Maverik Fueling Station Traffic Impact Analysis

City of Pinon Hills, California

August 14, 2024

Prepared by:

TJW ENGINEERING, INC.
9841 Irvine Center Drive, Suite 200
Irvine, CA 92618
949.878.3509 | www.tjwengineering.com

TJW ENGINEERING, INC.
TRAFFIC ENGINEERING &
TRANSPORTATION PLANNING
CONSULTANTS

August 14, 2024

Mr. Jeremy Johnson
COUNTY OF SAN BERNARDINO
825 East Third Street
San Bernardino, CA 92415

Subject: Traffic Impact Analysis – Maverik Fueling Station, City of Pinon Hill

Dear Mr. Johnson:

TJW ENGINEERING, INC. (TJW) is pleased to present you with this traffic impact analysis for the proposed project, Maverik Fueling Station, located on Oasis Road south of Highway 138 in Pinon Hills within the County of San Bernardino.

This traffic study has been prepared to meet the traffic study requirements for the County of San Bernardino and assess 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 County of San Bernardino.

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

Sincerely,

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





David Chew, PTP
Transportation Planner

Daniel Flores, EIT
Project Engineer

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1.0 EXECUTIVE SUMMARY

This traffic impact analysis (TIA) analyzes the projected traffic operations associated with the proposed project, Maverik Fueling Station, located on Oasis Road south of Highway 138 in the city of Pinon Hills within the County of San Bernardino. 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 County of San Bernardino via a scoping agreement (See **Appendix A**) and is pursuant to applicable *San Bernardino County Transportation Authority Recommended Traffic Impact Analysis Guidelines for Vehicle Miles Traveled and Level of Service Assessment* (SBCTA Guidelines) (February 2020) and the *San Bernardino County Transportation Impact Guidelines* (County Guidelines) (July 2019).

The proposed project includes a gasoline station with fueling pumps for five (5) truck and twenty (20) standard passenger vehicles, and a 5,637 square foot convenience store. Site access is planned via one right in/out driveway off Oasis Road and two full access driveways off Buckthorne Road. The site is currently zoned as CG for General Commercial per the Public San Bernardino County Zoning Map. The project site is currently vacant. The proposed project is anticipated to be built and generating trips in 2026.

The proposed project is projected to generate 8,035 daily trips, 702 AM peak hour trips, and 615 PM peak hour trips.

The following twelve (12) intersections and one (1) roadway segment in the vicinity of the project site have been included in the level of service (LOS) analysis:

Intersections:

1. Oasis Road/Route 138
2. Oasis Road/Buckthorne Road
3. Project Driveway #1/Buckthorne Road
4. Project Driveway #2/Buckthorne Road
5. Oasis Road/Project Driveway #3
6. Mountain Road/Route 138
7. Soledad Road/Route 138
8. 263rd Street East/Route 138
9. Ponderosa Road/Route 138
10. Desert View Road/Route 138
11. Acorn Road/Route 138
12. Green Road-Phelan Road/Route 138

Roadway Segment:

1. Oasis Road between Route 138 and Buckthorne Road

The study intersections are analyzed for the following study scenarios:

- Existing Traffic Conditions (Existing)
- Opening Year Traffic (Existing + Ambient Growth + Cumulative Projects)
- Opening Year Traffic Plus Projects Conditions (Existing + Ambient Growth + Cumulative Projects + Proposed Project).

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 County Guidelines thresholds of significance for analyzing transportation deficiencies.

Table ES-1

Summary of Transportation Deficiencies at Study Intersections

Intersection			Existing	Opening Year No Project	Opening Year With Project
1	Oasis Road	Route 138	-	-	-
2	Oasis Road	Buckthorne Road	-	-	-
3	Project Dwy	Buckthorne Road	-	-	-
4	Project Dwy	Buckthorne Road	-	-	-
5	Oasis Road	Project Dwy	-	-	-
6	Route 138	Mountain Road	-	-	deficient
7	Route 138	Soledad Road	-	-	-
8	Route 138	263rd Street East	-	-	-
9	Route 138	Ponderosa Road	-	-	-
10	Route 138	Desert View Road	-	-	-
11	Route 138	Acorn Road	-	-	-
12	Route 138	Green Road – Phelan Road	-	-	-

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 Traffic Conditions

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

Opening Year Plus Project Traffic Conditions

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:

- The intersection of Mountain Road/Route 138 for both AM and PM Peak Hours;

1.2 ON-SITE ROADWAY AND SITE ACCESS IMPROVEMENTS

Wherever necessary, roadways adjacent to the proposed project site and site access points will be constructed in compliance with recommended roadway classifications and respective cross-sections in the County of San Bernardino General Plan or as directed by the County Engineer.

Sight distance at each project access point should be reviewed with respect to standard Caltrans and County sight distance standards at the time of final grading, landscaping, and street improvement plans.

Signing/striping should be implemented in conjunction with detailed construction plans for the project site.

2.0 INTRODUCTION

This traffic impact analysis (TIA) analyzes the projected traffic operations associated with the proposed project, Maverik Fueling Station, located on Oasis Road south of Highway 138 in the city of Pinon Hills within the County of San Bernardino. 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 County of San Bernardino via a scoping agreement (See **Appendix A**) and is pursuant to applicable *San Bernardino County Transportation Authority Recommended Traffic Impact Analysis Guidelines for Vehicle Miles Traveled and Level of Service Assessment* (SBCTA Guidelines) (February 2020) and the *San Bernardino County Transportation Impact Guidelines* (County Guidelines) (July 2019).

2.1 PROJECT DESCRIPTION

The proposed project includes a gasoline station with fueling pumps for five (5) truck and twenty (20) standard passenger vehicles, and a 5,637 square foot convenience store. Site access is planned via one right in/out driveway off Oasis Road and two full access driveways off Buckthorne Road. The site is currently zoned as CG for General Commercial per the Public San Bernardino County Zoning Map. The project site is currently vacant. The proposed project is anticipated to be built and generating trips in 2026. **Exhibit 1** shows the proposed project site location. **Exhibit 2** shows the project site plan.

2.2 STUDY AREA

The following twelve (12) intersections and one (1) roadway segments in the vicinity of the project site have been included in the level of service (LOS) analysis:

Intersections:

1. Oasis Road/Route 138
2. Oasis Road/Buckthorne Road
3. Project Driveway #1/Buckthorne Road
4. Project Driveway #2/Buckthorne Road
5. Oasis Road/Project Driveway #3
6. Mountain Road/Route 138
7. Soledad Road/Route 138
8. 263rd Street East/Route 138
9. Ponderosa Road/Route 138
10. Desert View Road/Route 138
11. Acorn Road/Route 138
12. Green Road-Phelan Road/Route 138

Roadway Segment:

1. Oasis Road between Route 138 and Buckthorne Road

The study intersections and roadway segments are all located within the County of San Bernardino. These are analyzed for the following study scenarios:

- Existing Traffic Conditions (Existing);
- Background Traffic Conditions (Existing + Ambient Growth + Cumulative Projects)
- Background Plus Projects Conditions (Background traffic + Proposed Project).

Traffic operations are evaluated for the following time periods:

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

2.3 ANALYSIS METHODOLOGY

2.3.1 Intersection Analysis Methodology

The traffic analysis focuses on the project's off-site traffic-related impacts at the traffic study area intersections and on the study area roadway segments. In accordance with the County Guidelines, intersection operation for both signalized and unsignalized intersections is evaluated using the methodology of the Highway Capacity Manual (HCM) 7th Edition (Transportation Research Board, 2022).

The Highway Capacity Manual uses Level of Service (LOS) to describe the quality of flow on roadways and at intersections using a range from LOS A, or very favorable progression, to LOS F, or very poor progression. The LOS definitions 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 LOS ranges for signalized intersections is based on the intersection's average control delay for all movements at the intersection during the peak hour. Control delays include initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay.

Table 1 identifies each Level of Service category with the corresponding general characteristics of traffic flow plus accompanying delay ranges at signalized intersections.

Table 1

HCM – LOS & Delay Thresholds – 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: Transportation Research Board, *Highway Capacity Manual*, HCM 7th Edition (Washington D.C., 2022).

The Highway Capacity Manual LOS range 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 intersections, 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 Thresholds – Unsignalized Intersections

Level of Service	Description	Delay (in seconds)
A	Little or no delays.	0 – 10.00
B	Short traffic delays.	10.01 – 15.00
C	Average traffic delays.	15.01 – 25.00
D	Long traffic delays. Multiple vehicles in queue.	25.01 – 35.00
E	Very long delays. Demand approaching capacity of intersection	35.01 – 50.00
F	Very constrained flow with extreme delays and intersection capacity exceeded.	> 50.01

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

This study utilizes *PTV Vistro 2022* 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 into consideration the optimization and coordination of signalized and unsignalized intersections within a network.

2.3.2 Roadway Segment Analysis Methodology

LOS for roadway segments is based on volume/capacity ratio (V/C). Since no roadway capacity information was found for the County of San Bernardino the Roadway capacities have been referenced from the *County of Riverside Transportation Analysis Guidelines for Level of Service and Vehicle Miles Traveled, Appendix D (December 2020)*. The capacities for each type of facility are defined below in **Table 3** presents the LOS range based on daily roadway segment capacity.

Table 3
HCM – LOS & Capacity Thresholds – Roadway Capacity

Facility Type	Number of Lanes	LOS C Capacity (Vehicles Per Day)	LOS D Capacity (Vehicles Per Day)	LOS E Capacity (Vehicles Per Day)
Collector	2	10,400	11,700	13,000
Secondary	4	20,700	23,300	25,900
Major	4	27,300	30,700	34,100
Arterial	2	14,400	16,200	18,000
Arterial	4	28,700	32,300	35,900
Mountain Arterial	2	12,900	14,500	16,100
Mountain Arterial	3	16,700	18,800	20,900
Mountain Arterial	4	29,800	33,500	37,200
Urban Arterial	4	28,700	32,300	35,900
Urban Arterial	6	43,100	48,500	53,900
Urban Arterial	8	57,400	64,600	71,800
Expressway	4	32,700	36,800	40,900
Expressway	6	49,000	55,200	61,300
Expressway	8	65,400	73,500	81,700
Freeway	4	61,200	68,900	76,500
Freeway	6	94,000	105,800	117,500
Freeway	8	128,400	144,500	160,500
Freeway	10	160,500	180,500	200,600
Ramp[4]	1	16,000	18,000	20,000

1. All capacity figures are based on optimum conditions and are intended as guidelines for planning purposes only.
2. Maximum two-way ADT values are based on the 1999 Modified Highway Capacity Manual Level of Service Tables as defined in the Riverside County Congestion Management Program.
3. Two-lane roadways designated as future arterials that conform to arterial design standards for vertical and horizontal alignments are analyzed as arterials.
4. Ramp capacity is given as a one-way traffic volume.

Table 4 below describes the LOS and V/C ranges for roadway segments.

Table 4
LOS & V/C Ranges – Roadway Segments

Level of Service	Volume/Capacity Ratio
A	0.00 - 0.60
B	> 0.60 – 0.70
C	> 0.70 – 0.80
D	> 0.80 – 0.90
E	> 0.90 – 1.00
F	> 1.00

2.4 PERFORMANCE CRITERIA

Signalized Intersections

Consistent with the acceptable LOS for the Desert, Valley, and Mountain regions as described in the General Plan, the County should consider the following signalized intersection criteria for application in a traffic study. Please note that this will be completed to demonstrate General Plan Consistency. Specific CEQA thresholds, which are based on VMT requirements, are described later in this memorandum.

• Any signalized study intersection in the Valley or Mountain regions that is operating at an acceptable LOS D or better without project traffic in which the addition of project traffic causes the intersection to degrade to an LOS E or F shall identify improvements to improve operations to LOS D or better.

• Any signalized study intersection in the Desert region that is operating at an LOS C or better without project traffic in which the addition of project traffic causes the intersection to degrade to an LOS D, E, or F shall identify improvements to improve operations to LOS C.

• Any signalized study intersection in the Valley or Mountain regions that is operating at LOS E or F without project traffic where the project increases delay by 5.0 or more seconds shall identify improvements to offset the increase in delay.

• Any signalized study intersection in the Desert region that is operating at LOS D, E, or F without project traffic where the project increases delay by 5.0 or more seconds shall identify improvements to offset the increase in delay.

Unsignalized Intersections

Consistent with the acceptable LOS for the Desert, Valley, and Mountain regions as described in the current General Plan, the County should consider the following unsignalized intersection criteria when identifying operational deficiencies:

An operational improvement would be required if the study determines that either section a) or both sections b) and c) occur: a) The addition of project related traffic causes the intersection to degrade from an LOS D or better to a LOS E or worse in the Valley and Mountain regions or from an LOS C or better to an LOS D or worse in the Desert region.

OR

b) The project adds 5.0 seconds or more of delay to an intersection that is already projected to operate without project traffic at an LOS E or F in the Valley and Mountain regions or at an LOS D, E, or F in the Desert region (per Section 10.5.2 b))

AND

c) One or both of the following conditions are met:

1) The project adds ten (10) or more trips to any minor street approach
2) The intersection meets the peak hour traffic signal warrant after the addition of project traffic (per Section 10.5.2 c)).

If the conditions above are satisfied, improvements should be identified that achieve the following:

• In the Valley and Mountain regions, improvements should be identified that would achieve LOS D or better for case a) above or to pre-project LOS and delay for case b) above.

• In the Desert region, improvements should be identified that would achieve LOS C or better for case a) above or to pre-project LOS and delay for case b) above

Roadway Segments

Consistent with the acceptable LOS for the Desert, Valley, and Mountain regions as described in the current General Plan, the County should consider the following roadway segment thresholds and improvement requirements:

• Any study roadway segment in the Valley or Mountain regions that is operating at an LOS D or better without project traffic in which the addition of project traffic causes the segment to degrade to an LOS E or F should identify improvements to achieve LOS D.

• Any study roadway segment in the Desert region that is operating at an LOS C or better without project traffic in which the addition of project traffic causes the segment to degrade to an LOS D, E, or F should identify improvements to achieve LOS D.

• Any roadway segment that operates unacceptably in the no project scenario where the project adds traffic in excess of 5% of the roadway capacity (e.g. a volume-to-capacity ratio increase of 0.05) should identify improvements to add capacity to the segment.



Legend:

- - - - Project Site

(#) Study Intersection Location

Exhibit 1: Project Location

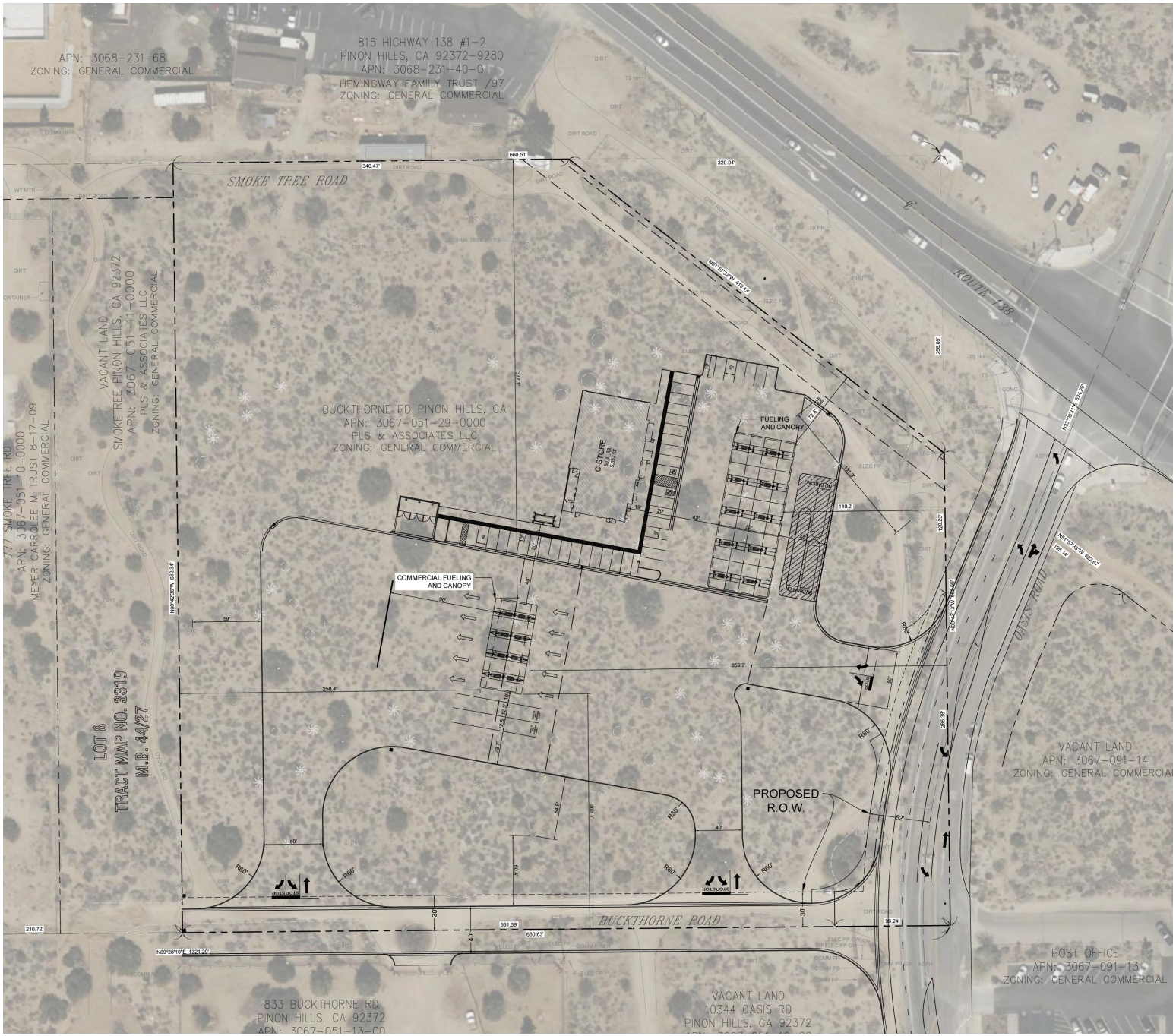


Exhibit 2: Proposed Project Site Plan

3.0 EXISTING CONDITIONS

3.1 EXISTING CIRCULATION NETWORK/STUDY AREA CONDITIONS

The characteristics of the roadway system within the vicinity of the project site are described in **Table 5.**

Table 5

Roadway Characteristics within Study Area

Roadway	Classification[1]	Jurisdiction	Direction	Existing Travel Lanes	Median Type[2]	Speed Limit (mph)	On-Street Parking
Oasis Road	Major Highway	County of San Bernardino	North-South	2	PM	55	No
Route 138	Major Arterial Highway	County of San Bernardino	East-West	2-4	TWLT	50-55	No
Buckthorne Road	Local Roadway	County of San Bernardino	East West	2	NM	-	No
Mountain Road	Local Roadway	County of San Bernardino	North-South	2	NM	-	No
Soledad Road	Local Roadway	County of San Bernardino	North-South	2	NM	-	No
263rd Street	Local Roadway	County of San Bernardino	North-South	2	NM	-	No
Ponderosa Road	Local Roadway	County of San Bernardino	North-South	2	NM	-	No
Desert View Road	Local Roadway	County of San Bernardino	North-South	2	NM	-	No
Acorn Road	Local Roadway	County of San Bernardino	North-South	2	NM	-	No
Green Road-Phelan Road	Major Highway	County of San Bernardino	East-West	2	NM	55	No

1: Source: San Bernardino County Land Use Plan General Plan Circulation and Transportation Victor Valley Region
2: TWLTL = Two-Way Left-Turn Lane, RM= Raised Median, NM = No Median. PM = Painted Median

Exhibit 3 shows the existing conditions of the study area intersection controls and roadway geometry.

3.2 COUNTY OF SAN BERNARDINO GENERAL PLAN CIRCULATION ELEMENT

The proposed project site is located within the County of San Bernardino. **Appendix A** contains the current *County of San Bernardino General Plan* and an explanation of roadway cross sections.

3.3 EXISTING BICYCLE AND PEDESTRIAN FACILITIES

Within the study area, there are no existing bicycle facilities or pedestrian facilities.

3.4 EXISTING PUBLIC TRANSIT SERVICES

The City of Pinon Hills is served by the Victor Valley Transit Authority (VVTA) which provides transit service through the City of Pinon Hills. However, there are no stops in the vicinity of the proposed project.

3.5 EXISTING TRAFFIC VOLUMES

To determine the existing operation of the study intersections, AM and PM peak period traffic volumes were estimated based on new traffic counts collected on April 24, 2024. Detailed traffic count data is provided in **Appendix B**. **Exhibit 4** and **Exhibit 5** show existing AM and PM peak hour volumes at the study intersections.

3.6 EXISTING CONDITIONS INTERSECTION LEVEL OF SERVICE ANALYSIS

Existing conditions AM and PM peak hour intersection analysis is shown in **Table 6**. Calculations are based on the existing geometrics at the study area intersections as shown in **Exhibit 3.** HCM analysis sheets are provided in **Appendix C**.

Table 6

Intersection Analysis – Existing Conditions

Intersection			Control Type	Peak Hour	Existing Conditions	
					Delay (s/veh)	LOS
1	Oasis Road	Route 138	Signal	AM	29.9	C
				PM	30.9	C
2	Oasis Road	Buckthorne Road	TWSC	AM	8.4	A
				PM	8.5	A
3	Project Driveway #1	Buckthorne Road	TWSC	AM	-	-
				PM	-	-
4	Project Driveway #2	Buckthorne Road	TWSC	AM	-	-
				PM	-	-
5	Oasis Road	Project Driveway #3	TWSC	AM	-	-
				PM	-	-
6	Mountain Road	Route 138	TWSC	AM	13.5	B
				PM	18.4	C
7	Soledad Road	Route 138	TWSC	AM	13.1	B
				PM	15.4	C
8	263rd Street East	Route 138	TWSC	AM	17.9	C
				PM	19.2	C
9	Ponderosa Road	Route 138	TWSC	AM	14.1	B
				PM	0.0	A
10	Desert View Road	Route 138	TWSC	AM	16.5	C
				PM	15.5	C
11	Acorn Road	Route 138	TWSC	AM	13.0	B
				PM	17.8	C
12	Green Road-Phelan Road	Route 138	Signal	AM	20.1	C
				PM	21.8	C

Note: TWSC = Two-Way Stop-Control; Delay shown in seconds per vehicle.

1 = Per the Highway Capacity Manual 7th Edition, for signalized intersection, the overall average delay and LOS are shown. For intersections with one or two-way stop-control, the delay and LOS for the worst individual movement is shown.

As shown in **Table 6**, the study intersections are currently operating at an acceptable LOS during the AM and PM peak hours.

3.7 EXISTING CONDITIONS ROADWAY SEGMENT LEVEL OF SERVICE ANALYSIS

The roadway segment level of service analysis was conducted based on the roadway capacities presented previously in this report. The results of the roadway analysis for Existing Conditions are shown in **Table 7**. Review of this table indicates that the study roadway segment of North Union Rd and West Lathrop Road is currently operating at an acceptable level of service (LOS D or better) on a daily basis.

Table 7
Roadway Segment – Existing Conditions

Roadway	Segment	Classification	Existing Travel Lanes	LOS E Capacity	Existing ADT	V/C	LOS
Oasis Road	Between Route 138 and Buckthorne Road	Major Highway	2	13,650	1,074	0.08	A

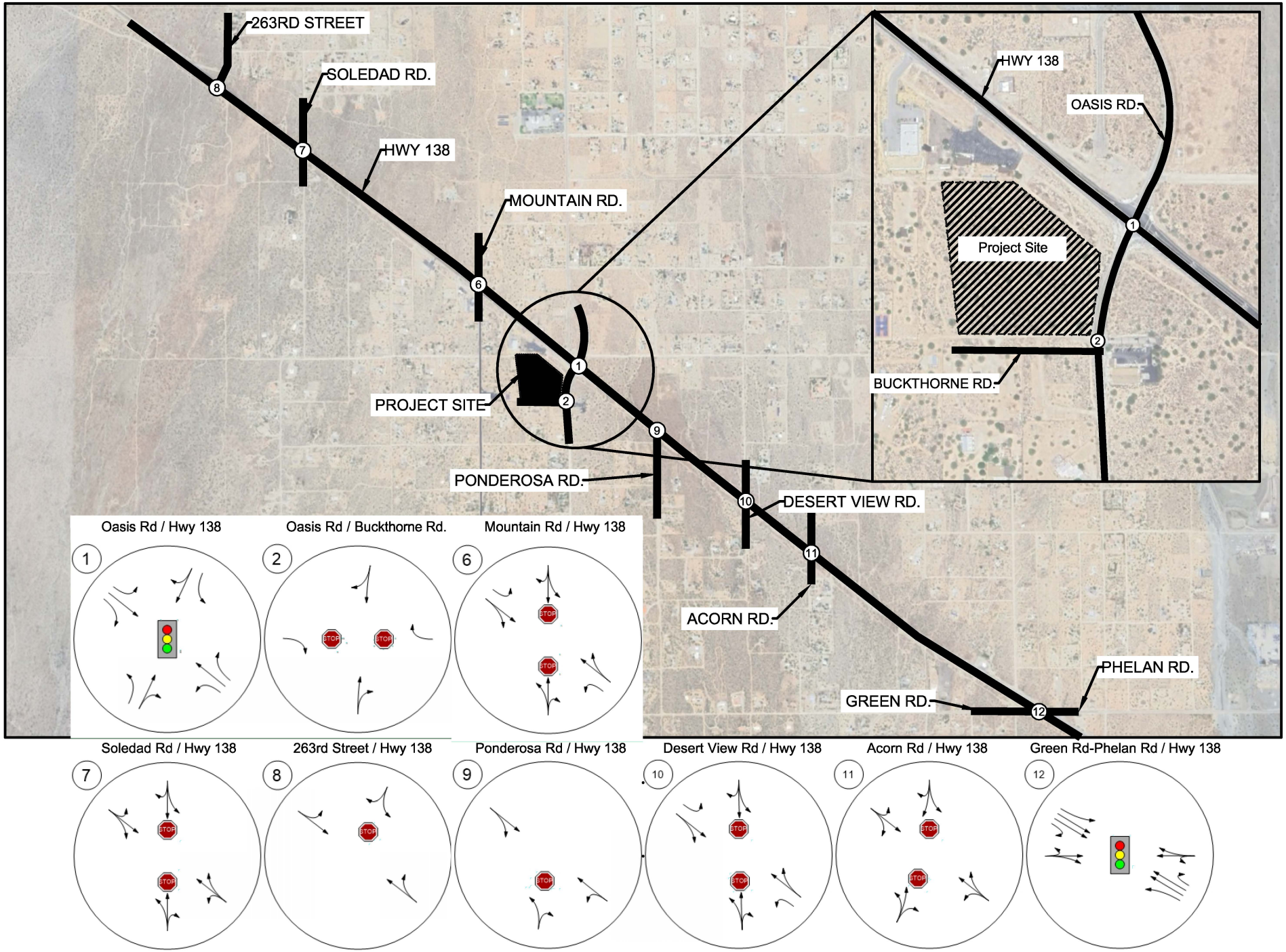
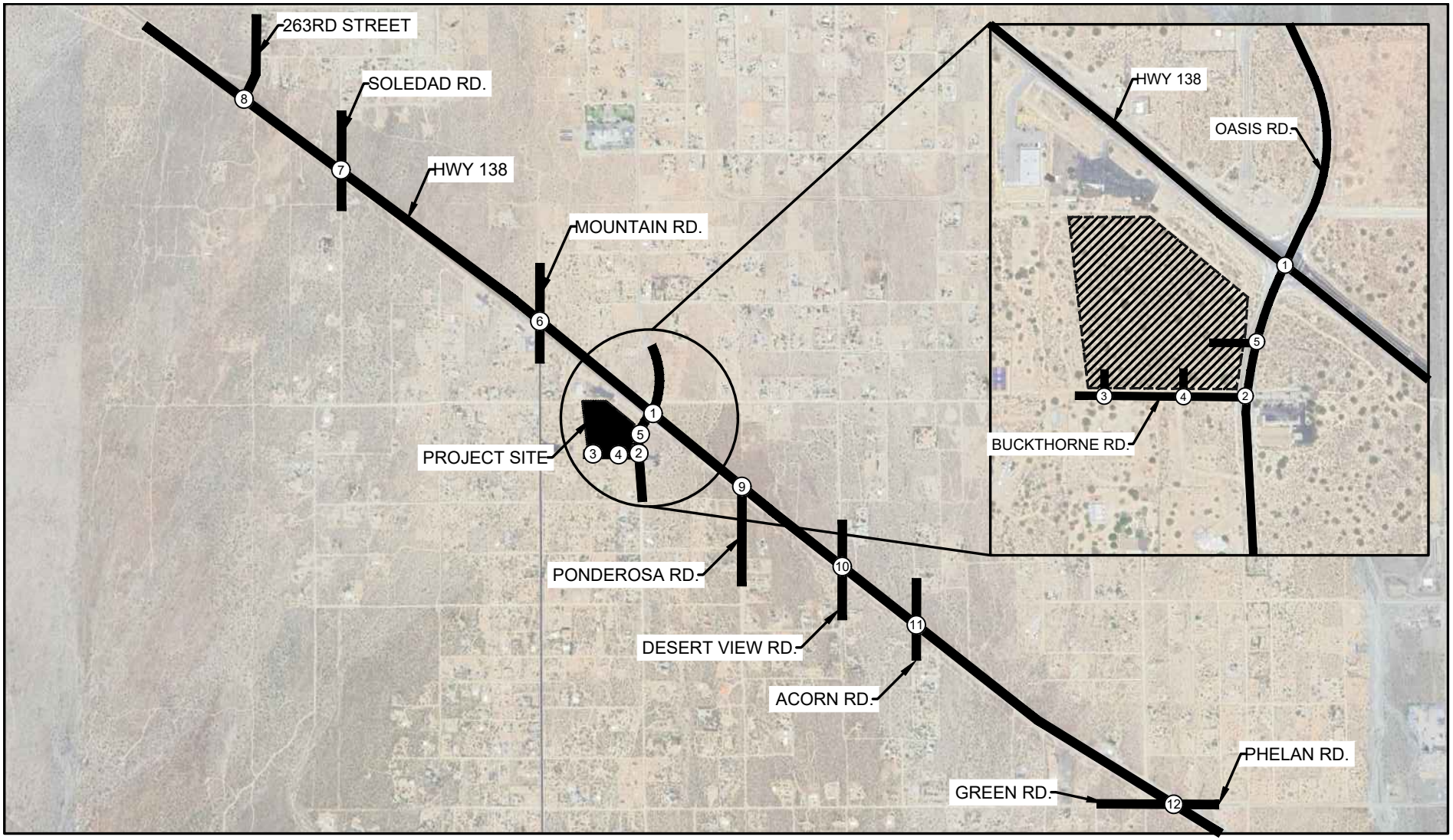


Exhibit 3: Existing Lane Geometry and Intersection Controls



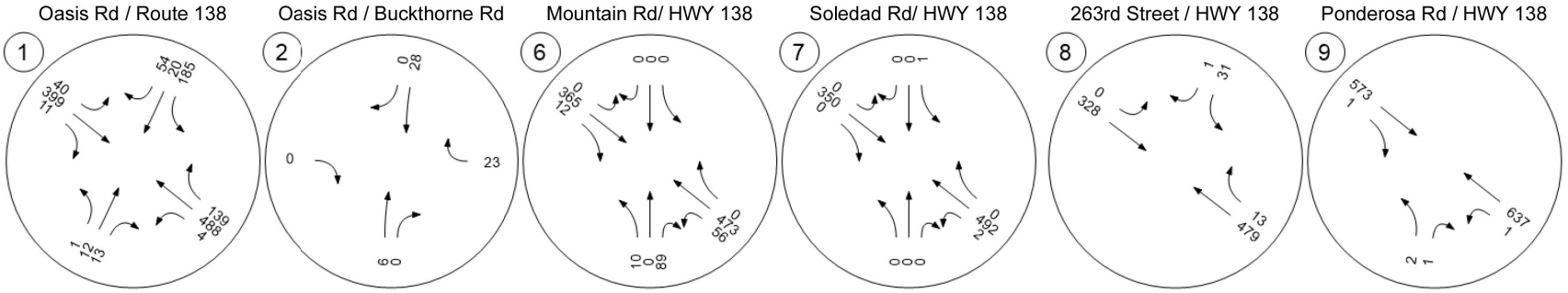
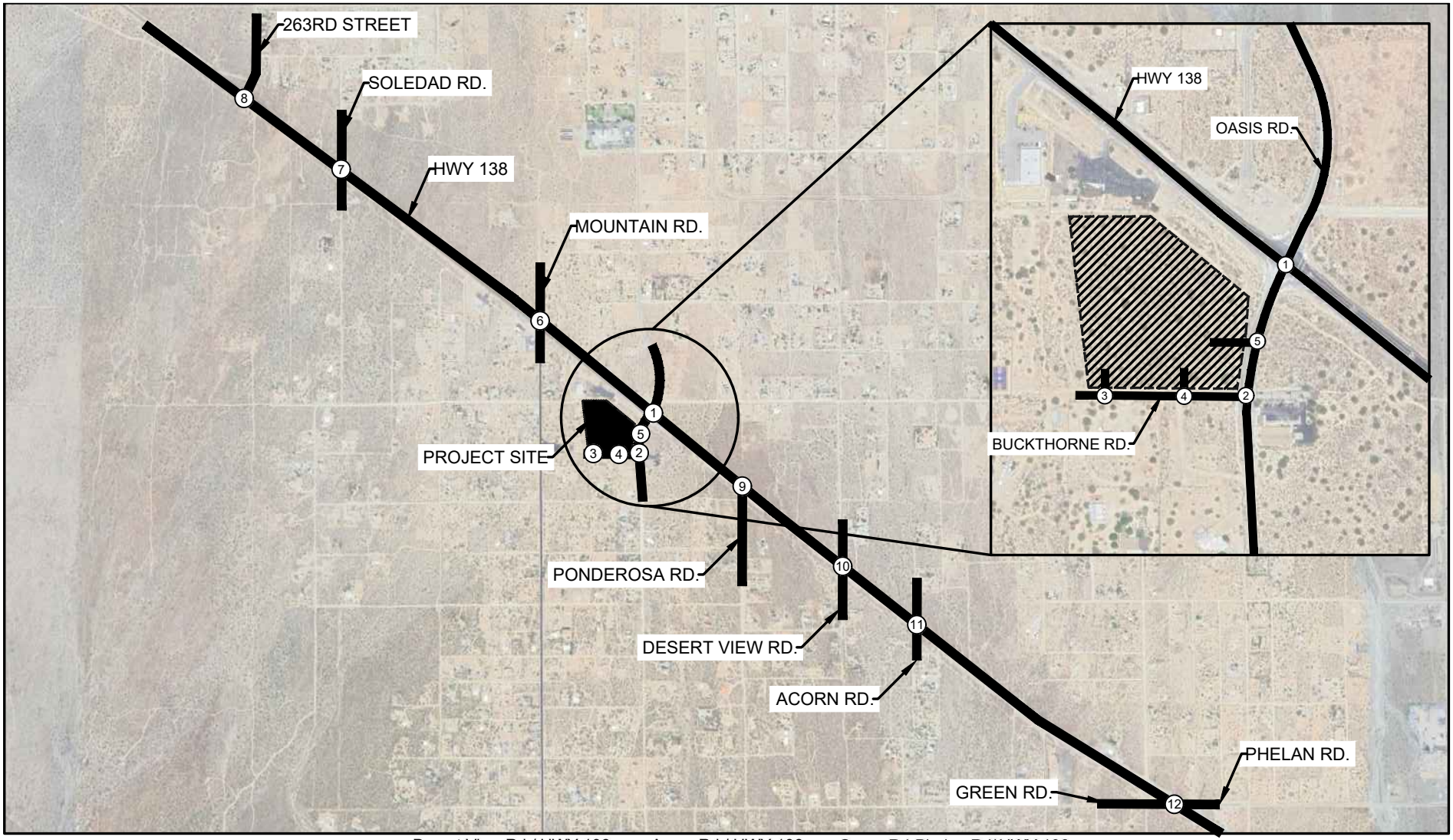


Exhibit 4a: Existing AM Peak Hour Volumes



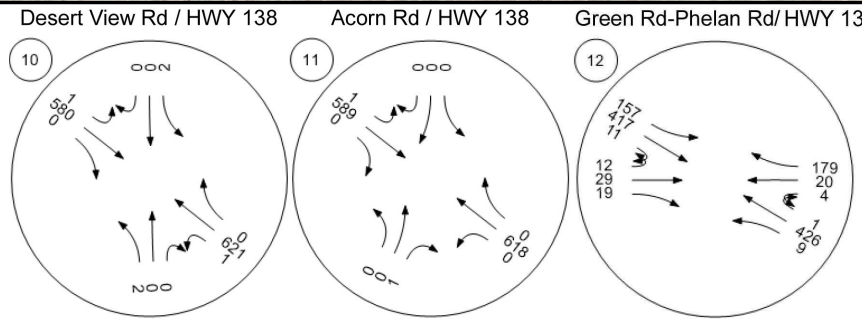
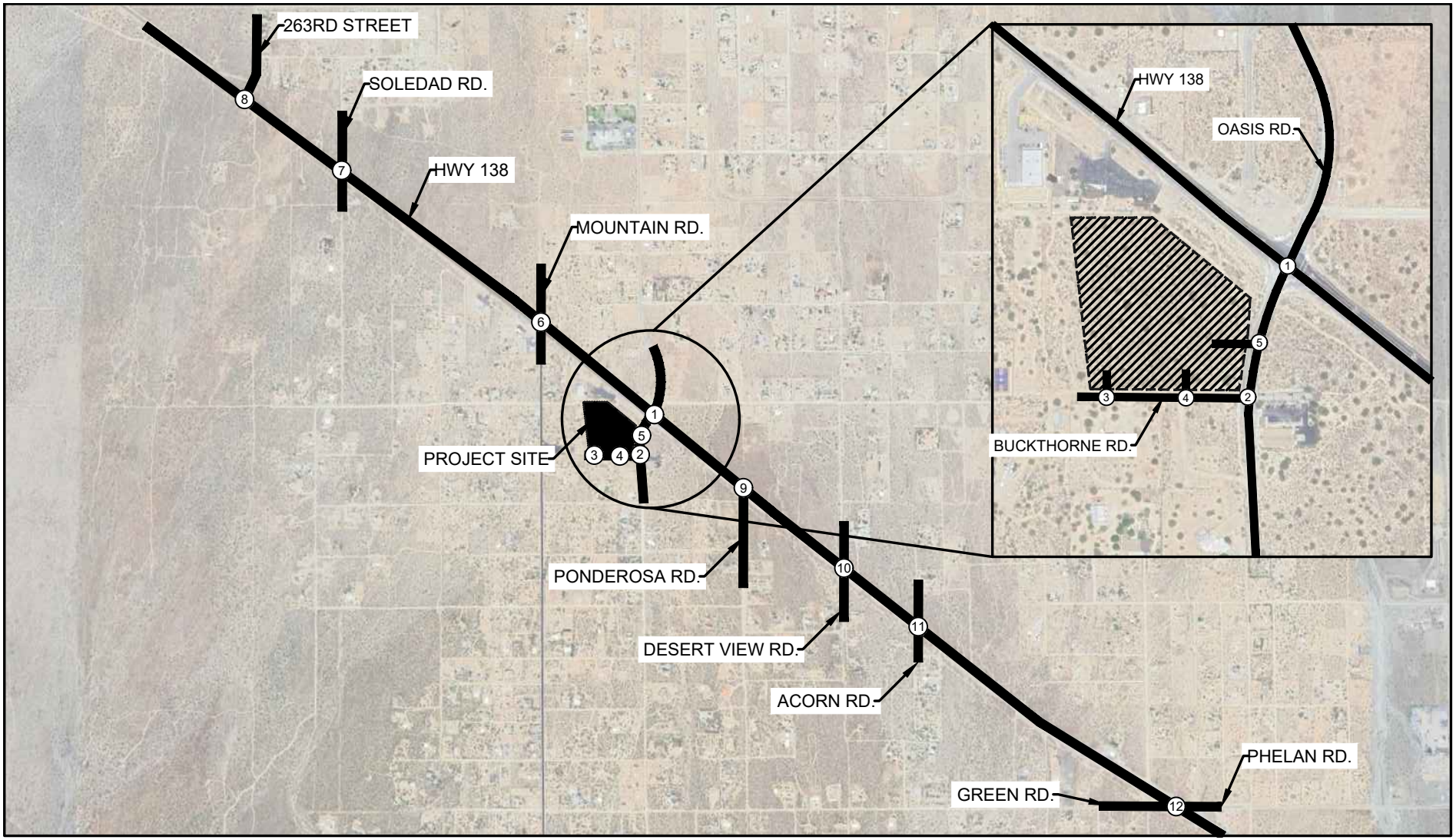


