	A											
Intersection V/C	0.405											

Emissions

Vehicle Miles Traveled [mph]	1.75	264.70	12.25	12.09	176.23	5.91	4.31	15.16
Stops [stops/h]	2.31	86.96	3.56	33.54	198.19	4.91	46.54	61.78
Fuel consumption [US gal/h]	0.10	10.87	0.49	0.82	9.33	0.29	0.82	1.45
CO [g/h]	6.84	759.70	33.94	56.99	652.41	20.20	57.47	101.50
NOx [g/h]	1.33	147.81	6.60	11.09	126.93	3.93	11.18	19.75
VOC [g/h]	1.58	176.07	7.87	13.21	151.20	4.68	13.32	23.52

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	1.771	1.947
Crosswalk LOS	F	F	A	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1133	1133	600	600
d_b, Bicycle Delay [s]	5.63	5.63	14.70	14.70
l_b,int, Bicycle LOS Score for Intersection	2.479	2.726	1.664	1.695
Bicycle LOS	B	B	A	A

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 3: Moreno Beach Dr/ Cactus Ave

Control Type:	Signalized	Delay (sec / veh):	34.1
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.644

Intersection Setup

Name	Moreno Beach Drive			Moreno Beach Drive			Cactus Avenue			Cactus Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	210.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			30.00			45.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Moreno Beach Drive			Moreno Beach Drive			Cactus Avenue			Cactus Avenue		
Base Volume Input [veh/h]	113	365	30	53	526	94	96	165	120	11	95	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	58	54	0	1	35	11	21	247	48	0	307	9
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	247	665	50	90	915	168	182	523	249	18	466	42
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	62	166	13	23	229	42	46	131	62	5	117	11
Total Analysis Volume [veh/h]	247	665	50	90	915	168	182	523	249	18	466	42
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	110
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	1	6	6	5	2	2	3	8	0	7	4	0
Auxiliary Signal Groups			6,7			2,3						
Maximum Green [s]	21	27	27	18	24	24	20	30	0	19	29	0
Amber [s]	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0.0	5.0	5.0	0.0	5.0	5.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	17.0	17.0	0.0	17.0	17.0	0.0	24.0	0.0	0.0	24.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	25.0	31.0	31.0	22.0	28.0	28.0	24.0	34.0	0.0	23.0	33.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	10	5	10	10	5	10	0	5	10	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No	No	No	No	No	No	No		No	No	
Maximum Recall	No	No	No	No	No	No	No	No		No	No	
Pedestrian Recall	No	No	No	No	No	No	No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Calculated Cycle Length [s]	110	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	17.2	56.0	62.2	7.1	45.9	63.2	13.3	28.7	28.7	2.2	17.6	17.6
g / C, Green / Cycle	0.16	0.51	0.57	0.06	0.42	0.57	0.12	0.26	0.26	0.02	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.14	0.18	0.03	0.05	0.18	0.10	0.10	0.21	0.21	0.01	0.14	0.14
s, saturation flow rate [veh/h]	1810	3618	1615	1810	5176	1615	1810	1900	1695	1810	1900	1846
c, Capacity [veh/h]	283	1839	913	117	2158	928	219	496	442	37	304	296
d1, Uniform Delay [s]	45.34	16.29	10.73	50.61	22.71	11.12	47.23	38.26	38.26	53.31	44.85	44.89
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.29	0.55	0.11	9.95	0.61	0.43	8.03	3.49	3.90	9.59	6.33	6.73
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, 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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.87	0.36	0.05	0.77	0.42	0.18	0.83	0.82	0.82	0.49	0.84	0.85
d, Delay for Lane Group [s/veh]	53.64	16.84	10.85	60.56	23.33	11.55	55.26	41.75	42.15	62.89	51.18	51.62
Lane Group LOS	D	B	B	E	C	B	E	D	D	E	D	D
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	6.94	4.71	0.52	2.76	5.65	2.01	5.20	10.36	9.29	0.57	7.03	6.91
50th-Percentile Queue Length [ft/ln]	173.53	117.75	12.98	68.95	141.29	50.18	130.05	258.88	232.25	14.35	175.83	172.72
95th-Percentile Queue Length [veh/ln]	11.26	8.27	0.93	4.96	9.55	3.61	8.94	15.63	14.29	1.03	11.38	11.22
95th-Percentile Queue Length [ft/ln]	281.55	206.73	23.36	124.12	238.75	90.32	223.57	390.82	357.21	25.83	284.57	280.48

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	53.64	16.84	10.85	60.56	23.33	11.55	55.26	41.84	42.15	62.89	51.38	51.62
Movement LOS	D	B	B	E	C	B	E	D	D	E	D	D
d_A, Approach Delay [s/veh]	25.98			24.50			44.48			51.79		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	34.14											
Intersection LOS	C											
Intersection V/C	0.644											

Emissions

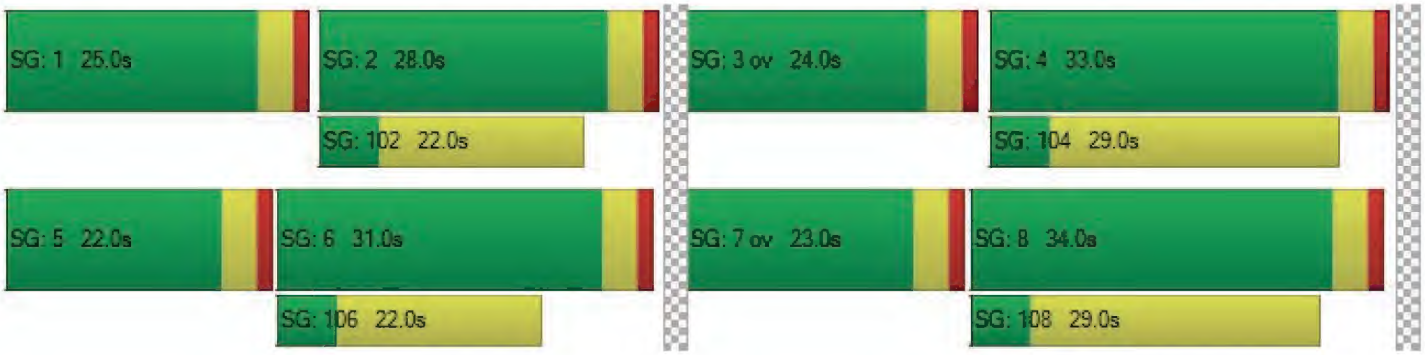
Vehicle Miles Traveled [mph]	21.74	58.53	4.40	22.50	228.71	41.99	14.06	31.51	28.12	1.38	19.65	19.21
Stops [stops/h]	227.17	308.29	16.99	90.27	554.87	65.68	170.25	338.90	304.03	18.79	230.18	226.10
Fuel consumption [US gal/h]	6.91	8.97	0.52	2.53	16.82	2.49	4.65	8.76	7.87	0.56	6.87	6.75
CO [g/h]	483.08	627.16	36.24	177.11	1176.00	173.80	324.70	612.28	549.86	39.48	480.03	471.91
NOx [g/h]	93.99	122.02	7.05	34.46	228.81	33.81	63.17	119.13	106.98	7.68	93.40	91.82
VOC [g/h]	111.96	145.35	8.40	41.05	272.55	40.28	75.25	141.90	127.44	9.15	111.25	109.37