Exhibit 4b: Existing AM Peak Hour Volumes



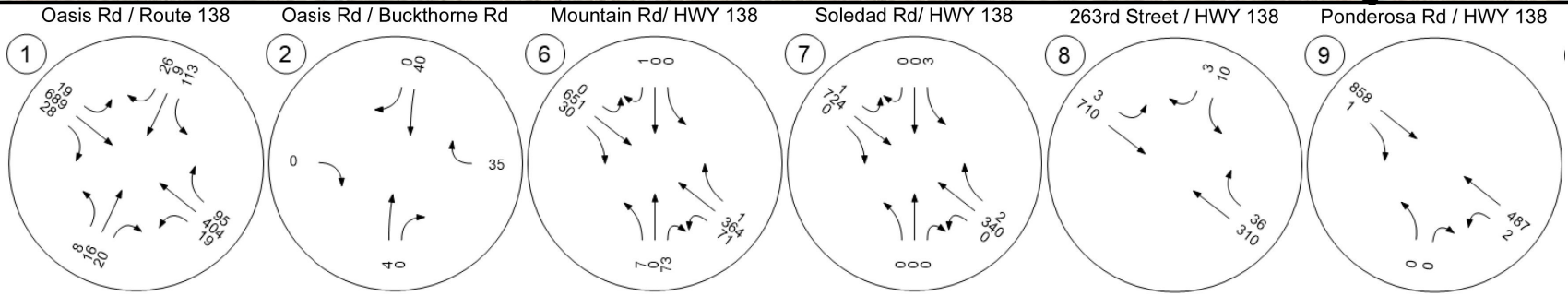
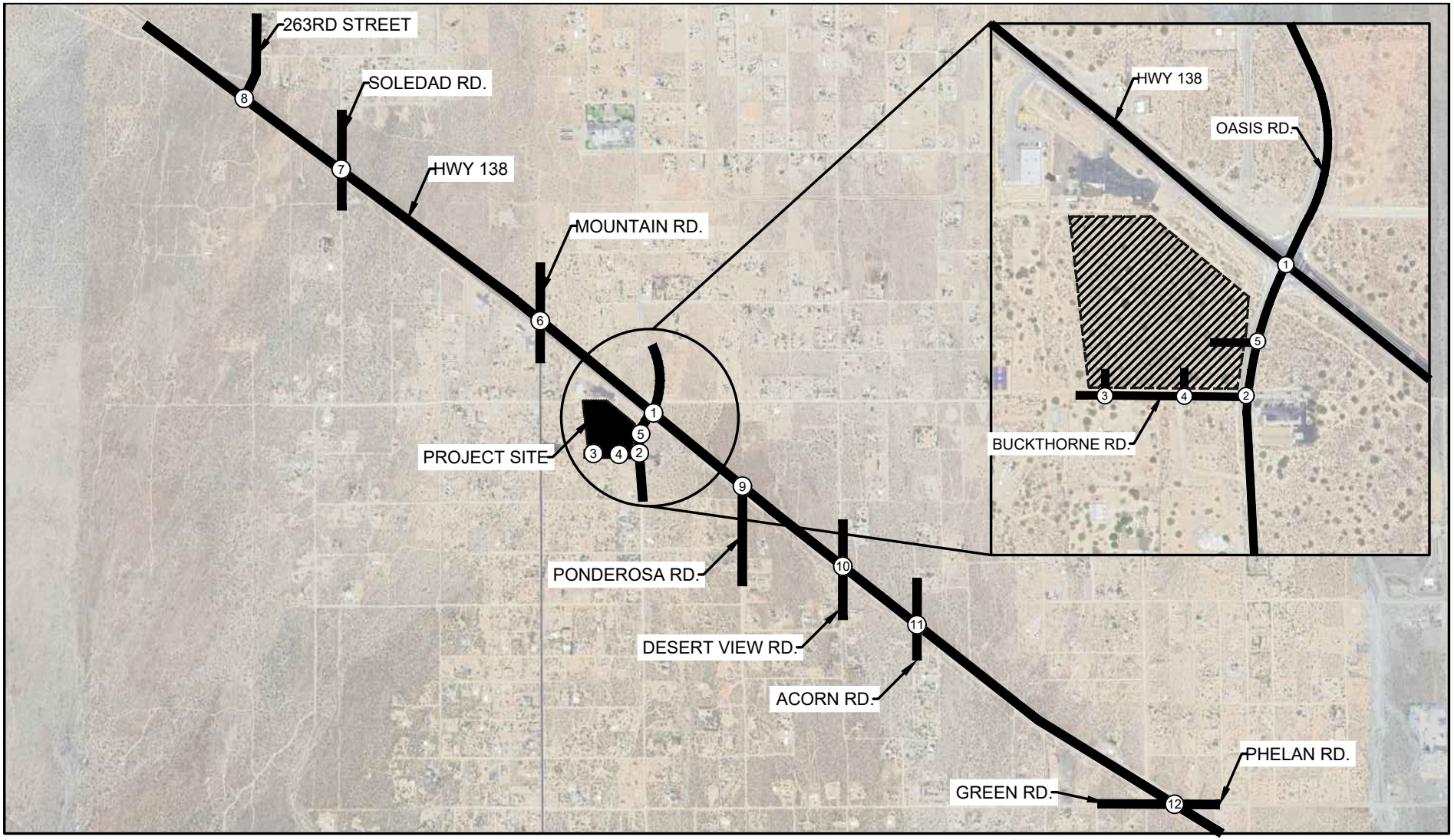


Exhibit 5a: Existing PM Peak Hour Volumes



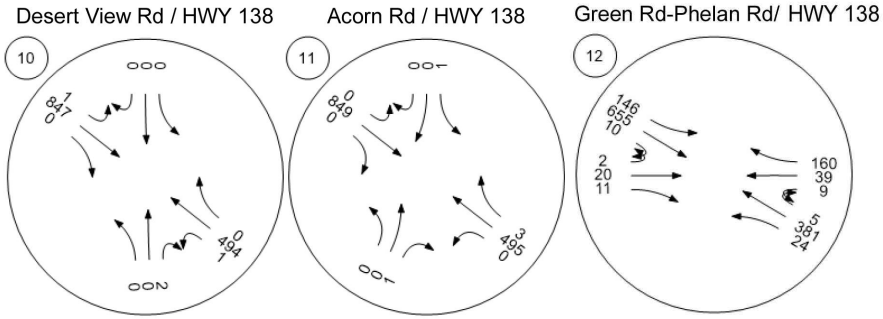


Exhibit 5b: Existing PM Peak Hour Volumes

4.0 PROPOSED PROJECT

4.1 PROJECT DESCRIPTION

The proposed project consists of a 15-pump gas station (5 trucks and 10 standard) with a 5,637 square foot convenience store. Site access is planned via two all-access driveways, both on Oasis Road and Buckthorne Road. The site is currently zoned as CG for General Commercial per the Public San Bernardino County Map. The project site is currently vacant. The proposed project is anticipated to be built and generating trips in 2026.

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 most of the proposed project land uses.

Table 8 summarizes the projected AM peak hour, PM peak hour, and daily trip generation of the proposed project. The proposed project is projected to generate 8,035 net daily trips with 702 net AM and 615 net PM peak hour trips.

Table 8

Proposed Project Trip Generation

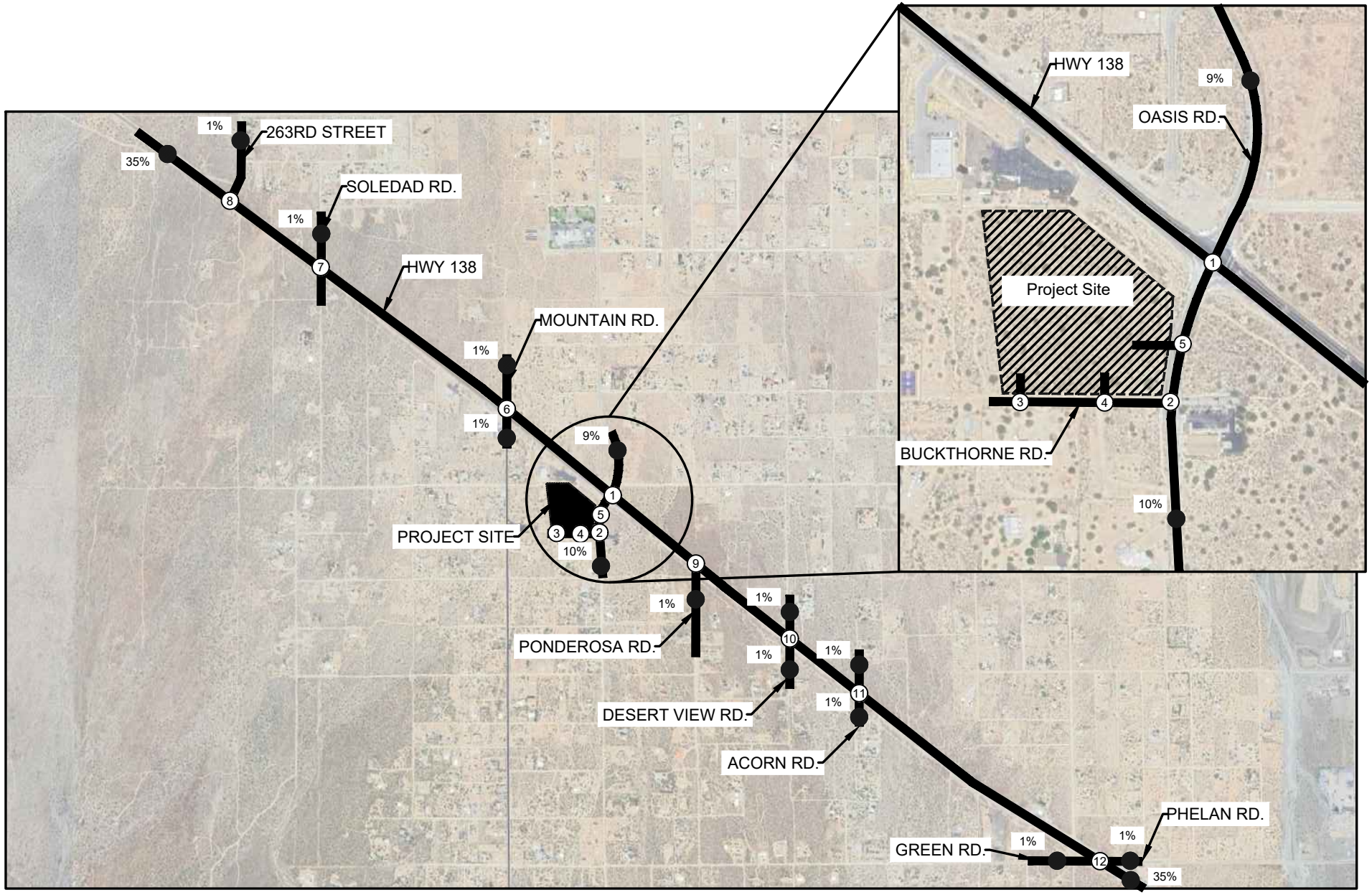
Proposed Land Use[1]	ITE Code[2]	Qty	Unit[3]	Daily		AM Peak Hour					PM Peak Hour				
				Rate	Volume	Rate	In:Out Split	Volume			Rate	In:Out Split	Volume		
								In	Out	Total			In	Out	Total
Convenience Store/Gas Station GFA (>5.5k), VFP (>8)	945(6)	20	VFP	345.75	6,915	31.6	50:50	316	316	632	26.9	50:50	269	269	538
Truck Stop	950	5	VFP	224	1,120	13.97	49:51	34	36	70	15.42	53:47	41	36	77

Results	Daily	Volume	AM Peak Hour	In	Out	Total	PM Peak Hour	In	Out	Total
Net Total		**8,035**		**350**	**352**	**702**		**310**	**305**	**615**

1: Trip generation and pass-by rates are from ITE Trip Generation Manual (11th Edition, 2021).
2: Parentheses reflect subcategory of land use code. For example, 945(6) is only convenience stores/gas stations with a general floor area (GFA) of >5.5k square feet and >8 VFPs.
3: VFP = Vehicle Fueling Positions.

4.3 PROJECT TRIP DISTRIBUTION

Projecting trip distribution involves identifying probable destinations and traffic routes used by the proposed project's traffic. Potential interaction between proposed land use and surrounding regional access routes are considered to identify 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 projected trip distribution of proposed project's generated trips.



Legend:

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

Exhibit 6: Proposed Trip Distribution

5.0 BACKGROUND TRAFFIC CONDITIONS (EAC)

Background Traffic Conditions (EAC) analysis is intended to identify existing conditions in the year 2026.

5.1 ROADWAY IMPROVEMENTS

Lane configuration and traffic control assumed to be in place for the EAC scenario is consistent with those previously shown in **Exhibit 3** with the addition of the project driveway shown in **Exhibit 10.**

5.2 EAC TRAFFIC VOLUMES

Background traffic conditions volumes include background traffic plus the addition of the traffic projected to be generated by the proposed project and traffic projected to be generated by cumulative developments in the vicinity of the proposed project. Cumulative developments are projects which are in various stages of planning, entitlement and construction. Since the proposed project is expected to be built and generating trips in 2026, EA*C* volumes include an ambient growth rate of 2% per year for two year, applied to existing volumes. **Exhibit 8** and **Exhibit 9** show EAC AM and PM peak hour volumes at the study intersections.

EAC Traffic Volumes = (Existing (2024) Counts * 1.02^2) + Cumulative projects

5.3 CUMULATIVE PROJECTS

This analysis also accounts for other reasonably foreseeable development projects which are either approved or are currently being processed in the study area as part of a cumulative analysis scenario. A list of cumulative projects was developed for this analysis through consultation with City staff, and obtainment of current development status reports. A summary of cumulative projects land uses is shown on **Table 9**. Cumulative project locations are shown in **Exhibit 7**.

Table 9
Cumulative Project Trip Generation

ID	Land Use[1]	ITE Code[2]	Qty	Unit[3]	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	Convenience Store/Gas Station, GFA (2-4k), VFP (>8)	945(2)	12	VFP	265.12	3,181	16.1	50:50	97	96	193	18.4	50:50	111	110	221
2	General Office Building	710	10.0	TSF	10.84	108	1.52	88:12	13	2	15	1.44	17:83	2	12	14
3	Coffee/Donut Shop with Drive-Through Window	937	2.2	TSF	533.57	1,190	85.9	51:49	98	94	192	39	50:50	44	43	87
4	Tractor Supply Store	810	39.0	TSF	0	0	0	0	0	0	0	1.4	47:53	26	29	55
5	Warehousing	150	5.5	TSF	1.71	9	0.17	77:23	1	0	1	0.18	28:72	0	1	1
6	Automobile Parts and Service Center	943	7.2	TSF	16.6	120	1.91	72:28	10	4	14	2.06	39:61	6	9	15
Total						**4,608**			**219**	**196**	**415**			**189**	**204**	**393**

1: Trip generation and pass-by rates from ITE Trip Generation (11th Edition, 2021).
2: Parentheses reflect subcategory of land use code. Example: 945(2) is only convenience stores/gas stations with a general floor area (GFA) of 2-4k square feet and >8 VFPs.
3: RM = Rooms; TSF = Thousand Square Feet; VFP = Vehicle Fueling Positions; DU = Dwelling Units.

5.4 EAC INTERSECTION LEVEL OF SERVICE ANALYSIS

The *Background* traffic conditions AM and PM peak hour intersection analysis is shown in **Table 10**. HCM analysis sheets are provided in **Appendix C**. **Exhibit 8** and **Exhibit 9** shows EAC AM and PM peak hour volumes at the study intersection.

Table 10

Intersection Analysis – EAC Traffic Conditions

Intersection			Control Type	Peak Hour	EAC Conditions	
					Delay (s/veh)	LOS
1	Oasis Road	Route 138	Signal	AM	32.0	C
				PM	32.3	C
2	Oasis Road	Buckthorne Road	TWSC	AM	8.4	A
				PM	8.5	A
3	Project Driveway #1	Buckthorne Road	TWSC	AM	-	-
				PM	-	-
4	Project Driveway #2	Buckthorne Road	TWSC	AM	-	-
				PM	-	-
5	Oasis Road	Project Driveway #3	TWSC	AM	-	-
				PM	-	-
6	Mountain Road	Route 138	TWSC	AM	15.2	C
				PM	21.5	C
7	Soledad Road	Route 138	TWSC	AM	14.1	B
				PM	16.7	C
8	263rd Street East	Route 138	TWSC	AM	13.8	C
				PM	14.8	B
9	Ponderosa Road	Route 138	TWSC	AM	15.4	C
				PM	0.0	A
10	Desert View Road	Route 138	TWSC	AM	18.3	C
				PM	16.9	C
11	Acorn Road	Route 138	TWSC	AM	14.1	B
				PM	19.7	C
12	Green Road-Phelan Road	Route 138	Signal	AM	23.2	B
				PM	25.4	C

Note: TWSC = Two-Way Stop-Control; Delay shown in seconds per vehicle.

1 = Per the Highway Capacity Manual 7th Edition, for signalized intersection, the overall average delay and LOS are shown. For intersections with one or two-way stop-control, the delay and LOS for the worst individual movement is shown.

As shown on **Table 10**, the study intersections are projected to continue to operate at an acceptable LOS during the AM and PM peak hours for *Background* traffic conditions.

5.5 EAC ROADWAY LEVEL OF SERVICE ANALYSIS

The roadway segment level of service analysis results for *Background* traffic conditions scenario are summarized in **Table 11**.

Table 11

Roadway Segment – EAC Traffic Conditions

Roadway	Segment	Classification	Existing Travel Lanes	LOS D Capacity	EAC ADT	V/C	LOS
Oasis Road	Between Route 138 and Buckthorne Road	Secondary Highway	2	13,650	1,140	0.08	A

As shown on **Table 11** the study intersections are projected to continue to operate at an acceptable LOS during the AM and PM peak hours for *Background* traffic conditions.

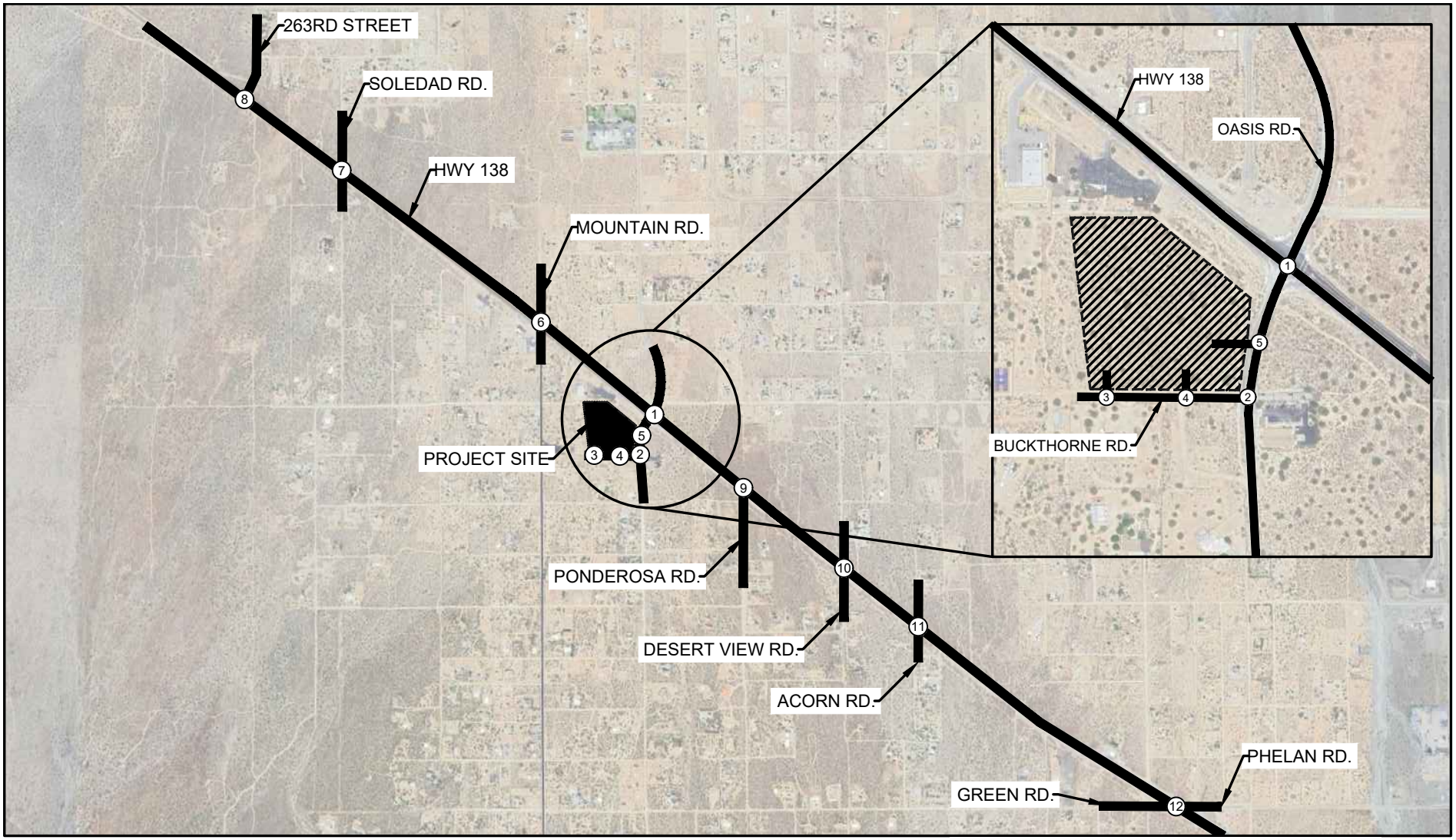


Legend:

(X) Approximate Cumulative Project Locations

(#) Study Intersection Location

Exhibit 7: Cumulative Project Location



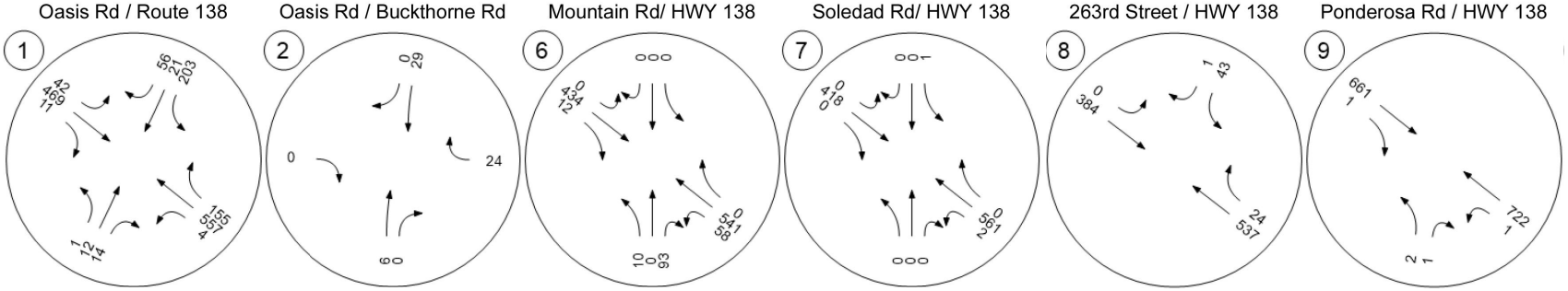
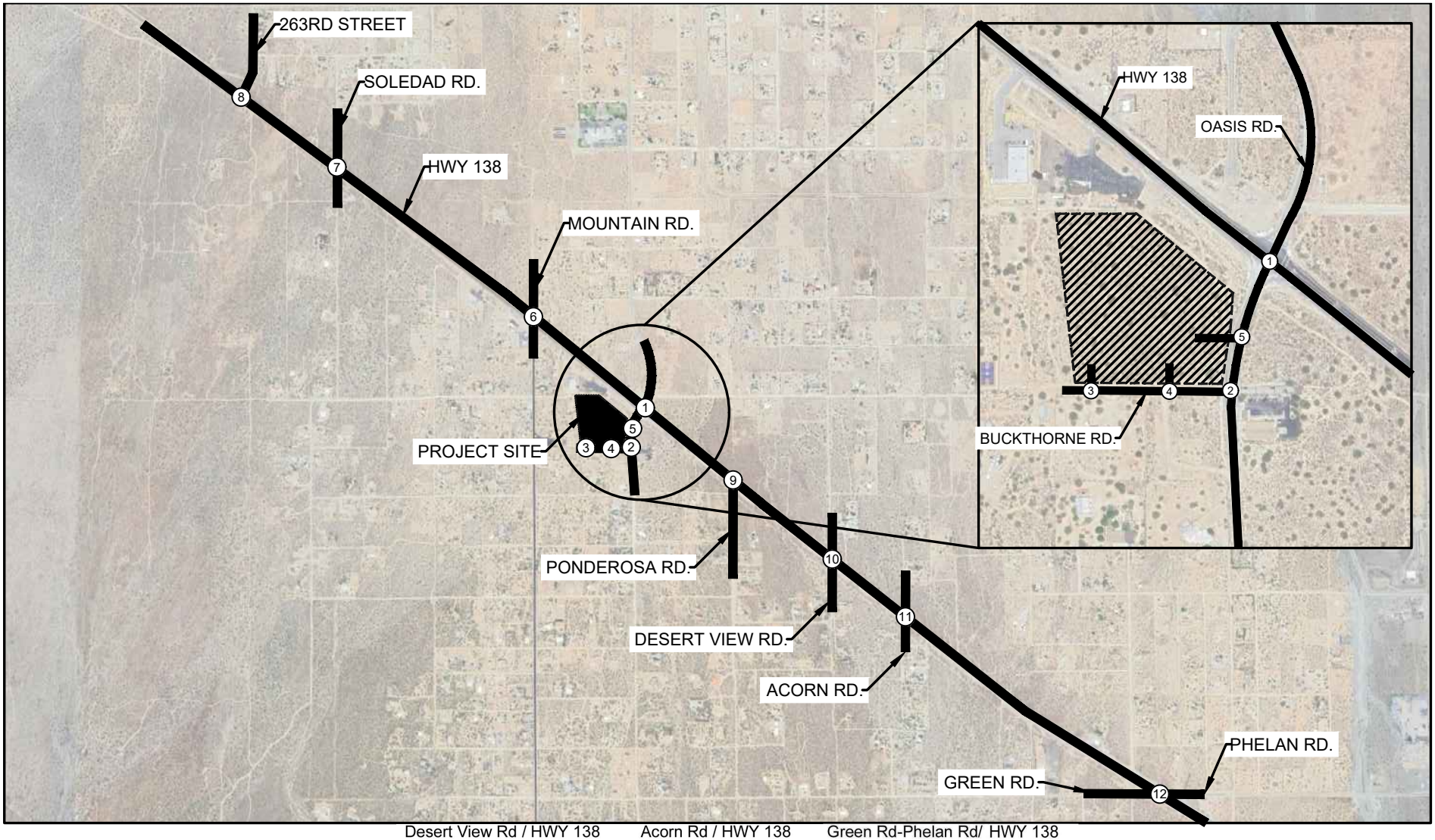


Exhibit 8a: Background AM Peak Hour Volumes



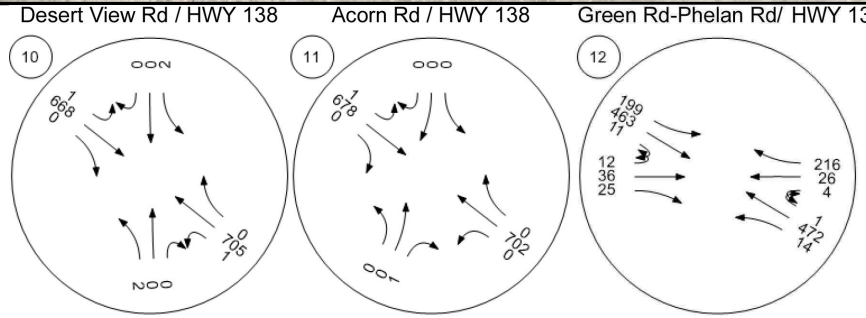
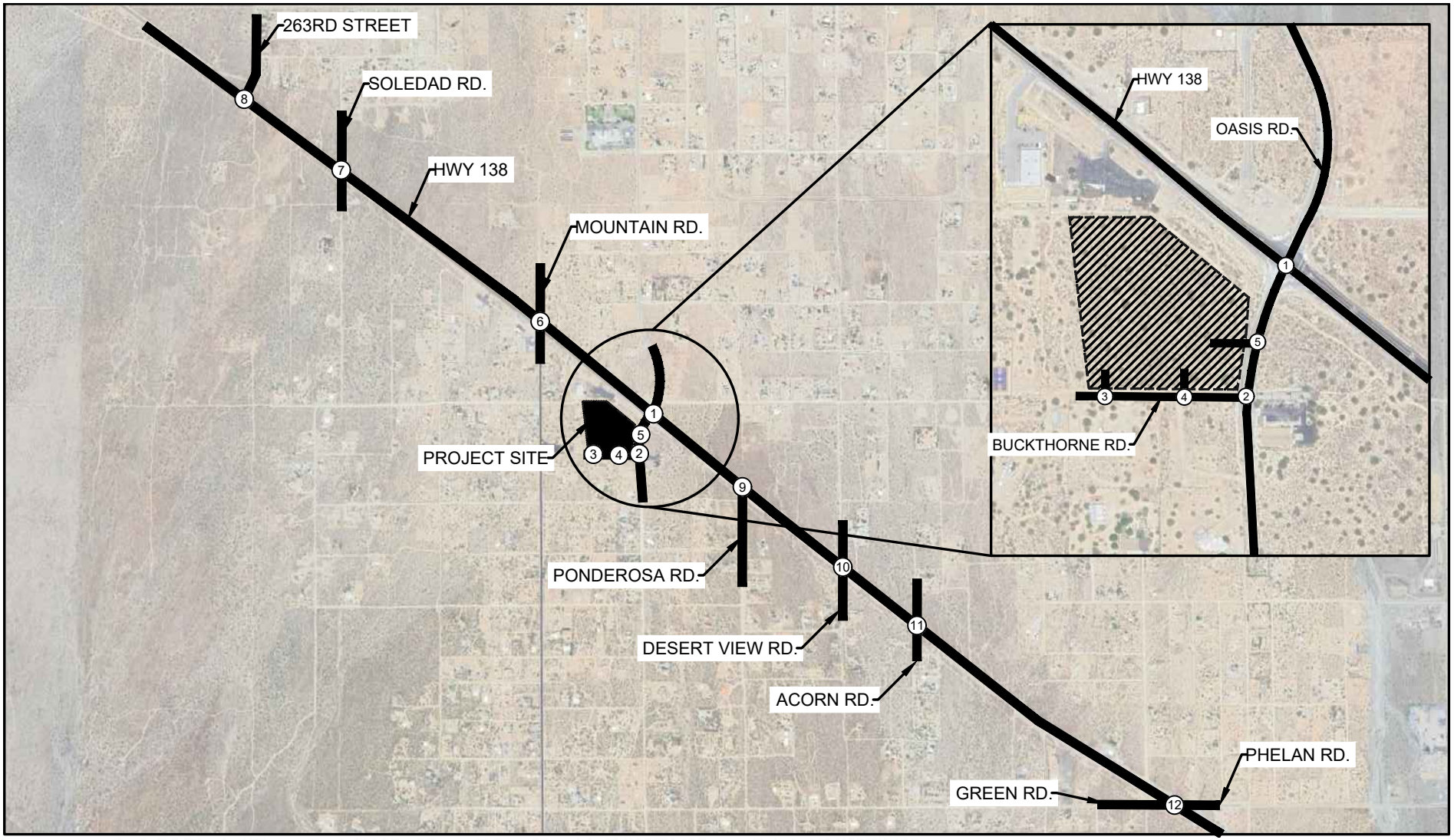


Exhibit 8b: Background AM Peak Hour Volumes



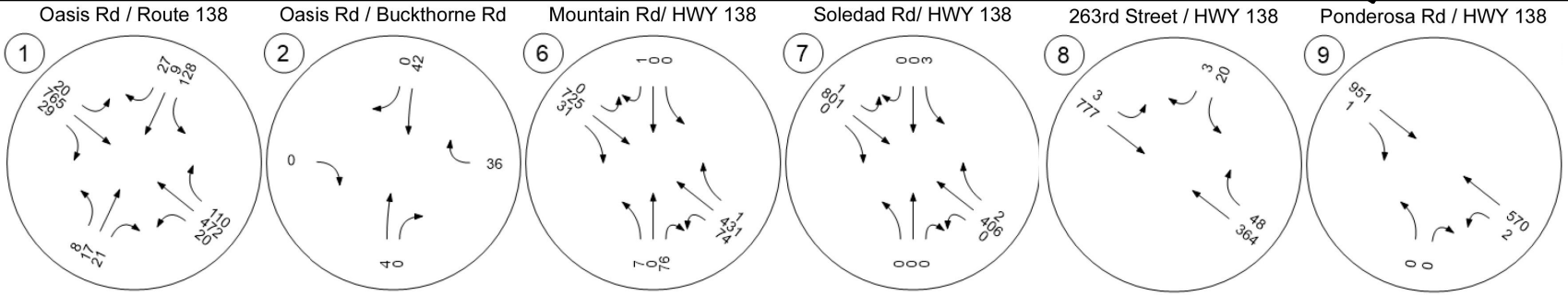
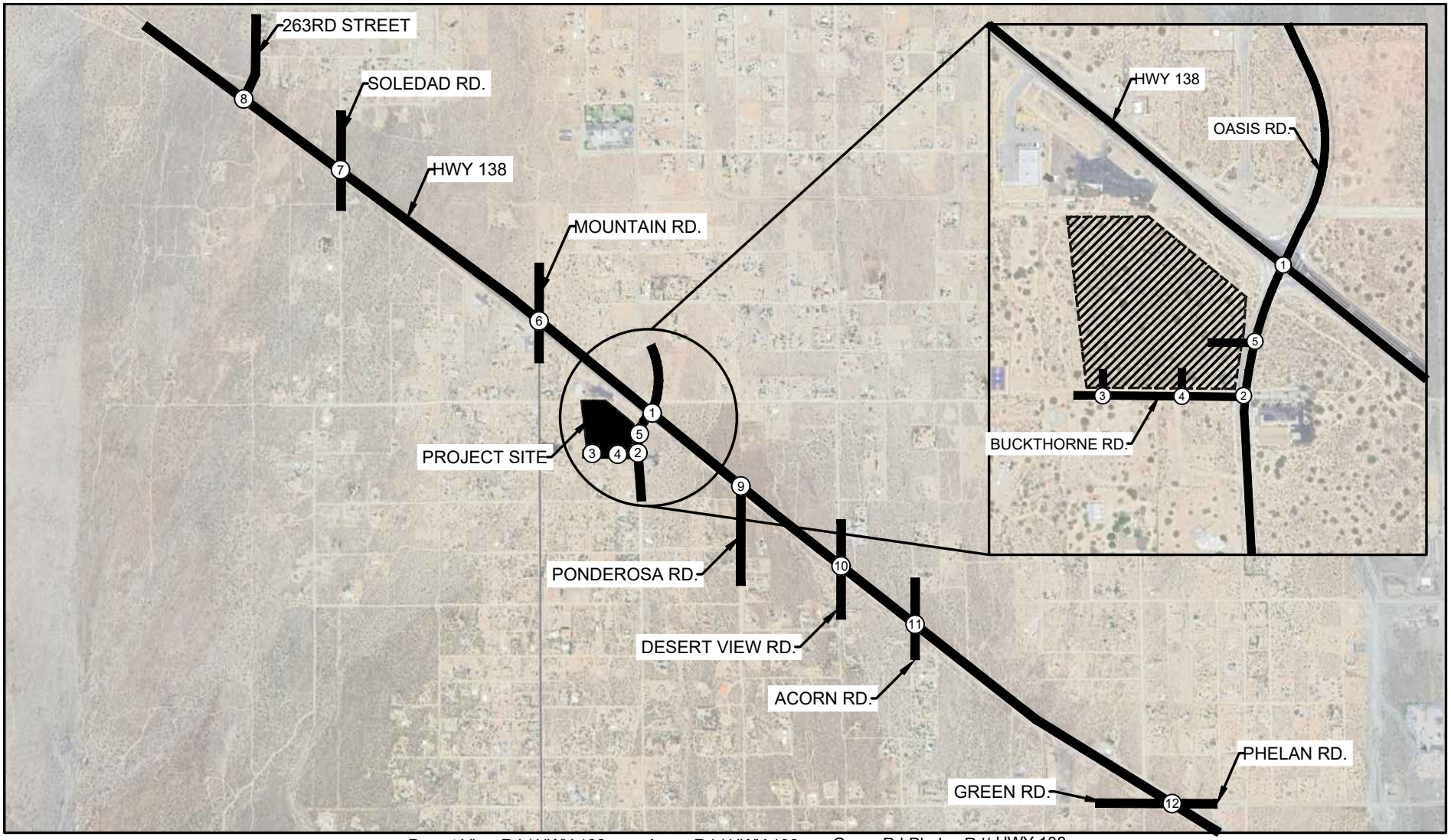


Exhibit 9a: Background PM Peak Hour Volumes



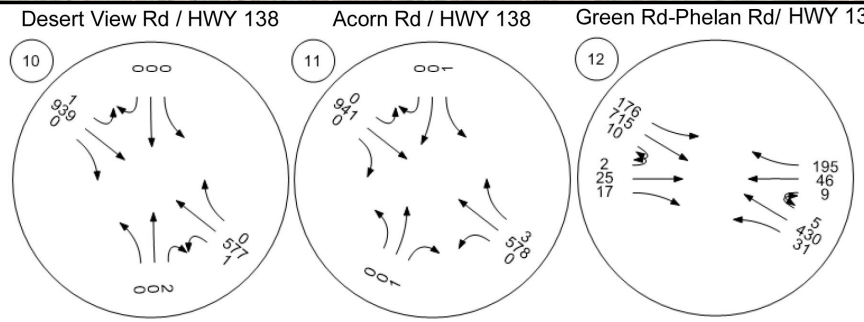


Exhibit 9b: Background PM Peak Hour Volumes

6.0 BACKGROUND PLUS PROJECT TRAFFIC CONDITIONS (EACP)

Background Plus Project Traffic Conditions (EACP) analysis is intended to identify existing conditions with the proposed project.

6.1 ROADWAY IMPROVEMENTS

Lane configuration and traffic control assumed to be in place for the EAC scenario is consistent with those previously shown in **Exhibit 3** with the addition of the project driveway shown in **Exhibit 10**.

6.2 EACP TRAFFIC VOLUMES

Background Plus Project Traffic conditions volumes include the trips generated by the completion of the proposed project. Since the proposed project is expected to be fully completed and generating trips in 2026, EACP volumes include an ambient growth rate of 2% per year for two years, applied to existing volumes**.**

EACP Traffic Volumes = (Existing (2024) Counts * 1.02^2) + Cumulative Projects + Proposed Project

Exhibit 11 and **Exhibit 12** shows *Cumulative Without Project* AM and PM peak hour volumes at the study intersections.

6.3 EACP INTERSECTION LEVEL OF SERVICE ANALYSIS

Background Plus Project traffic conditions AM and PM peak hour intersection analysis is shown in **Table 12**. HCM analysis sheets are provided in **Appendix C.**

Table 12

Intersection Analysis – EACP Traffic Conditions

Intersection			Control Type	Peak Hour	EAC Conditions		EACP Conditions		Deficient?
					Delay (s/veh)	LOS	Delay (s/veh)	LOS	
1	Oasis Road	Route 138	Signal	AM	32.0	C	33.4	C	-
				PM	32.3	C	32.6	C	-
2	Oasis Road	Buckthorne Road	TWSC	AM	8.4	A	9.2	A	-
				PM	8.5	A	9.4	A	-
3	Project Driveway #1	Buckthorne Road	TWSC	AM	-	-	9.5	A	-
				PM	-	-	9.4	A	-
4	Project Driveway #2	Buckthorne Road	TWSC	AM	-	-	12.1	B	-
				PM	-	-	11.3	B	-
5	Oasis Road	Project Driveway #3	TWSC	AM	-	-	9.5	A	-
				PM	-	-	9.4	A	-
6	Mountain Road	Route 138	TWSC	AM	15.2	C	**59.6**	**F**	Yes
				PM	21.5	C	**70.9**	**F**	Yes
7	Soledad Road	Route 138	TWSC	AM	14.1	B	16.4	C	-
				PM	16.7	C	19.1	C	-

Intersection			Control Type	Peak Hour	EAC Conditions		EACP Conditions		Deficient?
					Delay (s/veh)	LOS	Delay (s/veh)	LOS	
8	263rd Street East	Route 138	TWSC	AM	13.8	C	16.0	C	-
				PM	14.8	B	16.7	C	-
9	Ponderosa Road	Route 138	TWSC	AM	15.4	C	18.8	C	-
				PM	0.0	A	18.9	C	-
10	Desert View Road	Route 138	TWSC	AM	18.3	C	22.7	C	-
				PM	16.9	C	21.3	C	-
11	Acorn Road	Route 138	TWSC	AM	14.1	B	21.8	C	-
				PM	19.7	C	22.3	C	-
12	Green Road-Phelan Road	Route 138	Signal	AM	23.2	B	25.9	C	-
				PM	25.4	C	28.5	C	-

Note: TWSC = Two-Way Stop-Control; Delay shown in seconds per vehicle.
1 = Per the Highway Capacity Manual 7th Edition, for signalized intersection, the overall average delay and LOS are shown. 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 continue to operate at an acceptable LOS during the AM and PM peak hours for *Background Plus Project* traffic conditions with the exception of the following intersection:

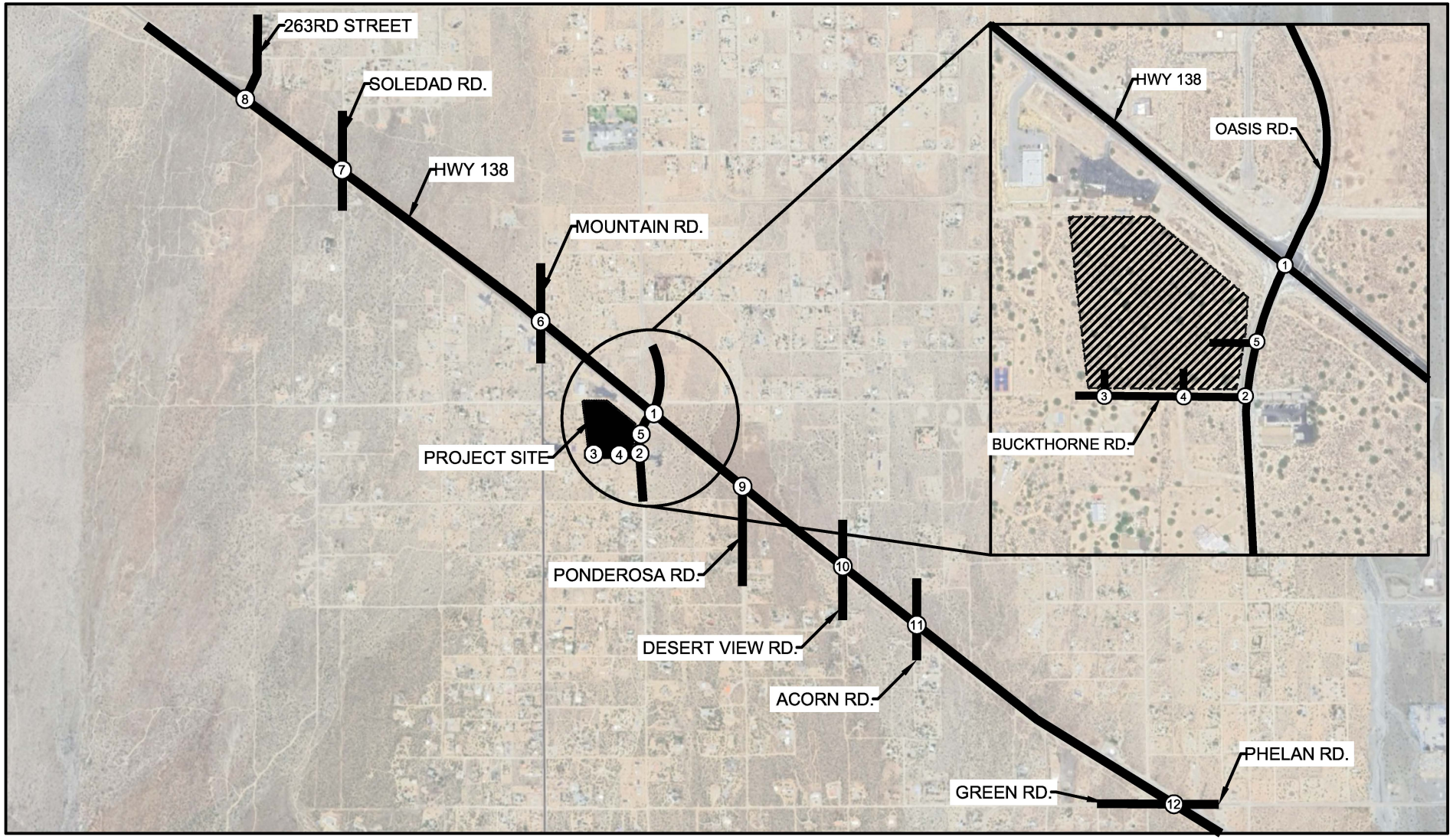
- #6 – Mountain Road / Route 138 (AM and PM Peak Hour Volumes)

6.4 EACP ROADWAY LEVEL OF SERVICE ANALYSIS

The roadway segment level of service analysis results for *Background Plus Project* traffic conditions scenario are summarized in **Table 13**.

Table 13
Roadway Segment – EACP Traffic Conditions

Roadway	Segment	Classification	Existing Travel Lanes	LOS D Capacity	EACP ADT	V/C	LOS
Oasis Road	Between Route 138 and Buckthorne Road	Secondary Highway	2	13,650	8,371	0.61	B



Project Dwy #1 / Buckthorne Rd. Project Dwy #2 / Buckthorne Rd. Oasis Rd. / Project Dwy #3

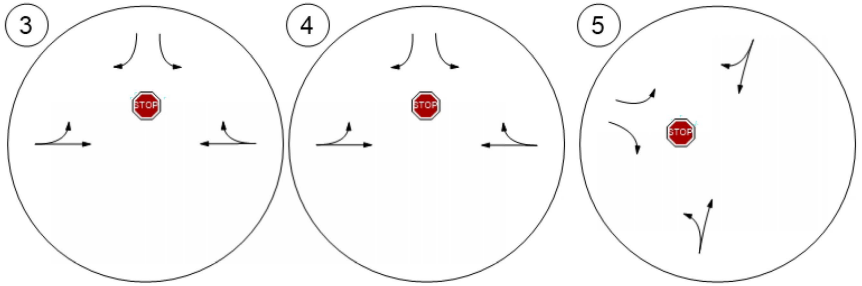
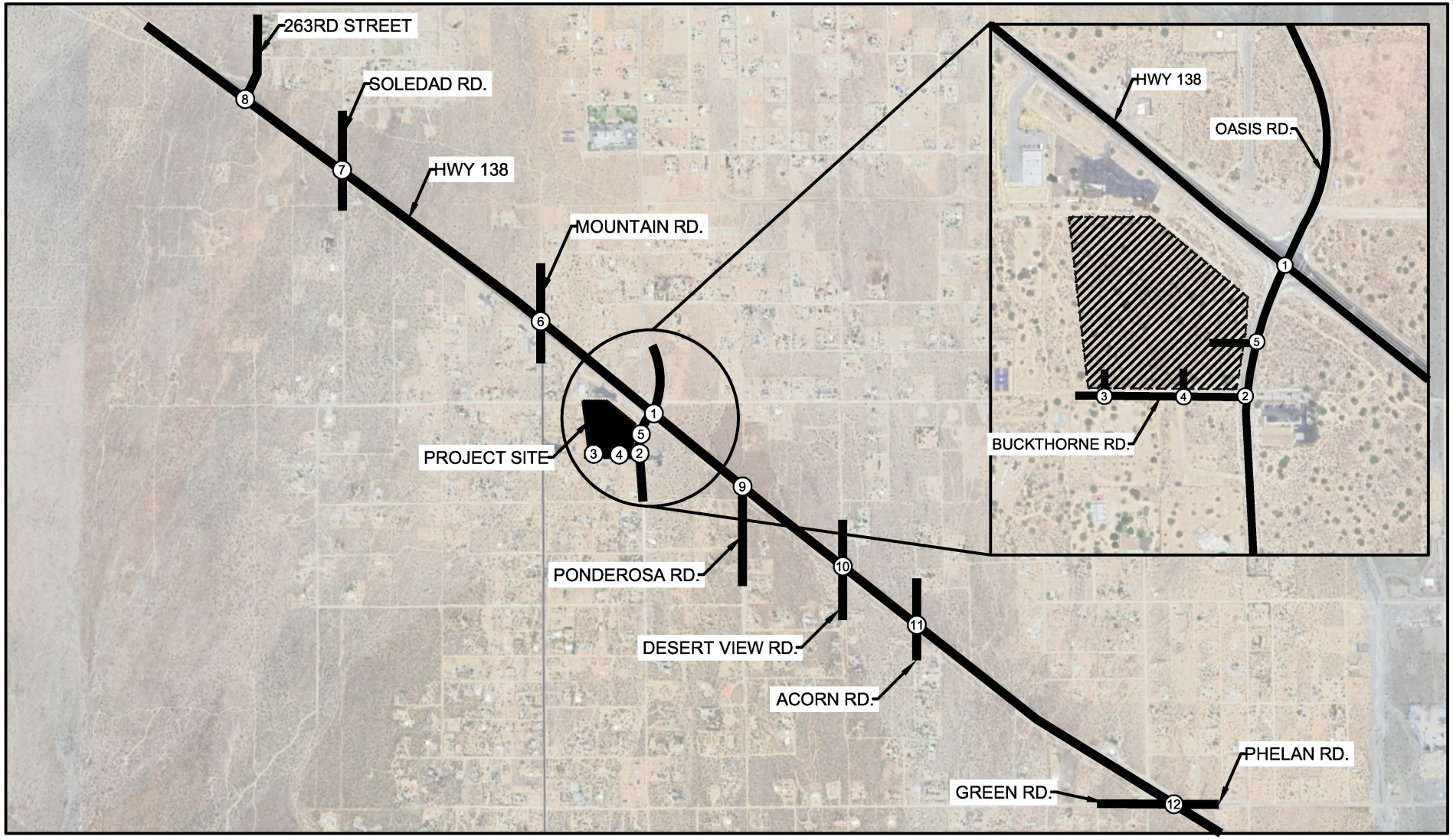


Exhibit 10: Lane Geometry and Intersection Controls



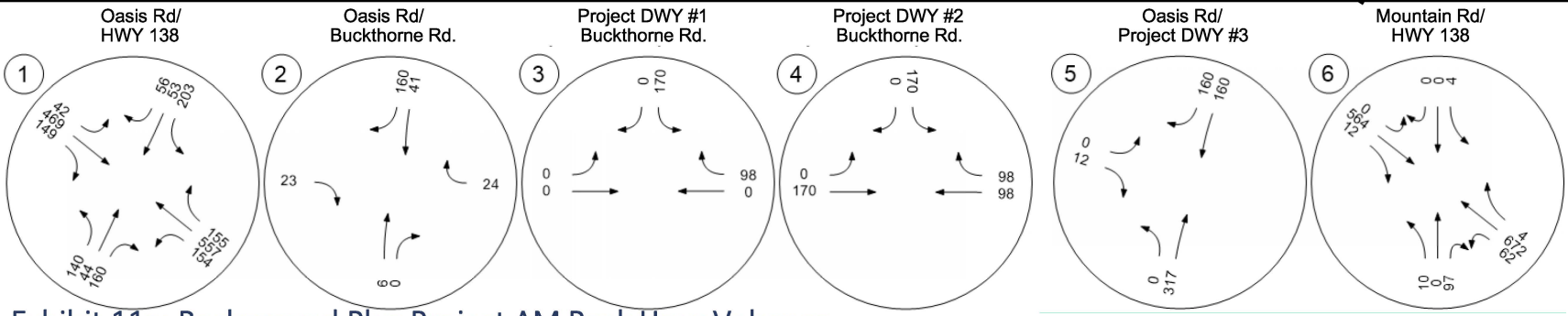
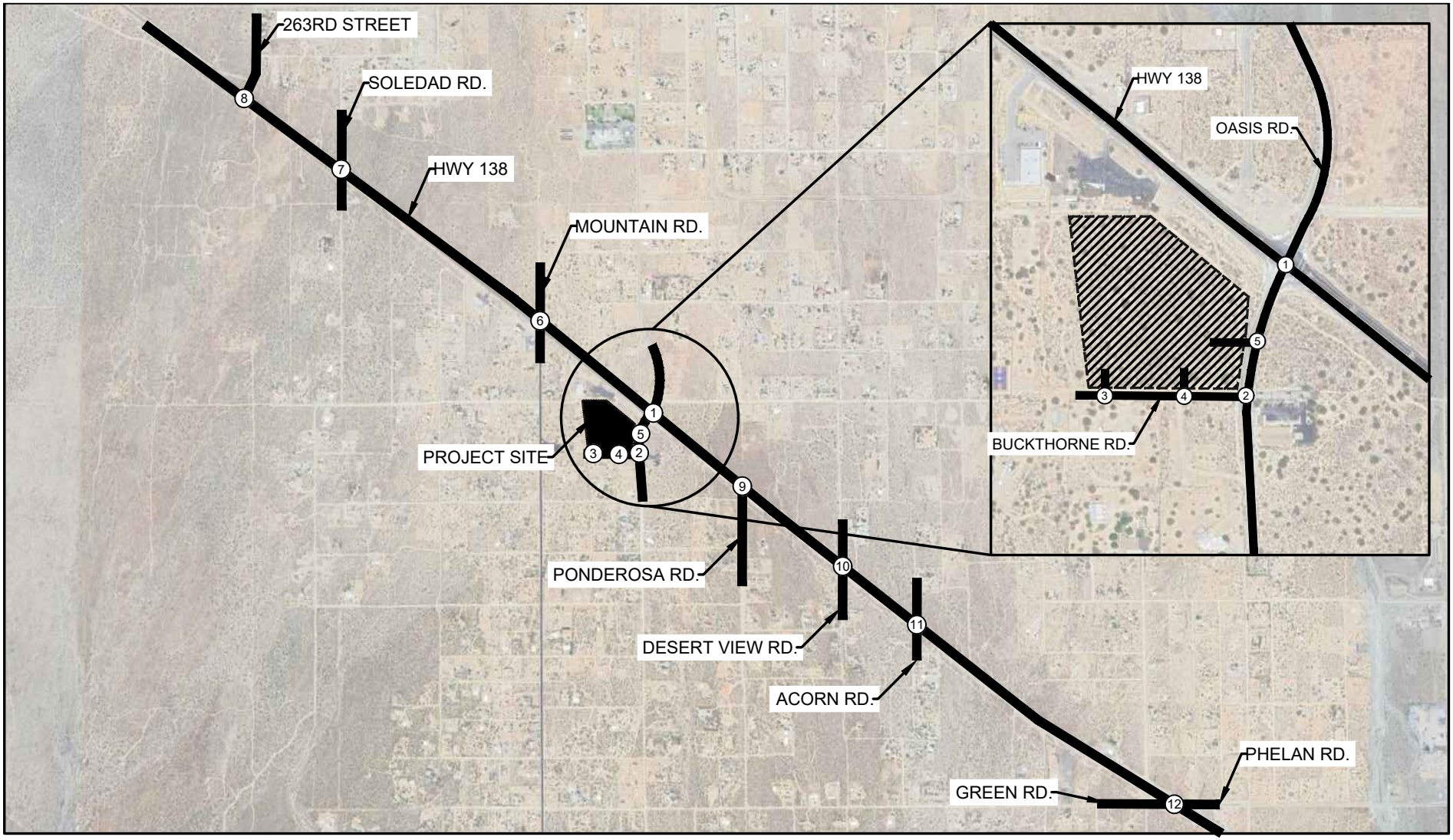


Exhibit 11a: Background Plus Project AM Peak Hour Volumes



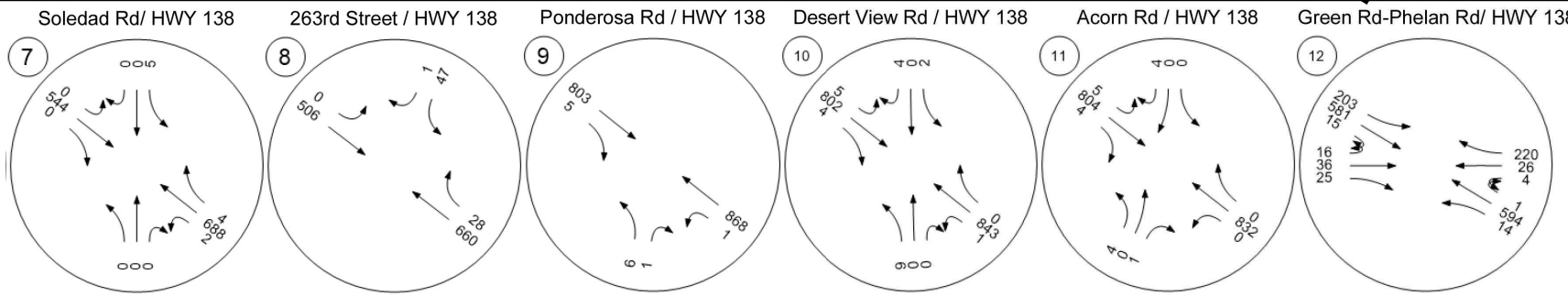
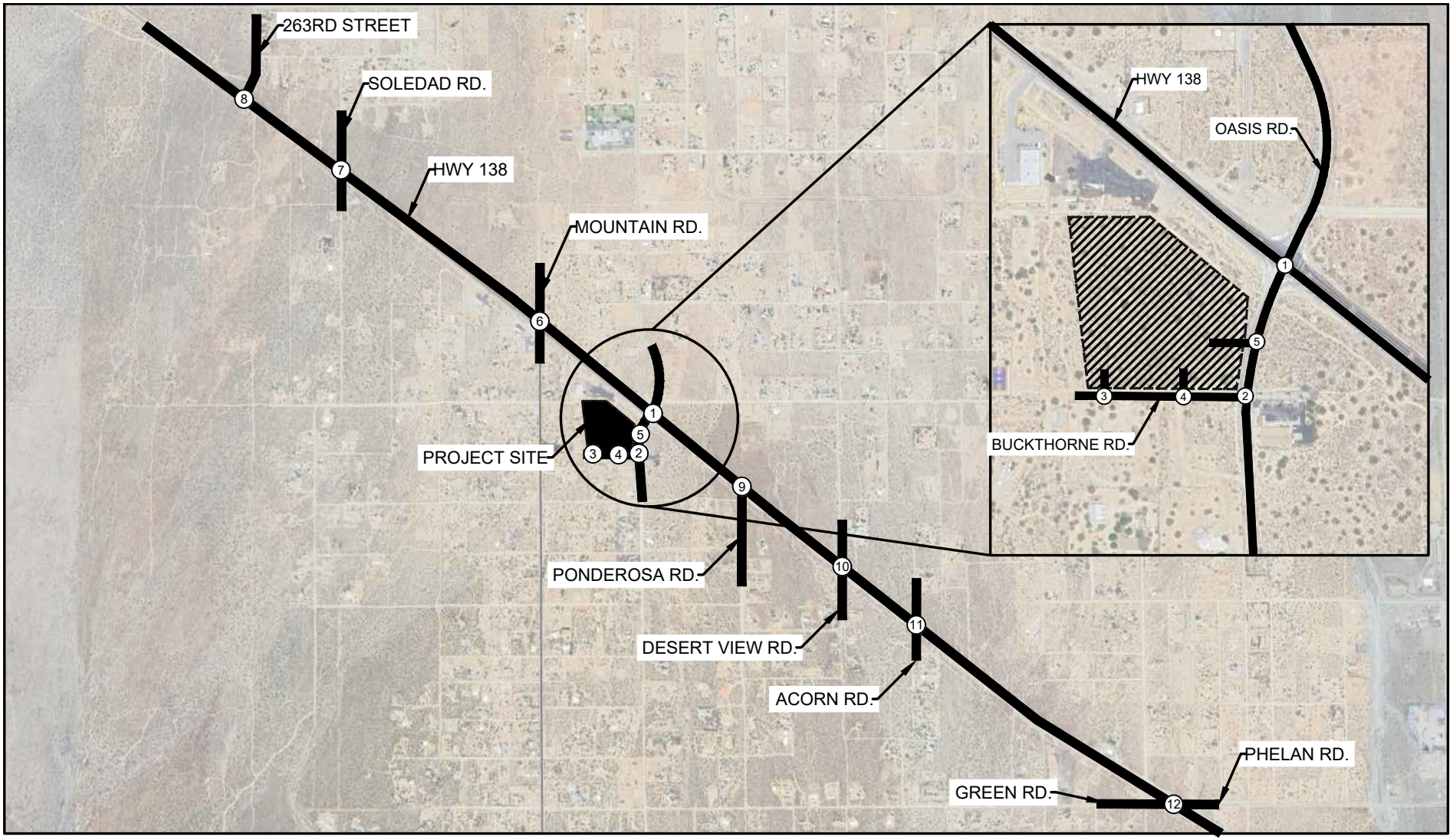


Exhibit 11b: Background Plus Project AM Peak Hour Volumes



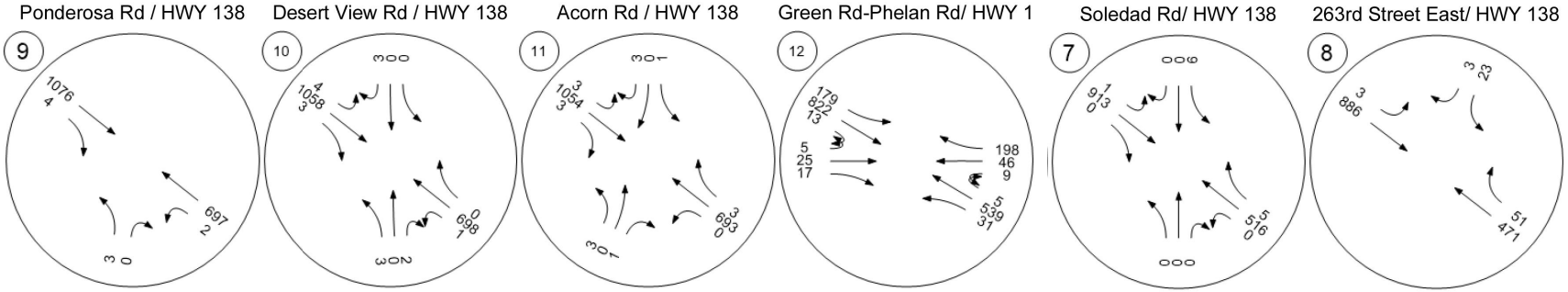
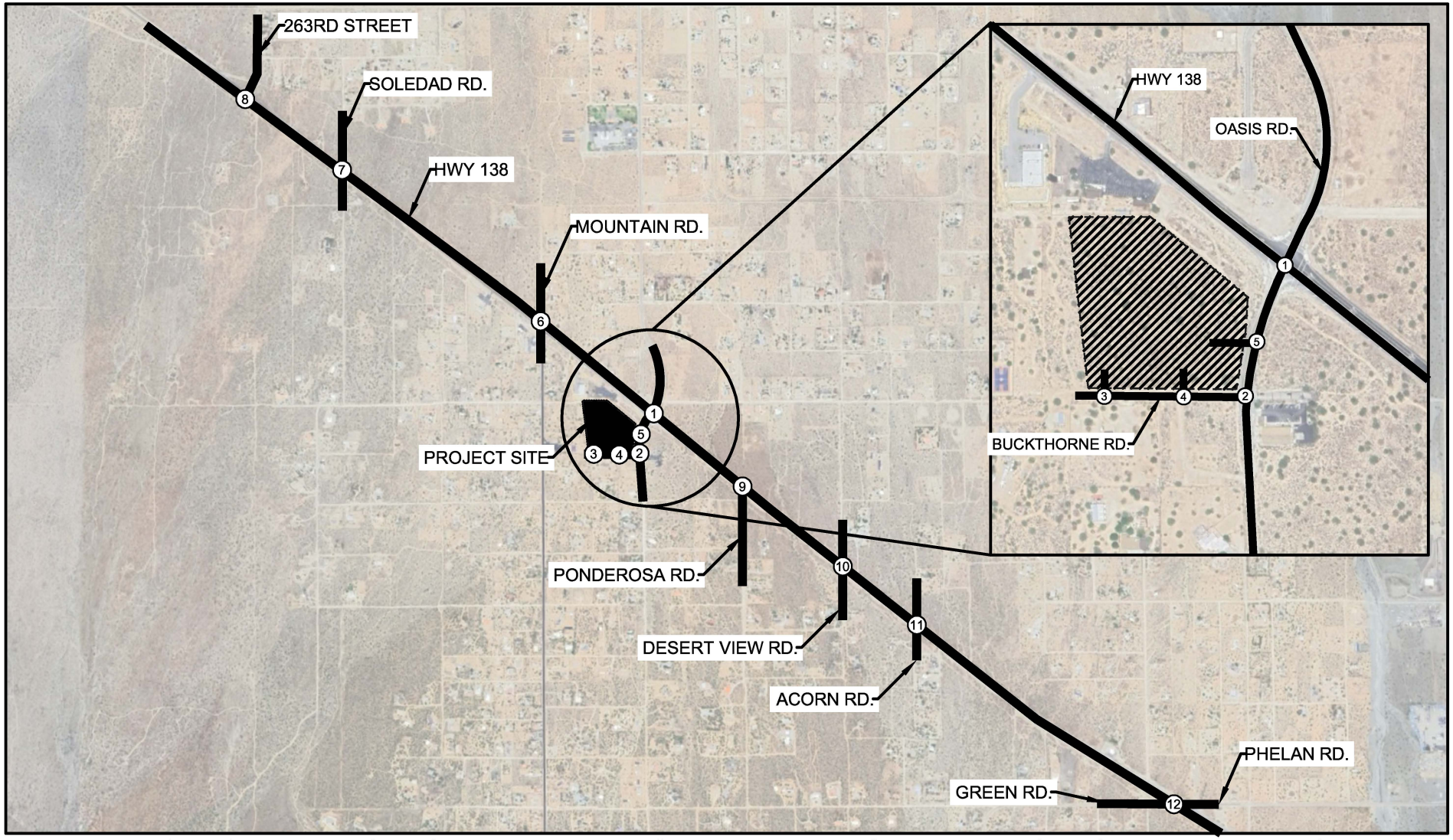


Exhibit 12b: Background Plus Project PM Peak Hour Volumes



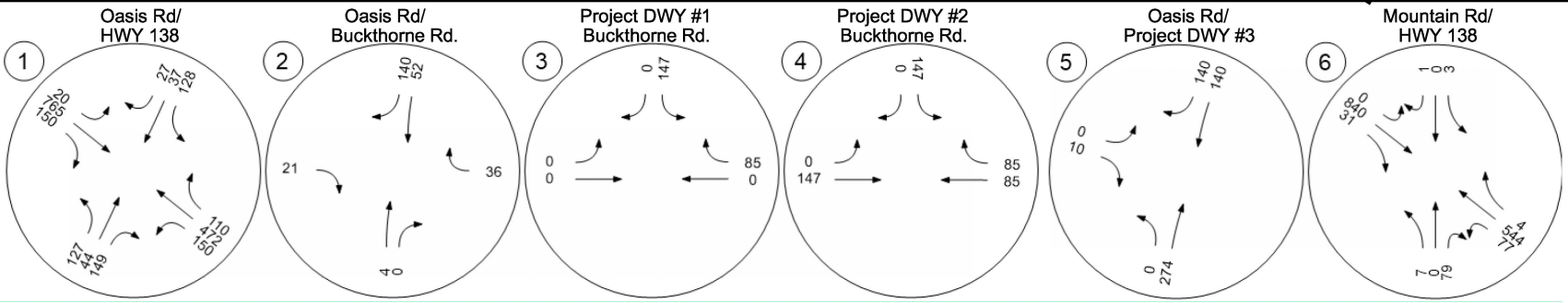


Exhibit 12a: Background Plus Project PM Peak Hour Volumes

7.0 RECOMMENDED PROJECT IMPROVEMENTS AND PROJECT FAIR SHARE

7.1 RECOMMENDED PROJECT IMPROVEMENTS

Development of the proposed project would result in unsatisfactory queueing impacts at one intersection in the EACP conditions. The following improvements would result in the intersections operating with satisfactory and improved queueing.

- Intersection #6 – Add a signal.

Recommended project improvements AM, and PM peak hour intersection analysis is shown in **Table 14** and are also shown in **Exhibit** 13. HCM analysis sheets are provided in ***Appendix D***.

Table 14
Intersection Analysis – Recommended Project Improvements

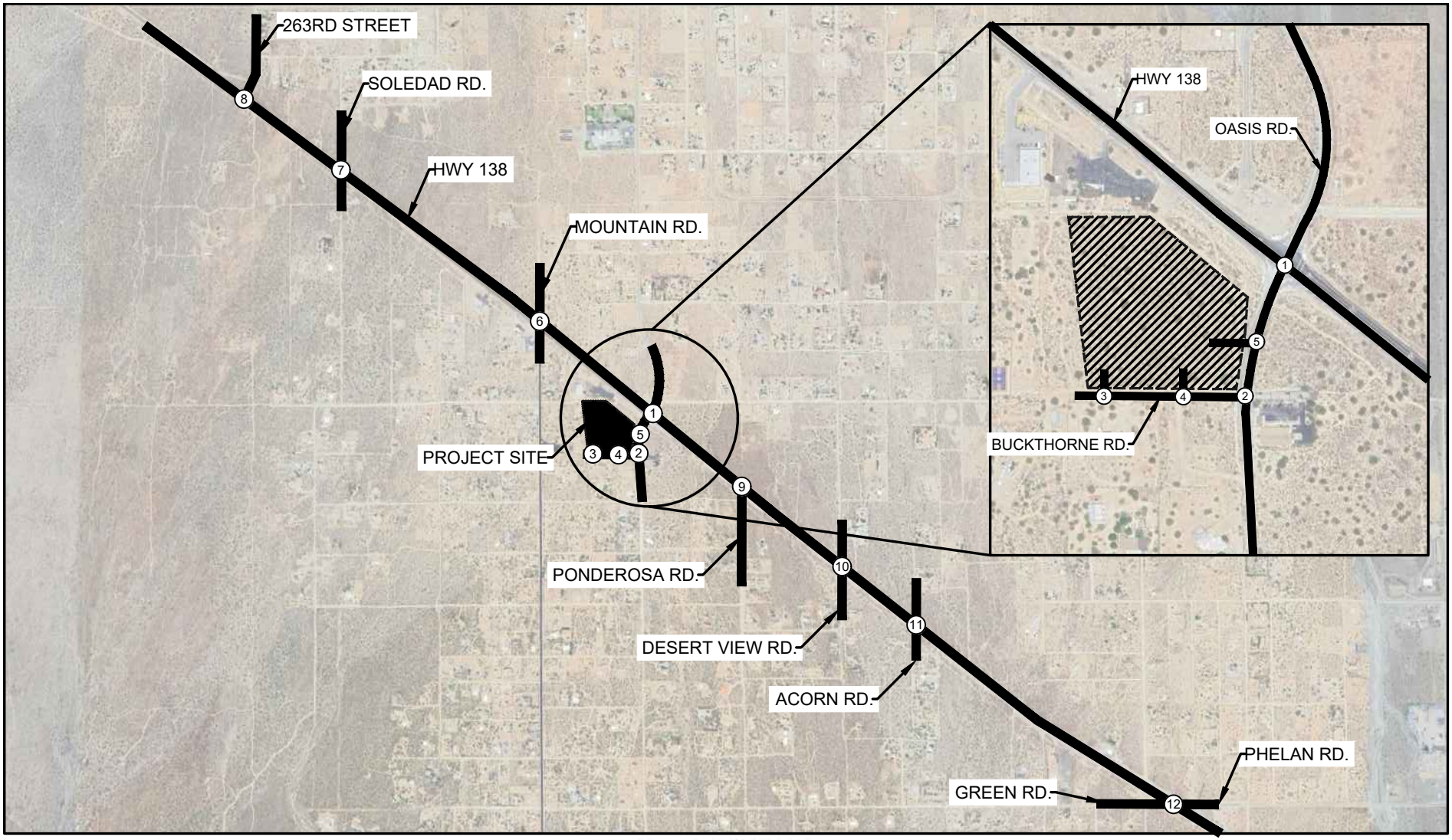
Intersection			Control Type	Peak Hour	EACP Conditions		Control Type	Mitigation Conditions		Deficient?
6	Mountain Road	Route 138	TWSC	AM	**59.6**	**F**	Signal	7.0	A	-
				PM	**70.9**	**F**		7.3	A	-

7.2 PROJECT FAIR SHARE

The project's fair share percentage for each recommended improvement is identified in **Table 15** 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 15
Fair Share Analysis

Intersection		Peak Hour	Project Trips	Future Development Trips	Project % of Fair Share	Improvements
6	Mountain Road / Route 138	**AM**	**277**	**1148**	**19%**	Add a signal
		PM	240	1346	15%	



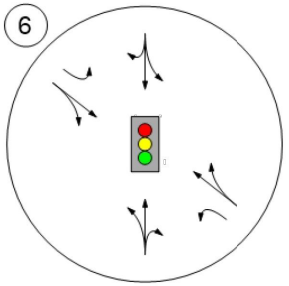


Exhibit 13: Recommended Improvements Lane Geometry and Intersection Controls

APPENDICES

Appendix A: Scoping Agreement and City Documents
Appendix B: Existing Traffic Counts and Model Volumes
Appendix C: HCM Analysis Sheets
Appendix D: Signal Warrant Reports

APPENDIX A

SCOPING AGREEMENT AND CITY DOCUMENTS

SCOPE FOR TRAFFIC STUDY

Project Name:	Maverik Fueling Station

This Scope for Traffic Study acknowledges San Bernardino County Department of Public Works, Traffic Division requirements of traffic impact analysis for the project and is subject to change:
Available on the Department of Public Works Website:
http://cms.sbcounty.gov/dpw/Transportation/Traffic.aspx

Project Address/APN	Oasis Road south of Highway 138 APN: 3067-051-29		
Project Description	15-pump gas station (5 trucks and 20 standard) with a 5,637 sq ft convenience store.		
City	Pinon Hills		
Project Horizon Year	2040	**Project Opening Year**	2026
Closest Intersection (Xtn) to the Project			
Xtn N/S Street Name	Oasis Road		
Xtn E/W Street Name	Highway 138		
County Supervisorial District	1st	**Ambient Growth Rate per Year Valley 2%, Desert 1%**	2%

	Traffic Engineer	**Owner/Developer**
Company	TJW Engineering	Maverik, Inc
Name	Tiffany Chang	Kevin Deis
Address	9841 Irvine Center Drive, Suite 200	185 S State Street, Suite 800
City, State, Zip Code	Irvine, CA 92612	Salt Lake City, UT 84111
Phone #	949-878-3509	801-634-3210
Email address	tiffany@tjwengineering.com	Kevin.Deis@maverik.com

TJW Engineering Inc. — **March 13, 2024**

Firm Preparing Study — **DATE**

Gene Kim — **C83175/T2684**

Engineer of Record — **License Number**

SCOPE FOR TRAFFIC STUDY

Project Name:	Maverik Fueling Station

1. Traffic Distribution: Please insert or attach Figure(s) illustrating project trip distribution in percentages and volumes at the study intersections analyzed.

2. Trip Credit: Exact amount of credit subject to approval by Traffic Division.

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

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

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

On/off ramps are included as part of the study area intersections. Additional tasks to be coordinated with Caltrans.

The applicant shall consult with the State of California Department of Transportation (Caltrans) to determine the California Environmental Quality Act levels of significance with regard to traffic impacts on Caltrans' freeway facilities. This consultation shall also include a determination of Caltrans requirements for the study of traffic impacts to its facilities and the mitigation of any such impacts. This analysis must follow the most current Caltrans' Vehicle Miles Traveled-Focused Transportation Impact Study Guide (May 2020) and can be obtained from https://dot.ca.gov/-/media/dot-media/programs/transportation-planning/documents/sb-743/2020-05-20-approved-vmt-focused-tisg-a11y.pdf. If Caltrans finds that the project has a significant impact on the freeway, Caltrans shall be requested to include the basis for this finding in their response. If fees are proposed to mitigate the freeway impact, Caltrans shall be requested to identify the specific project to which the fees will apply. These written comments from Caltrans shall be included with the traffic study and submitted to Public Works for review and approval. If a documented good faith effort is made to consult with Caltrans and written comments cannot be obtained from within a reasonable amount of time, an analysis of the freeway impact shall be made using HCM procedures. Appendix A of the San Bernardino County Transportation Authority CMP outlines allowable modifications to these procedures. The San Bernardino County Transportation Authority CMP can be viewed online at: https://www.gosbcta.com/planning-sustainability/?term=249

SCOPE FOR TRAFFIC STUDY

Project Name:	Maverik Fueling Station

5. Trip Generation

Trip Generation Rate(s) Source: ITE Trip Generation		**I – Institute of Transportation Engineers; S – San Diego Traffic Generators; C – County; O – Other:**	**Edition:**	11th	

Land Use Code	**Land Use**	**Rate Based on**	**QTY**	**AVTE Units***	**Daily Trips**	Weekday A.M. Peak			Weekday P.M. Peak			Weekend peak hour		
						In	Out	Total	In	Out	Total	In	Out	Total
945	Convenience Store/Gas Station	**I**	20	VFP	6,915	316	316	632	269	269	538			
950	Truck Stop	I	5	VFP	1,120	34	36	70	41	36	77			

* - Average Vehicle Trip Ends.
For ITE Land Uses provide number and name of Land Use. e.g. LU 814 - Variety Store. Units include ksf, employee, GLA, etc.