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	46.37	46.37	46.37	46.37
l_p,int, Pedestrian LOS Score for Intersectio	3.103	2.892	2.848	2.697
Crosswalk LOS	C	C	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	491	436	545	527
d_b, Bicycle Delay [s]	31.31	33.62	29.09	29.82
l_b,int, Bicycle LOS Score for Intersection	2.353	2.205	2.347	1.994
Bicycle LOS	B	B	B	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



GENERAL PLAN BUILDOUT PLUS PROJECT TRAFFIC CONDITIONS

Intersection Level Of Service Report
Intersection 1: Moreno Beach Dr/ Alessandro Blvd

Control Type:	Signalized	Delay (sec / veh):	29.4
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.592

Intersection Setup

Name	Moreno Beach Drive			Moreno Beach Drive			Alessandro Boulevard			Alessandro Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	0	1	0	0
Entry Pocket Length [ft]	110.00	100.00	100.00	150.00	100.00	100.00	100.00	100.00	100.00	200.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			40.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Moreno Beach Drive			Moreno Beach Drive			Alessandro Boulevard			Alessandro Boulevard		
Base Volume Input [veh/h]	93	506	28	11	405	59	54	101	52	39	175	16
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	12	51	4	0	57	48	47	345	8	2	137	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	168	897	51	18	734	147	137	514	95	67	430	27
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	42	224	13	5	184	37	34	129	24	17	108	7
Total Analysis Volume [veh/h]	168	897	51	18	734	147	137	514	95	67	430	27
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	21	34	0	15	28	0	19	28	0	17	26	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	17.0	0.0	0.0	17.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	21.0	34.0	0.0	16.0	29.0	0.0	20.0	30.0	0.0	20.0	30.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Calculated Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	11.3	57.8	57.8	2.0	48.5	48.5	9.4	19.3	19.3	4.9	14.8	14.8
g / C, Green / Cycle	0.11	0.58	0.58	0.02	0.49	0.49	0.09	0.19	0.19	0.05	0.15	0.15
(v / s)_i Volume / Saturation Flow Rate	0.09	0.25	0.03	0.01	0.20	0.09	0.08	0.16	0.16	0.04	0.12	0.12
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1810	1900	1798	1810	1900	1861
c, Capacity [veh/h]	205	2090	933	37	1754	783	170	367	347	89	282	276
d1, Uniform Delay [s]	43.34	11.86	9.21	48.46	16.65	14.60	44.43	38.98	39.00	46.96	41.29	41.31
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.87	0.65	0.11	9.55	0.74	0.53	8.74	5.64	6.04	12.19	5.81	6.05
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, 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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.82	0.43	0.05	0.49	0.42	0.19	0.81	0.85	0.85	0.76	0.82	0.82
d, Delay for Lane Group [s/veh]	51.21	12.51	9.32	58.01	17.39	15.13	53.17	44.62	45.04	59.15	47.09	47.36
Lane Group LOS	D	B	A	E	B	B	D	D	D	E	D	D
Critical Lane Group	Yes	No	No	No	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	4.35	5.05	0.46	0.53	5.12	1.85	3.65	7.71	7.36	1.88	5.66	5.59
50th-Percentile Queue Length [ft/ln]	108.75	126.14	11.45	13.21	128.01	46.27	91.23	192.75	183.98	46.88	141.62	139.81
95th-Percentile Queue Length [veh/ln]	7.77	8.73	0.82	0.95	8.83	3.33	6.57	12.26	11.81	3.38	9.57	9.47
95th-Percentile Queue Length [ft/ln]	194.26	218.23	20.61	23.77	220.79	83.29	164.21	306.59	295.21	84.38	239.20	236.76

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	51.21	12.51	9.32	58.01	17.39	15.13	53.17	44.79	45.04	59.15	47.22	47.36
Movement LOS	D	B	A	E	B	B	D	D	D	E	D	D
d_A, Approach Delay [s/veh]	18.19			17.83			46.36			48.75		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	29.36											
Intersection LOS	C											
Intersection V/C	0.592											

Emissions

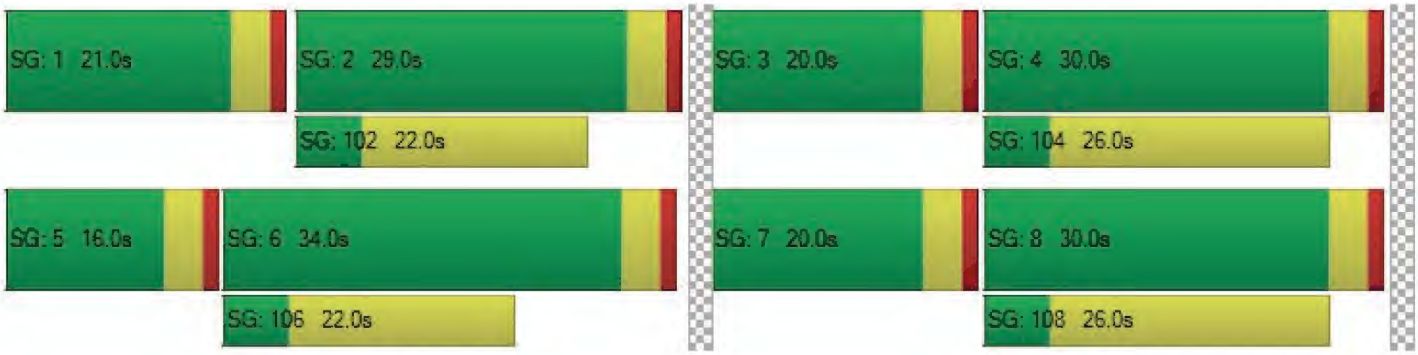
Vehicle Miles Traveled [mph]	20.20	107.83	6.13	1.48	60.50	12.12	10.14	23.13	21.95	5.28	18.16	17.86
Stops [stops/h]	156.59	363.28	16.48	19.02	368.67	66.63	131.36	277.56	264.93	67.50	203.93	201.32
Fuel consumption [US gal/h]	4.39	10.50	0.51	0.50	9.25	1.70	3.14	6.39	6.11	2.02	5.95	5.87
CO [g/h]	306.85	733.71	35.78	34.93	646.91	118.58	219.20	446.79	426.90	141.16	415.62	410.49
NOx [g/h]	59.70	142.75	6.96	6.80	125.87	23.07	42.65	86.93	83.06	27.46	80.87	79.87
VOC [g/h]	71.11	170.04	8.29	8.10	149.93	27.48	50.80	103.55	98.94	32.71	96.32	95.13