SCOPE FOR TRAFFIC STUDY

Project Name:	Maverik Fueling Station

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

Xtn #	% County	% City	N-S/E-W Street Name	City Name/Caltrans	Signalized	CMP
1	0	0	Oasis Road / HWY 138	Pinon Hills	Yes/no	Yes/no
2	100	0	Oasis Road / Buckthorne Road	Pinon Hills	Yes/no	Yes/no
3	100	0	Project Driveway / Buckthorne Road	Pinon Hills	Yes/no	Yes/no
4	100	0	Oasis Road / Project Driveway	Pinon Hills	Yes/no	Yes/no
5	0	0	Mountain Road / HWY 138	Pinon Hills	Yes/no	Yes/no
6	0	0	Soledad Rd / HWY 138	Pinon Hills	Yes/no	Yes/no
7	0	0	263rd Street E / HWY 138	Pinon Hills	Yes/no	Yes/no
8	0	0	Desert View Road / HWY 138	Pinon Hills	Yes/no	Yes/no
9	0	0	Acorn Road / HWY 138	Pinon Hills	Yes/no	Yes/no
10	0	0	Green Road / HWY 138	Pinon Hills	Yes/no	Yes/no
11	0	0	Ponderosa Rd / HWY 138	Pinon Hills	No	No

Cities/agencies to be consulted: San Bernardino County & Caltrans

SCOPE FOR TRAFFIC STUDY

Project Name:	Maverik Fueling Station

7. Other:

Traffic counts may be conducted immediately per the following:
• Must be taken on Tuesdays, Wednesdays or Thursdays. • Certain projects may need to collect traffic counts on Friday or Sunday
• Must exclude holidays, and the first weekdays before and after the holiday.
• Must be taken on days when local schools or colleges are in session.
• Must be taken on days of good weather, and avoid atypical conditions (e.g., road construction, detours, or major traffic incidents).
• Traffic counts used for other traffic studies in the area shall **NOT** be reused again, unless 25% of the counts conducted for that particular traffic study are validated with new counts. The difference in volumes between the old and new counts at each corresponding movement should not be more than 10%.
• New traffic counts shall be checked to ensure the difference in volumes at corresponding approaches, if applicable, between two adjacent intersections is no more than 10% unless the difference can be justified.
• For all proposed mitigation measures, a conceptual plan for the improvements shall be submitted to our Traffic Studies section for review and approval prior to the approval of the Traffic Impact Analysis. All proposed improvements shall be within the right-of-way.
• For all cumulative mitigation measures, a cost estimate for the improvement shall be submitted.
• Raw traffic counts data must be included with traffic analysis study
• Traffic Counts must not be older than 1 year prior to submittal unless approved by County Traffic.

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

8. Fees

The County charges on an actual cost basis for review of traffic studies. An initial deposit of $1,802 is required at the time that a land use application is filed with the Department of Land Use Services If the review costs exceed the initial deposit, the applicant will be expected to provide additional funds and the review will be suspended until the additional funds are deposited.

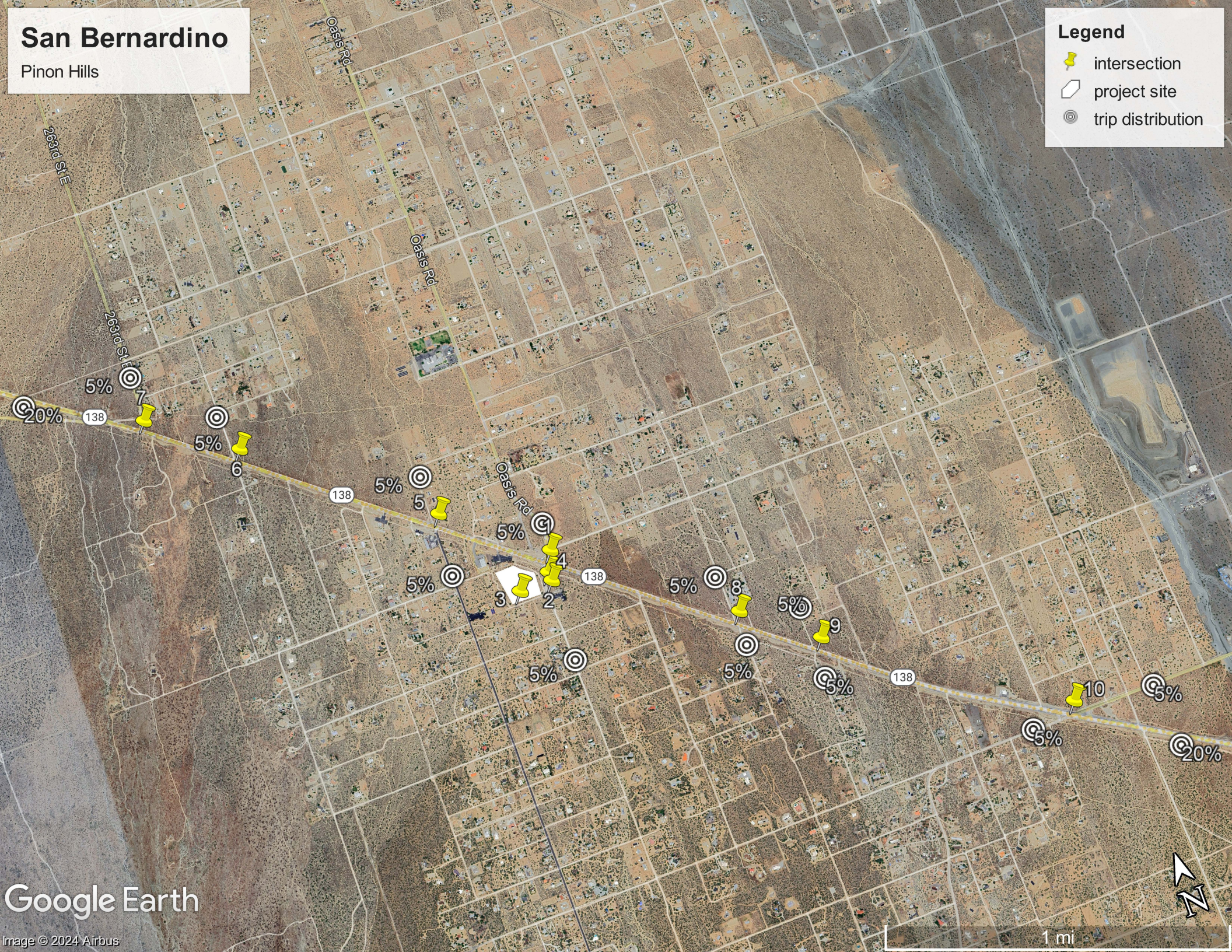
Project Name:	Maverik Fueling Station

9. Contact Information:

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

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

Phone: 909-387-8186
Fax: 909-387-7809
Email: Eric.Valencia@dpw.sbcounty.gov or Osvaldo.Roque@dpw.sbcounty.gov


San Bernardino
Pinon Hills
Legend
intersection
project site
trip distribution
Oasis Rd
263rd St E
138
20%
5%
10
1 mi
N
Google Earth
Image © 2024 Airbus

APPENDIX B

EXISTING TRAFFIC COUNTS AND MODEL VOLUMES

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

County of San Bernardino
N/S: Oasis Road
E/W: SR-138
Weather: Clear

File Name : 01_CSB_Oasis_SR138 AM
Site Code : 23624355
Start Date : 4/24/2024
Page No : 1

Groups Printed- Total Volume

	Oasis Road Southbound				SR-138 Westbound				Oasis Road Northbound				SR-138 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	17	0	3	20	0	122	23	145	0	0	1	1	2	74	1	77	243
07:15 AM	22	2	2	26	2	124	23	149	0	0	2	2	0	87	8	95	272
07:30 AM	51	5	20	76	1	117	40	158	0	4	3	7	13	117	2	132	373
07:45 AM	67	9	18	94	0	129	61	190	1	5	3	9	14	95	1	110	403
Total	157	16	43	216	3	492	147	642	1	9	9	19	29	373	12	414	1291
08:00 AM	45	4	14	63	1	118	15	134	0	3	5	8	13	100	0	113	318
08:15 AM	34	3	5	42	1	91	11	103	0	2	3	5	2	90	6	98	248
08:30 AM	30	4	7	41	1	113	15	129	0	2	2	4	2	97	7	106	280
08:45 AM	23	0	3	26	3	110	7	120	2	1	2	5	2	90	0	92	243
Total	132	11	29	172	6	432	48	486	2	8	12	22	19	377	13	409	1089
Grand Total	289	27	72	388	9	924	195	1128	3	17	21	41	48	750	25	823	2380
Apprch %	74.5	7	18.6		0.8	81.9	17.3		7.3	41.5	51.2		5.8	91.1	3		
Total %	12.1	1.1	3	16.3	0.4	38.8	8.2	47.4	0.1	0.7	0.9	1.7	2	31.5	1.1	34.6	

	Oasis Road Southbound				SR-138 Westbound				Oasis Road Northbound				SR-138 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 07:15 AM																	
07:15 AM	22	2	2	26	**2**	124	23	149	0	0	2	2	0	87	**8**	95	272
07:30 AM	51	5	**20**	76	1	117	40	158	0	4	3	7	13	**117**	2	**132**	373
07:45 AM	**67**	**9**	18	**94**	0	**129**	**61**	**190**	**1**	**5**	3	**9**	**14**	95	1	110	**403**
08:00 AM	45	4	14	63	1	118	15	134	0	3	**5**	8	13	100	0	113	318
Total Volume	185	20	54	259	4	488	139	631	1	12	13	26	40	399	11	450	1366
% App. Total	71.4	7.7	20.8		0.6	77.3	22		3.8	46.2	50		8.9	88.7	2.4		
PHF	.690	.556	.675	.689	.500	.946	.570	.830	.250	.600	.650	.722	.714	.853	.344	.852	.847

Counts Unlimited, Inc.
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County of San Bernardino
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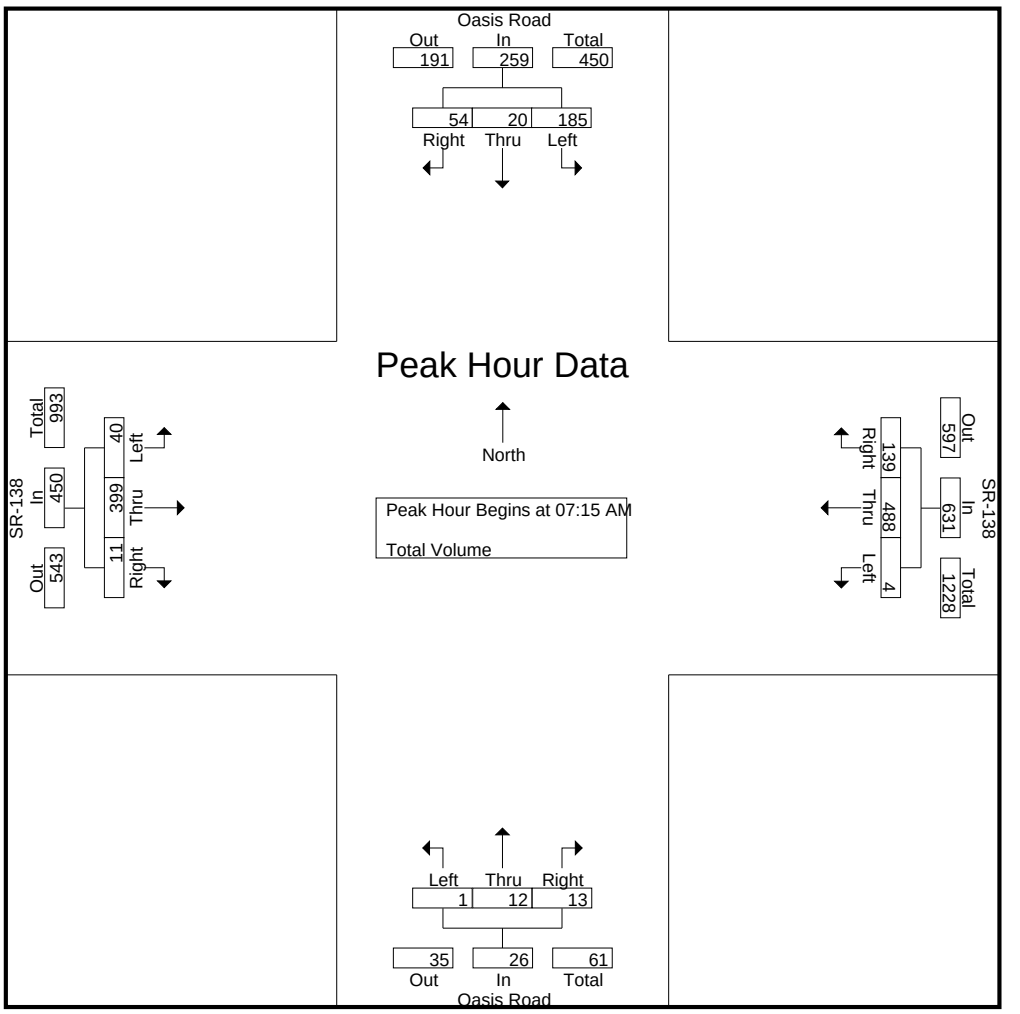
File Name : 01_CSB_Oasis_SR138 AM
Site Code : 23624355
Start Date : 4/24/2024
Page No : 2



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

	07:30 AM				07:00 AM				07:30 AM				07:30 AM			
+0 mins.	51	5	**20**	76	0	122	23	145	0	4	3	7	13	**117**	2	**132**
+15 mins.	**67**	**9**	18	**94**	**2**	124	23	149	**1**	**5**	3	**9**	**14**	95	1	110
+30 mins.	45	4	14	63	1	117	40	158	0	3	**5**	8	13	100	0	113
+45 mins.	34	3	5	42	0	**129**	**61**	**190**	0	2	3	5	2	90	**6**	98
Total Volume	197	21	57	275	3	492	147	642	1	14	14	29	42	402	9	453
% App. Total	71.6	7.6	20.7		0.5	76.6	22.9		3.4	48.3	48.3		9.3	88.7	2	
PHF	.735	.583	.713	.731	.375	.953	.602	.845	.250	.700	.700	.806	.750	.859	.375	.858

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County of San Bernardino
N/S: Oasis Road
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File Name : 01_CSB_Oasis_SR138 PM
Site Code : 23624355
Start Date : 4/24/2024
Page No : 1

Groups Printed- Total Volume

	Oasis Road Southbound				SR-138 Westbound				Oasis Road Northbound				SR-138 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	27	5	5	37	8	105	27	140	4	5	4	13	4	177	7	188	378
04:15 PM	25	2	7	34	5	106	23	134	3	5	12	20	8	156	9	173	361
04:30 PM	31	1	7	39	2	94	28	124	1	3	4	8	6	171	4	181	352
04:45 PM	30	1	7	38	4	99	17	120	0	3	0	3	1	185	8	194	355
Total	113	9	26	148	19	404	95	518	8	16	20	44	19	689	28	736	1446
05:00 PM	20	5	5	30	5	99	17	121	2	2	2	6	1	192	3	196	353
05:15 PM	17	2	4	23	4	85	18	107	1	2	0	3	1	155	3	159	292
05:30 PM	19	3	8	30	4	99	17	120	2	5	2	9	5	183	0	188	347
05:45 PM	10	0	5	15	6	94	18	118	1	2	4	7	7	201	0	208	348
Total	66	10	22	98	19	377	70	466	6	11	8	25	14	731	6	751	1340
Grand Total	179	19	48	246	38	781	165	984	14	27	28	69	33	1420	34	1487	2786
Apprch %	72.8	7.7	19.5		3.9	79.4	16.8		20.3	39.1	40.6		2.2	95.5	2.3		
Total %	6.4	0.7	1.7	8.8	1.4	28	5.9	35.3	0.5	1	1	2.5	1.2	51	1.2	53.4	

	Oasis Road Southbound				SR-138 Westbound				Oasis Road Northbound				SR-138 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 04:00 PM																	
04:00 PM	27	**5**	5	37	**8**	105	27	**140**	**4**	**5**	4	13	4	177	7	188	**378**
04:15 PM	25	2	**7**	34	5	**106**	23	134	3	5	**12**	**20**	**8**	156	**9**	173	361
04:30 PM	**31**	1	7	**39**	2	94	**28**	124	1	3	4	8	6	171	4	181	352
04:45 PM	30	1	7	38	4	99	17	120	0	3	0	3	1	**185**	8	**194**	355
Total Volume	113	9	26	148	19	404	95	518	8	16	20	44	19	689	28	736	1446
% App. Total	76.4	6.1	17.6		3.7	78	18.3		18.2	36.4	45.5		2.6	93.6	3.8		
PHF	.911	.450	.929	.949	.594	.953	.848	.925	.500	.800	.417	.550	.594	.931	.778	.948	.956

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County of San Bernardino
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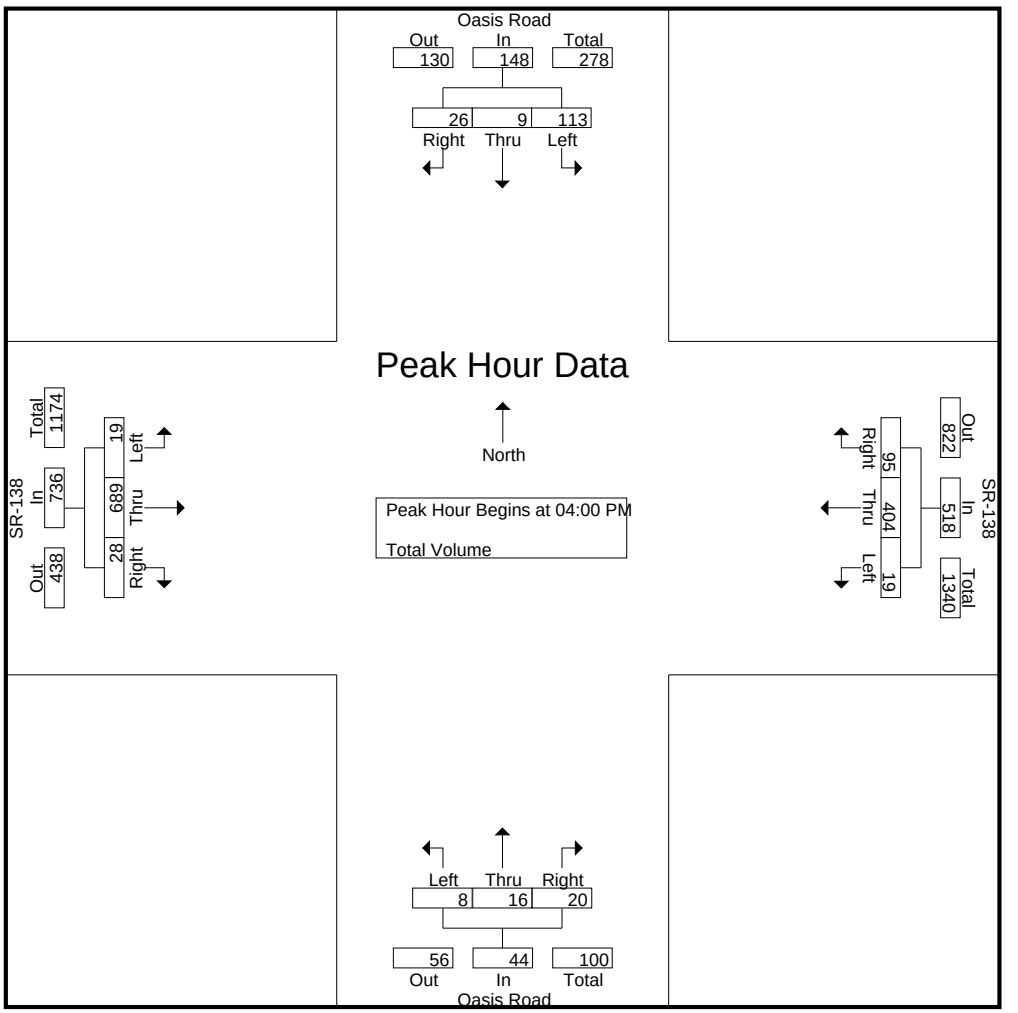

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:00 PM				04:00 PM				05:00 PM			
+0 mins.	27	**5**	5	37	**8**	105	27	**140**	**4**	**5**	4	13	1	192	**3**	196
+15 mins.	25	2	**7**	34	5	**106**	23	134	3	5	**12**	**20**	1	155	3	159
+30 mins.	**31**	1	7	**39**	2	94	**28**	124	1	3	4	8	5	183	0	188
+45 mins.	30	1	7	38	4	99	17	120	0	3	0	3	**7**	**201**	0	**208**
Total Volume	113	9	26	148	19	404	95	518	8	16	20	44	14	731	6	751
% App. Total	76.4	6.1	17.6		3.7	78	18.3		18.2	36.4	45.5		1.9	97.3	0.8	
PHF	.911	.450	.929	.949	.594	.953	.848	.925	.500	.800	.417	.550	.500	.909	.500	.903

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County of San Bernardino
N/S: Oasis Road
E/W: Buckthorne Road
Weather: Clear

File Name : 02_CSB_Oasis_Buck AM
Site Code : 23624355
Start Date : 4/24/2024
Page No : 1

Groups Printed- Total Volume

	Oasis Road Southbound				US Postal Service Driveway Westbound				Oasis Road Northbound				Buckthorne Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
07:15 AM	0	3	0	3	0	0	4	4	0	0	0	0	0	0	0	0	7
07:30 AM	0	5	1	6	1	0	2	3	0	3	0	3	0	0	1	1	13
07:45 AM	0	10	0	10	0	0	7	7	0	2	0	2	0	0	0	0	19
Total	0	20	1	21	1	0	13	14	0	6	0	6	0	0	1	1	42
08:00 AM	0	5	0	5	0	0	8	8	0	1	0	1	0	0	0	0	14
08:15 AM	0	6	0	6	0	0	1	1	0	3	0	3	0	0	0	0	10
08:30 AM	0	7	0	7	0	0	7	7	0	0	0	0	0	0	0	0	14
08:45 AM	0	3	0	3	0	0	3	3	0	1	0	1	0	0	0	0	7
Total	0	21	0	21	0	0	19	19	0	5	0	5	0	0	0	0	45
Grand Total	0	41	1	42	1	0	32	33	0	11	0	11	0	0	1	1	87
Apprch %	0	97.6	2.4		3	0	97		0	100	0		0	0	100		
Total %	0	47.1	1.1	48.3	1.1	0	36.8	37.9	0	12.6	0	12.6	0	0	1.1	1.1	

	Oasis Road Southbound				US Postal Service Driveway Westbound				Oasis Road Northbound				Buckthorne Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	**10**	0	**10**	0	0	7	7	0	2	0	2	0	0	0	0	**19**
08:00 AM	0	5	0	5	0	0	**8**	**8**	0	1	0	1	0	0	0	0	14
08:15 AM	0	6	0	6	0	0	1	1	0	**3**	0	**3**	0	0	0	0	10
08:30 AM	0	7	0	7	0	0	7	7	0	0	0	0	0	0	0	0	14
Total Volume	0	28	0	28	0	0	23	23	0	6	0	6	0	0	0	0	57
% App. Total	0	100	0		0	0	100		0	100	0		0	0	0		
PHF	.000	.700	.000	.700	.000	.000	.719	.719	.000	.500	.000	.500	.000	.000	.000	.000	.750

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County of San Bernardino
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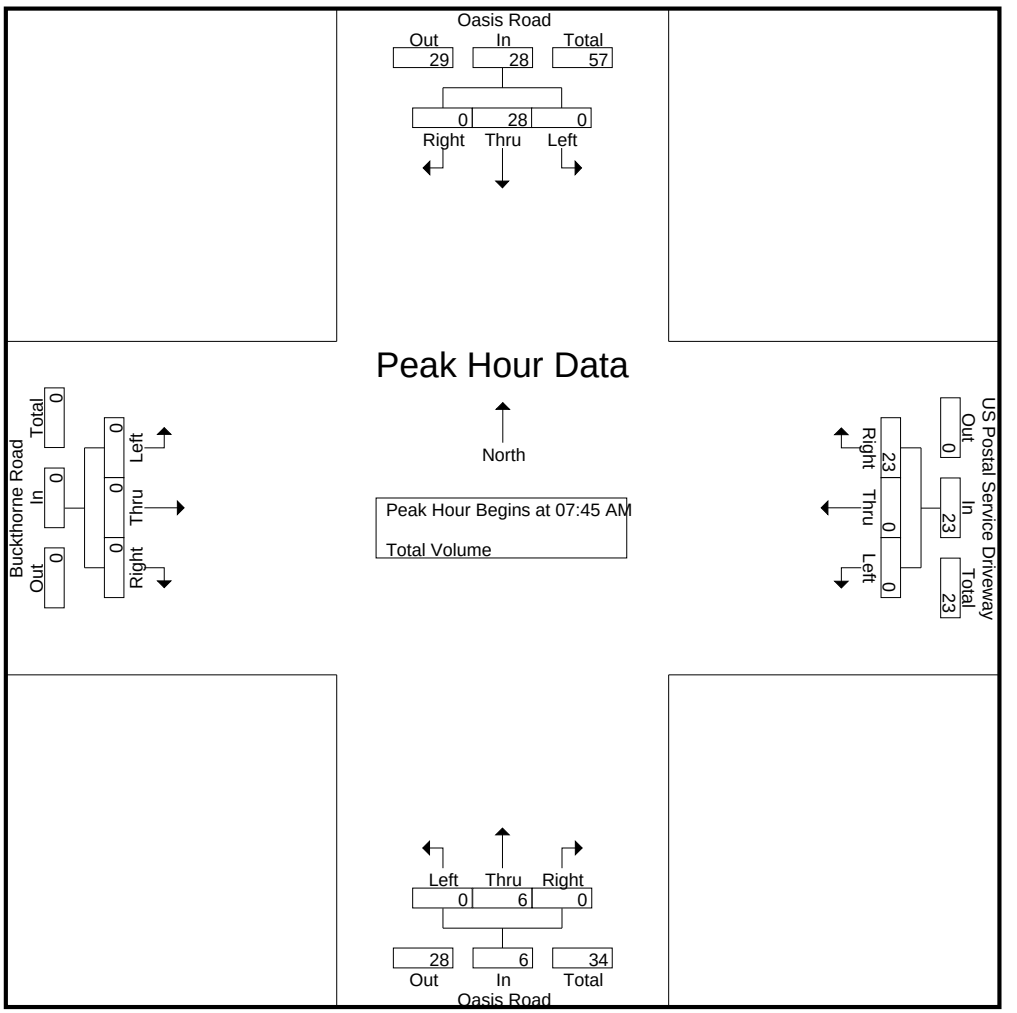

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:45 AM				07:45 AM				07:30 AM				07:00 AM			
+0 mins.	0	**10**	0	**10**	0	0	7	7	0	**3**	0	**3**	0	0	0	0
+15 mins.	0	5	0	5	0	0	**8**	**8**	0	2	0	2	0	0	0	0
+30 mins.	0	6	0	6	0	0	1	1	0	1	0	1	0	0	**1**	**1**
+45 mins.	0	7	0	7	0	0	7	7	0	3	0	3	0	0	0	0
Total Volume	0	28	0	28	0	0	23	23	0	9	0	9	0	0	1	1
% App. Total	0	100	0		0	0	100		0	100	0		0	0	100	
PHF	.000	.700	.000	.700	.000	.000	.719	.719	.000	.750	.000	.750	.000	.000	.250	.250

Counts Unlimited, Inc.
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County of San Bernardino
N/S: Oasis Road
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Weather: Clear

File Name : 02_CSB_Oasis_Buck PM
Site Code : 23624355
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Page No : 1

Groups Printed- Total Volume

	Oasis Road Southbound				US Postal Service Driveway Westbound				Oasis Road Northbound				Buckthorne Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	17	0	17	0	0	13	13	0	2	0	2	0	0	0	0	32
04:15 PM	0	12	0	12	0	0	12	12	0	2	0	2	0	0	0	0	26
04:30 PM	0	6	0	6	2	0	6	8	0	0	0	0	0	0	0	0	14
04:45 PM	0	5	0	5	0	0	4	4	0	0	0	0	0	0	0	0	9
Total	0	40	0	40	2	0	35	37	0	4	0	4	0	0	0	0	81
05:00 PM	0	10	1	11	1	0	6	7	0	0	0	0	0	0	0	0	18
05:15 PM	0	5	1	6	0	0	4	4	0	2	0	2	0	0	0	0	12
05:30 PM	0	7	0	7	1	0	5	6	0	3	0	3	0	0	0	0	16
05:45 PM	0	6	0	6	1	0	4	5	0	2	0	2	1	0	0	1	14
Total	0	28	2	30	3	0	19	22	0	7	0	7	1	0	0	1	60
Grand Total	0	68	2	70	5	0	54	59	0	11	0	11	1	0	0	1	141
Apprch %	0	97.1	2.9		8.5	0	91.5		0	100	0		100	0	0		
Total %	0	48.2	1.4	49.6	3.5	0	38.3	41.8	0	7.8	0	7.8	0.7	0	0	0.7	

	Oasis Road Southbound				US Postal Service Driveway Westbound				Oasis Road Northbound				Buckthorne Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	**17**	0	**17**	0	0	**13**	**13**	0	**2**	0	**2**	0	0	0	0	**32**
04:15 PM	0	12	0	12	0	0	12	12	0	2	0	2	0	0	0	0	26
04:30 PM	0	6	0	6	**2**	0	6	8	0	0	0	0	0	0	0	0	14
04:45 PM	0	5	0	5	0	0	4	4	0	0	0	0	0	0	0	0	9
Total Volume	0	40	0	40	2	0	35	37	0	4	0	4	0	0	0	0	81
% App. Total	0	100	0		5.4	0	94.6		0	100	0		0	0	0		
PHF	.000	.588	.000	.588	.250	.000	.673	.712	.000	.500	.000	.500	.000	.000	.000	.000	.633

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County of San Bernardino
N/S: Oasis Road
E/W: Buckthorne Road
Weather: Clear

File Name : 02_CSB_Oasis_Buck PM
Site Code : 23624355
Start Date : 4/24/2024
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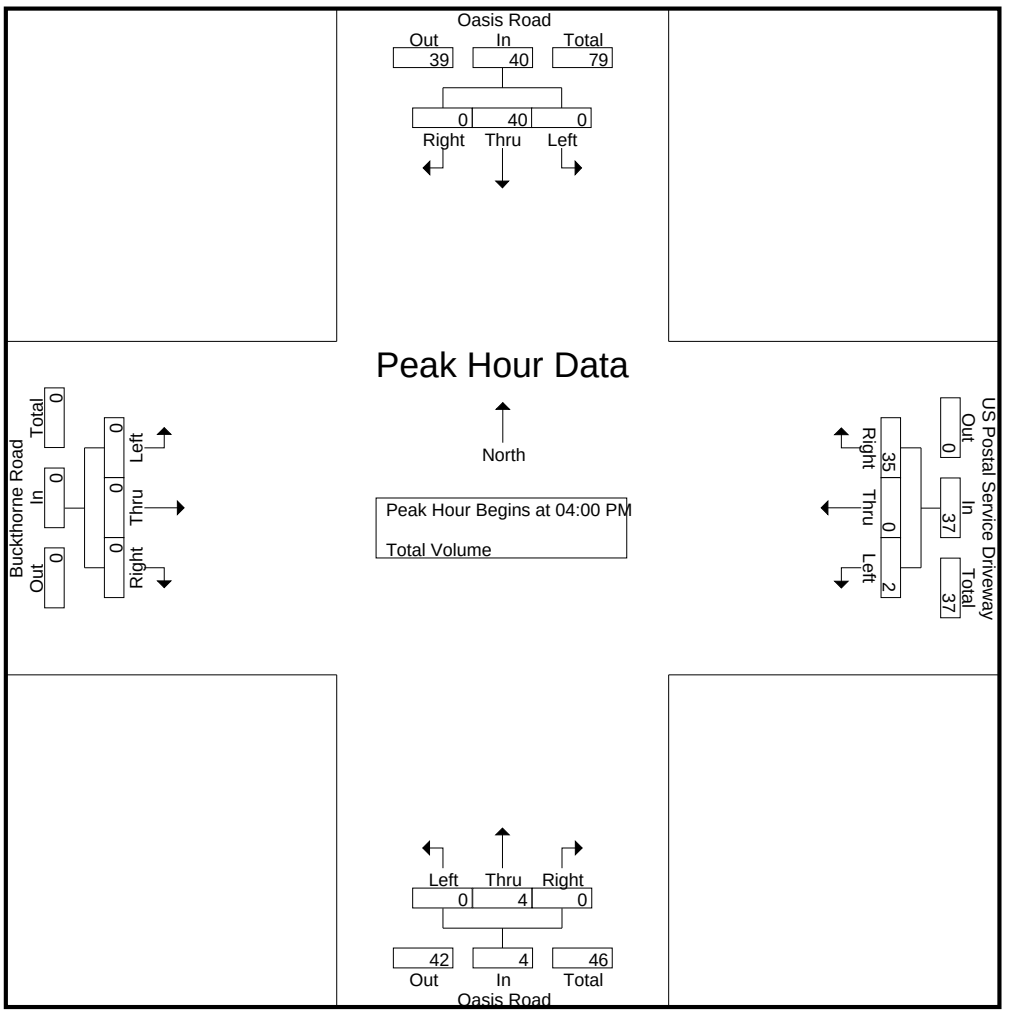

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:00 PM				05:00 PM				05:00 PM			
+0 mins.	0	**17**	0	**17**	0	0	**13**	**13**	0	0	0	0	0	0	0	0
+15 mins.	0	12	0	12	0	0	12	12	0	2	0	2	0	0	0	0
+30 mins.	0	6	0	6	**2**	0	6	8	0	**3**	0	**3**	0	0	0	0
+45 mins.	0	5	0	5	0	0	4	4	0	2	0	2	**1**	0	0	**1**
Total Volume	0	40	0	40	2	0	35	37	0	7	0	7	1	0	0	1
% App. Total	0	100	0		5.4	0	94.6		0	100	0		100	0	0	
PHF	.000	.588	.000	.588	.250	.000	.673	.712	.000	.583	.000	.583	.250	.000	.000	.250

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County of San Bernardino
N/S: Mountain Road
E/W: SR-138
Weather: Clear

File Name : 05_CSB_Mtn_SR138 AM
Site Code : 23624355
Start Date : 4/24/2024
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Groups Printed- Total Volume

	Mountain Road Southbound				SR-138 Westbound				Mountain Road Northbound				SR-138 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	6	134	0	140	4	0	6	10	0	74	0	74	224
07:15 AM	0	0	0	0	3	125	0	128	2	0	20	22	0	81	5	86	236
07:30 AM	0	0	0	0	15	118	0	133	2	0	30	32	0	105	3	108	273
07:45 AM	0	0	0	0	18	123	0	141	2	0	21	23	0	100	2	102	266
Total	0	0	0	0	42	500	0	542	10	0	77	87	0	360	10	370	999
08:00 AM	0	0	0	0	20	107	0	127	4	0	18	22	0	79	2	81	230
08:15 AM	0	0	0	0	7	95	0	102	4	0	17	21	0	80	4	84	207
08:30 AM	0	0	0	0	10	109	0	119	1	0	25	26	0	85	2	87	232
08:45 AM	0	0	0	0	11	98	0	109	2	0	13	15	0	77	5	82	206
Total	0	0	0	0	48	409	0	457	11	0	73	84	0	321	13	334	875
Grand Total	0	0	0	0	90	909	0	999	21	0	150	171	0	681	23	704	1874
Apprch %	0	0	0		9	91	0		12.3	0	87.7		0	96.7	3.3		
Total %	0	0	0	0	4.8	48.5	0	53.3	1.1	0	8	9.1	0	36.3	1.2	37.6	

	Mountain Road Southbound				SR-138 Westbound				Mountain Road Northbound				SR-138 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 07:15 AM																	
07:15 AM	0	0	0	0	3	**125**	0	128	2	0	20	22	0	81	**5**	86	236
07:30 AM	0	0	0	0	15	118	0	133	2	0	**30**	**32**	0	**105**	3	**108**	**273**
07:45 AM	0	0	0	0	18	123	0	**141**	2	0	21	23	0	100	2	102	266
08:00 AM	0	0	0	0	**20**	107	0	127	**4**	0	18	22	0	79	2	81	230
Total Volume	0	0	0	0	56	473	0	529	10	0	89	99	0	365	12	377	1005
% App. Total	0	0	0		10.6	89.4	0		10.1	0	89.9		0	96.8	3.2		
PHF	.000	.000	.000	.000	.700	.946	.000	.938	.625	.000	.742	.773	.000	.869	.600	.873	.920

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County of San Bernardino
N/S: Mountain Road
E/W: SR-138
Weather: Clear

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Site Code : 23624355
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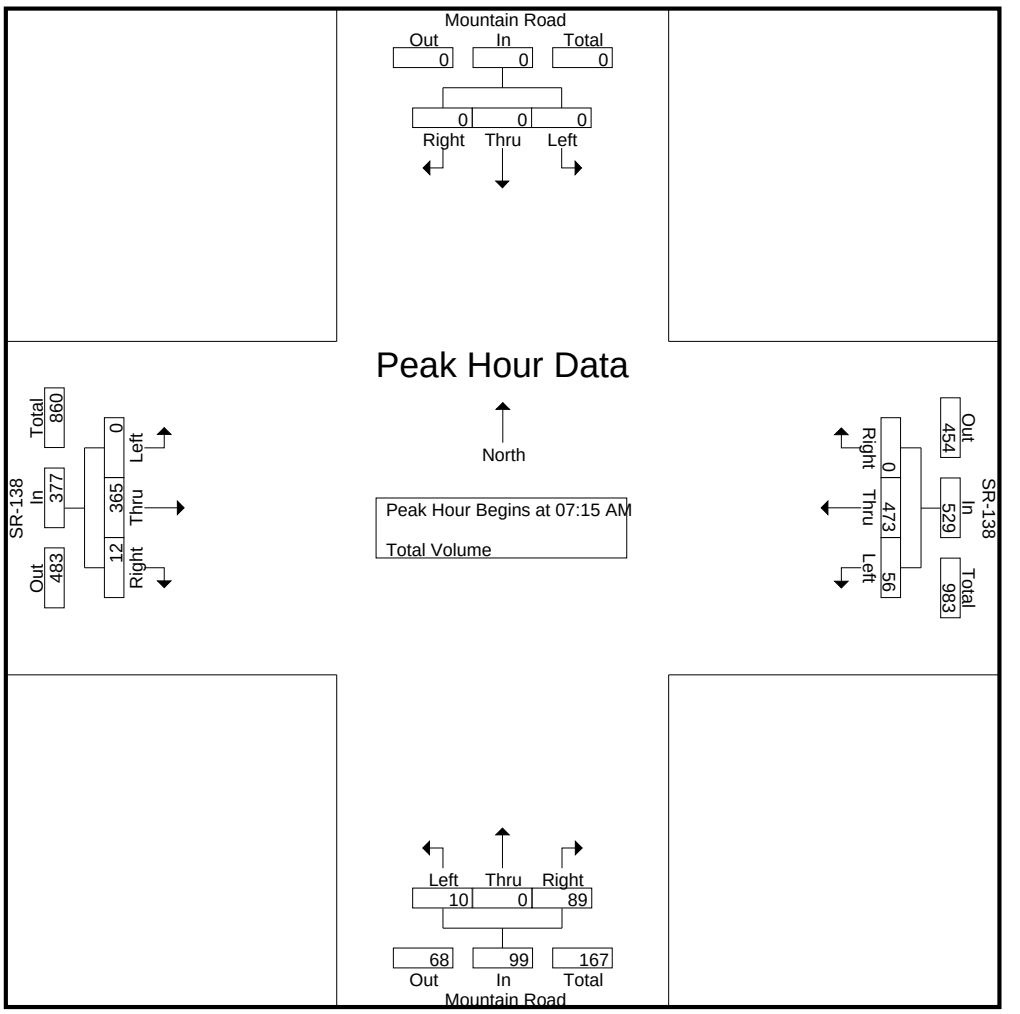

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	0	0	6	**134**	0	140	2	0	20	22	0	81	**5**	86
+15 mins.	0	0	0	0	3	125	0	128	2	0	**30**	**32**	0	**105**	3	**108**
+30 mins.	0	0	0	0	15	118	0	133	2	0	21	23	0	100	2	102
+45 mins.	0	0	0	0	**18**	123	0	**141**	**4**	0	18	22	0	79	2	81
Total Volume	0	0	0	0	42	500	0	542	10	0	89	99	0	365	12	377
% App. Total	0	0	0		7.7	92.3	0		10.1	0	89.9		0	96.8	3.2	
PHF	.000	.000	.000	.000	.583	.933	.000	.961	.625	.000	.742	.773	.000	.869	.600	.873

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County of San Bernardino
N/S: Mountain Road
E/W: SR-138
Weather: Clear

File Name : 05_CSB_Mtn_SR138 PM
Site Code : 23624355
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Groups Printed- Total Volume

	Mountain Road Southbound				SR-138 Westbound				Mountain Road Northbound				SR-138 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	0	0	1	1	14	105	0	119	4	0	19	23	0	174	9	183	326
04:15 PM	0	0	0	0	21	85	1	107	2	0	20	22	0	129	7	136	265
04:30 PM	0	0	0	0	20	88	0	108	0	0	18	18	0	158	5	163	289
04:45 PM	0	0	0	0	16	86	0	102	1	0	16	17	0	190	9	199	318
Total	0	0	1	1	71	364	1	436	7	0	73	80	0	651	30	681	1198
05:00 PM	0	0	0	0	19	85	0	104	3	0	22	25	0	170	3	173	302
05:15 PM	0	0	0	0	22	70	0	92	3	0	18	21	0	150	5	155	268
05:30 PM	0	0	0	0	15	90	0	105	2	0	23	25	0	160	14	174	304
05:45 PM	0	0	0	0	22	84	0	106	1	0	14	15	0	180	3	183	304
Total	0	0	0	0	78	329	0	407	9	0	77	86	0	660	25	685	1178
Grand Total	0	0	1	1	149	693	1	843	16	0	150	166	0	1311	55	1366	2376
Apprch %	0	0	100		17.7	82.2	0.1		9.6	0	90.4		0	96	4		
Total %	0	0	0	0	6.3	29.2	0	35.5	0.7	0	6.3	7	0	55.2	2.3	57.5	

	Mountain Road Southbound				SR-138 Westbound				Mountain Road Northbound				SR-138 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 04:00 PM																	
04:00 PM	0	0	**1**	**1**	14	**105**	0	**119**	**4**	0	19	**23**	0	174	**9**	183	**326**
04:15 PM	0	0	0	0	**21**	85	**1**	107	2	0	**20**	22	0	129	7	136	265
04:30 PM	0	0	0	0	20	88	0	108	0	0	18	18	0	158	5	163	289
04:45 PM	0	0	0	0	16	86	0	102	1	0	16	17	0	**190**	9	**199**	318
Total Volume	0	0	1	1	71	364	1	436	7	0	73	80	0	651	30	681	1198
% App. Total	0	0	100		16.3	83.5	0.2		8.8	0	91.2		0	95.6	4.4		
PHF	.000	.000	.250	.250	.845	.867	.250	.916	.438	.000	.913	.870	.000	.857	.833	.856	.919

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County of San Bernardino
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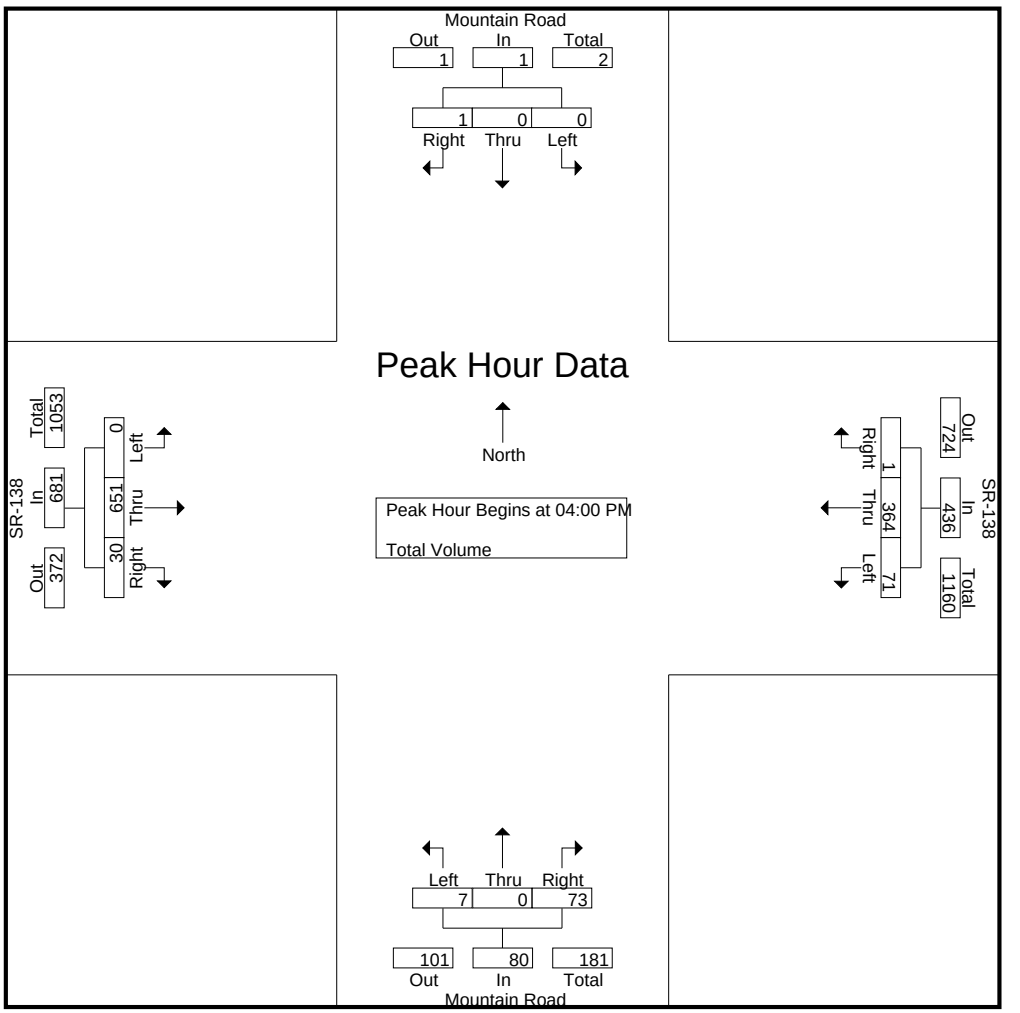

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:00 PM				04:45 PM				04:45 PM			
+0 mins.	0	0	**1**	**1**	14	**105**	0	**119**	1	0	16	17	0	**190**	9	**199**
+15 mins.	0	0	0	0	**21**	85	**1**	107	**3**	0	22	**25**	0	170	3	173
+30 mins.	0	0	0	0	20	88	0	108	3	0	18	21	0	150	5	155
+45 mins.	0	0	0	0	16	86	0	102	2	0	**23**	25	0	160	**14**	174
Total Volume	0	0	1	1	71	364	1	436	9	0	79	88	0	670	31	701
% App. Total	0	0	100		16.3	83.5	0.2		10.2	0	89.8		0	95.6	4.4	
PHF	.000	.000	.250	.250	.845	.867	.250	.916	.750	.000	.859	.880	.000	.882	.554	.881

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County of San Bernardino
N/S: Soledad Road
E/W: SR-138
Weather: Clear

File Name : 06_CSB_Sol_SR138 AM
Site Code : 23624355
Start Date : 4/24/2024
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Groups Printed- Total Volume

	Soledad Road Southbound				SR-138 Westbound				Soledad Road Northbound				SR-138 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	0	0	1	0	127	0	127	0	0	0	0	0	68	0	68	196
07:15 AM	0	0	0	0	1	120	0	121	0	0	0	0	0	89	0	89	210
07:30 AM	0	0	0	0	1	122	0	123	0	0	0	0	0	88	0	88	211
07:45 AM	0	0	0	0	0	123	0	123	0	0	0	0	0	105	0	105	228
Total	1	0	0	1	2	492	0	494	0	0	0	0	0	350	0	350	845
08:00 AM	0	0	0	0	0	102	1	103	0	0	0	0	0	77	0	77	180
08:15 AM	1	0	0	1	0	100	1	101	0	0	0	0	0	82	0	82	184
08:30 AM	2	0	0	2	1	108	0	109	0	0	0	0	0	81	0	81	192
08:45 AM	0	0	0	0	0	98	0	98	0	0	0	0	0	86	0	86	184
Total	3	0	0	3	1	408	2	411	0	0	0	0	0	326	0	326	740
Grand Total	4	0	0	4	3	900	2	905	0	0	0	0	0	676	0	676	1585
Apprch %	100	0	0		0.3	99.4	0.2		0	0	0		0	100	0		
Total %	0.3	0	0	0.3	0.2	56.8	0.1	57.1	0	0	0	0	0	42.6	0	42.6	

	Soledad Road Southbound				SR-138 Westbound				Soledad Road Northbound				SR-138 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 07:00 AM																	
07:00 AM	**1**	0	0	**1**	0	**127**	0	**127**	0	0	0	0	0	68	0	68	196
07:15 AM	0	0	0	0	**1**	120	0	121	0	0	0	0	0	89	0	89	210
07:30 AM	0	0	0	0	1	122	0	123	0	0	0	0	0	88	0	88	211
07:45 AM	0	0	0	0	0	123	0	123	0	0	0	0	0	**105**	0	**105**	**228**
Total Volume	1	0	0	1	2	492	0	494	0	0	0	0	0	350	0	350	845
% App. Total	100	0	0		0.4	99.6	0		0	0	0		0	100	0		
PHF	.250	.000	.000	.250	.500	.969	.000	.972	.000	.000	.000	.000	.000	.833	.000	.833	.927

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County of San Bernardino
N/S: Soledad Road
E/W: SR-138
Weather: Clear

File Name : 06_CSB_Sol_SR138 AM
Site Code : 23624355
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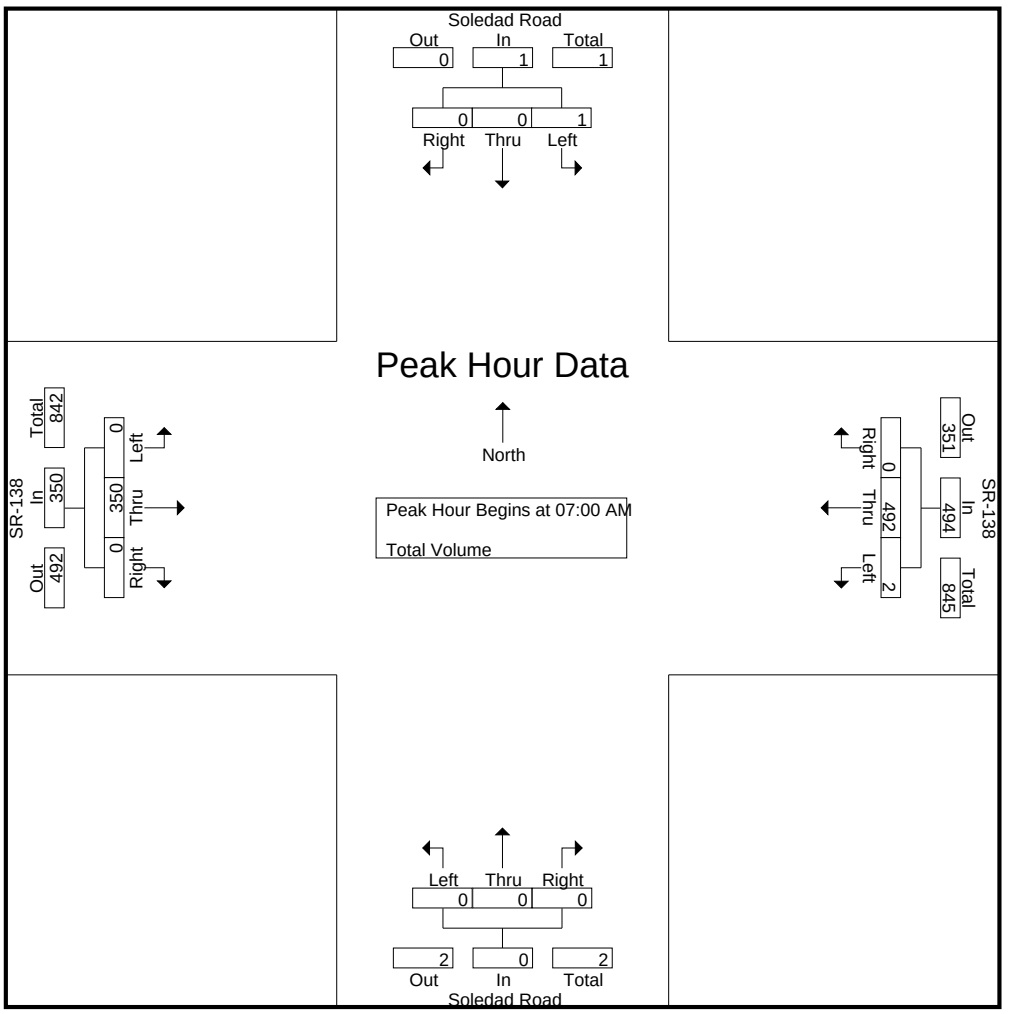

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:45 AM				07:00 AM				07:00 AM				07:15 AM			
+0 mins.	0	0	0	0	0	**127**	0	**127**	0	0	0	0	0	89	0	89
+15 mins.	0	0	0	0	**1**	120	0	121	0	0	0	0	0	88	0	88
+30 mins.	1	0	0	1	1	122	0	123	0	0	0	0	0	**105**	0	**105**
+45 mins.	**2**	0	0	**2**	0	123	0	123	0	0	0	0	0	77	0	77
Total Volume	3	0	0	3	2	492	0	494	0	0	0	0	0	359	0	359
% App. Total	100	0	0		0.4	99.6	0		0	0	0		0	100	0	
PHF	.375	.000	.000	.375	.500	.969	.000	.972	.000	.000	.000	.000	.000	.855	.000	.855

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County of San Bernardino
N/S: Soledad Road
E/W: SR-138
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File Name : 06_CSB_Sol_SR138 PM
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Groups Printed- Total Volume

	Soledad Road Southbound				SR-138 Westbound				Soledad Road Northbound				SR-138 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	0	0	0	0	3	100	1	104	0	0	0	0	1	172	0	173	277
04:15 PM	0	0	0	0	0	90	1	91	0	0	0	0	0	143	1	144	235
04:30 PM	0	0	0	0	0	87	0	87	0	0	0	0	0	149	0	149	236
04:45 PM	1	0	0	1	0	80	0	80	0	0	0	0	0	205	0	205	286
Total	1	0	0	1	3	357	2	362	0	0	0	0	1	669	1	671	1034
05:00 PM	1	0	0	1	0	88	0	88	0	0	0	0	0	166	0	166	255
05:15 PM	0	0	0	0	0	82	0	82	0	0	0	0	1	161	0	162	244
05:30 PM	1	0	0	1	0	90	2	92	0	0	0	0	0	192	0	192	285
05:45 PM	0	0	0	0	1	85	1	87	0	0	0	0	0	151	0	151	238
Total	2	0	0	2	1	345	3	349	0	0	0	0	1	670	0	671	1022
Grand Total	3	0	0	3	4	702	5	711	0	0	0	0	2	1339	1	1342	2056
Apprch %	100	0	0		0.6	98.7	0.7		0	0	0		0.1	99.8	0.1		
Total %	0.1	0	0	0.1	0.2	34.1	0.2	34.6	0	0	0	0	0.1	65.1	0	65.3	

	Soledad Road Southbound				SR-138 Westbound				Soledad Road Northbound				SR-138 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	**1**	0	0	**1**	0	80	0	80	0	0	0	0	0	**205**	0	**205**	**286**
05:00 PM	1	0	0	1	0	88	0	88	0	0	0	0	0	166	0	166	255
05:15 PM	0	0	0	0	0	82	0	82	0	0	0	0	**1**	161	0	162	244
05:30 PM	1	0	0	1	0	**90**	**2**	**92**	0	0	0	0	0	192	0	192	285
Total Volume	3	0	0	3	0	340	2	342	0	0	0	0	1	724	0	725	1070
% App. Total	100	0	0		0	99.4	0.6		0	0	0		0.1	99.9	0		
PHF	.750	.000	.000	.750	.000	.944	.250	.929	.000	.000	.000	.000	.250	.883	.000	.884	.935

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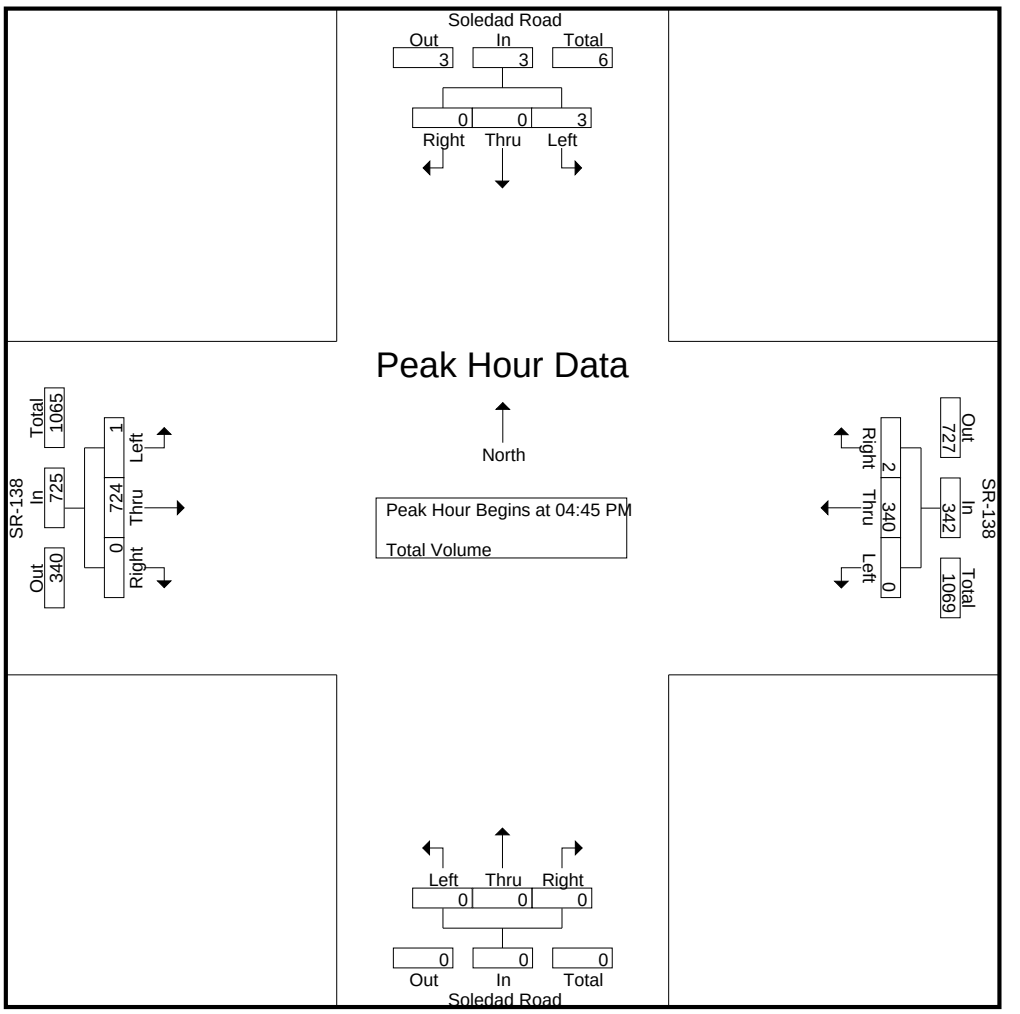
County of San Bernardino
N/S: Soledad Road
E/W: SR-138
Weather: Clear

File Name : 06_CSB_Sol_SR138 PM
Site Code : 23624355
Start Date : 4/24/2024
Page No : 2



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

	04:45 PM				04:00 PM				04:00 PM				04:45 PM			
+0 mins.	**1**	0	0	**1**	**3**	**100**	**1**	**104**	0	0	0	0	0	**205**	0	**205**
+15 mins.	1	0	0	1	0	90	1	91	0	0	0	0	0	166	0	166
+30 mins.	0	0	0	0	0	87	0	87	0	0	0	0	**1**	161	0	162
+45 mins.	1	0	0	1	0	80	0	80	0	0	0	0	0	192	0	192
Total Volume	3	0	0	3	3	357	2	362	0	0	0	0	1	724	0	725
% App. Total	100	0	0		0.8	98.6	0.6		0	0	0		0.1	99.9	0	
PHF	.750	.000	.000	.750	.250	.893	.500	.870	.000	.000	.000	.000	.250	.883	.000	.884

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County of San Bernardino
N/S: 263rd Street E
E/W: SR-138
Weather: Clear

File Name : 07_CSB_263rd E_SR138 AM
Site Code : 23624355
Start Date : 4/24/2024
Page No : 1

Groups Printed- Total Volume

	263rd Street E Southbound			SR-138 Westbound			SR-138 Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
07:00 AM	7	0	7	120	6	126	0	65	65	198
07:15 AM	6	0	6	115	3	118	0	78	78	202
07:30 AM	4	1	5	139	0	139	0	93	93	237
07:45 AM	14	0	14	105	4	109	0	92	92	215
Total	31	1	32	479	13	492	0	328	328	852
08:00 AM	8	1	9	102	9	111	0	70	70	190
08:15 AM	5	2	7	96	1	97	0	77	77	181
08:30 AM	6	0	6	104	1	105	0	74	74	185
08:45 AM	2	0	2	92	5	97	0	83	83	182
Total	21	3	24	394	16	410	0	304	304	738
Grand Total	52	4	56	873	29	902	0	632	632	1590
Apprch %	92.9	7.1		96.8	3.2		0	100		
Total %	3.3	0.3	3.5	54.9	1.8	56.7	0	39.7	39.7	

	263rd Street E Southbound			SR-138 Westbound			SR-138 Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	7	0	7	120	**6**	126	0	65	65	198
07:15 AM	6	0	6	115	3	118	0	78	78	202
07:30 AM	4	**1**	5	**139**	0	**139**	0	**93**	**93**	**237**
07:45 AM	**14**	0	**14**	105	4	109	0	92	92	215
Total Volume	31	1	32	479	13	492	0	328	328	852
% App. Total	96.9	3.1		97.4	2.6		0	100		
PHF	.554	.250	.571	.862	.542	.885	.000	.882	.882	.899

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County of San Bernardino
N/S: 263rd Street E
E/W: SR-138
Weather: Clear

File Name : 07_CSB_263rd E_SR138 AM
Site Code : 23624355
Start Date : 4/24/2024
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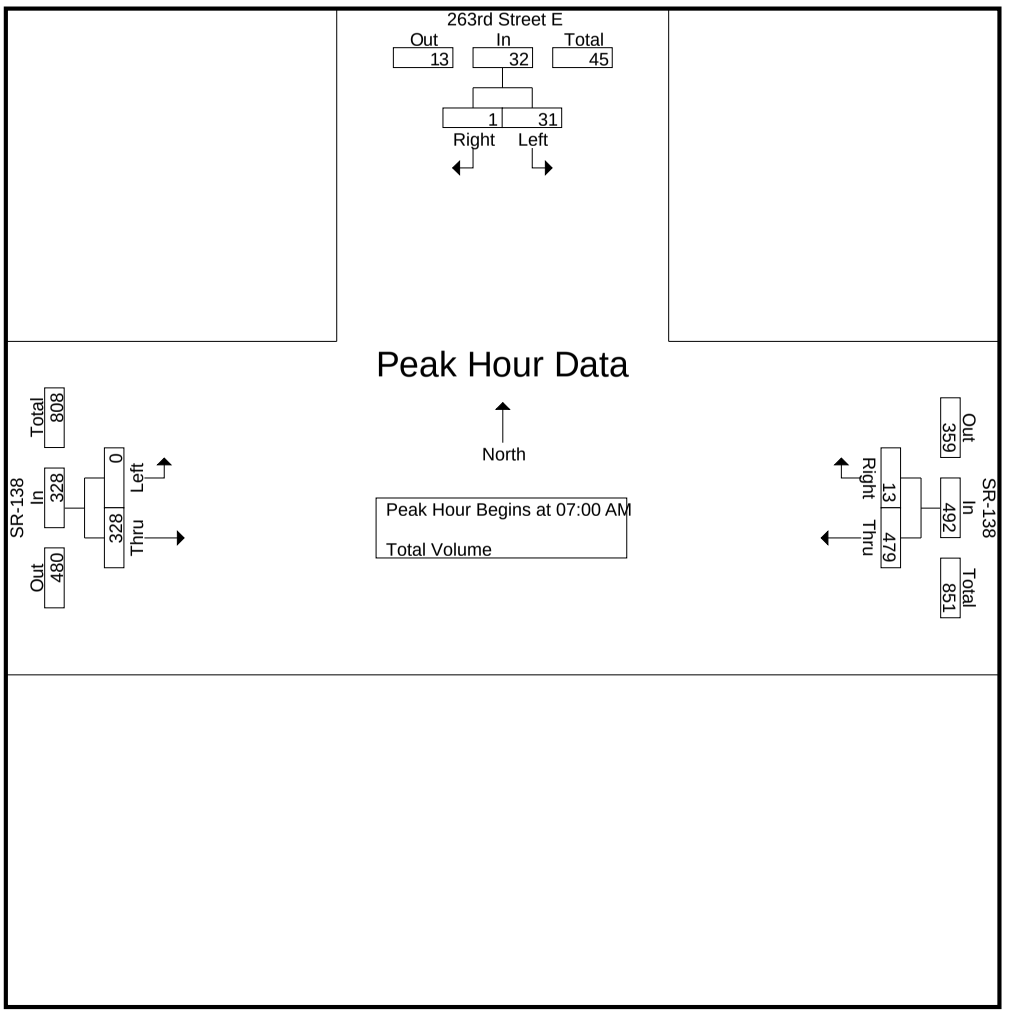

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:45 AM			07:00 AM			07:15 AM		
+0 mins.	**14**	0	**14**	120	**6**	126	0	78	78
+15 mins.	8	1	9	115	3	118	0	**93**	**93**
+30 mins.	5	**2**	7	**139**	0	**139**	0	92	92
+45 mins.	6	0	6	105	4	109	0	70	70
Total Volume	33	3	36	479	13	492	0	333	333
% App. Total	91.7	8.3		97.4	2.6		0	100	
PHF	.589	.375	.643	.862	.542	.885	.000	.895	.895

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County of San Bernardino
N/S: 263rd Street E
E/W: SR-138
Weather: Clear

File Name : 07_CSB_263rd E_SR138 PM
Site Code : 23624355
Start Date : 4/24/2024
Page No : 1

Groups Printed- Total Volume

	263rd Street E Southbound			SR-138 Westbound			SR-138 Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
04:00 PM	5	2	7	89	7	96	0	171	171	274
04:15 PM	1	1	2	81	7	88	1	140	141	231
04:30 PM	4	0	4	74	7	81	2	150	152	237
04:45 PM	4	1	5	80	6	86	1	196	197	288
Total	14	4	18	324	27	351	4	657	661	1030
05:00 PM	1	1	2	76	11	87	1	172	173	262
05:15 PM	3	0	3	75	7	82	0	157	157	242
05:30 PM	2	1	3	79	12	91	1	185	186	280
05:45 PM	1	0	1	68	9	77	0	152	152	230
Total	7	2	9	298	39	337	2	666	668	1014
Grand Total	21	6	27	622	66	688	6	1323	1329	2044
Apprch %	77.8	22.2		90.4	9.6		0.5	99.5		
Total %	1	0.3	1.3	30.4	3.2	33.7	0.3	64.7	65	

	263rd Street E Southbound			SR-138 Westbound			SR-138 Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	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	**4**	**1**	**5**	**80**	6	86	**1**	**196**	**197**	**288**
05:00 PM	1	1	2	76	11	87	1	172	173	262
05:15 PM	3	0	3	75	7	82	0	157	157	242
05:30 PM	2	1	3	79	**12**	**91**	1	185	186	280
Total Volume	10	3	13	310	36	346	3	710	713	1072
% App. Total	76.9	23.1		89.6	10.4		0.4	99.6		
PHF	.625	.750	.650	.969	.750	.951	.750	.906	.905	.931

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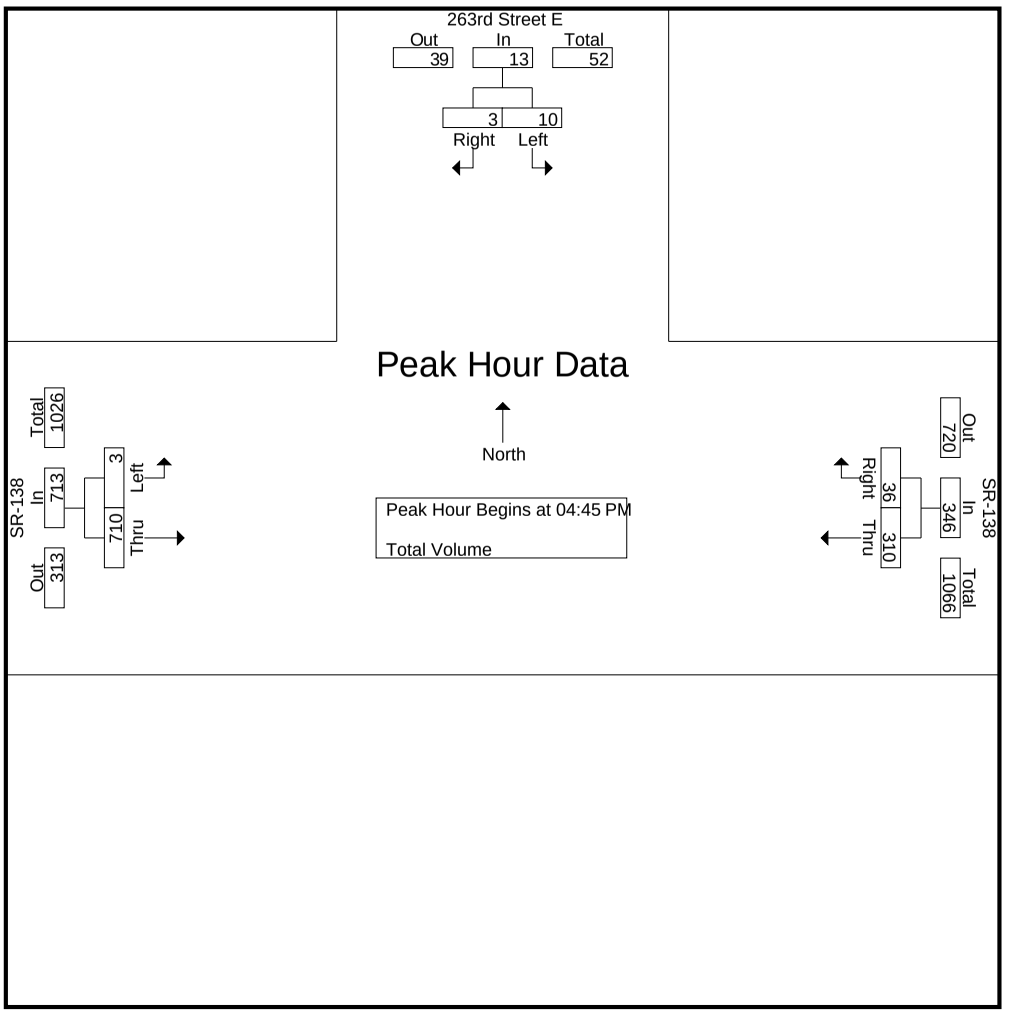
County of San Bernardino
N/S: 263rd Street E
E/W: SR-138
Weather: Clear

File Name : 07_CSB_263rd E_SR138 PM
Site Code : 23624355
Start Date : 4/24/2024
Page No : 2



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

	04:00 PM			04:00 PM			04:45 PM		
+0 mins.	**5**	**2**	**7**	**89**	**7**	**96**	**1**	**196**	**197**
+15 mins.	1	1	2	81	7	88	1	172	173
+30 mins.	4	0	4	74	7	81	0	157	157
+45 mins.	4	1	5	80	6	86	1	185	186
Total Volume	14	4	18	324	27	351	3	710	713
% App. Total	77.8	22.2		92.3	7.7		0.4	99.6	
PHF	.700	.500	.643	.910	.964	.914	.750	.906	.905

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County of San Bernardino
N/S: Ponderosa Road
E/W: SR-138
Weather: Clear

File Name : 08_CSB_Pond_SR138 AM
Site Code : 23624355
Start Date : 4/24/2024
Page No : 1

Groups Printed- Total Volume

	SR-138 Westbound			Ponderosa Road Northbound			SR-138 Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	0	135	135	0	0	0	93	0	93	228
07:15 AM	1	158	159	0	0	0	107	0	107	266
07:30 AM	0	160	160	2	1	3	157	1	158	321
07:45 AM	0	182	182	0	0	0	163	0	163	345
Total	1	635	636	2	1	3	520	1	521	1160
08:00 AM	0	137	137	0	0	0	146	0	146	283
08:15 AM	0	103	103	0	0	0	116	0	116	219
08:30 AM	0	130	130	0	0	0	126	0	126	256
08:45 AM	0	108	108	0	0	0	126	0	126	234
Total	0	478	478	0	0	0	514	0	514	992
Grand Total	1	1113	1114	2	1	3	1034	1	1035	2152
Apprch %	0.1	99.9		66.7	33.3		99.9	0.1		
Total %	0	51.7	51.8	0.1	0	0.1	48	0	48.1	

	SR-138 Westbound			Ponderosa Road Northbound			SR-138 Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	**1**	158	159	0	0	0	107	0	107	266
07:30 AM	0	160	160	**2**	**1**	**3**	157	**1**	158	321
07:45 AM	0	**182**	**182**	0	0	0	**163**	0	**163**	**345**
08:00 AM	0	137	137	0	0	0	146	0	146	283
Total Volume	1	637	638	2	1	3	573	1	574	1215
% App. Total	0.2	99.8		66.7	33.3		99.8	0.2		
PHF	.250	.875	.876	.250	.250	.250	.879	.250	.880	.880

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County of San Bernardino
N/S: Ponderosa Road
E/W: SR-138
Weather: Clear

File Name : 08_CSB_Pond_SR138 AM
Site Code : 23624355
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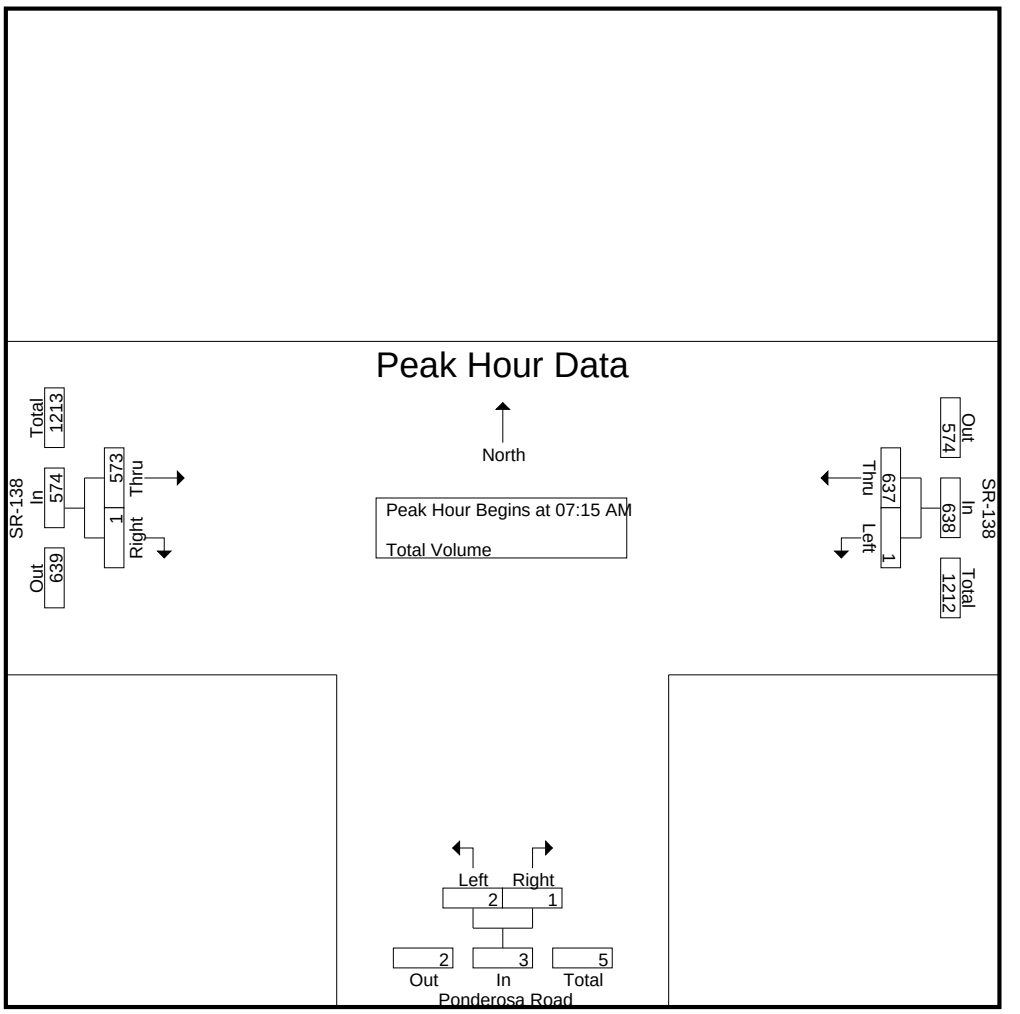

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM			07:00 AM			07:30 AM		
+0 mins.	**1**	158	159	0	0	0	157	**1**	158
+15 mins.	0	160	160	0	0	0	**163**	0	**163**
+30 mins.	0	**182**	**182**	**2**	**1**	**3**	146	0	146
+45 mins.	0	137	137	0	0	0	116	0	116
Total Volume	1	637	638	2	1	3	582	1	583
% App. Total	0.2	99.8		66.7	33.3		99.8	0.2	
PHF	.250	.875	.876	.250	.250	.250	.893	.250	.894

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County of San Bernardino
N/S: Ponderosa Road
E/W: SR-138
Weather: Clear

File Name : 08_CSB_Pond_SR138 PM
Site Code : 23624355
Start Date : 4/24/2024
Page No : 1

Groups Printed- Total Volume

	SR-138 Westbound			Ponderosa Road Northbound			SR-138 Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	0	122	122	0	1	1	206	1	207	330
04:15 PM	0	133	133	0	0	0	191	0	191	324
04:30 PM	1	112	113	0	0	0	219	0	219	332
04:45 PM	0	122	122	0	0	0	225	0	225	347
Total	1	489	490	0	1	1	841	1	842	1333
05:00 PM	1	120	121	0	0	0	223	1	224	345
05:15 PM	0	103	103	0	0	0	179	0	179	282
05:30 PM	0	123	123	0	0	0	215	0	215	338
05:45 PM	1	118	119	0	1	1	228	0	228	348
Total	2	464	466	0	1	1	845	1	846	1313
Grand Total	3	953	956	0	2	2	1686	2	1688	2646
Apprch %	0.3	99.7		0	100		99.9	0.1		
Total %	0.1	36	36.1	0	0.1	0.1	63.7	0.1	63.8	

	SR-138 Westbound			Ponderosa Road Northbound			SR-138 Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	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	0	**133**	**133**	0	0	0	191	0	191	324
04:30 PM	**1**	112	113	0	0	0	219	0	219	332
04:45 PM	0	122	122	0	0	0	**225**	0	**225**	**347**
05:00 PM	1	120	121	0	0	0	223	**1**	224	345
Total Volume	2	487	489	0	0	0	858	1	859	1348
% App. Total	0.4	99.6		0	0		99.9	0.1		
PHF	.500	.915	.919	.000	.000	.000	.953	.250	.954	.971

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County of San Bernardino
N/S: Ponderosa Road
E/W: SR-138
Weather: Clear