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersectio	2.950	2.937	2.694	2.666
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	600	500	520	520
d_b, Bicycle Delay [s]	24.50	28.13	27.38	27.38
l_b,int, Bicycle LOS Score for Intersection	2.480	2.301	2.175	1.992
Bicycle LOS	B	B	B	A

Sequence

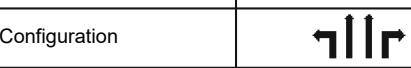
Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Moreno Beach Dr/ Brodiaea Ave

Control Type:	Signalized	Delay (sec / veh):	5.9
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.406

Intersection Setup

Name	Moreno Beach Drive			Moreno Beach Drive			Brodiaea Avenue			Brodiaea Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	0	0	0	0	0	0
Entry Pocket Length [ft]	150.00	100.00	200.00	150.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			No			Yes			Yes		

Volumes

Name	Moreno Beach Drive			Moreno Beach Drive			Brodiaea Avenue			Brodiaea Avenue		
Base Volume Input [veh/h]	10	620	20	28	468	19	2	1	9	22	6	39
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	31	10	12	50	3	2	1	0	27	3	36
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	17	1068	43	59	833	35	5	3	15	64	13	101
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	267	11	15	208	9	1	1	4	16	3	25
Total Analysis Volume [veh/h]	17	1068	43	59	833	35	5	3	15	64	13	101
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow	No			No								
Signal Group	0	6	0	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	0	33	0	0	33	0	0	19	0	0	19	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	7.0	0.0	0.0	7.0	0.0	0.0	10.0	0.0	0.0	10.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0.0	37.0	0.0	0.0	37.0	0.0	0.0	23.0	0.0	0.0	23.0	0.0
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	10	0	0	10	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	C	C
C, Calculated Cycle Length [s]	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	42.4	42.4	42.4	42.4	42.4	42.4	9.6	9.6
g / C, Green / Cycle	0.71	0.71	0.71	0.71	0.71	0.71	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.03	0.30	0.03	0.11	0.23	0.02	0.01	0.11
s, saturation flow rate [veh/h]	648	3618	1615	515	3618	1615	1724	1600
c, Capacity [veh/h]	491	2554	1140	396	2554	1140	350	338
d1, Uniform Delay [s]	5.62	3.68	2.66	7.29	3.37	2.65	21.43	23.66
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.13	0.51	0.06	0.79	0.34	0.05	0.08	1.27
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.03	0.42	0.04	0.15	0.33	0.03	0.07	0.53
d, Delay for Lane Group [s/veh]	5.75	4.18	2.72	8.08	3.71	2.70	21.51	24.93
Lane Group LOS	A	A	A	A	A	A	C	C
Critical Lane Group	No	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.08	1.17	0.08	0.41	1.20	0.09	0.26	2.29
50th-Percentile Queue Length [ft/ln]	1.99	29.35	1.94	10.22	29.99	2.18	6.54	57.36
95th-Percentile Queue Length [veh/ln]	0.14	2.11	0.14	0.74	2.16	0.16	0.47	4.13
95th-Percentile Queue Length [ft/ln]	3.58	52.82	3.49	18.40	53.98	3.92	11.78	103.25

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	5.75	4.18	2.72	8.08	3.71	2.70	21.51	21.51	21.51	24.93	24.93	24.93
Movement LOS	A	A	A	A	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	4.15			3.95			21.51			24.93		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	5.88											
Intersection LOS	A											
Intersection V/C	0.406											

Emissions

Vehicle Miles Traveled [mph]	4.25	266.95	10.75	8.10	114.42	4.81	1.57	32.92
Stops [stops/h]	4.77	140.86	4.65	24.53	143.94	5.23	15.70	137.66
Fuel consumption [US gal/h]	0.22	11.81	0.45	0.57	6.13	0.25	0.28	3.19
CO [g/h]	15.72	825.57	31.46	39.58	428.77	17.20	19.49	223.20
NOx [g/h]	3.06	160.63	6.12	7.70	83.42	3.35	3.79	43.43
VOC [g/h]	3.64	191.33	7.29	9.17	99.37	3.99	4.52	51.73

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	1.770	1.940
Crosswalk LOS	F	F	A	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1100	1100	633	633
d_b, Bicycle Delay [s]	6.08	6.08	14.01	14.01
l_b,int, Bicycle LOS Score for Intersection	2.490	2.324	1.598	1.853
Bicycle LOS	B	B	A	A

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 3: Moreno Beach Dr/ Cactus Ave

Control Type:	Signalized	Delay (sec / veh):	36.0
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.567