File Name : 08_CSB_Pond_SR138 PM
Site Code : 23624355
Start Date : 4/24/2024
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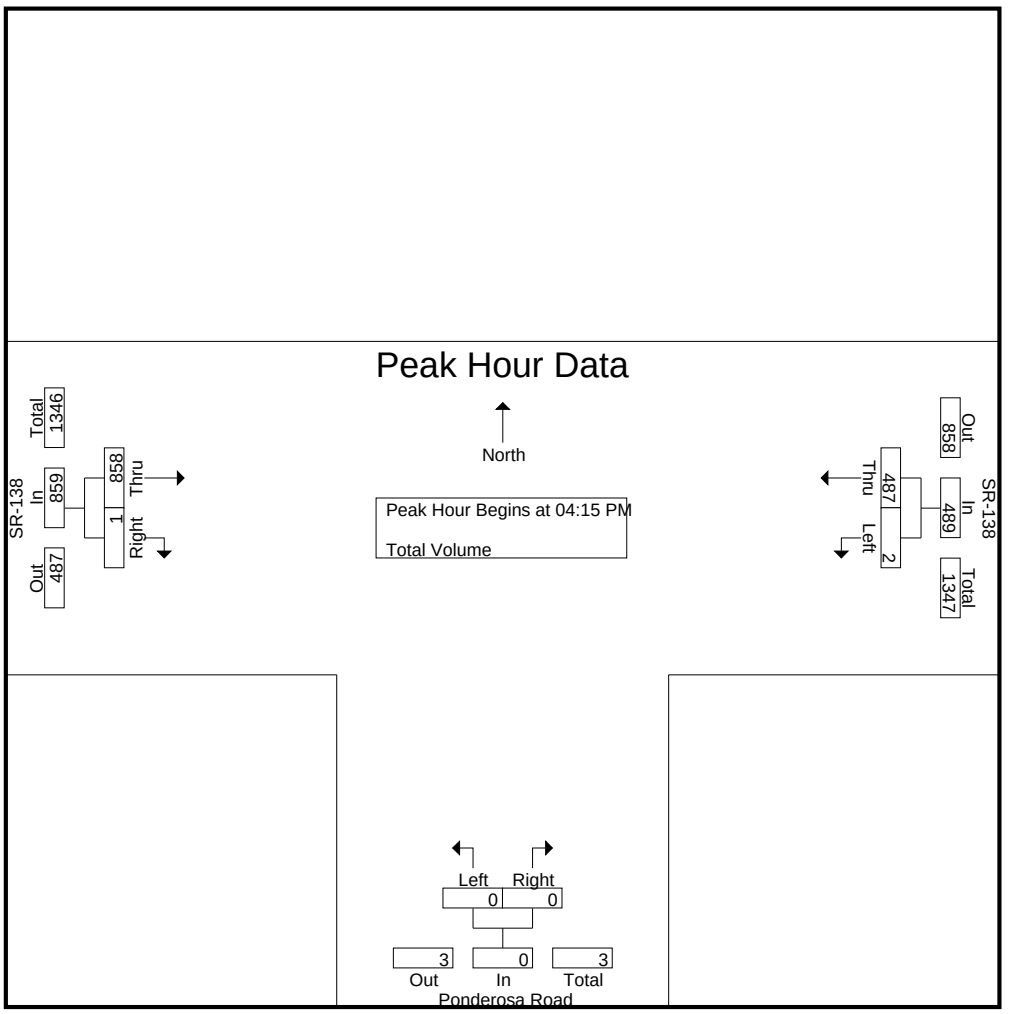

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM			04:00 PM			04:15 PM		
+0 mins.	0	122	122	0	**1**	**1**	191	0	191
+15 mins.	0	**133**	**133**	0	0	0	219	0	219
+30 mins.	**1**	112	113	0	0	0	**225**	0	**225**
+45 mins.	0	122	122	0	0	0	223	**1**	224
Total Volume	1	489	490	0	1	1	858	1	859
% App. Total	0.2	99.8		0	100		99.9	0.1	
PHF	.250	.919	.921	.000	.250	.250	.953	.250	.954

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County of San Bernardino
N/S: Desert View Road
E/W: SR-138
Weather: Clear

File Name : 09_CSB_Des V_SR138 AM
Site Code : 23624355
Start Date : 4/24/2024
Page No : 1

Groups Printed- Total Volume

	Desert View Road Southbound				SR-138 Westbound				Desert View Road Northbound				SR-138 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	143	0	143	0	0	0	0	0	95	0	95	238
07:15 AM	1	0	0	1	0	147	0	147	1	0	0	1	0	108	0	108	257
07:30 AM	0	0	0	0	0	163	0	163	0	0	0	0	1	163	0	164	327
07:45 AM	0	0	0	0	1	182	0	183	0	0	0	0	0	163	0	163	346
Total	1	0	0	1	1	635	0	636	1	0	0	1	1	529	0	530	1168
08:00 AM	1	0	0	1	0	129	0	129	1	0	0	1	0	146	0	146	277
08:15 AM	0	0	0	0	0	107	0	107	0	0	1	1	0	122	1	123	231
08:30 AM	0	0	1	1	1	131	0	132	0	0	0	0	1	127	0	128	261
08:45 AM	0	0	0	0	0	109	0	109	1	0	0	1	0	110	0	110	220
Total	1	0	1	2	1	476	0	477	2	0	1	3	1	505	1	507	989
Grand Total	2	0	1	3	2	1111	0	1113	3	0	1	4	2	1034	1	1037	2157
Apprch %	66.7	0	33.3		0.2	99.8	0		75	0	25		0.2	99.7	0.1		
Total %	0.1	0	0	0.1	0.1	51.5	0	51.6	0.1	0	0	0.2	0.1	47.9	0	48.1	

	Desert View Road Southbound				SR-138 Westbound				Desert View Road Northbound				SR-138 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 07:15 AM																	
07:15 AM	**1**	0	0	**1**	0	147	0	147	**1**	0	0	**1**	0	108	0	108	257
07:30 AM	0	0	0	0	0	163	0	163	0	0	0	0	**1**	**163**	0	**164**	327
07:45 AM	0	0	0	0	**1**	**182**	0	**183**	0	0	0	0	0	163	0	163	**346**
08:00 AM	1	0	0	1	0	129	0	129	1	0	0	1	0	146	0	146	277
Total Volume	2	0	0	2	1	621	0	622	2	0	0	2	1	580	0	581	1207
% App. Total	100	0	0		0.2	99.8	0		100	0	0		0.2	99.8	0		
PHF	.500	.000	.000	.500	.250	.853	.000	.850	.500	.000	.000	.500	.250	.890	.000	.886	.872

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County of San Bernardino
N/S: Desert View Road
E/W: SR-138
Weather: Clear

File Name : 09_CSB_Des V_SR138 AM
Site Code : 23624355
Start Date : 4/24/2024
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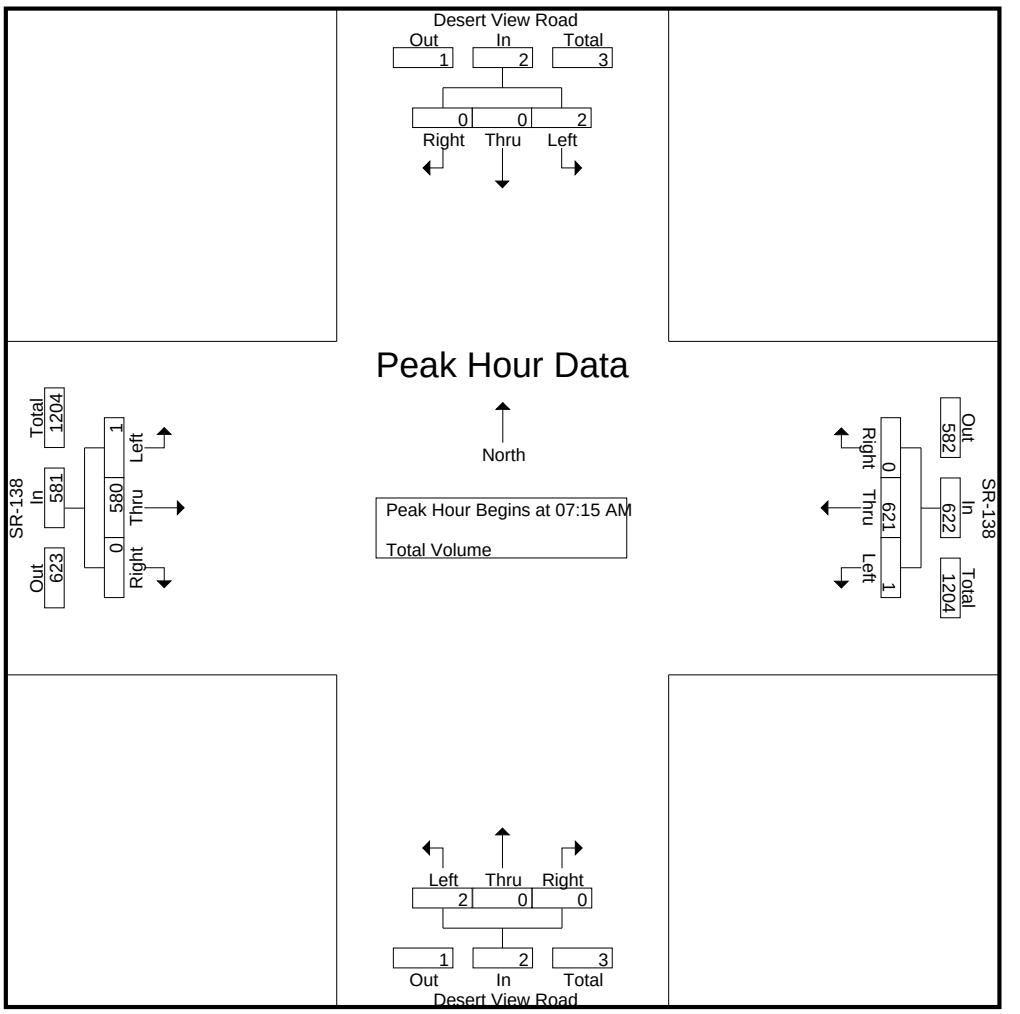

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:00 AM				08:00 AM				07:30 AM			
+0 mins.	**1**	0	0	**1**	0	143	0	143	**1**	0	0	**1**	**1**	**163**	0	**164**
+15 mins.	0	0	0	0	0	147	0	147	0	0	**1**	1	0	163	0	163
+30 mins.	0	0	0	0	0	163	0	163	0	0	0	0	0	146	0	146
+45 mins.	1	0	0	1	**1**	**182**	0	**183**	1	0	0	1	0	122	**1**	123
Total Volume	2	0	0	2	1	635	0	636	2	0	1	3	1	594	1	596
% App. Total	100	0	0		0.2	99.8	0		66.7	0	33.3		0.2	99.7	0.2	
PHF	.500	.000	.000	.500	.250	.872	.000	.869	.500	.000	.250	.750	.250	.911	.250	.909

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County of San Bernardino
N/S: Desert View Road
E/W: SR-138
Weather: Clear

File Name : 09_CSB_Des V_SR138 PM
Site Code : 23624355
Start Date : 4/24/2024
Page No : 1

Groups Printed- Total Volume

	Desert View Road Southbound				SR-138 Westbound				Desert View Road Northbound				SR-138 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	0	0	0	0	1	126	0	127	0	0	0	0	0	211	0	211	338
04:15 PM	0	0	0	0	0	134	0	134	0	0	0	0	0	197	0	197	331
04:30 PM	0	0	0	0	1	113	0	114	0	0	0	0	0	207	0	207	321
04:45 PM	0	0	0	0	0	126	0	126	0	0	1	1	1	213	0	214	341
Total	0	0	0	0	2	499	0	501	0	0	1	1	1	828	0	829	1331
05:00 PM	0	0	0	0	0	121	0	121	0	0	1	1	0	230	0	230	352
05:15 PM	0	0	0	0	1	104	0	105	0	0	0	0	1	171	0	172	277
05:30 PM	0	0	0	0	0	123	0	123	0	0	1	1	0	206	1	207	331
05:45 PM	0	0	0	0	0	123	0	123	0	0	0	0	0	223	0	223	346
Total	0	0	0	0	1	471	0	472	0	0	2	2	1	830	1	832	1306
Grand Total	0	0	0	0	3	970	0	973	0	0	3	3	2	1658	1	1661	2637
Apprch %	0	0	0		0.3	99.7	0		0	0	100		0.1	99.8	0.1		
Total %	0	0	0	0	0.1	36.8	0	36.9	0	0	0.1	0.1	0.1	62.9	0	63	

	Desert View Road Southbound				SR-138 Westbound				Desert View Road Northbound				SR-138 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	0	0	0	0	0	**134**	0	**134**	0	0	0	0	0	197	0	197	331
04:30 PM	0	0	0	0	**1**	113	0	114	0	0	0	0	0	207	0	207	321
04:45 PM	0	0	0	0	0	126	0	126	0	0	**1**	**1**	**1**	213	0	214	341
05:00 PM	0	0	0	0	0	121	0	121	0	0	1	1	0	**230**	0	**230**	**352**
Total Volume	0	0	0	0	1	494	0	495	0	0	2	2	1	847	0	848	1345
% App. Total	0	0	0		0.2	99.8	0		0	0	100		0.1	99.9	0		
PHF	.000	.000	.000	.000	.250	.922	.000	.924	.000	.000	.500	.500	.250	.921	.000	.922	.955

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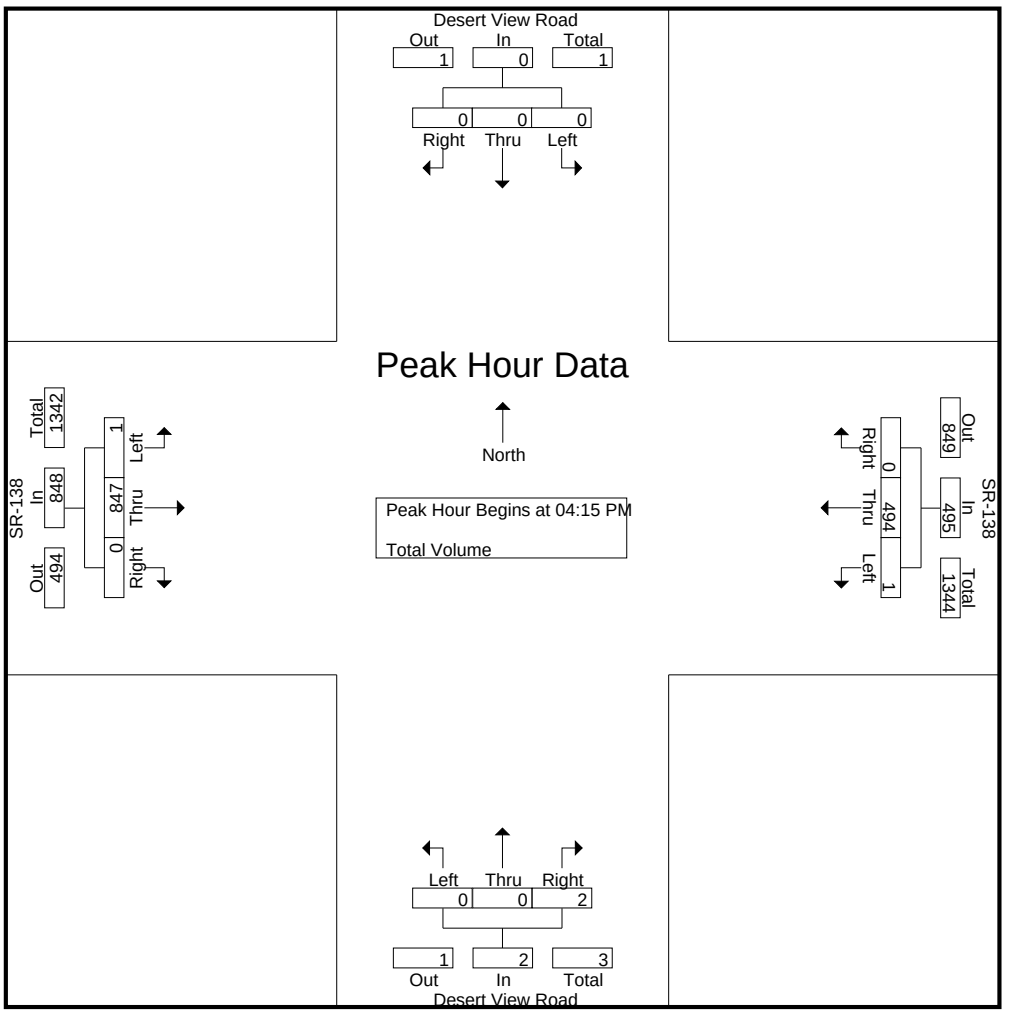
County of San Bernardino
N/S: Desert View Road
E/W: SR-138
Weather: Clear

File Name : 09_CSB_Des V_SR138 PM
Site Code : 23624355
Start Date : 4/24/2024
Page No : 2



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

	04:00 PM				04:00 PM				04:45 PM				04:15 PM			
+0 mins.	0	0	0	0	**1**	126	0	127	0	0	**1**	**1**	0	197	0	197
+15 mins.	0	0	0	0	0	**134**	0	**134**	0	0	1	1	0	207	0	207
+30 mins.	0	0	0	0	1	113	0	114	0	0	0	0	**1**	213	0	214
+45 mins.	0	0	0	0	0	126	0	126	0	0	1	1	0	**230**	0	**230**
Total Volume	0	0	0	0	2	499	0	501	0	0	3	3	1	847	0	848
% App. Total	0	0	0		0.4	99.6	0		0	0	100		0.1	99.9	0	
PHF	.000	.000	.000	.000	.500	.931	.000	.935	.000	.000	.750	.750	.250	.921	.000	.922

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County of San Bernardino
N/S: Acorn Road
E/W: SR-138
Weather: Clear

File Name : 10_CSB_Acorn_SR138 AM
Site Code : 23624355
Start Date : 4/24/2024
Page No : 1

Groups Printed- Total Volume

	Acorn Road Southbound				SR-138 Westbound				Acorn Road Northbound				SR-138 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	158	0	158	0	0	0	0	0	95	0	95	253
07:15 AM	0	0	0	0	0	144	0	144	0	0	0	0	0	109	0	109	253
07:30 AM	0	0	0	0	0	168	0	168	0	0	0	0	0	168	0	168	336
07:45 AM	0	0	0	0	0	184	0	184	0	0	1	1	1	165	0	166	351
Total	0	0	0	0	0	654	0	654	0	0	1	1	1	537	0	538	1193
08:00 AM	0	0	0	0	0	122	0	122	0	0	0	0	0	147	0	147	269
08:15 AM	0	0	0	0	0	112	0	112	0	0	0	0	0	135	0	135	247
08:30 AM	0	0	0	0	0	130	0	130	0	0	0	0	0	134	0	134	264
08:45 AM	0	0	0	0	0	113	0	113	0	0	0	0	0	110	0	110	223
Total	0	0	0	0	0	477	0	477	0	0	0	0	0	526	0	526	1003
Grand Total	0	0	0	0	0	1131	0	1131	0	0	1	1	1	1063	0	1064	2196
Apprch %	0	0	0		0	100	0		0	0	100		0.1	99.9	0		
Total %	0	0	0	0	0	51.5	0	51.5	0	0	0	0	0	48.4	0	48.5	

	Acorn Road Southbound				SR-138 Westbound				Acorn Road Northbound				SR-138 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 07:15 AM																	
07:15 AM	0	0	0	0	0	144	0	144	0	0	0	0	0	109	0	109	253
07:30 AM	0	0	0	0	0	168	0	168	0	0	0	0	0	**168**	0	**168**	336
07:45 AM	0	0	0	0	0	**184**	0	**184**	0	0	**1**	**1**	**1**	165	0	166	**351**
08:00 AM	0	0	0	0	0	122	0	122	0	0	0	0	0	147	0	147	269
Total Volume	0	0	0	0	0	618	0	618	0	0	1	1	1	589	0	590	1209
% App. Total	0	0	0		0	100	0		0	0	100		0.2	99.8	0		
PHF	.000	.000	.000	.000	.000	.840	.000	.840	.000	.000	.250	.250	.250	.876	.000	.878	.861

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County of San Bernardino
N/S: Acorn Road
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Weather: Clear

File Name : 10_CSB_Acorn_SR138 AM
Site Code : 23624355
Start Date : 4/24/2024
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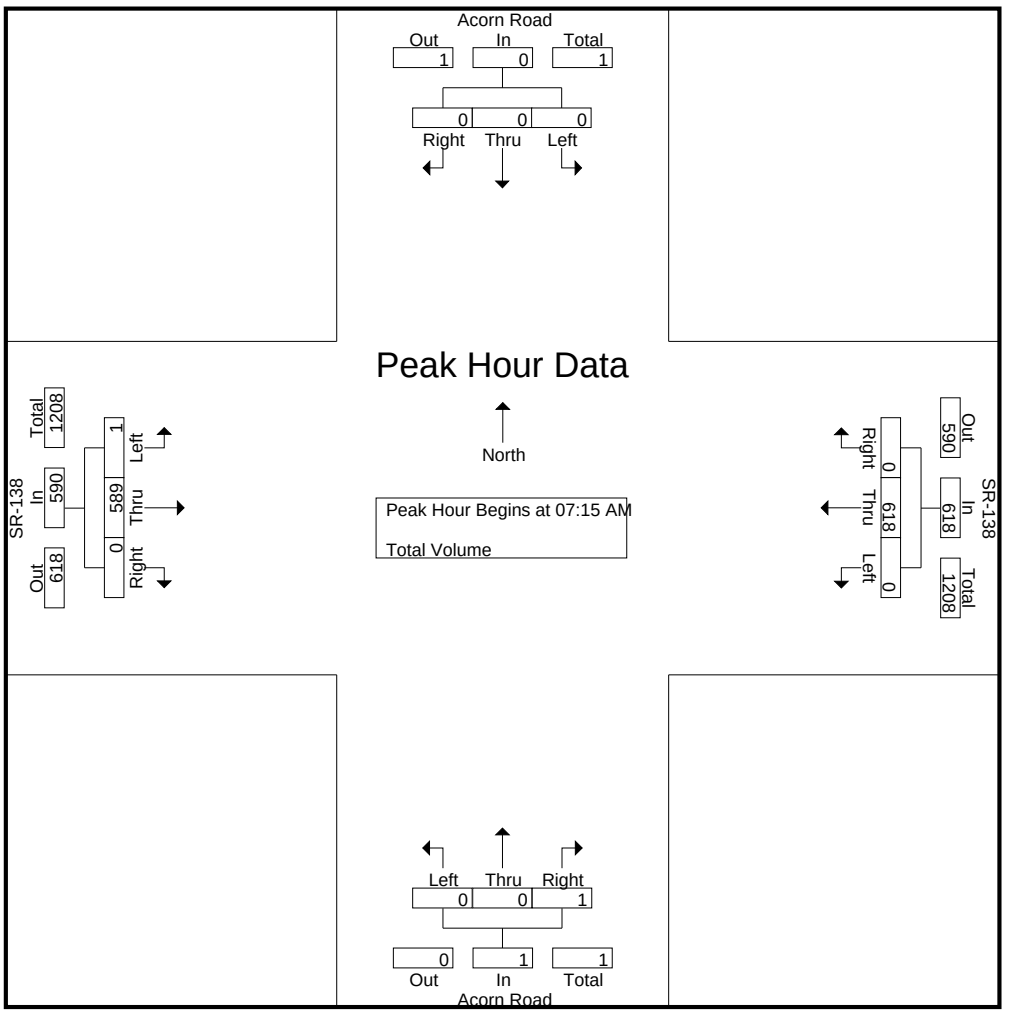

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:30 AM			
+0 mins.	0	0	0	0	0	158	0	158	0	0	0	0	0	**168**	0	**168**
+15 mins.	0	0	0	0	0	144	0	144	0	0	0	0	**1**	165	0	166
+30 mins.	0	0	0	0	0	168	0	168	0	0	0	0	0	147	0	147
+45 mins.	0	0	0	0	0	**184**	0	**184**	0	0	**1**	**1**	0	135	0	135
Total Volume	0	0	0	0	0	654	0	654	0	0	1	1	1	615	0	616
% App. Total	0	0	0		0	100	0		0	0	100		0.2	99.8	0	
PHF	.000	.000	.000	.000	.000	.889	.000	.889	.000	.000	.250	.250	.250	.915	.000	.917

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County of San Bernardino
N/S: Acorn Road
E/W: SR-138
Weather: Clear

File Name : 10_CSB_Acorn_SR138 PM
Site Code : 23624355
Start Date : 4/24/2024
Page No : 1

Groups Printed- Total Volume

	Acorn Road Southbound				SR-138 Westbound				Acorn Road Northbound				SR-138 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	0	0	0	0	0	133	0	133	0	0	0	0	0	213	0	213	346
04:15 PM	1	0	0	1	0	135	1	136	0	0	0	0	0	205	0	205	342
04:30 PM	0	0	0	0	0	113	0	113	0	0	1	1	0	201	0	201	315
04:45 PM	0	0	0	0	0	125	1	126	0	0	0	0	0	204	0	204	330
Total	1	0	0	1	0	506	2	508	0	0	1	1	0	823	0	823	1333
05:00 PM	0	0	0	0	0	122	1	123	0	0	0	0	0	239	0	239	362
05:15 PM	0	0	0	0	0	105	0	105	0	0	1	1	0	160	0	160	266
05:30 PM	0	0	0	0	0	122	0	122	0	0	0	0	0	208	0	208	330
05:45 PM	0	0	0	0	0	128	0	128	0	0	0	0	0	225	0	225	353
Total	0	0	0	0	0	477	1	478	0	0	1	1	0	832	0	832	1311
Grand Total	1	0	0	1	0	983	3	986	0	0	2	2	0	1655	0	1655	2644
Apprch %	100	0	0		0	99.7	0.3		0	0	100		0	100	0		
Total %	0	0	0	0	0	37.2	0.1	37.3	0	0	0.1	0.1	0	62.6	0	62.6	

	Acorn Road Southbound				SR-138 Westbound				Acorn Road Northbound				SR-138 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	**1**	0	0	**1**	0	**135**	**1**	**136**	0	0	0	0	0	205	0	205	342
04:30 PM	0	0	0	0	0	113	0	113	0	0	**1**	**1**	0	201	0	201	315
04:45 PM	0	0	0	0	0	125	1	126	0	0	0	0	0	204	0	204	330
05:00 PM	0	0	0	0	0	122	1	123	0	0	0	0	0	**239**	0	**239**	**362**
Total Volume	1	0	0	1	0	495	3	498	0	0	1	1	0	849	0	849	1349
% App. Total	100	0	0		0	99.4	0.6		0	0	100		0	100	0		
PHF	.250	.000	.000	.250	.000	.917	.750	.915	.000	.000	.250	.250	.000	.888	.000	.888	.932

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County of San Bernardino
N/S: Green Road/Phelan Road
E/W: SR-138
Weather: Clear

File Name : 11_CSB_Green_SR138 AM
Site Code : 23624355
Start Date : 4/24/2024
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Groups Printed- Total Volume

	Phelan Road Southbound				SR-138 Westbound				Green Road Northbound				SR-138 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	3	5	33	41	2	115	0	117	1	6	6	13	14	83	0	97	268
07:15 AM	0	6	38	44	1	117	0	118	3	8	5	16	30	83	1	114	292
07:30 AM	1	3	40	44	2	107	1	110	4	11	6	21	43	113	5	161	336
07:45 AM	1	4	58	63	3	120	0	123	3	6	6	15	41	120	3	164	365
Total	5	18	169	192	8	459	1	468	11	31	23	65	128	399	9	536	1261
08:00 AM	2	7	43	52	3	82	0	85	2	4	2	8	43	101	2	146	291
08:15 AM	2	2	26	30	2	90	1	93	2	4	4	10	35	89	2	126	259
08:30 AM	2	4	32	38	0	90	2	92	2	10	7	19	41	91	3	135	284
08:45 AM	0	3	28	31	2	85	0	87	1	8	3	12	29	90	2	121	251
Total	6	16	129	151	7	347	3	357	7	26	16	49	148	371	9	528	1085
Grand Total	11	34	298	343	15	806	4	825	18	57	39	114	276	770	18	1064	2346
Apprch %	3.2	9.9	86.9		1.8	97.7	0.5		15.8	50	34.2		25.9	72.4	1.7		
Total %	0.5	1.4	12.7	14.6	0.6	34.4	0.2	35.2	0.8	2.4	1.7	4.9	11.8	32.8	0.8	45.4	

	Phelan Road Southbound				SR-138 Westbound				Green Road Northbound				SR-138 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 07:15 AM																	
07:15 AM	0	6	38	44	1	117	0	118	3	8	5	16	30	83	1	114	292
07:30 AM	1	3	40	44	2	107	**1**	110	**4**	**11**	**6**	**21**	**43**	113	**5**	161	336
07:45 AM	1	4	**58**	**63**	**3**	**120**	0	**123**	3	6	6	15	41	**120**	3	**164**	**365**
08:00 AM	**2**	**7**	43	52	3	82	0	85	2	4	2	8	43	101	2	146	291
Total Volume	4	20	179	203	9	426	1	436	12	29	19	60	157	417	11	585	1284
% App. Total	2	9.9	88.2		2.1	97.7	0.2		20	48.3	31.7		26.8	71.3	1.9		
PHF	.500	.714	.772	.806	.750	.888	.250	.886	.750	.659	.792	.714	.913	.869	.550	.892	.879

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County of San Bernardino
N/S: Green Road/Phelan Road
E/W: SR-138
Weather: Clear

File Name : 11_CSB_Green_SR138 AM
Site Code : 23624355
Start Date : 4/24/2024
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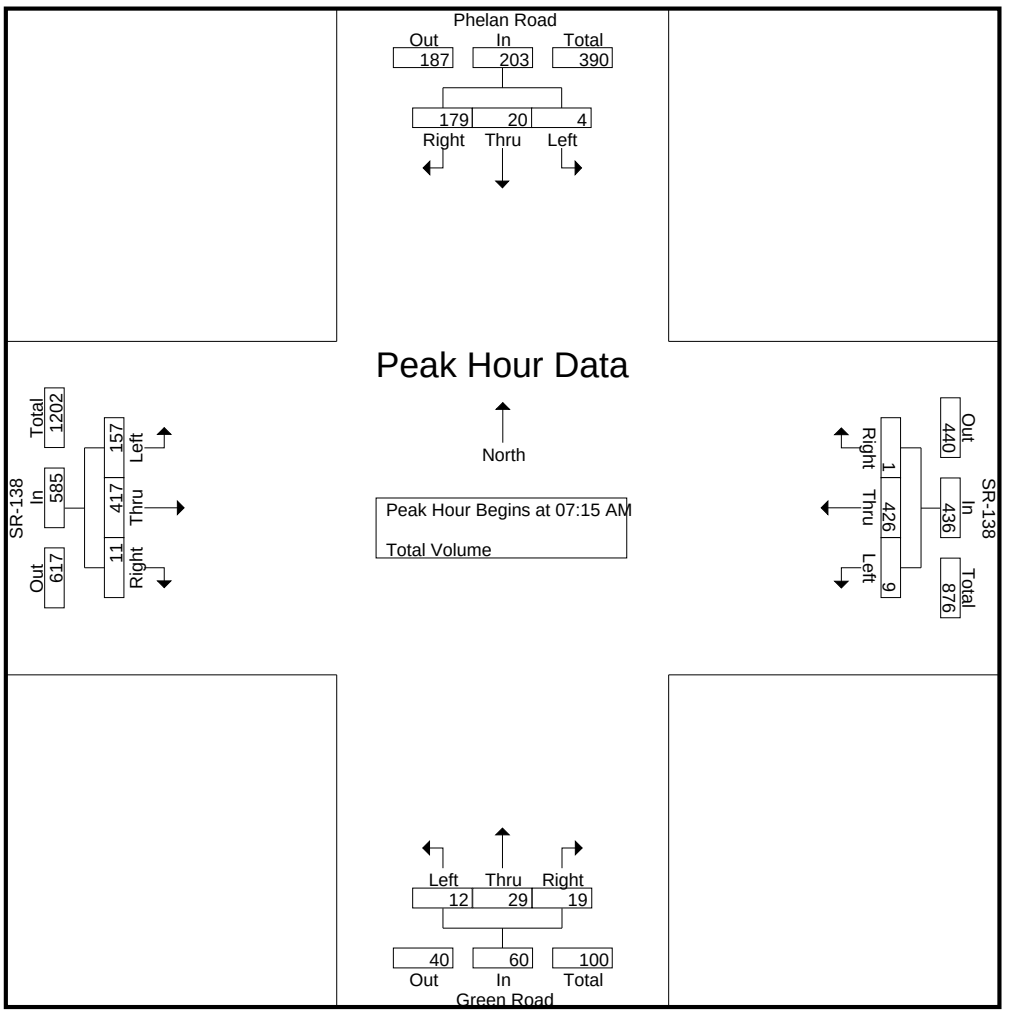

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:00 AM				07:00 AM				07:30 AM			
+0 mins.	0	6	38	44	2	115	0	117	1	6	**6**	13	**43**	113	**5**	161
+15 mins.	1	3	40	44	1	117	0	118	3	8	5	16	41	**120**	3	**164**
+30 mins.	1	4	**58**	**63**	2	107	**1**	110	**4**	**11**	6	**21**	43	101	2	146
+45 mins.	**2**	**7**	43	52	**3**	**120**	0	**123**	3	6	6	15	35	89	2	126
Total Volume	4	20	179	203	8	459	1	468	11	31	23	65	162	423	12	597
% App. Total	2	9.9	88.2		1.7	98.1	0.2		16.9	47.7	35.4		27.1	70.9	2	
PHF	.500	.714	.772	.806	.667	.956	.250	.951	.688	.705	.958	.774	.942	.881	.600	.910

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County of San Bernardino
N/S: Green Road/Phelan Road
E/W: SR-138
Weather: Clear

File Name : 11_CSB_Green_SR138 PM
Site Code : 23624355
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Groups Printed- Total Volume

	Phelan Road Southbound				SR-138 Westbound				Green Road Northbound				SR-138 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	0	6	45	51	6	110	0	116	0	5	2	7	32	189	1	222	396
04:15 PM	1	14	50	65	8	89	3	100	0	6	4	10	37	153	6	196	371
04:30 PM	6	11	34	51	2	85	1	88	0	7	3	10	48	155	2	205	354
04:45 PM	2	8	31	41	8	97	1	106	2	2	2	6	29	158	1	188	341
Total	9	39	160	208	24	381	5	410	2	20	11	33	146	655	10	811	1462
05:00 PM	0	8	21	29	5	98	1	104	0	7	2	9	40	175	1	216	358
05:15 PM	2	9	40	51	8	80	0	88	2	3	2	7	34	136	1	171	317
05:30 PM	3	4	26	33	5	84	0	89	2	8	2	12	45	151	7	203	337
05:45 PM	2	10	47	59	8	90	4	102	0	8	3	11	32	197	1	230	402
Total	7	31	134	172	26	352	5	383	4	26	9	39	151	659	10	820	1414
Grand Total	16	70	294	380	50	733	10	793	6	46	20	72	297	1314	20	1631	2876
Apprch %	4.2	18.4	77.4		6.3	92.4	1.3		8.3	63.9	27.8		18.2	80.6	1.2		
Total %	0.6	2.4	10.2	13.2	1.7	25.5	0.3	27.6	0.2	1.6	0.7	2.5	10.3	45.7	0.7	56.7	

	Phelan Road Southbound				SR-138 Westbound				Green Road Northbound				SR-138 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 04:00 PM																	
04:00 PM	0	6	45	51	6	**110**	0	**116**	0	5	2	7	32	**189**	1	**222**	**396**
04:15 PM	1	**14**	**50**	**65**	**8**	89	**3**	100	0	6	**4**	**10**	37	153	**6**	196	371
04:30 PM	**6**	11	34	51	2	85	1	88	0	**7**	3	10	**48**	155	2	205	354
04:45 PM	2	8	31	41	8	97	1	106	**2**	2	2	6	29	158	1	188	341
Total Volume	9	39	160	208	24	381	5	410	2	20	11	33	146	655	10	811	1462
% App. Total	4.3	18.8	76.9		5.9	92.9	1.2		6.1	60.6	33.3		18	80.8	1.2		
PHF	.375	.696	.800	.800	.750	.866	.417	.884	.250	.714	.688	.825	.760	.866	.417	.913	.923

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County of San Bernardino
N/S: Green Road/Phelan Road
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File Name : 11_CSB_Green_SR138 PM
Site Code : 23624355
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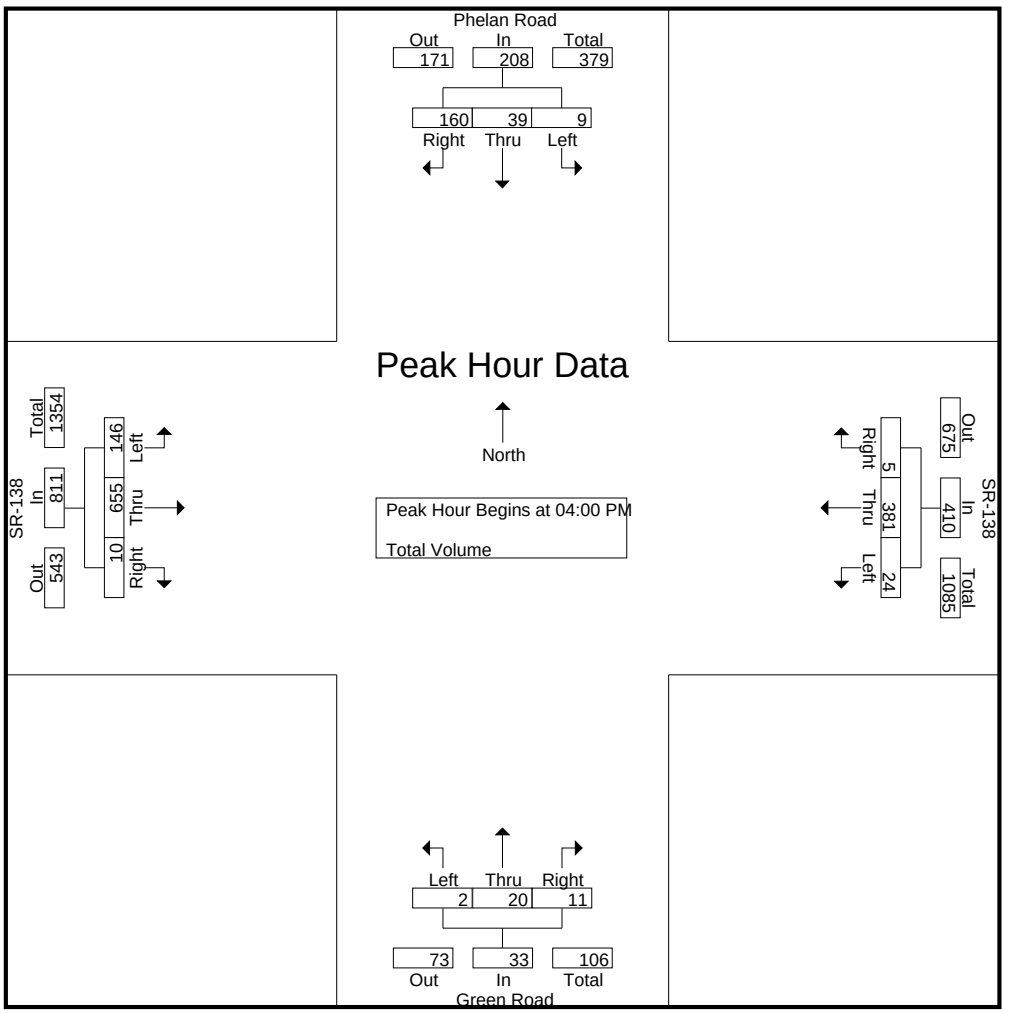

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:00 PM				05:00 PM				05:00 PM			
+0 mins.	0	6	45	51	6	**110**	0	**116**	0	7	2	9	40	175	1	216
+15 mins.	1	**14**	**50**	**65**	**8**	89	**3**	100	**2**	3	2	7	34	136	1	171
+30 mins.	**6**	11	34	51	2	85	1	88	2	**8**	2	**12**	**45**	151	**7**	203
+45 mins.	2	8	31	41	8	97	1	106	0	8	**3**	11	32	**197**	1	**230**
Total Volume	9	39	160	208	24	381	5	410	4	26	9	39	151	659	10	820
% App. Total	4.3	18.8	76.9		5.9	92.9	1.2		10.3	66.7	23.1		18.4	80.4	1.2	
PHF	.375	.696	.800	.800	.750	.866	.417	.884	.500	.813	.750	.813	.839	.836	.357	.891

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File Name : 10_CSB_Acorn_SR138 PM
Site Code : 23624355
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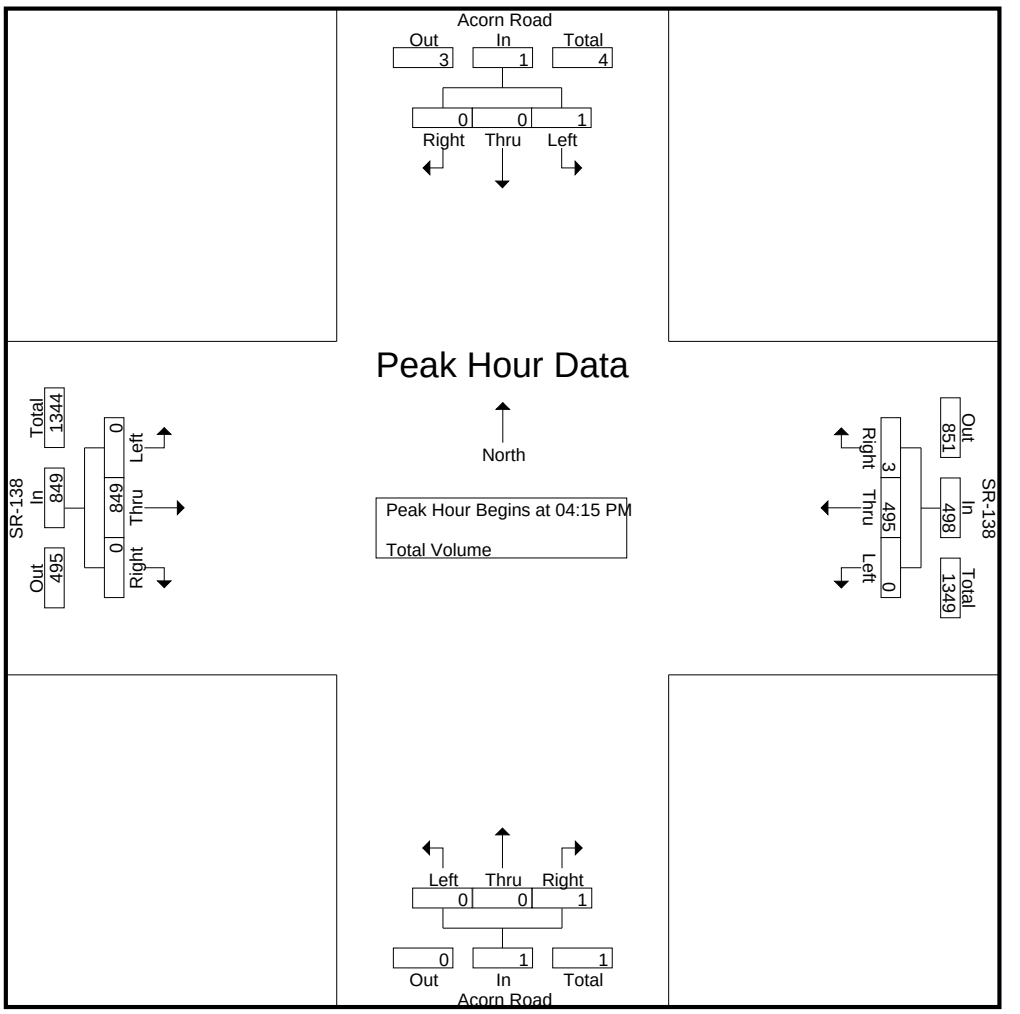


Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:00 PM				04:30 PM				04:15 PM			
+0 mins.	0	0	0	0	0	133	0	133	0	0	**1**	**1**	0	205	0	205
+15 mins.	**1**	0	0	**1**	0	**135**	**1**	**136**	0	0	0	0	0	201	0	201
+30 mins.	0	0	0	0	0	113	0	113	0	0	0	0	0	204	0	204
+45 mins.	0	0	0	0	0	125	1	126	0	0	1	1	0	**239**	0	**239**
Total Volume	1	0	0	1	0	506	2	508	0	0	2	2	0	849	0	849
% App. Total	100	0	0		0	99.6	0.4		0	0	100		0	100	0	
PHF	.250	.000	.000	.250	.000	.937	.500	.934	.000	.000	.500	.500	.000	.888	.000	.888

Counts Unlimited, Inc.

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

County of San Bernardino
Oasis Road
B/ State Route 138 - Buckthorne Road
24 Hour Directional Volume Count

CSB001
Site Code: 236-24355

Start Time	4/24/2024 Wed	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		0	12			0	17				
12:15		0	13			1	11				
12:30		0	14			0	13				
12:45		0	19	0	58	0	19	1	60	1	118
01:00		0	17			0	17				
01:15		1	14			0	10				
01:30		0	12			0	12				
01:45		0	17	1	60	0	15	0	54	1	114
02:00		0	18			0	25				
02:15		0	10			0	11				
02:30		0	14			0	14				
02:45		1	**14**	1	56	0	**21**	0	71	1	127
03:00		0	**22**			0	**24**				
03:15		0	**18**			0	**15**				
03:30		0	**17**			0	**17**				
03:45		0	14	0	71	0	11	0	67	0	138
04:00		0	15			0	17				
04:15		0	14			0	12				
04:30		0	6			0	6				
04:45		0	4	0	39	0	5	0	40	0	79
05:00		0	6			0	11				
05:15		0	6			0	6				
05:30		0	8			0	7				
05:45		0	7	0	27	0	6	0	30	0	57
06:00		3	5			2	4				
06:15		0	3			0	2				
06:30		0	3			2	3				
06:45		1	2	4	13	0	2	4	11	8	24
07:00		1	0			2	1				
07:15		4	1			3	1				
07:30		5	1			6	1				
07:45		9	1	19	3	10	0	21	3	40	6
08:00		9	0			5	2				
08:15		4	2			6	2				
08:30		7	0			7	0				
08:45		4	1	24	3	3	1	21	5	45	8
09:00		7	0			10	0				
09:15		10	0			8	1				
09:30		4	0			10	1				
09:45		10	0	31	0	9	1	37	3	68	3
10:00		11	0			8	0				
10:15		6	1			13	1				
10:30		19	0			**16**	1				
10:45		**14**	0	50	1	**15**	0	52	2	102	3
11:00		**12**	0			**15**	0				
11:15		**23**	0			**24**	0				
11:30		**23**	0			15	0				
11:45		10	0	68	0	9	0	63	0	131	0
Total		198	331	198	331	199	346	199	346	397	677
Combined Total		529		529		545		545		1074	
AM Peak	-	10:45	-	-	-	10:30	-	-	-	-	-
Vol.	-	72	-	-	-	70	-	-	-	-	-
P.H.F.		0.783				0.729					
PM Peak	-	-	02:45	-	-	-	02:45	-	-	-	-
Vol.	-	-	71	-	-	-	77	-	-	-	-
P.H.F.			0.807				0.802				
Percentage		37.4%	62.6%			36.5%	63.5%				
ADT/AADT		ADT 1,074		AADT 1,074							

APPENDIX C

HCM ANALYSIS WORKSHEETS

EXISTING
TRAFFIC CONDITION

Intersection Level Of Service Report
Intersection 1: Oasis Rd / Route 138

Control Type:	Signalized	Delay (sec / veh):	29.9
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.604

Intersection Setup

Name	Oasis Road			Oasis Road			HWY 138			HWY 138		
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	0	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	120.00	100.00	100.00	525.00	100.00	525.00	525.00	100.00	525.00
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			55.00			0.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Oasis Road			Oasis Road			HWY 138			HWY 138		
Base Volume Input [veh/h]	1	12	13	185	20	54	40	399	11	4	488	139
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]	1	12	13	185	20	54	40	399	11	4	488	139
Peak Hour Factor	0.8470	0.8470	0.8470	0.8470	0.8470	0.8470	0.8470	0.8470	0.8470	0.8470	0.8470	0.8470
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]	0	4	4	55	6	16	12	118	3	1	144	41
Total Analysis Volume [veh/h]	1	14	15	218	24	64	47	471	13	5	576	164
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]	70
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

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												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	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
Split [s]	10	23	0	13	26	0	9	25	0	9	25	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
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	14	0	0	14	0	0	10	0	0	10	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
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	
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
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

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	L	C	R	L	C	R
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70
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]	0	19	9	28	3	25	25	0	23	23
g / C, Green / Cycle	0.00	0.28	0.13	0.40	0.04	0.36	0.36	0.01	0.32	0.32
(v / s)_i Volume / Saturation Flow Rate	0.00	0.02	0.12	0.05	0.03	0.25	0.01	0.00	0.30	0.10
s, saturation flow rate [veh/h]	1810	1741	1810	1684	1810	1900	1615	1810	1900	1615
c, Capacity [veh/h]	3	482	233	680	78	683	581	12	614	522
d1, Uniform Delay [s]	34.92	18.63	30.22	13.13	32.92	19.09	14.48	34.63	23.00	17.84
k, delay calibration	0.11	0.50	0.11	0.50	0.11	0.14	0.11	0.11	0.24	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
d2, Incremental Delay [s]	69.16	0.24	15.88	0.39	7.36	1.63	0.02	20.60	13.90	0.34
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	0.37	0.06	0.94	0.13	0.60	0.69	0.02	0.41	0.94	0.31
d, Delay for Lane Group [s/veh]	104.08	18.87	46.10	13.53	40.28	20.73	14.49	55.24	36.91	18.18
Lane Group LOS	F	B	D	B	D	C	B	E	D	B
Critical Lane Group	No	Yes	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.07	0.34	4.23	0.78	0.98	7.14	0.15	0.15	10.10	1.76
50th-Percentile Queue Length [ft/ln]	1.69	8.55	105.75	19.46	24.57	178.43	3.63	3.69	252.60	43.92
95th-Percentile Queue Length [veh/ln]	0.12	0.62	7.60	1.40	1.77	11.52	0.26	0.27	15.32	3.16
95th-Percentile Queue Length [ft/ln]	3.03	15.39	190.08	35.04	44.22	287.96	6.54	6.64	382.93	79.06

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	104.08	18.87	18.87	46.10	13.53	13.53	40.28	20.73	14.49	55.24	36.91	18.18
Movement LOS	F	B	B	D	B	B	D	C	B	E	D	B
d_A, Approach Delay [s/veh]	21.71			36.73			22.31			32.91		
Approach LOS	C			D			C			C		
d_I, Intersection Delay [s/veh]	29.93											
Intersection LOS	C											
Intersection V/C	0.604											

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]	26.58	26.58	26.58	26.58
l_p,int, Pedestrian LOS Score for Intersection	1.964	2.245	2.120	2.709
Crosswalk LOS	A	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]	543	628	600	600
d_b, Bicycle Delay [s]	18.58	16.46	17.15	17.15
l_b,int, Bicycle LOS Score for Intersection	1.609	2.065	2.436	2.789
Bicycle LOS	A	B	B	C

Sequence

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



Intersection Level Of Service Report
Intersection 2: Oasis Rd / Buckthorne Rd

Control Type:	Two-way stop	Delay (sec / veh):	8.4
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.029

Intersection Setup

Name	Oasis Road			Oasis Road			Buckthorne Road			Buckthorne Road		
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	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	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			45.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Oasis Road			Oasis Road			Buckthorne Road			Buckthorne Road		
Base Volume Input [veh/h]	0	6	0	0	28	0	0	0	0	0	0	23
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]	0	6	0	0	28	0	0	0	0	0	0	23
Peak Hour Factor	1.0000	0.7500	0.7500	1.0000	0.7500	0.7500	1.0000	1.0000	0.7500	1.0000	1.0000	0.7500
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]	0	2	0	0	9	0	0	0	0	0	0	8
Total Analysis Volume [veh/h]	0	8	0	0	37	0	0	0	0	0	0	31
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane				
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.46	0.00	0.00	8.43
Movement LOS		A	A		A	A			A			A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.22
d_A, Approach Delay [s/veh]	0.00			0.00			8.46			8.43		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	3.44											
Intersection LOS	A											

Intersection Level Of Service Report
Intersection 6: Mountain Rd/ HWY 138

Control Type:	Two-way stop	Delay (sec / veh):	24.8
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.055

Intersection Setup

Name	Moutain Road			Mountain Road			HWY 138			HWY 138		
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	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	120.00	100.00	100.00	250.00	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]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Moutain Road			Mountain Road			HWY 138			HWY 138		
Base Volume Input [veh/h]	10	0	89	0	0	0	0	365	12	56	473	0
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	0	89	0	0	0	0	365	12	56	473	0
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
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	0	24	0	0	0	0	99	3	15	129	0
Total Analysis Volume [veh/h]	11	0	97	0	0	0	0	397	13	61	514	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
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	0.06	0.00	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.01	0.00
d_M, Delay for Movement [s/veh]	24.80	23.09	12.26	27.90	21.50	11.38	8.39	0.00	0.00	8.28	0.00	0.00
Movement LOS	C	C	B	D	C	B	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.76	0.76	0.76	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00
95th-Percentile Queue Length [ft/ln]	18.96	18.96	18.96	0.00	0.00	0.00	0.00	0.00	0.00	4.16	0.00	0.00
d_A, Approach Delay [s/veh]	13.54			20.26			0.00			0.88		
Approach LOS	B			C			A			A		
d_I, Intersection Delay [s/veh]	1.80											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 7: Soledad Rd/ HWY 138

Control Type:	Two-way stop	Delay (sec / veh):	13.1
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.002

Intersection Setup

Name	Soledad Rd			Soledad Rd			HWY 138			HWY 138		
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	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	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]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Soledad Rd			Soledad Rd			HWY 138			HWY 138		
Base Volume Input [veh/h]	0	0	0	1	0	0	0	350	0	2	492	0
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]	0	0	0	1	0	0	0	350	0	2	492	0
Peak Hour Factor	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270
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]	0	0	0	0	0	0	0	94	0	1	133	0
Total Analysis Volume [veh/h]	0	0	0	1	0	0	0	378	0	2	531	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	Yes	Yes		
Number of Storage Spaces in Median	2	2	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	13.08	13.13	10.35	13.10	13.15	11.54	8.44	0.00	0.00	8.02	0.00	0.00
Movement LOS	B	B	B	B	B	B	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.17	0.17	0.17	0.00	0.00	0.00	0.08	0.08	0.08
d_A, Approach Delay [s/veh]	12.18			13.10			0.00			0.03		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	0.03											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 8: 263rd Street / HWY 138

Control Type:	Two-way stop	Delay (sec / veh):	12.8
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.068

Intersection Setup

Name	263rd Street		HWY 138		HWY 138	
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		50.00		50.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	263rd Street		HWY 138		HWY 138	
Base Volume Input [veh/h]	31	1	0	328	479	13
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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
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]	31	1	0	328	479	13
Peak Hour Factor	0.8990	0.8990	0.8990	0.8990	0.8990	0.8990
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	0	0	91	133	4
Total Analysis Volume [veh/h]	34	1	0	365	533	14
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	Yes		
Number of Storage Spaces in Median	2	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.07	0.00	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	12.76	12.14	8.49	0.00	0.00	0.00
Movement LOS	B	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.22	0.22	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	5.62	5.62	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	12.74		0.00		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.47					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 9: Ponderosa Rd / HWY 138

Control Type:	Two-way stop	Delay (sec / veh):	14.9
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.005

Intersection Setup

Name	Ponderosa Road		HWY 138		HWY 138	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
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		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Ponderosa Road		HWY 138		HWY 138	
Base Volume Input [veh/h]	2	1	573	1	1	637
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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
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	1	573	1	1	637
Peak Hour Factor	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	163	0	0	181
Total Analysis Volume [veh/h]	2	1	651	1	1	724
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	Yes		
Number of Storage Spaces in Median	2	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.01	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	14.86	12.70	0.00	0.00	8.81	0.00
Movement LOS	B	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.57	0.57	0.00	0.00	0.04	0.04
d_A, Approach Delay [s/veh]	14.14		0.00		0.01	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.04					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 10: Desert View Rd / HWY 138

Control Type:	Two-way stop	Delay (sec / veh):	16.5
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.006

Intersection Setup

Name	Desert View Road			Desert View Road			HWY 138			HWY 138		
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	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	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]	30.00			30.00			55.00			55.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Desert View Road			Desert View Road			HWY 138			HWY 138		
Base Volume Input [veh/h]	2	0	0	2	0	0	1	580	0	1	621	0
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]	2	0	0	2	0	0	1	580	0	1	621	0
Peak Hour Factor	0.8720	0.8720	0.8720	0.8720	0.8720	0.8720	0.8720	0.8720	0.8720	0.8720	0.8720	0.8720
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	0	0	1	0	0	0	166	0	0	178	0
Total Analysis Volume [veh/h]	2	0	0	2	0	0	1	665	0	1	712	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	Yes	Yes		
Number of Storage Spaces in Median	2	2	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	16.50	16.02	12.84	16.50	16.01	13.33	9.02	0.00	0.00	8.86	0.00	0.00
Movement LOS	C	C	B	C	C	B	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.02	0.02	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.48	0.48	0.48	0.48	0.48	0.48	0.08	0.00	0.00	0.08	0.00	0.00
d_A, Approach Delay [s/veh]	16.50			16.50			0.01			0.01		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	0.06											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 11: Acorn Rd / HWY 138

Control Type:	Two-way stop	Delay (sec / veh):	13.0
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.002

Intersection Setup

Name	Acorn Road			Acorn Road			HWY 138			HWY 138		
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	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	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]	30.00			30.00			55.00			55.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Acorn Road			Acorn Road			HWY 138			HWY 138		
Base Volume Input [veh/h]	0	0	1	0	0	0	1	589	0	0	618	0
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]	0	0	1	0	0	0	1	589	0	0	618	0
Peak Hour Factor	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610
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]	0	0	0	0	0	0	0	171	0	0	179	0
Total Analysis Volume [veh/h]	0	0	1	0	0	0	1	684	0	0	718	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	Yes	Yes		
Number of Storage Spaces in Median	2	2	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	16.63	16.11	12.98	16.62	16.09	13.33	9.04	0.00	0.00	8.92	0.00	0.00
Movement LOS	C	C	B	C	C	B	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.17	0.17	0.17	0.00	0.00	0.00	0.04	0.04	0.04	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	12.98			15.34			0.01			0.00		
Approach LOS	B			C			A			A		
d_I, Intersection Delay [s/veh]	0.02											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 12: Green Rd-Phelan Rd/ HWY 138

Control Type:	Signalized	Delay (sec / veh):	20.1
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.468

Intersection Setup

Name	Green Road			Phelan Road			HWY 138			HWY 138		
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	0	0	0	0	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	360.00	100.00	445.00	635.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	1	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	1800.00	0.00	350.00	0.00	0.00	0.00
Speed [mph]	45.00			55.00			55.00			55.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			No			No			No		

Volumes

Name	Green Road			Phelan Road			HWY 138			HWY 138		
Base Volume Input [veh/h]	12	29	19	4	20	179	157	417	11	9	426	1
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]	12	29	19	4	20	179	157	417	11	9	426	1
Peak Hour Factor	0.8790	0.8790	0.8790	0.8790	0.8790	0.8790	0.8790	0.8790	0.8790	0.8790	0.8790	0.8790
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	8	5	1	6	51	45	119	3	3	121	0
Total Analysis Volume [veh/h]	14	33	22	5	23	204	179	474	13	10	485	1
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
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]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	6	0	0	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	14	0	0	14	0	31	30	0	16	15	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	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	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
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
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

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	L	C	R	L	C	R
C, 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	2.00	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
g_i, Effective Green Time [s]	30	30	8	18	18	1	11	11
g / C, Green / Cycle	0.49	0.49	0.13	0.29	0.29	0.01	0.18	0.18
(v / s)_i Volume / Saturation Flow Rate	0.04	0.14	0.10	0.13	0.01	0.01	0.13	0.00
s, saturation flow rate [veh/h]	1658	1642	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	888	869	235	1062	474	27	647	289
d1, Uniform Delay [s]	8.07	9.04	25.28	17.27	15.13	29.36	23.43	20.30
k, delay calibration	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
d2, Incremental Delay [s]	0.17	0.75	5.05	0.29	0.02	8.29	1.78	0.00
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	0.08	0.27	0.76	0.45	0.03	0.37	0.75	0.00
d, Delay for Lane Group [s/veh]	8.24	9.79	30.33	17.56	15.15	37.65	25.21	20.31
Lane Group LOS	A	A	C	B	B	D	C	C
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.39	1.38	2.42	2.17	0.10	0.19	2.88	0.01
50th-Percentile Queue Length [ft/ln]	9.82	34.48	60.48	54.13	2.62	4.68	71.90	0.25
95th-Percentile Queue Length [veh/ln]	0.71	2.48	4.35	3.90	0.19	0.34	5.18	0.02
95th-Percentile Queue Length [ft/ln]	17.68	62.06	108.86	97.43	4.72	8.42	129.41	0.45

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	8.24	8.24	8.24	9.79	9.79	9.79	30.33	17.56	15.15	37.65	25.21	20.31
Movement LOS	A	A	A	A	A	A	C	B	B	D	C	C
d_A, Approach Delay [s/veh]	8.24			9.79			20.95			25.45		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	20.11											
Intersection LOS	C											
Intersection V/C	0.468											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	0.0
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	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000	0.000
Crosswalk LOS	F	F	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	333	333	865	366
d_b, Bicycle Delay [s]	20.87	20.87	9.67	20.05
l_b,int, Bicycle LOS Score for Intersection	1.673	1.942	2.109	1.969
Bicycle LOS	A	A	B	A

Sequence

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



Intersection Level Of Service Report
Intersection 1: Oasis Rd / Route 138

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):	0.597

Intersection Setup

Name	Oasis Road			Oasis Road			HWY 138			HWY 138		
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	0	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	120.00	100.00	100.00	525.00	100.00	525.00	525.00	100.00	525.00
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			55.00			0.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Oasis Road			Oasis Road			HWY 138			HWY 138		
Base Volume Input [veh/h]	8	16	20	113	9	26	19	689	28	19	404	95
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]	8	16	20	113	9	26	19	689	28	19	404	95
Peak Hour Factor	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560
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	4	5	30	2	7	5	180	7	5	106	25
Total Analysis Volume [veh/h]	8	17	21	118	9	27	20	721	29	20	423	99
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
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

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												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	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
Split [s]	10	23	0	10	23	0	23	38	0	9	24	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
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	14	0	0	14	0	0	10	0	0	10	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
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	
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
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

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	L	C	R	L	C	R
C, 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]	1	24	6	29	2	32	32	2	32	32
g / C, Green / Cycle	0.01	0.30	0.08	0.36	0.02	0.41	0.41	0.02	0.41	0.41
(v / s)_i Volume / Saturation Flow Rate	0.00	0.02	0.07	0.02	0.01	0.38	0.02	0.01	0.22	0.06
s, saturation flow rate [veh/h]	1810	1731	1810	1678	1810	1900	1615	1810	1900	1615
c, Capacity [veh/h]	19	514	136	607	41	770	654	41	770	654
d1, Uniform Delay [s]	39.36	20.23	36.62	16.67	38.65	22.83	14.42	38.65	18.22	15.09
k, delay calibration	0.11	0.50	0.11	0.50	0.11	0.32	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
d2, Incremental Delay [s]	13.83	0.28	14.88	0.19	8.49	14.79	0.03	8.49	0.61	0.11
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	0.42	0.07	0.87	0.06	0.48	0.94	0.04	0.48	0.55	0.15
d, Delay for Lane Group [s/veh]	53.19	20.51	51.50	16.86	47.13	37.61	14.45	47.13	18.84	15.20
Lane Group LOS	D	C	D	B	D	D	B	D	B	B
Critical Lane Group	No	Yes	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.22	0.51	2.65	0.41	0.51	16.72	0.35	0.46	5.26	1.01
50th-Percentile Queue Length [ft/ln]	5.54	12.72	66.26	10.15	12.64	418.05	8.74	11.51	131.42	25.32
95th-Percentile Queue Length [veh/ln]	0.40	0.92	4.77	0.73	0.91	23.43	0.63	0.83	9.02	1.82
95th-Percentile Queue Length [ft/ln]	9.98	22.90	119.27	18.27	22.76	585.70	15.73	20.71	225.42	45.57

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	53.19	20.51	20.51	51.50	16.86	16.86	47.13	37.61	14.45	47.13	18.84	15.20
Movement LOS	D	C	C	D	B	B	D	D	B	D	B	B
d_A, Approach Delay [s/veh]	26.19			43.40			36.99			19.22		
Approach LOS	C			D			D			B		
d_I, Intersection Delay [s/veh]	30.94											
Intersection LOS	C											
Intersection V/C	0.597											

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]	31.52	31.52	31.52	31.52
l_p,int, Pedestrian LOS Score for Intersection	1.987	2.109	2.127	2.696
Crosswalk LOS	A	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]	475	475	850	500
d_b, Bicycle Delay [s]	23.27	23.27	13.24	22.51
l_b,int, Bicycle LOS Score for Intersection	1.636	1.814	2.830	2.454
Bicycle LOS	A	A	C	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: Oasis Rd / Buckthorne Rd

Control Type:	Two-way stop	Delay (sec / veh):	8.5
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.051

Intersection Setup

Name	Oasis Road			Oasis Road			Buckthorne Road			Buckthorne Road		
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	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	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			45.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Oasis Road			Oasis Road			Buckthorne Road			Buckthorne Road		
Base Volume Input [veh/h]	0	4	0	0	40	0	0	0	0	0	0	35
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]	0	4	0	0	40	0	0	0	0	0	0	35
Peak Hour Factor	1.0000	0.6330	0.6330	1.0000	0.6330	0.6330	1.0000	1.0000	0.6330	1.0000	1.0000	0.6330
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]	0	2	0	0	16	0	0	0	0	0	0	14
Total Analysis Volume [veh/h]	0	6	0	0	63	0	0	0	0	0	0	55
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane				
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.57	0.00	0.00	8.50
Movement LOS		A	A		A	A			A			A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.01
d_A, Approach Delay [s/veh]	0.00			0.00			8.57			8.50		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	3.77											
Intersection LOS	A											

Intersection Level Of Service Report
Intersection 6: Mountain Rd/ HWY 138

Control Type:	Two-way stop	Delay (sec / veh):	35.5
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.061

Intersection Setup

Name	Moutain Road			Mountain Road			HWY 138			HWY 138		
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	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	120.00	100.00	100.00	250.00	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]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Moutain Road			Mountain Road			HWY 138			HWY 138		
Base Volume Input [veh/h]	7	0	73	0	0	1	0	651	30	71	364	1
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]	7	0	73	0	0	1	0	651	30	71	364	1
Peak Hour Factor	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190
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	0	20	0	0	0	0	177	8	19	99	0
Total Analysis Volume [veh/h]	8	0	79	0	0	1	0	708	33	77	396	1
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
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	0.06	0.00	0.18	0.00	0.00	0.00	0.00	0.01	0.00	0.09	0.00	0.00
d_M, Delay for Movement [s/veh]	35.51	31.71	16.65	40.50	28.99	10.49	8.07	0.00	0.00	9.51	0.00	0.00
Movement LOS	E	D	C	E	D	B	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.95	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.29	0.00	0.00
95th-Percentile Queue Length [ft/ln]	23.65	23.65	23.65	0.11	0.11	0.11	0.00	0.00	0.00	7.22	0.00	0.00
d_A, Approach Delay [s/veh]	18.39			10.49			0.00			1.55		
Approach LOS	C			B			A			A		
d_I, Intersection Delay [s/veh]	1.80											
Intersection LOS	E											

Intersection Level Of Service Report
Intersection 7: Soledad Rd/ HWY 138

Control Type:	Two-way stop	Delay (sec / veh):	15.4
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.009

Intersection Setup

Name	Soledad Rd			Soledad Rd			HWY 138			HWY 138		
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	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	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]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Soledad Rd			Soledad Rd			HWY 138			HWY 138		
Base Volume Input [veh/h]	0	0	0	3	0	0	1	724	0	0	340	2
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]	0	0	0	3	0	0	1	724	0	0	340	2
Peak Hour Factor	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350
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]	0	0	0	1	0	0	0	194	0	0	91	1
Total Analysis Volume [veh/h]	0	0	0	3	0	0	1	774	0	0	364	2
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	Yes	Yes		
Number of Storage Spaces in Median	2	2	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	15.34	14.96	13.96	15.43	15.04	10.35	7.99	0.00	0.00	9.23	0.00	0.00
Movement LOS	C	B	B	C	C	B	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.03	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.65	0.65	0.65	0.04	0.04	0.04	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	14.75			15.43			0.01			0.00		
Approach LOS	B			C			A			A		
d_I, Intersection Delay [s/veh]	0.05											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 8: 263rd Street / HWY 138

Control Type:	Two-way stop	Delay (sec / veh):	14.1
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.027

Intersection Setup

Name	263rd Street		HWY 138		HWY 138	
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		50.00		50.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	263rd Street		HWY 138		HWY 138	
Base Volume Input [veh/h]	10	3	3	710	310	36
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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
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]	10	3	3	710	310	36
Peak Hour Factor	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	1	1	191	83	10
Total Analysis Volume [veh/h]	11	3	3	763	333	39
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	Yes		
Number of Storage Spaces in Median	2	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.00	0.00	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	14.11	10.44	8.01	0.00	0.00	0.00
Movement LOS	B	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.10	0.10	0.01	0.01	0.00	0.00
95th-Percentile Queue Length [ft/ln]	2.42	2.42	0.13	0.13	0.00	0.00
d_A, Approach Delay [s/veh]	13.32		0.03		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.18					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 9: Ponderosa Rd / HWY 138

Control Type:	Two-way stop	Delay (sec / veh):	9.7
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.003

Intersection Setup

Name	Ponderosa Road		HWY 138		HWY 138	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
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		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Ponderosa Road		HWY 138		HWY 138	
Base Volume Input [veh/h]	0	0	858	1	2	487
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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
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]	0	0	858	1	2	487
Peak Hour Factor	0.9710	0.9710	0.9710	0.9710	0.9710	0.9710
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	221	0	1	125
Total Analysis Volume [veh/h]	0	0	884	1	2	502
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	Yes		
Number of Storage Spaces in Median	2	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.01	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	15.37	15.37	0.00	0.00	9.66	0.00
Movement LOS	C	C	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.08	0.08
d_A, Approach Delay [s/veh]	15.37		0.00		0.04	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.01					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 10: Desert View Rd / HWY 138

Control Type:	Two-way stop	Delay (sec / veh):	15.5
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.006

Intersection Setup

Name	Desert View Road			Desert View Road			HWY 138			HWY 138		
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	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	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]	30.00			30.00			55.00			55.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Desert View Road			Desert View Road			HWY 138			HWY 138		
Base Volume Input [veh/h]	0	0	2	0	0	0	1	847	0	1	494	0
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]	0	0	2	0	0	0	1	847	0	1	494	0
Peak Hour Factor	0.9550	0.9550	0.9550	0.9550	0.9550	0.9550	0.9550	0.9550	0.9550	0.9550	0.9550	0.9550
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]	0	0	1	0	0	0	0	222	0	0	129	0
Total Analysis Volume [veh/h]	0	0	2	0	0	0	1	887	0	1	517	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	Yes	Yes		
Number of Storage Spaces in Median	2	2	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	17.45	16.71	15.47	17.48	16.67	11.40	8.40	0.00	0.00	9.67	0.00	0.00
Movement LOS	C	C	C	C	C	B	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.44	0.44	0.44	0.00	0.00	0.00	0.07	0.00	0.00	0.10	0.00	0.00
d_A, Approach Delay [s/veh]	15.47			15.18			0.01			0.02		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	0.03											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 11: Acorn Rd / HWY 138

Control Type:	Two-way stop	Delay (sec / veh):	17.8
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.004

Intersection Setup

Name	Acorn Road			Acorn Road			HWY 138			HWY 138		
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	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	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]	30.00			30.00			55.00			55.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Acorn Road			Acorn Road			HWY 138			HWY 138		
Base Volume Input [veh/h]	0	0	1	1	0	0	0	849	0	0	495	3
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]	0	0	1	1	0	0	0	849	0	0	495	3
Peak Hour Factor	0.9320	0.9320	0.9320	0.9320	0.9320	0.9320	0.9320	0.9320	0.9320	0.9320	0.9320	0.9320
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]	0	0	0	0	0	0	0	228	0	0	133	1
Total Analysis Volume [veh/h]	0	0	1	1	0	0	0	911	0	0	531	3
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	Yes	Yes		
Number of Storage Spaces in Median	2	2	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	17.76	16.96	15.77	17.81	16.96	11.58	8.45	0.00	0.00	9.76	0.00	0.00
Movement LOS	C	C	C	C	C	B	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.22	0.22	0.22	0.27	0.27	0.27	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	15.77			17.81			0.00			0.00		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	0.02											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 12: Green Rd-Phelan Rd/ HWY 138

Control Type:	Signalized	Delay (sec / veh):	21.8
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.432

Intersection Setup

Name	Green Road			Phelan Road			HWY 138			HWY 138		
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	0	0	0	0	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	360.00	100.00	445.00	635.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	1	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	1800.00	0.00	350.00	0.00	0.00	0.00
Speed [mph]	45.00			55.00			55.00			55.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			No			No			No		

Volumes

Name	Green Road			Phelan Road			HWY 138			HWY 138		
Base Volume Input [veh/h]	2	20	11	9	39	160	146	655	10	24	381	5
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]	2	20	11	9	39	160	146	655	10	24	381	5
Peak Hour Factor	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230
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	5	3	2	11	43	40	177	3	7	103	1
Total Analysis Volume [veh/h]	2	22	12	10	42	173	158	710	11	26	413	5
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
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]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	6	0	0	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	14	0	0	14	0	26	36	0	10	20	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	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	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
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
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

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	L	C	R	L	C	R
C, 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	2.00	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
g_i, Effective Green Time [s]	31	31	7	15	15	2	10	10
g / C, Green / Cycle	0.52	0.52	0.11	0.25	0.25	0.03	0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.02	0.14	0.09	0.20	0.01	0.01	0.11	0.00
s, saturation flow rate [veh/h]	1775	1666	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	981	924	209	911	407	57	607	271
d1, Uniform Delay [s]	7.16	8.10	25.77	20.95	16.95	28.63	23.53	20.90
k, delay calibration	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
d2, Incremental Delay [s]	0.07	0.63	5.44	1.48	0.03	5.60	1.35	0.03
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	0.04	0.24	0.75	0.78	0.03	0.46	0.68	0.02
d, Delay for Lane Group [s/veh]	7.23	8.73	31.22	22.43	16.98	34.22	24.88	20.93
Lane Group LOS	A	A	C	C	B	C	C	C
Critical Lane Group	No	Yes	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.18	1.20	2.18	3.93	0.10	0.41	2.42	0.05
50th-Percentile Queue Length [ft/ln]	4.58	30.12	54.45	98.25	2.42	10.23	60.43	1.29
95th-Percentile Queue Length [veh/ln]	0.33	2.17	3.92	7.07	0.17	0.74	4.35	0.09
95th-Percentile Queue Length [ft/ln]	8.25	54.21	98.02	176.86	4.36	18.42	108.78	2.32

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	7.23	7.23	7.23	8.73	8.73	8.73	31.22	22.43	16.98	34.22	24.88	20.93
Movement LOS	A	A	A	A	A	A	C	C	B	C	C	C
d_A, Approach Delay [s/veh]	7.23			8.73			23.94			25.38		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	21.80											
Intersection LOS	C											
Intersection V/C	0.432											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	0.0
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	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000	0.000
Crosswalk LOS	F	F	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	333	333	1065	533
d_b, Bicycle Delay [s]	20.87	20.87	6.56	16.17
l_b,int, Bicycle LOS Score for Intersection	1.619	1.931	2.285	1.926
Bicycle LOS	A	A	B	A

Sequence

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



OPENING YEAR
TRAFFIC CONDITIONS

Intersection Level Of Service Report
Intersection 1: Oasis Rd / Route 138

Control Type:	Signalized	Delay (sec / veh):	32.0
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.638

Intersection Setup

Name	Oasis Road			Oasis Road			HWY 138			HWY 138		
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	0	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	120.00	100.00	100.00	525.00	100.00	525.00	525.00	100.00	525.00
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			55.00			0.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			No			No			No		

Volumes

Name	Oasis Road			Oasis Road			HWY 138			HWY 138		
Base Volume Input [veh/h]	1	12	13	185	20	54	40	399	11	4	488	139
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	0	0	11	0	0	0	54	0	0	49	10
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]	1	12	14	203	21	56	42	469	11	4	557	155
Peak Hour Factor	0.8470	0.8470	0.8470	0.8470	0.8470	0.8470	0.8470	0.8470	0.8470	0.8470	0.8470	0.8470
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]	0	4	4	60	6	17	12	138	3	1	164	46
Total Analysis Volume [veh/h]	1	14	17	240	25	66	50	554	13	5	658	183
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
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

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												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	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
Split [s]	9	14	0	17	22	0	9	50	0	9	50	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
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	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
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	
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
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

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	L	C	R	L	C	R
C, 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]	0	24	13	36	4	37	37	1	34	34
g / C, Green / Cycle	0.00	0.26	0.14	0.40	0.04	0.41	0.41	0.01	0.38	0.38
(v / s)_i Volume / Saturation Flow Rate	0.00	0.02	0.13	0.05	0.03	0.29	0.01	0.00	0.35	0.11
s, saturation flow rate [veh/h]	1810	1732	1810	1684	1810	1900	1615	1810	1900	1615
c, Capacity [veh/h]	5	451	262	678	74	778	661	14	715	607
d1, Uniform Delay [s]	44.87	25.10	38.01	17.00	42.65	22.21	15.86	44.51	26.85	19.79
k, delay calibration	0.11	0.50	0.11	0.50	0.11	0.11	0.11	0.11	0.21	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
d2, Incremental Delay [s]	19.71	0.29	12.16	0.41	10.16	1.26	0.01	14.08	9.81	0.28
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	0.21	0.07	0.92	0.13	0.67	0.71	0.02	0.35	0.92	0.30
d, Delay for Lane Group [s/veh]	64.58	25.40	50.17	17.41	52.81	23.48	15.88	58.58	36.66	20.07
Lane Group LOS	E	C	D	B	D	C	B	E	D	C
Critical Lane Group	No	Yes	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.05	0.51	5.70	1.12	1.36	10.63	0.18	0.16	13.85	2.49
50th-Percentile Queue Length [ft/ln]	1.20	12.69	142.39	28.12	34.12	265.87	4.40	4.03	346.34	62.19
95th-Percentile Queue Length [veh/ln]	0.09	0.91	9.61	2.02	2.46	15.98	0.32	0.29	19.96	4.48
95th-Percentile Queue Length [ft/ln]	2.16	22.84	240.25	50.61	61.42	399.58	7.91	7.26	498.94	111.94

Movement, Approach, & Intersection Results

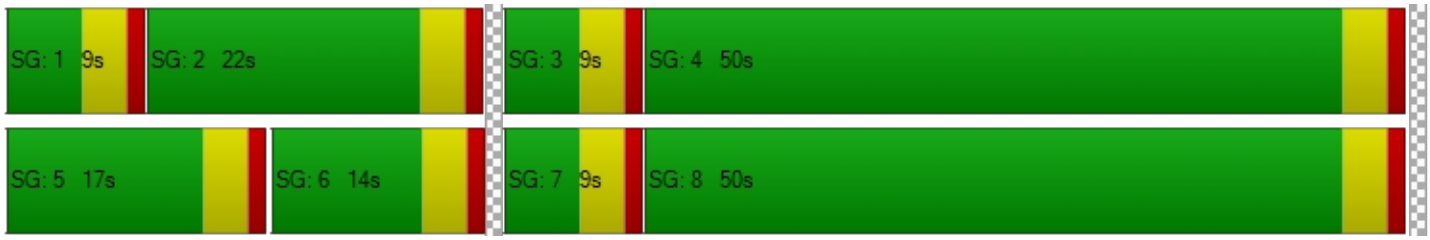
d_M, Delay for Movement [s/veh]	64.58	25.40	25.40	50.17	17.41	17.41	52.81	23.48	15.88	58.58	36.66	20.07
Movement LOS	E	C	C	D	B	B	D	C	B	E	D	C
d_A, Approach Delay [s/veh]	26.62			41.17			25.69			33.20		
Approach LOS	C			D			C			C		
d_I, Intersection Delay [s/veh]	31.99											
Intersection LOS	C											
Intersection V/C	0.638											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	0.0
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	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000	0.000
Crosswalk LOS	F	F	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	222	400	1021	1021
d_b, Bicycle Delay [s]	35.60	28.84	10.79	10.79
l_b,int, Bicycle LOS Score for Intersection	1.612	2.106	2.578	2.956
Bicycle LOS	A	B	B	C