Intersection Setup

Name	Moreno Beach Drive			Moreno Beach Drive			Cactus Avenue			Cactus Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	210.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			30.00			45.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Moreno Beach Drive			Moreno Beach Drive			Cactus Avenue			Cactus Avenue		
Base Volume Input [veh/h]	115	469	54	30	365	67	94	92	76	63	131	36
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	35	30	0	0	53	24	10	330	42	0	160	1
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	227	814	90	50	664	136	167	484	169	105	379	61
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	57	204	23	13	166	34	42	121	42	26	95	15
Total Analysis Volume [veh/h]	227	814	90	50	664	136	167	484	169	105	379	61
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	1	6	6	5	2	2	3	8	0	7	4	0
Auxiliary Signal Groups			6,7			2,3						
Maximum Green [s]	27	34	34	17	24	24	24	32	0	21	29	0
Amber [s]	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0.0	5.0	5.0	0.0	5.0	5.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	17.0	17.0	0.0	17.0	17.0	0.0	24.0	0.0	0.0	24.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	31.0	38.0	38.0	21.0	28.0	28.0	28.0	36.0	0.0	25.0	33.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	10	5	10	10	5	10	0	5	10	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No	No	No	No	No	No	No		No	No	
Maximum Recall	No	No	No	No	No	No	No	No		No	No	
Pedestrian Recall	No	No	No	No	No	No	No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Calculated Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	17.2	66.2	79.1	4.4	53.4	70.8	13.4	24.5	24.5	8.9	20.0	20.0
g / C, Green / Cycle	0.14	0.55	0.66	0.04	0.44	0.59	0.11	0.20	0.20	0.07	0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.13	0.23	0.06	0.03	0.13	0.08	0.09	0.18	0.18	0.06	0.12	0.12
s, saturation flow rate [veh/h]	1810	3618	1615	1810	5176	1615	1810	1900	1734	1810	1900	1810
c, Capacity [veh/h]	260	1994	1065	67	2300	952	202	387	354	135	317	302
d1, Uniform Delay [s]	50.30	15.60	7.38	57.22	21.25	11.05	52.17	46.35	46.37	54.54	47.22	47.28
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.87	0.62	0.16	15.13	0.32	0.32	8.31	6.59	7.26	9.20	2.90	3.14
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, 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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.87	0.41	0.08	0.75	0.29	0.14	0.83	0.88	0.88	0.78	0.71	0.71
d, Delay for Lane Group [s/veh]	59.17	16.22	7.54	72.35	21.56	11.36	60.48	52.94	53.63	63.75	50.12	50.42
Lane Group LOS	E	B	A	E	C	B	E	D	D	E	D	D
Critical Lane Group	Yes	No	No	No	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	7.07	6.03	0.77	1.78	4.03	1.69	5.26	10.26	9.45	3.36	6.36	6.13
50th-Percentile Queue Length [ft/ln]	176.65	150.64	19.16	44.61	100.85	42.16	131.49	256.46	236.30	84.05	158.90	153.37
95th-Percentile Queue Length [veh/ln]	11.43	10.05	1.38	3.21	7.26	3.04	9.02	15.51	14.49	6.05	10.49	10.20
95th-Percentile Queue Length [ft/ln]	285.64	251.28	34.48	80.29	181.52	75.89	225.52	387.78	362.35	151.28	262.27	254.93

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	59.17	16.22	7.54	72.35	21.56	11.36	60.48	53.15	53.63	63.75	50.24	50.42
Movement LOS	E	B	A	E	C	B	E	D	D	E	D	D
d_A, Approach Delay [s/veh]	24.15			22.92			54.74			52.86		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	36.01											
Intersection LOS	D											
Intersection V/C	0.567											

Emissions

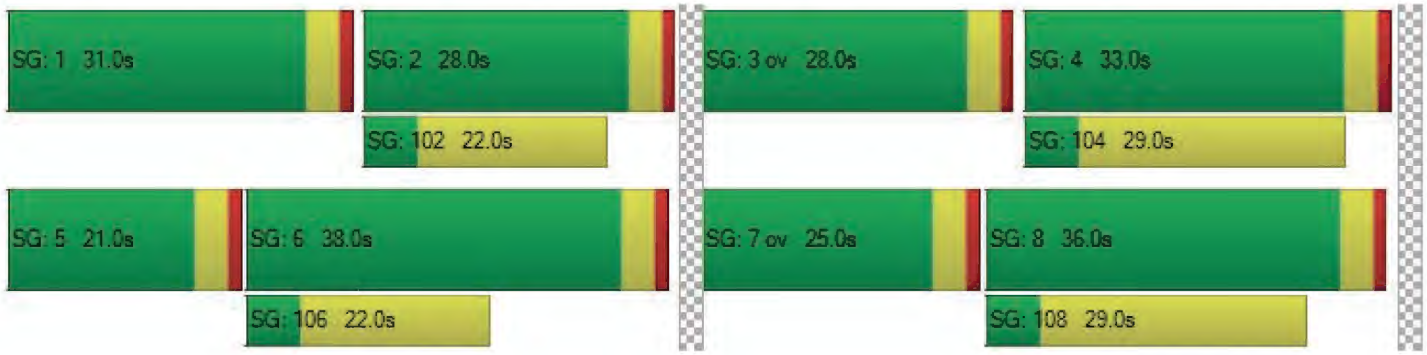
Vehicle Miles Traveled [mph]	19.98	71.65	7.92	12.50	165.97	33.99	12.90	26.34	24.09	8.03	17.16	16.50
Stops [stops/h]	211.98	361.54	22.99	53.53	363.05	50.60	157.79	307.76	283.56	100.86	190.68	184.05
Fuel consumption [US gal/h]	6.66	10.64	0.76	1.55	11.75	1.99	4.46	8.40	7.76	3.18	5.79	5.59
CO [g/h]	465.27	743.43	52.86	108.09	821.45	139.34	311.69	587.39	542.14	222.22	404.70	390.75
NOx [g/h]	90.53	144.64	10.29	21.03	159.82	27.11	60.64	114.28	105.48	43.24	78.74	76.03
VOC [g/h]	107.83	172.30	12.25	25.05	190.38	32.29	72.24	136.13	125.65	51.50	93.79	90.56

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	51.34	51.34	51.34
l_p,int, Pedestrian LOS Score for Intersectio	3.089	2.873	2.772	2.695
Crosswalk LOS	C	C	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	567	400	533	483
d_b, Bicycle Delay [s]	30.82	38.40	32.27	34.50
l_b,int, Bicycle LOS Score for Intersection	2.493	2.027	2.236	2.009
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: Project Access/ Brodiaea Ave

Control Type:	Two-way stop	Delay (sec / veh):	10.2
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.004

Intersection Setup

Name	Project Access		Brodiaea Avenue		Brodiaea Avenue	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Project Access		Brodiaea Avenue		Brodiaea Avenue	
Base Volume Input [veh/h]	0	0	0	49	67	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	3	66	23	0	0	1
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	66	23	82	112	1
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	17	6	21	28	0
Total Analysis Volume [veh/h]	3	66	23	82	112	1
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.07	0.02	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	10.17	9.11	7.44	0.00	0.00	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.24	0.24	0.04	0.04	0.00	0.00
95th-Percentile Queue Length [ft/ln]	5.97	5.97	0.97	0.97	0.00	0.00
d_A, Approach Delay [s/veh]	9.16		1.63		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	2.80					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 1: Moreno Beach Dr/ Alessandro Blvd

Control Type:	Signalized	Delay (sec / veh):	35.0
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.730

Intersection Setup

Name	Moreno Beach Drive			Moreno Beach Drive			Alessandro Boulevard			Alessandro Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	0	1	0	0
Entry Pocket Length [ft]	110.00	100.00	100.00	150.00	100.00	100.00	100.00	100.00	100.00	200.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			40.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Moreno Beach Drive			Moreno Beach Drive			Alessandro Boulevard			Alessandro Boulevard		
Base Volume Input [veh/h]	54	491	41	26	667	60	87	183	79	44	84	15
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	24	87	16	0	67	58	59	230	17	5	320	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	114	908	85	43	1183	158	205	536	149	79	461	25
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	29	227	21	11	296	40	51	134	37	20	115	6
Total Analysis Volume [veh/h]	114	908	85	43	1183	158	205	536	149	79	461	25
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	20	44	0	25	49	0	27	36	0	19	28	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	17.0	0.0	0.0	17.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	20.0	42.0	0.0	23.0	45.0	0.0	25.0	35.0	0.0	20.0	30.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Calculated Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	9.4	66.5	66.5	3.9	60.9	60.9	15.5	26.9	26.9	6.7	18.1	18.1
g / C, Green / Cycle	0.08	0.55	0.55	0.03	0.51	0.51	0.13	0.22	0.22	0.06	0.15	0.15
(v / s)_i Volume / Saturation Flow Rate	0.06	0.25	0.05	0.02	0.33	0.10	0.11	0.19	0.19	0.04	0.13	0.13
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1810	1900	1760	1810	1900	1866
c, Capacity [veh/h]	142	2003	894	59	1836	820	235	425	394	102	286	281
d1, Uniform Delay [s]	54.35	15.96	12.62	57.50	21.62	16.13	51.26	44.46	44.47	55.85	49.68	49.70
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.18	0.13	0.13	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.86	0.74	0.21	15.49	1.76	0.52	15.06	5.37	5.79	11.64	7.21	7.47
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, 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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.80	0.45	0.10	0.73	0.64	0.19	0.87	0.84	0.84	0.77	0.86	0.86
d, Delay for Lane Group [s/veh]	64.21	16.71	12.83	72.99	23.37	16.65	66.32	49.83	50.26	67.50	56.89	57.17
Lane Group LOS	E	B	B	E	C	B	E	D	D	E	E	E
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	3.69	7.05	1.07	1.52	11.73	2.37	6.92	10.49	9.77	2.62	7.46	7.38
50th-Percentile Queue Length [ft/ln]	92.33	176.30	26.64	37.96	293.30	59.19	172.94	262.22	244.15	65.40	186.62	184.38
95th-Percentile Queue Length [veh/ln]	6.65	11.41	1.92	2.73	17.35	4.26	11.23	15.80	14.89	4.71	11.95	11.83
95th-Percentile Queue Length [ft/ln]	166.19	285.17	47.96	68.33	433.73	106.55	280.78	395.01	372.28	117.71	298.63	295.72

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	64.21	16.71	12.83	72.99	23.37	16.65	66.32	49.97	50.26	67.50	57.02	57.17
Movement LOS	E	B	B	E	C	B	E	D	D	E	E	E
d_A, Approach Delay [s/veh]	21.30			24.15			53.78			58.50		
Approach LOS	C			C			D			E		
d_I, Intersection Delay [s/veh]	34.95											
Intersection LOS	C											
Intersection V/C	0.730											

Emissions

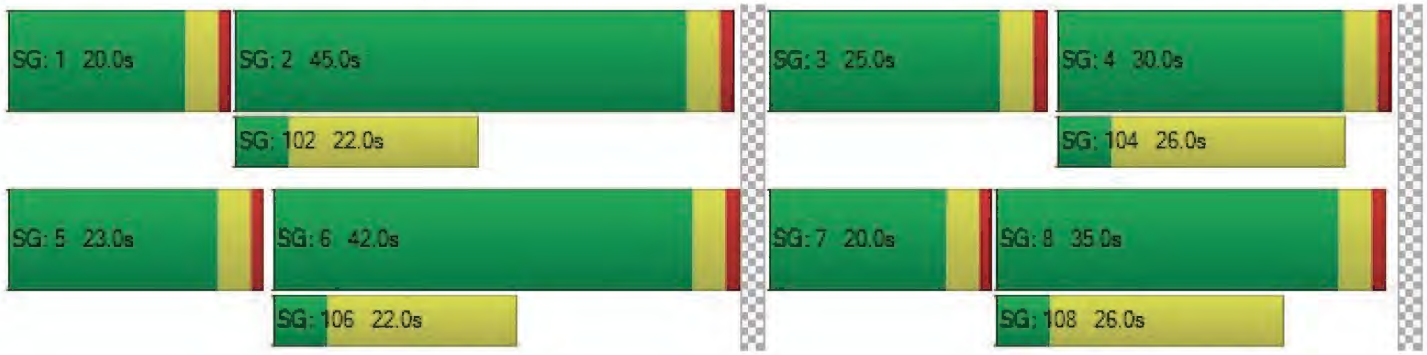
Vehicle Miles Traveled [mph]	13.70	109.15	10.22	3.54	97.52	13.02	15.18	26.32	24.39	6.23	19.30	19.01
Stops [stops/h]	110.79	423.11	31.97	45.56	703.92	71.03	207.53	314.67	292.98	78.48	223.94	221.25
Fuel consumption [US gal/h]	3.34	12.09	0.97	1.33	17.72	1.86	5.35	7.64	7.12	2.50	6.92	6.84
CO [g/h]	233.23	845.05	67.79	92.73	1238.74	130.36	373.87	533.95	497.74	174.62	483.56	478.02
NOx [g/h]	45.38	164.42	13.19	18.04	241.01	25.36	72.74	103.89	96.84	33.97	94.08	93.01
VOC [g/h]	54.05	195.85	15.71	21.49	287.09	30.21	86.65	123.75	115.36	40.47	112.07	110.79

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	51.34	51.34	51.34
l_p,int, Pedestrian LOS Score for Intersectio	3.082	3.083	2.737	2.715
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	633	683	517	433
d_b, Bicycle Delay [s]	28.02	26.00	33.00	36.82
l_b,int, Bicycle LOS Score for Intersection	2.473	2.701	2.294	2.026
Bicycle LOS	B	B	B	B

Sequence

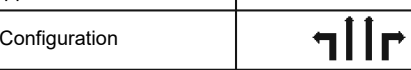
Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Moreno Beach Dr/ Brodiaea Ave

Control Type:	Signalized	Delay (sec / veh):	5.7
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.432

Intersection Setup

Name	Moreno Beach Drive			Moreno Beach Drive			Brodiaea Avenue			Brodiaea Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	0	0	0	0	0	0
Entry Pocket Length [ft]	150.00	100.00	200.00	150.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			No			Yes			Yes		

Volumes

Name	Moreno Beach Drive			Moreno Beach Drive			Brodiaea Avenue			Brodiaea Avenue		
Base Volume Input [veh/h]	4	583	29	52	739	24	14	2	11	18	2	29
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	84	32	40	47	3	19	4	0	19	2	24
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	1059	81	127	1283	43	42	7	18	49	5	73
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	265	20	32	321	11	11	2	5	12	1	18
Total Analysis Volume [veh/h]	7	1059	81	127	1283	43	42	7	18	49	5	73
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow	No			No								
Signal Group	0	6	0	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	0	36	0	0	36	0	0	16	0	0	16	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	7.0	0.0	0.0	7.0	0.0	0.0	10.0	0.0	0.0	10.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0.0	40.0	0.0	0.0	40.0	0.0	0.0	20.0	0.0	0.0	20.0	0.0
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	10	0	0	10	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	C	C
C, Calculated Cycle Length [s]	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	43.1	43.1	43.1	43.1	43.1	43.1	8.9	8.9
g / C, Green / Cycle	0.72	0.72	0.72	0.72	0.72	0.72	0.15	0.15
(v / s)_i Volume / Saturation Flow Rate	0.02	0.29	0.05	0.25	0.35	0.03	0.04	0.08
s, saturation flow rate [veh/h]	420	3618	1615	501	3618	1615	1625	1635
c, Capacity [veh/h]	338	2598	1160	400	2598	1160	339	326
d1, Uniform Delay [s]	7.08	3.37	2.51	7.85	3.69	2.45	22.60	23.45
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.11	0.48	0.12	2.08	0.67	0.06	0.28	0.76
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.02	0.41	0.07	0.32	0.49	0.04	0.20	0.39
d, Delay for Lane Group [s/veh]	7.19	3.84	2.62	9.93	4.37	2.51	22.88	24.21
Lane Group LOS	A	A	A	A	A	A	C	C
Critical Lane Group	No	No	No	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.04	1.01	0.13	0.99	2.03	0.10	0.80	1.59
50th-Percentile Queue Length [ft/ln]	1.06	25.18	3.32	24.77	50.73	2.47	19.98	39.68
95th-Percentile Queue Length [veh/ln]	0.08	1.81	0.24	1.78	3.65	0.18	1.44	2.86
95th-Percentile Queue Length [ft/ln]	1.90	45.32	5.97	44.59	91.32	4.44	35.96	71.43

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	7.19	3.84	2.62	9.93	4.37	2.51	22.88	22.88	22.88	24.21	24.21	24.21
Movement LOS	A	A	A	A	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	3.78			4.80			22.88			24.21		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	5.70											
Intersection LOS	A											
Intersection V/C	0.432											

Emissions

Vehicle Miles Traveled [mph]	1.75	264.70	20.25	17.44	176.23	5.91	4.59	23.49
Stops [stops/h]	2.53	120.87	7.96	59.46	243.52	5.92	47.95	95.24
Fuel consumption [US gal/h]	0.10	11.40	0.84	1.30	9.74	0.30	0.85	2.24
CO [g/h]	7.11	797.18	58.45	91.10	680.85	20.82	59.23	156.39
NOx [g/h]	1.38	155.10	11.37	17.73	132.47	4.05	11.52	30.43
VOC [g/h]	1.65	184.75	13.55	21.11	157.79	4.82	13.73	36.24

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	1.775	2.071
Crosswalk LOS	F	F	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1200	1200	533	533
d_b, Bicycle Delay [s]	4.80	4.80	16.13	16.13
l_b,int, Bicycle LOS Score for Intersection	2.506	2.758	1.670	1.769
Bicycle LOS	B	C	A	A

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 3: Moreno Beach Dr/ Cactus Ave

Control Type:	Signalized	Delay (sec / veh):	36.5
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.645

Intersection Setup

Name	Moreno Beach Drive			Moreno Beach Drive			Cactus Avenue			Cactus Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	210.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			30.00			45.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Moreno Beach Drive			Moreno Beach Drive			Cactus Avenue			Cactus Avenue		
Base Volume Input [veh/h]	113	365	30	53	526	94	96	165	120	11	95	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	58	74	0	1	47	18	33	247	48	0	307	9
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	247	685	50	90	927	175	194	523	249	18	466	42
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	62	171	13	23	232	44	49	131	62	5	117	11
Total Analysis Volume [veh/h]	247	685	50	90	927	175	194	523	249	18	466	42
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	1	6	6	5	2	2	3	8	0	7	4	0
Auxiliary Signal Groups			6,7			2,3						
Maximum Green [s]	22	28	28	17	23	23	20	34	0	15	29	0
Amber [s]	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0.0	5.0	5.0	0.0	5.0	5.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	17.0	17.0	0.0	17.0	17.0	0.0	24.0	0.0	0.0	24.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	30.0	35.0	35.0	25.0	30.0	30.0	27.0	40.0	0.0	20.0	33.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	10	5	10	10	5	10	0	5	10	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No	No	No	No	No	No	No		No	No	
Maximum Recall	No	No	No	No	No	No	No	No		No	No	
Pedestrian Recall	No	No	No	No	No	No	No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Calculated Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	18.6	62.1	68.4	7.7	51.3	70.5	15.2	31.9	31.9	2.3	19.0	19.0
g / C, Green / Cycle	0.15	0.52	0.57	0.06	0.43	0.59	0.13	0.27	0.27	0.02	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.14	0.19	0.03	0.05	0.18	0.11	0.11	0.21	0.21	0.01	0.14	0.14
s, saturation flow rate [veh/h]	1810	3618	1615	1810	5176	1615	1810	1900	1695	1810	1900	1846
c, Capacity [veh/h]	280	1871	921	117	2209	948	229	504	450	36	301	292
d1, Uniform Delay [s]	49.64	17.25	11.43	55.27	24.01	11.48	51.24	41.25	41.25	58.24	49.17	49.22
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.12	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.87	0.55	0.11	10.29	0.59	0.43	9.08	3.16	3.53	10.63	6.89	7.33
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, 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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.88	0.37	0.05	0.77	0.42	0.18	0.85	0.81	0.81	0.51	0.85	0.86
d, Delay for Lane Group [s/veh]	58.51	17.80	11.54	65.56	24.60	11.91	60.32	44.41	44.77	68.87	56.06	56.55
Lane Group LOS	E	B	B	E	C	B	E	D	D	E	E	E
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	7.66	5.33	0.57	3.01	6.22	2.25	6.13	11.31	10.14	0.63	7.79	7.65
50th-Percentile Queue Length [ft/ln]	191.62	133.30	14.30	75.36	155.55	56.19	153.24	282.75	253.45	15.77	194.66	191.21
95th-Percentile Queue Length [veh/ln]	12.21	9.12	1.03	5.43	10.31	4.05	10.19	16.83	15.36	1.14	12.36	12.18
95th-Percentile Queue Length [ft/ln]	305.13	227.98	25.73	135.65	257.81	101.15	254.75	420.64	383.99	28.38	309.07	304.60

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	58.51	17.80	11.54	65.56	24.60	11.91	60.32	44.49	44.77	68.87	56.28	56.55
Movement LOS	E	B	B	E	C	B	E	D	D	E	E	E
d_A, Approach Delay [s/veh]	27.72			25.83			47.74			56.73		
Approach LOS	C			C			D			E		
d_I, Intersection Delay [s/veh]	36.54											
Intersection LOS	D											
Intersection V/C	0.645											

Emissions

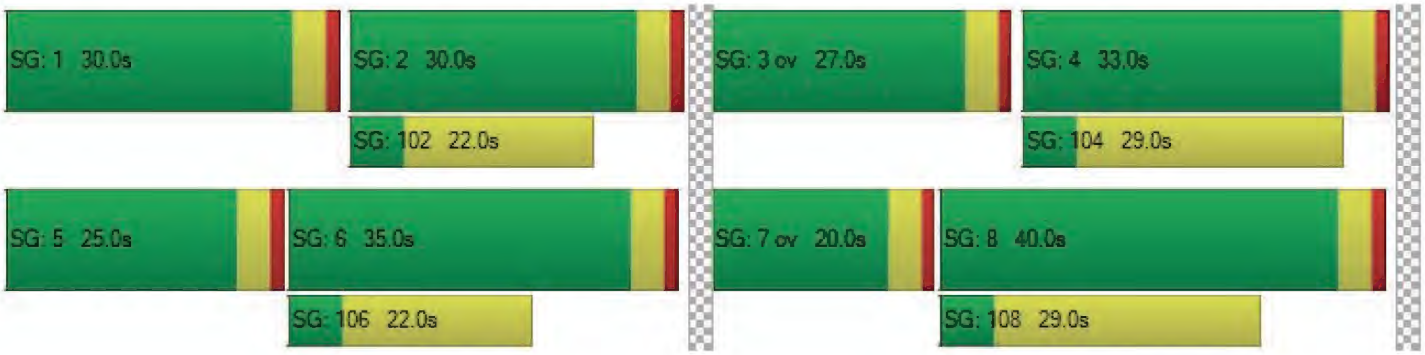
Vehicle Miles Traveled [mph]	21.74	60.29	4.40	22.50	231.71	43.74	14.98	31.51	28.11	1.38	19.65	19.21
Stops [stops/h]	229.94	319.93	17.16	90.43	559.96	67.43	183.89	339.30	304.14	18.92	233.60	229.45
Fuel consumption [US gal/h]	7.20	9.41	0.53	2.63	17.27	2.60	5.18	8.99	8.06	0.59	7.17	7.05
CO [g/h]	503.16	657.86	36.92	183.57	1207.31	181.55	362.16	628.06	563.52	41.15	501.52	493.10
NOx [g/h]	97.90	128.00	7.18	35.72	234.90	35.32	70.46	122.20	109.64	8.01	97.58	95.94
VOC [g/h]	116.61	152.47	8.56	42.54	279.80	42.08	83.93	145.56	130.60	9.54	116.23	114.28

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	51.34	51.34	51.34
l_p,int, Pedestrian LOS Score for Intersectio	3.114	2.903	2.857	2.702
Crosswalk LOS	C	C	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	517	433	600	483
d_b, Bicycle Delay [s]	33.00	36.82	29.40	34.50
l_b,int, Bicycle LOS Score for Intersection	2.370	2.215	2.357	1.994
Bicycle LOS	B	B	B	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: Project Access/ Brodiaea Ave

Control Type:	Two-way stop	Delay (sec / veh):	11.2
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.003

Intersection Setup

Name	Project Access		Brodiaea Avenue		Brodiaea Avenue	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Project Access		Brodiaea Avenue		Brodiaea Avenue	
Base Volume Input [veh/h]	0	0	0	83	49	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.6727	1.6727	1.6727	1.6727	1.6727	1.6727
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	2	45	75	1	0	4
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	45	75	140	82	4
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	11	19	35	21	1
Total Analysis Volume [veh/h]	2	45	75	140	82	4
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.05	0.05	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	11.22	8.87	7.45	0.00	0.00	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.16	0.16	0.13	0.13	0.00	0.00
95th-Percentile Queue Length [ft/ln]	3.88	3.88	3.26	3.26	0.00	0.00
d_A, Approach Delay [s/veh]	8.97		2.60		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	2.82					
Intersection LOS	B					

APPENDIX E

TRAFFIC SIGNAL WARRANT ANALYSIS SHEETS

PEAK HOUR VOLUME WARRANT
URBAN CONDITIONS

Peak Hour: AM

Scenario: OYP

Major Street: Moreno Beach Drive

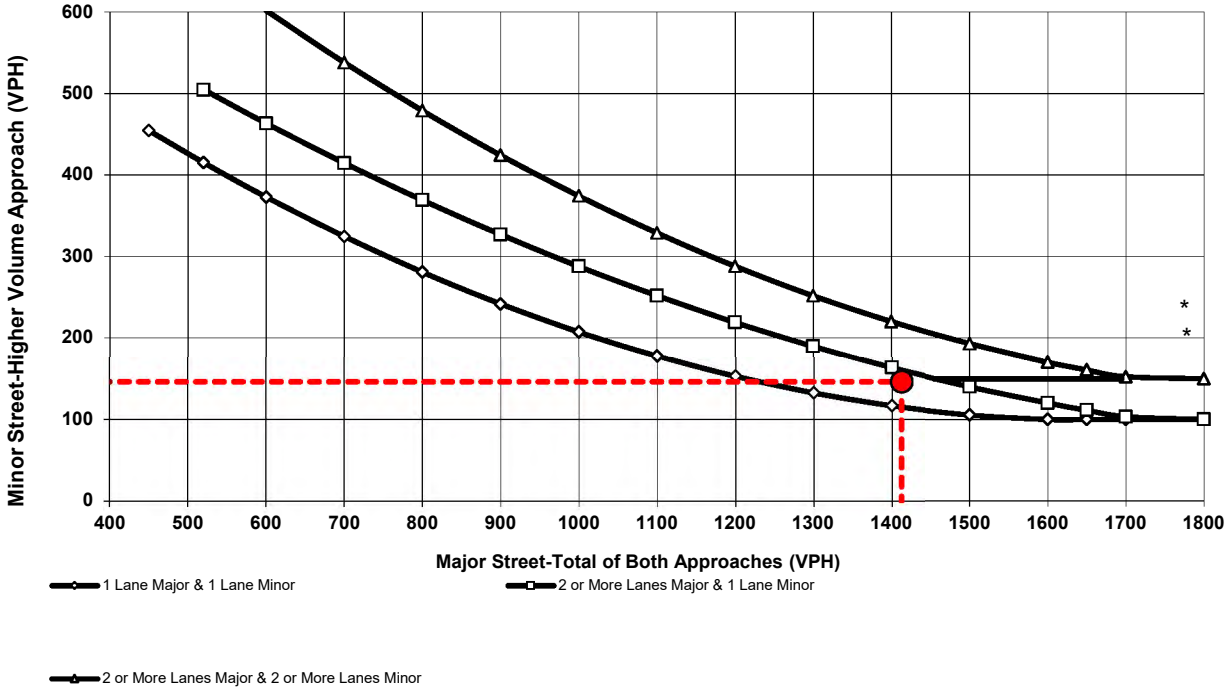
Minor Street: Brodiaea Avenue

Total of Both Approaches (VPH): 1412
Number of Approach Lanes: 2

Higher Volume Approach (VPH): 146
Number of Approach Lanes: 1

SIGNAL WARRANT NOT SATISFIED

Figure 4C-3. Peak Hour Warrant (Urban)



*Note:
150 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

OYP Conditions
AM Peak Hour Volume Warrant
Moreno Beach Drive / Brodiaea Avenue

PEAK HOUR VOLUME WARRANT
URBAN CONDITIONS

Peak Hour: PM

Scenario: OYP

Major Street: Moreno Beach Drive

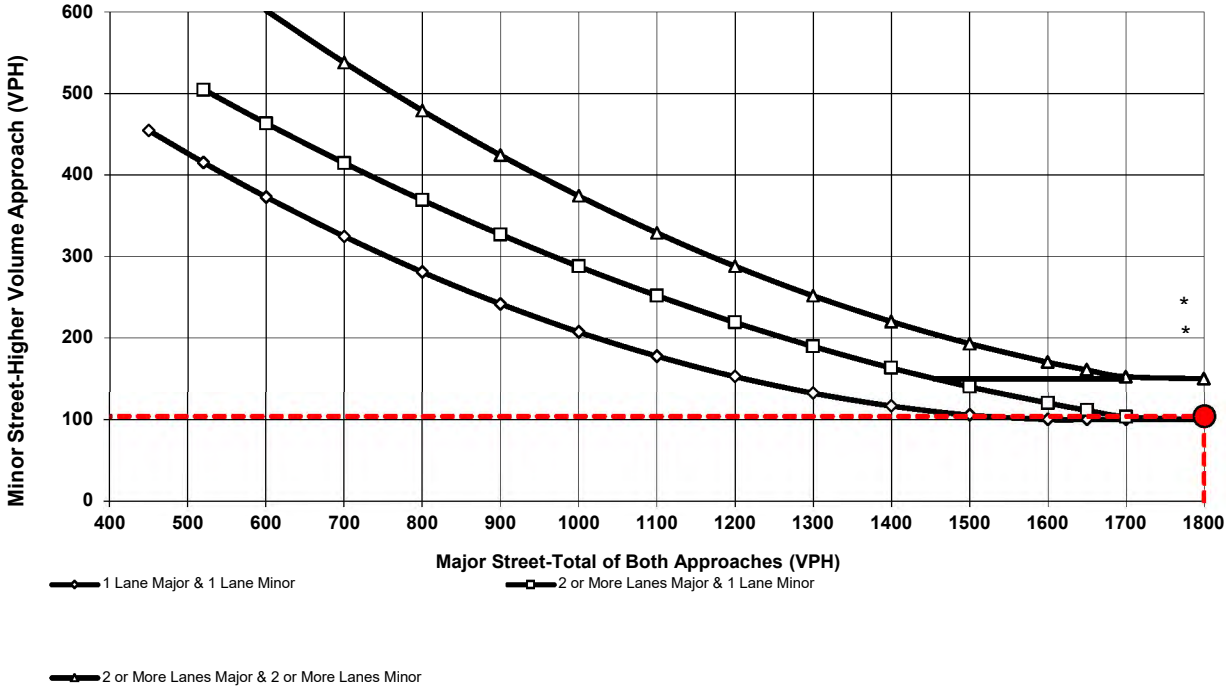
Minor Street: Brodiaea Avenue

Total of Both Approaches (VPH): 1839
Number of Approach Lanes: 2

Higher Volume Approach (VPH): 104
Number of Approach Lanes: 1

SIGNAL WARRANT SATISFIED

Figure 4C-3. Peak Hour Warrant (Urban)



*Note:
150 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

OYP Conditions
PM Peak Hour Volume Warrant
Moreno Beach Drive / Brodiaea Avenue

APPENDIX F

GENERAL PLAN BUILDOUT ANNUAL GROWTH RATE CALCULATIONS

General Plan Buildout Annual Growth Rate Calculations

Segment	Peak Hour	2018 [1]	2045 [1]	Annual Growth		
1 Moreno Beach Dr (N)	AM	3,129	6,656	1.028350	=	2.84%
	PM	4,159	8,614	1.027334	=	2.73%
2 Cottonwood Ave (W)	AM	394	745	1.023874	=	2.39%
	PM	466	939	1.026289	=	2.63%
3 Cottonwood Ave (E)	AM	170	2,494	1.104592	=	10.46%
	PM	213	2,996	1.102871	=	10.29%
4 Alessandro Blvd €	AM	649	1,207	1.023246	=	2.32%
	PM	530	1,321	1.034403	=	3.44%
5 Moreno Beach Dr (S)	AM	2,059	3,345	1.018135	=	1.81%
	PM	1,525	5,609	1.049419	=	4.94%
6 Cactus Ave (W)	AM	875	3,570	1.053458	=	5.35%
	PM	890	3,256	1.049211	=	4.92%
7 Cactus Ave (E)	AM	153	4,202	1.130544	=	13.05%
	PM	218	4,098	1.114781	=	11.48%
8 JFK Dr	AM	4,086	4,995	1.007467	=	0.75%
	PM	4,821	6,146	1.009034	=	0.90%
Annual Growth Rate		21,208	53,537	1.034891	=	**3.49%**

1: Source: RIVCOM (Riverside County Transportation Model).