Sequence

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



Intersection Level Of Service Report
Intersection 2: Oasis Rd / Buckthorne Rd

Control Type:	Two-way stop	Delay (sec / veh):	8.4
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.030

Intersection Setup

Name	Oasis Road			Oasis Road			Buckthorne Road			Buckthorne Road		
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	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	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			45.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Oasis Road			Oasis Road			Buckthorne Road			Buckthorne Road		
Base Volume Input [veh/h]	0	6	0	0	28	0	0	0	0	0	0	23
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	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]	0	6	0	0	29	0	0	0	0	0	0	24
Peak Hour Factor	1.0000	0.7500	0.7500	1.0000	0.7500	0.7500	1.0000	1.0000	0.7500	1.0000	1.0000	0.7500
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]	0	2	0	0	10	0	0	0	0	0	0	8
Total Analysis Volume [veh/h]	0	8	0	0	39	0	0	0	0	0	0	32
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane				
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.47	0.00	0.00	8.44
Movement LOS		A	A		A	A			A			A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.29
d_A, Approach Delay [s/veh]	0.00			0.00			8.47			8.44		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	3.42											
Intersection LOS	A											

Intersection Level Of Service Report
Intersection 6: Mountain Rd/ HWY 138

Control Type:	Two-way stop	Delay (sec / veh):	30.6
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.071

Intersection Setup

Name	Moutain Road			Mountain Road			HWY 138			HWY 138		
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	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	120.00	100.00	100.00	250.00	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]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Moutain Road			Mountain Road			HWY 138			HWY 138		
Base Volume Input [veh/h]	10	0	89	0	0	0	0	365	12	56	473	0
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	0	0	0	0	0	0	54	0	0	49	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	0	93	0	0	0	0	434	12	58	541	0
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
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	0	25	0	0	0	0	118	3	16	147	0
Total Analysis Volume [veh/h]	11	0	101	0	0	0	0	472	13	63	588	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
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	0.07	0.00	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.01	0.00
d_M, Delay for Movement [s/veh]	30.56	27.71	13.54	35.18	25.44	12.02	8.61	0.00	0.00	8.51	0.00	0.00
Movement LOS	D	D	B	E	D	B	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.94	0.94	0.94	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.00
95th-Percentile Queue Length [ft/ln]	23.38	23.38	23.38	0.00	0.00	0.00	0.00	0.00	0.00	4.60	0.00	0.00
d_A, Approach Delay [s/veh]	15.21			24.21			0.00			0.82		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	1.80											
Intersection LOS	D											

Intersection Level Of Service Report
Intersection 7: Soledad Rd/ HWY 138

Control Type:	Two-way stop	Delay (sec / veh):	14.1
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.003

Intersection Setup

Name	Soledad Rd			Soledad Rd			HWY 138			HWY 138		
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	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	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]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Soledad Rd			Soledad Rd			HWY 138			HWY 138		
Base Volume Input [veh/h]	0	0	0	1	0	0	0	350	0	2	492	0
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	0	0	0	0	0	0	54	0	0	49	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]	0	0	0	1	0	0	0	418	0	2	561	0
Peak Hour Factor	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270
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]	0	0	0	0	0	0	0	113	0	1	151	0
Total Analysis Volume [veh/h]	0	0	0	1	0	0	0	451	0	2	605	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	Yes	Yes		
Number of Storage Spaces in Median	2	2	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	14.06	13.96	10.88	14.09	13.99	12.20	8.66	0.00	0.00	8.22	0.00	0.00
Movement LOS	B	B	B	B	B	B	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.19	0.19	0.19	0.00	0.00	0.00	0.08	0.08	0.08
d_A, Approach Delay [s/veh]	12.96			14.09			0.00			0.03		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	0.03											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 8: 263rd Street / HWY 138

Control Type:	Two-way stop	Delay (sec / veh):	13.8
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.105

Intersection Setup

Name	263rd Street		HWY 138		HWY 138	
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		50.00		50.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	263rd Street		HWY 138		HWY 138	
Base Volume Input [veh/h]	31	1	0	328	479	13
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]	11	0	0	43	39	10
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]	43	1	0	384	537	24
Peak Hour Factor	0.8990	0.8990	0.8990	0.8990	0.8990	0.8990
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	0	0	107	149	7
Total Analysis Volume [veh/h]	48	1	0	427	597	27
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	Yes		
Number of Storage Spaces in Median	2	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.11	0.00	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	13.85	13.18	8.72	0.00	0.00	0.00
Movement LOS	B	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.36	0.36	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	8.96	8.96	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	13.83		0.00		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.62					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 9: Ponderosa Rd / HWY 138

Control Type:	Two-way stop	Delay (sec / veh):	16.2
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.006

Intersection Setup

Name	Ponderosa Road		HWY 138		HWY 138	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
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		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Ponderosa Road		HWY 138		HWY 138	
Base Volume Input [veh/h]	2	1	573	1	1	637
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]	0	0	65	0	0	59
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	1	661	1	1	722
Peak Hour Factor	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	188	0	0	205
Total Analysis Volume [veh/h]	2	1	751	1	1	820
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	Yes		
Number of Storage Spaces in Median	2	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.01	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	16.21	13.79	0.00	0.00	9.15	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.03	0.03	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.65	0.65	0.00	0.00	0.04	0.04
d_A, Approach Delay [s/veh]	15.40		0.00		0.01	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.04					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 10: Desert View Rd / HWY 138

Control Type:	Two-way stop	Delay (sec / veh):	18.3
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.007

Intersection Setup

Name	Desert View Road			Desert View Road			HWY 138			HWY 138		
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	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	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]	30.00			30.00			55.00			55.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Desert View Road			Desert View Road			HWY 138			HWY 138		
Base Volume Input [veh/h]	2	0	0	2	0	0	1	580	0	1	621	0
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	0	0	0	0	0	0	65	0	0	59	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]	2	0	0	2	0	0	1	668	0	1	705	0
Peak Hour Factor	0.8720	0.8720	0.8720	0.8720	0.8720	0.8720	0.8720	0.8720	0.8720	0.8720	0.8720	0.8720
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	0	0	1	0	0	0	192	0	0	202	0
Total Analysis Volume [veh/h]	2	0	0	2	0	0	1	766	0	1	808	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	Yes	Yes		
Number of Storage Spaces in Median	2	2	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	18.32	17.50	13.97	18.32	17.50	14.47	9.36	0.00	0.00	9.21	0.00	0.00
Movement LOS	C	C	B	C	C	B	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.02	0.02	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.55	0.55	0.55	0.55	0.55	0.55	0.09	0.00	0.00	0.09	0.00	0.00
d_A, Approach Delay [s/veh]	18.32			18.32			0.01			0.01		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	0.06											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 11: Acorn Rd / HWY 138

Control Type:	Two-way stop	Delay (sec / veh):	14.1
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.003

Intersection Setup

Name	Acorn Road			Acorn Road			HWY 138			HWY 138		
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]	100.00	100.00	100.00	100.00	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]	30.00			30.00			55.00			55.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Acorn Road			Acorn Road			HWY 138			HWY 138		
Base Volume Input [veh/h]	0	0	1	0	0	0	1	589	0	0	618	0
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	0	0	0	0	0	0	65	0	0	59	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]	0	0	1	0	0	0	1	678	0	0	702	0
Peak Hour Factor	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610
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]	0	0	0	0	0	0	0	197	0	0	204	0
Total Analysis Volume [veh/h]	0	0	1	0	0	0	1	787	0	0	815	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane				
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	Yes	Yes		
Number of Storage Spaces in Median	2	2	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	18.47	17.60	14.14	18.47	17.59	14.46	9.39	0.00	0.00	9.28	0.00	0.00
Movement LOS	C	C	B	C	C	B	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.19	0.00	0.00	0.00	0.04	0.04	0.04	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	14.14			16.84			0.01			0.00		
Approach LOS	B			C			A			A		
d_I, Intersection Delay [s/veh]	0.01											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 12: Green Rd-Phelan Rd/ HWY 138

Control Type:	Signalized	Delay (sec / veh):	23.2
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.536

Intersection Setup

Name	Green Road			Phelan Road			HWY 138			HWY 138		
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	0	0	0	0	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	360.00	100.00	445.00	635.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	1	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	1800.00	0.00	350.00	0.00	0.00	0.00
Speed [mph]	45.00			55.00			55.00			55.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			No			No			No		

Volumes

Name	Green Road			Phelan Road			HWY 138			HWY 138		
Base Volume Input [veh/h]	12	29	19	4	20	179	157	417	11	9	426	1
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	6	5	0	5	30	36	29	0	5	29	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]	12	36	25	4	26	216	199	463	11	14	472	1
Peak Hour Factor	0.8790	0.8790	0.8790	0.8790	0.8790	0.8790	0.8790	0.8790	0.8790	0.8790	0.8790	0.8790
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	10	7	1	7	61	57	132	3	4	134	0
Total Analysis Volume [veh/h]	14	41	28	5	30	246	226	527	13	16	537	1
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]	70
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]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	6	0	0	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	19	0	0	19	0	23	18	0	23	18	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	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	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
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
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

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	L	C	R	L	C	R
C, Cycle Length [s]	70	70	70	70	70	70	70	70
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	2.00	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
g_i, Effective Green Time [s]	34	34	11	22	22	1	13	13
g / C, Green / Cycle	0.49	0.49	0.15	0.32	0.32	0.02	0.18	0.18
(v / s)_i Volume / Saturation Flow Rate	0.05	0.17	0.12	0.15	0.01	0.01	0.15	0.00
s, saturation flow rate [veh/h]	1665	1643	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	877	858	278	1149	513	38	669	299
d1, Uniform Delay [s]	9.55	10.98	28.71	19.11	16.46	33.91	27.35	23.30
k, delay calibration	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
d2, Incremental Delay [s]	0.21	1.02	5.74	0.29	0.02	7.37	2.30	0.00
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	0.09	0.33	0.81	0.46	0.03	0.42	0.80	0.00
d, Delay for Lane Group [s/veh]	9.76	12.00	34.45	19.40	16.48	41.28	29.64	23.31
Lane Group LOS	A	B	C	B	B	D	C	C
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.60	2.24	3.66	2.90	0.12	0.32	3.95	0.01
50th-Percentile Queue Length [ft/ln]	15.09	55.88	91.55	72.56	3.10	8.01	98.72	0.31
95th-Percentile Queue Length [veh/ln]	1.09	4.02	6.59	5.22	0.22	0.58	7.11	0.02
95th-Percentile Queue Length [ft/ln]	27.17	100.59	164.79	130.61	5.59	14.41	177.70	0.55

Movement, Approach, & Intersection Results

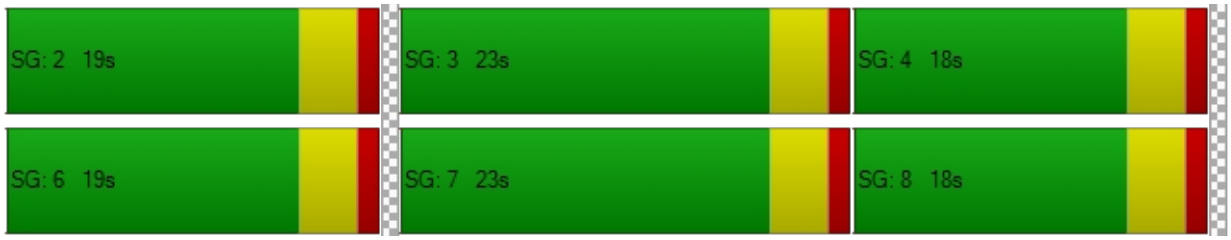
d_M, Delay for Movement [s/veh]	9.76	9.76	9.76	12.00	12.00	12.00	34.45	19.40	16.48	41.28	29.64	23.31
Movement LOS	A	A	A	B	B	B	C	B	B	D	C	C
d_A, Approach Delay [s/veh]	9.76			12.00			23.79			29.97		
Approach LOS	A			B			C			C		
d_I, Intersection Delay [s/veh]	23.16											
Intersection LOS	C											
Intersection V/C	0.536											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	0.0
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	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000	0.000
Crosswalk LOS	F	F	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	428	428	400	400
d_b, Bicycle Delay [s]	21.64	21.64	22.43	22.43
l_b,int, Bicycle LOS Score for Intersection	1.697	2.023	2.192	2.017
Bicycle LOS	A	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 1: Oasis Rd / Route 138

Control Type:	Signalized	Delay (sec / veh):	32.2
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.662

Intersection Setup

Name	Oasis Road			Oasis Road			HWY 138			HWY 138		
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	0	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	120.00	100.00	100.00	525.00	100.00	525.00	525.00	100.00	525.00
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			55.00			0.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Oasis Road			Oasis Road			HWY 138			HWY 138		
Base Volume Input [veh/h]	8	16	20	113	9	26	19	689	28	19	404	95
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	0	0	10	0	0	0	48	0	0	52	11
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]	8	17	21	128	9	27	20	765	29	20	472	110
Peak Hour Factor	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560
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	4	5	33	2	7	5	200	8	5	123	29
Total Analysis Volume [veh/h]	8	18	22	134	9	28	21	800	30	21	494	115
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
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

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												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	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
Split [s]	9	23	0	11	25	0	21	37	0	9	25	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
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	14	0	0	14	0	0	10	0	0	10	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
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	
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
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

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	L	C	R	L	C	R
C, 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]	1	20	7	26	2	35	35	2	35	35
g / C, Green / Cycle	0.01	0.25	0.09	0.33	0.02	0.44	0.44	0.02	0.44	0.44
(v / s)_i Volume / Saturation Flow Rate	0.00	0.02	0.07	0.02	0.01	0.42	0.02	0.01	0.26	0.07
s, saturation flow rate [veh/h]	1810	1732	1810	1676	1810	1900	1615	1810	1900	1615
c, Capacity [veh/h]	19	434	158	550	42	833	708	42	833	708
d1, Uniform Delay [s]	39.36	22.99	35.97	18.47	38.60	21.80	12.86	38.60	17.06	13.59
k, delay calibration	0.11	0.50	0.11	0.50	0.11	0.41	0.11	0.11	0.14	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
d2, Incremental Delay [s]	14.89	0.42	11.54	0.24	8.68	20.16	0.02	8.68	0.90	0.11
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	0.43	0.09	0.85	0.07	0.50	0.96	0.04	0.50	0.59	0.16
d, Delay for Lane Group [s/veh]	54.26	23.41	47.51	18.71	47.28	41.96	12.88	47.28	17.96	13.70
Lane Group LOS	D	C	D	B	D	D	B	D	B	B
Critical Lane Group	No	Yes	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.23	0.59	2.86	0.45	0.53	19.76	0.34	0.48	6.00	1.09
50th-Percentile Queue Length [ft/ln]	5.63	14.68	71.52	11.24	13.26	493.97	8.47	12.07	149.96	27.37
95th-Percentile Queue Length [veh/ln]	0.41	1.06	5.15	0.81	0.96	27.05	0.61	0.87	10.01	1.97
95th-Percentile Queue Length [ft/ln]	10.13	26.42	128.74	20.23	23.88	676.22	15.24	21.72	250.37	49.26

Movement, Approach, & Intersection Results

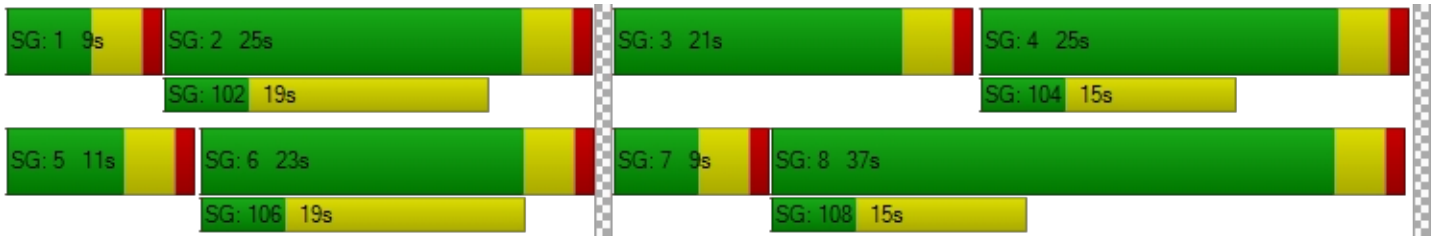
d_M, Delay for Movement [s/veh]	54.26	23.41	23.41	47.51	18.71	18.71	47.28	41.96	12.88	47.28	17.96	13.70
Movement LOS	D	C	C	D	B	B	D	D	B	D	B	B
d_A, Approach Delay [s/veh]	28.55			41.28			41.07			18.16		
Approach LOS	C			D			D			B		
d_I, Intersection Delay [s/veh]	32.25											
Intersection LOS	C											
Intersection V/C	0.662											

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 Intersection	1.989	2.130	2.127	2.771
Crosswalk LOS	A	B	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	475	525	825	525
d_b, Bicycle Delay [s]	23.26	21.76	13.81	21.76
l_b,int, Bicycle LOS Score for Intersection	1.639	1.842	2.964	2.599
Bicycle LOS	A	A	C	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: Oasis Rd / Buckthorne Rd

Control Type:	Two-way stop	Delay (sec / veh):	8.5
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.053

Intersection Setup

Name	Oasis Road			Oasis Road			Buckthorne Road			Buckthorne Road		
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	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	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			45.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Oasis Road			Oasis Road			Buckthorne Road			Buckthorne Road		
Base Volume Input [veh/h]	0	4	0	0	40	0	0	0	0	0	0	35
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	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]	0	4	0	0	42	0	0	0	0	0	0	36
Peak Hour Factor	1.0000	0.6330	0.6330	1.0000	0.6330	0.6330	1.0000	1.0000	0.6330	1.0000	1.0000	0.6330
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]	0	2	0	0	17	0	0	0	0	0	0	14
Total Analysis Volume [veh/h]	0	6	0	0	66	0	0	0	0	0	0	57
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane				
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.59	0.00	0.00	8.51
Movement LOS		A	A		A	A			A			A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.16
d_A, Approach Delay [s/veh]	0.00			0.00			8.59			8.51		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	3.76											
Intersection LOS	A											

Intersection Level Of Service Report
Intersection 6: Mountain Rd/ HWY 138

Control Type:	Two-way stop	Delay (sec / veh):	45.5
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.079

Intersection Setup

Name	Moutain Road			Mountain Road			HWY 138			HWY 138		
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	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	120.00	100.00	100.00	250.00	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]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Moutain Road			Mountain Road			HWY 138			HWY 138		
Base Volume Input [veh/h]	7	0	73	0	0	1	0	651	30	71	364	1
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	0	0	0	0	0	0	48	0	0	52	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]	7	0	76	0	0	1	0	725	31	74	431	1
Peak Hour Factor	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190
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	0	21	0	0	0	0	197	8	20	117	0
Total Analysis Volume [veh/h]	8	0	83	0	0	1	0	789	34	81	469	1
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
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	0.08	0.00	0.22	0.00	0.00	0.00	0.00	0.01	0.00	0.10	0.00	0.00
d_M, Delay for Movement [s/veh]	45.55	39.55	19.16	53.57	35.44	11.03	8.27	0.00	0.00	9.90	0.00	0.00
Movement LOS	E	E	C	F	E	B	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	1.20	1.20	1.20	0.01	0.01	0.01	0.00	0.00	0.00	0.33	0.00	0.00
95th-Percentile Queue Length [ft/ln]	30.05	30.05	30.05	0.13	0.13	0.13	0.00	0.00	0.00	8.24	0.00	0.00
d_A, Approach Delay [s/veh]	21.48			11.03			0.00			1.46		
Approach LOS	C			B			A			A		
d_I, Intersection Delay [s/veh]	1.89											
Intersection LOS	E											

Intersection Level Of Service Report
Intersection 7: Soledad Rd/ HWY 138

Control Type:	Two-way stop	Delay (sec / veh):	16.7
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.010

Intersection Setup

Name	Soledad Rd			Soledad Rd			HWY 138			HWY 138		
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	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	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]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Soledad Rd			Soledad Rd			HWY 138			HWY 138		
Base Volume Input [veh/h]	0	0	0	3	0	0	1	724	0	0	340	2
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	0	0	0	0	0	0	48	0	0	52	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]	0	0	0	3	0	0	1	801	0	0	406	2
Peak Hour Factor	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350
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]	0	0	0	1	0	0	0	214	0	0	109	1
Total Analysis Volume [veh/h]	0	0	0	3	0	0	1	857	0	0	434	2
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	Yes	Yes		
Number of Storage Spaces in Median	2	2	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	16.62	16.01	15.00	16.73	16.11	10.87	8.17	0.00	0.00	9.54	0.00	0.00
Movement LOS	C	C	C	C	C	B	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.03	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.73	0.73	0.73	0.04	0.04	0.04	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	15.88			16.73			0.01			0.00		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	0.05											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 8: 263rd Street / HWY 138

Control Type:	Two-way stop	Delay (sec / veh):	15.3
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.056

Intersection Setup

Name	263rd Street		HWY 138		HWY 138	
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		50.00		50.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	263rd Street		HWY 138		HWY 138	
Base Volume Input [veh/h]	10	3	3	710	310	36
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]	10	0	0	38	41	11
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]	20	3	3	777	364	48
Peak Hour Factor	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	1	1	209	98	13
Total Analysis Volume [veh/h]	21	3	3	835	391	52
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	Yes		
Number of Storage Spaces in Median	2	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.06	0.00	0.00	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	15.28	11.22	8.20	0.00	0.00	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.19	0.19	0.01	0.01	0.00	0.00
95th-Percentile Queue Length [ft/ln]	4.87	4.87	0.13	0.13	0.00	0.00
d_A, Approach Delay [s/veh]	14.77		0.03		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.29					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 9: Ponderosa Rd / HWY 138

Control Type:	Two-way stop	Delay (sec / veh):	10.1
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.003

Intersection Setup

Name	Ponderosa Road		HWY 138		HWY 138	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
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		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Ponderosa Road		HWY 138		HWY 138	
Base Volume Input [veh/h]	0	0	858	1	2	487
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]	0	0	58	0	0	63
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]	0	0	951	1	2	570
Peak Hour Factor	0.9710	0.9710	0.9710	0.9710	0.9710	0.9710
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	245	0	1	147
Total Analysis Volume [veh/h]	0	0	979	1	2	587
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	Yes		
Number of Storage Spaces in Median	2	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.01	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	16.65	16.77	0.00	0.00	10.06	0.00
Movement LOS	C	C	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.08	0.08
d_A, Approach Delay [s/veh]	16.71		0.00		0.03	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.01					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 10: Desert View Rd / HWY 138

Control Type:	Two-way stop	Delay (sec / veh):	16.9
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.007

Intersection Setup

Name	Desert View Road			Desert View Road			HWY 138			HWY 138		
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	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	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]	30.00			30.00			55.00			55.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Desert View Road			Desert View Road			HWY 138			HWY 138		
Base Volume Input [veh/h]	0	0	2	0	0	0	1	847	0	1	494	0
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	0	0	0	0	0	0	58	0	0	63	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]	0	0	2	0	0	0	1	939	0	1	577	0
Peak Hour Factor	0.9550	0.9550	0.9550	0.9550	0.9550	0.9550	0.9550	0.9550	0.9550	0.9550	0.9550	0.9550
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]	0	0	1	0	0	0	0	246	0	0	151	0
Total Analysis Volume [veh/h]	0	0	2	0	0	0	1	983	0	1	604	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	Yes	Yes		
Number of Storage Spaces in Median	2	2	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	19.27	18.17	16.90	19.31	18.11	12.17	8.66	0.00	0.00	10.07	0.00	0.00
Movement LOS	C	C	C	C	C	B	A	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.50	0.50	0.50	0.00	0.00	0.00	0.08	0.00	0.00	0.11	0.00	0.00
d_A, Approach Delay [s/veh]	16.90			16.53			0.01			0.02		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	0.03											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 11: Acorn Rd / HWY 138

Control Type:	Two-way stop	Delay (sec / veh):	19.7
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.004

Intersection Setup

Name	Acorn Road			Acorn Road			HWY 138			HWY 138		
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	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	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]	30.00			30.00			55.00			55.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Acorn Road			Acorn Road			HWY 138			HWY 138		
Base Volume Input [veh/h]	0	0	1	1	0	0	0	849	0	0	495	3
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	0	0	0	0	0	0	58	0	0	63	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]	0	0	1	1	0	0	0	941	0	0	578	3
Peak Hour Factor	0.9320	0.9320	0.9320	0.9320	0.9320	0.9320	0.9320	0.9320	0.9320	0.9320	0.9320	0.9320
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]	0	0	0	0	0	0	0	252	0	0	155	1
Total Analysis Volume [veh/h]	0	0	1	1	0	0	0	1010	0	0	620	3
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	Yes	Yes		
Number of Storage Spaces in Median	2	2	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	19.67	18.48	17.30	19.73	18.49	12.40	8.72	0.00	0.00	10.19	0.00	0.00
Movement LOS	C	C	C	C	C	B	A	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.26	0.26	0.26	0.31	0.31	0.31	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	17.30			19.73			0.00			0.00		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	0.02											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 12: Green Rd-Phelan Rd/ HWY 138

Control Type:	Signalized	Delay (sec / veh):	25.4
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.479

Intersection Setup

Name	Green Road			Phelan Road			HWY 138			HWY 138		
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	0	0	0	0	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	360.00	100.00	445.00	635.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	1	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	1800.00	0.00	350.00	0.00	0.00	0.00
Speed [mph]	45.00			55.00			55.00			55.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			No			No			No		

Volumes

Name	Green Road			Phelan Road			HWY 138			HWY 138		
Base Volume Input [veh/h]	2	20	11	9	39	160	146	655	10	24	381	5
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	4	6	0	5	29	24	34	0	6	34	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]	2	25	17	9	46	195	176	715	10	31	430	5
Peak Hour Factor	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230
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	7	5	2	12	53	48	194	3	8	116	1
Total Analysis Volume [veh/h]	2	27	18	10	50	211	191	775	11	34	466	5
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]	70
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]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	6	0	0	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	14	0	0	14	0	26	36	0	10	20	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	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	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
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
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

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	L	C	R	L	C	R
C, Cycle Length [s]	70	70	70	70	70	70	70	70
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	2.00	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
g_i, Effective Green Time [s]	37	37	9	18	18	2	12	12
g / C, Green / Cycle	0.53	0.53	0.13	0.26	0.26	0.04	0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.03	0.16	0.11	0.21	0.01	0.02	0.13	0.00
s, saturation flow rate [veh/h]	1765	1664	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	987	934	242	953	425	66	602	269
d1, Uniform Delay [s]	7.99	9.28	29.43	24.21	19.15	33.19	27.97	24.44
k, delay calibration	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
d2, Incremental Delay [s]	0.09	0.79	5.74	1.74	0.02	6.17	2.17	0.03
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	0.05	0.29	0.79	0.81	0.03	0.52	0.77	0.02
d, Delay for Lane Group [s/veh]	8.08	10.07	35.17	25.95	19.18	39.35	30.15	24.47
Lane Group LOS	A	B	D	C	B	D	C	C
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.29	1.86	3.13	5.32	0.12	0.62	3.45	0.06
50th-Percentile Queue Length [ft/ln]	7.36	46.53	78.26	132.99	2.93	15.59	86.21	1.58
95th-Percentile Queue Length [veh/ln]	0.53	3.35	5.63	9.10	0.21	1.12	6.21	0.11
95th-Percentile Queue Length [ft/ln]	13.25	83.76	140.86	227.55	5.27	28.07	155.18	2.85

Movement, Approach, & Intersection Results

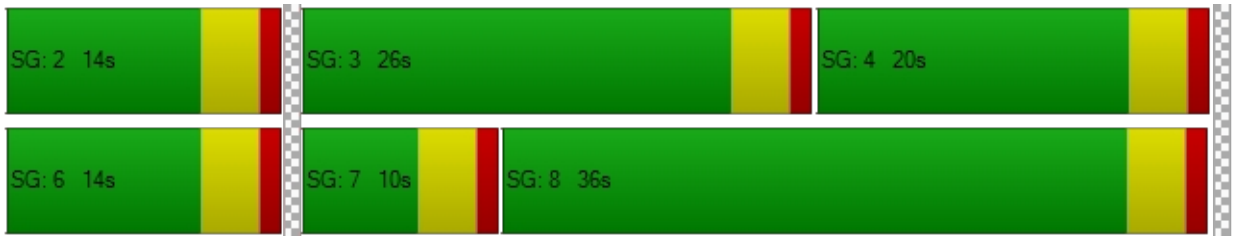
d_M, Delay for Movement [s/veh]	8.08	8.08	8.08	10.07	10.07	10.07	35.17	25.95	19.18	39.35	30.15	24.47
Movement LOS	A	A	A	B	B	B	D	C	B	D	C	C
d_A, Approach Delay [s/veh]	8.08			10.07			27.67			30.71		
Approach LOS	A			B			C			C		
d_I, Intersection Delay [s/veh]	25.36											
Intersection LOS	C											
Intersection V/C	0.479											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	0.0
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	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000	0.000
Crosswalk LOS	F	F	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	285	285	913	457
d_b, Bicycle Delay [s]	25.74	25.74	10.34	20.86
l_b,int, Bicycle LOS Score for Intersection	1.637	2.007	2.366	1.976
Bicycle LOS	A	B	B	A

Sequence

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



OPENING YEAR WITH PROJECT TRAFFIC CONDITIONS

Intersection Level Of Service Report
Intersection 1: Oasis Rd / Route 138

Control Type:	Signalized	Delay (sec / veh):	33.4
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.836

Intersection Setup

Name	Oasis Road			Oasis Road			HWY 138			HWY 138		
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	0	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	120.00	100.00	100.00	525.00	100.00	525.00	525.00	100.00	525.00
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			55.00			0.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Oasis Road			Oasis Road			HWY 138			HWY 138		
Base Volume Input [veh/h]	1	12	13	185	20	54	40	399	11	4	488	139
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]	139	32	146	11	32	0	0	54	138	150	49	10
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]	140	44	160	203	53	56	42	469	149	154	557	155
Peak Hour Factor	0.8470	0.8470	0.8470	0.8470	0.8470	0.8470	0.8470	0.8470	0.8470	0.8470	0.8470	0.8470
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	13	47	60	16	17	12	138	44	45	164	46
Total Analysis Volume [veh/h]	165	52	189	240	63	66	50	554	176	182	658	183
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
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

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												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	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
Split [s]	17	23	0	17	23	0	12	35	0	15	38	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
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	14	0	0	14	0	0	10	0	0	10	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
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	
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
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

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	L	C	R	L	C	R
C, 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]	9	16	12	19	3	26	26	10	32	32
g / C, Green / Cycle	0.11	0.20	0.15	0.24	0.04	0.32	0.32	0.12	0.40	0.40
(v / s)_i Volume / Saturation Flow Rate	0.09	0.14	0.13	0.07	0.03	0.29	0.11	0.10	0.35	0.11
s, saturation flow rate [veh/h]	1810	1669	1810	1743	1810	1900	1615	1810	1900	1615
c, Capacity [veh/h]	205	333	280	420	77	614	522	222	765	651
d1, Uniform Delay [s]	34.64	29.98	32.98	24.90	37.75	25.91	20.60	34.29	21.85	16.11
k, delay calibration	0.11	0.50	0.11	0.50	0.11	0.25	0.11	0.11	0.25	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
d2, Incremental Delay [s]	7.18	12.77	7.40	1.88	8.70	10.99	0.38	7.37	6.60	0.23
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	0.80	0.72	0.86	0.31	0.65	0.90	0.34	0.82	0.86	0.28
d, Delay for Lane Group [s/veh]	41.82	42.75	40.38	26.79	46.45	36.90	20.98	41.66	28.46	16.34
Lane Group LOS	D	D	D	C	D	D	C	D	C	B
Critical Lane Group	No	Yes	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.34	5.19	4.67	2.01	1.20	12.44	2.72	3.64	10.96	2.00
50th-Percentile Queue Length [ft/ln]	83.58	129.64	116.65	50.19	30.07	311.09	68.12	90.92	273.97	50.03
95th-Percentile Queue Length [veh/ln]	6.02	8.92	8.21	3.61	2.17	18.23	4.90	6.55	16.39	3.60
95th-Percentile Queue Length [ft/ln]	150.44	223.00	205.21	90.34	54.13	455.72	122.62	163.66	409.70	90.06

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	41.82	42.75	42.75	40.38	26.79	26.79	46.45	36.90	20.98	41.66	28.46	16.34
Movement LOS	D	D	D	D	C	C	D	D	C	D	C	B
d_A, Approach Delay [s/veh]	42.37			35.63			33.92			28.64		
Approach LOS	D			D			C			C		
d_I, Intersection Delay [s/veh]	33.40											
Intersection LOS	C											
Intersection V/C	0.836											

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]	31.53	31.53	31.53	31.53
l_p,int, Pedestrian LOS Score for Intersection	2.339	2.326	2.127	2.942
Crosswalk LOS	B	B	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	475	475	774	849
d_b, Bicycle Delay [s]	23.28	23.28	15.03	13.25
l_b,int, Bicycle LOS Score for Intersection	2.230	2.168	2.847	3.248
Bicycle LOS	B	B	C	C

Sequence

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



Intersection Level Of Service Report
Intersection 2: Oasis Rd / Buckthorne Rd

Control Type:	Two-way stop	Delay (sec / veh):	9.2
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.035

Intersection Setup

Name	Oasis Road			Oasis Road			Buckthorne Road			Buckthorne Road		
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	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	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			45.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Oasis Road			Oasis Road			Buckthorne Road			Buckthorne Road		
Base Volume Input [veh/h]	0	6	0	0	28	0	0	0	0	0	0	23
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]	35	0	0	0	12	160	317	0	23	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]	35	6	0	0	41	160	317	0	23	0	0	24
Peak Hour Factor	1.0000	0.7500	0.7500	1.0000	0.7500	0.7500	1.0000	1.0000	0.7500	1.0000	1.0000	0.7500
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]	9	2	0	0	14	53	79	0	8	0	0	8
Total Analysis Volume [veh/h]	35	8	0	0	55	213	317	0	31	0	0	32
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane				
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.03
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.20	0.00	0.00	8.44
Movement LOS		A	A		A	A			A			A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.09
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.71	0.00	0.00	2.29
d_A, Approach Delay [s/veh]	0.00			0.00			9.20			8.44		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	1.64											
Intersection LOS	A											

Intersection Level Of Service Report
Intersection 3: Project Driveway #1/ Buckthorne Rd

Control Type:	Two-way stop	Delay (sec / veh):	9.5
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.176

Intersection Setup

Name	Project Driveway #1		Buckthorne Road		Buckthorne Road	
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]	15.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Project Driveway #1		Buckthorne Road		Buckthorne Road	
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]	170	0	0	0	0	98
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]	170	0	0	0	0	98
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]	43	0	0	0	0	25
Total Analysis Volume [veh/h]	170	0	0	0	0	98
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
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	0.18	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	9.52	8.51	7.39	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.64	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	15.93	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	9.52		3.69		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	6.04					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 4: Project Driveway #2/Buckthorne Rd

Control Type:	Two-way stop	Delay (sec / veh):	12.0
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.250

Intersection Setup

Name	Project Driveway #2		Buckthorne Road		Buckthorne Road	
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]	15.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Project Driveway #2		Buckthorne Road		Buckthorne Road	
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]	170	0	0	170	98	98
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]	170	0	0	170	98	98
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]	43	0	0	43	25	25
Total Analysis Volume [veh/h]	170	0	0	170	98	98
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
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	0.25	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	12.05	8.98	7.59	0.00	0.00	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.98	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	24.61	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	12.05		0.00		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	3.82					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 5: Oasis Rd/ Project Driveway #3

Control Type:	Two-way stop	Delay (sec / veh):	9.5
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.015

Intersection Setup

Name	Oasis Road		Oasis Road		Project Driveway #3	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	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		45.00		15.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Oasis Road		Oasis Road		Project Driveway #3	
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]	0	317	160	160	0	12
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]	0	317	160	160	0	12
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]	0	79	40	40	0	3
Total Analysis Volume [veh/h]	0	317	160	160	0	12
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
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	0.00	0.00	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	7.88	0.00	0.00	0.00	12.27	9.55
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.05
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	1.14
d_A, Approach Delay [s/veh]	0.00		0.00		9.55	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.18					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 6: Mountain Rd/ HWY 138

Control Type:	Two-way stop	Delay (sec / veh):	59.6
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.057

Intersection Setup

Name	Moutain Road			Mountain Road			HWY 138			HWY 138		
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	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	120.00	100.00	100.00	250.00	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]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Moutain Road			Mountain Road			HWY 138			HWY 138		
Base Volume Input [veh/h]	10	0	89	0	0	0	0	365	12	56	473	0
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	0	4	4	0	0	0	184	0	4	180	4
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	0	97	4	0	0	0	564	12	62	672	4
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
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	0	26	1	0	0	0	153	3	17	183	1
Total Analysis Volume [veh/h]	11	0	105	4	0	0	0	613	13	67	730	4
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	2	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.11	0.00	0.21	0.06	0.00	0.00	0.00	0.01	0.00	0.07	0.01	0.00
d_M, Delay for Movement [s/veh]	47.12	40.71	17.18	59.62	39.14	16.59	9.09	0.00	0.00	9.01	0.00	0.00
Movement LOS	E	E	C	F	E	C	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	1.39	1.39	1.39	0.18	0.18	0.18	0.00	0.00	0.00	0.22	0.00	0.00
95th-Percentile Queue Length [ft/ln]	34.86	34.86	34.86	4.46	4.46	4.46	0.00	0.00	0.00	5.58	0.00	0.00
d_A, Approach Delay [s/veh]	20.02			59.62			0.00			0.75		
Approach LOS	C			F			A			A		
d_I, Intersection Delay [s/veh]	2.05											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 7: Soledad Rd/ HWY 138

Control Type:	Two-way stop	Delay (sec / veh):	16.4
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.016

Intersection Setup

Name	Soledad Rd			Soledad Rd			HWY 138			HWY 138		
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	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	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]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Soledad Rd			Soledad Rd			HWY 138			HWY 138		
Base Volume Input [veh/h]	0	0	0	1	0	0	0	350	0	2	492	0
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	0	0	4	0	0	0	180	0	0	176	4
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]	0	0	0	5	0	0	0	544	0	2	688	4
Peak Hour Factor	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270
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]	0	0	0	1	0	0	0	147	0	1	186	1
Total Analysis Volume [veh/h]	0	0	0	5	0	0	0	587	0	2	742	4
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	Yes	Yes		
Number of Storage Spaces in Median	2	2	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	16.17	15.73	12.01	16.36	15.90	13.79	9.13	0.00	0.00	8.61	0.00	0.00
Movement LOS	C	C	B	C	C	B	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.05	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	1.18	1.18	1.18	0.00	0.00	0.00	0.08	0.08	0.08
d_A, Approach Delay [s/veh]	14.64			16.36			0.00			0.02		
Approach LOS	B			C			A			A		
d_I, Intersection Delay [s/veh]	0.07											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 8: 263rd Street / HWY 138

Control Type:	Two-way stop	Delay (sec / veh):	16.0
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.137

Intersection Setup

Name	263rd Street		HWY 138		HWY 138	
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		50.00		50.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	263rd Street		HWY 138		HWY 138	
Base Volume Input [veh/h]	31	1	0	328	479	13
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]	15	0	0	165	162	14
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]	47	1	0	506	660	28
Peak Hour Factor	0.8990	0.8990	0.8990	0.8990	0.8990	0.8990
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	0	0	141	184	8
Total Analysis Volume [veh/h]	52	1	0	563	734	31
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	Yes		
Number of Storage Spaces in Median	2	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.14	0.00	0.00	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	16.00	15.20	9.20	0.00	0.00	0.00
Movement LOS	C	C	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.48	0.48	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	12.00	12.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	15.99		0.00		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.61					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 9: Ponderosa Rd / HWY 138

Control Type:	Two-way stop	Delay (sec / veh):	19.1
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.027

Intersection Setup

Name	Ponderosa Road		HWY 138		HWY 138	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
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		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Ponderosa Road		HWY 138		HWY 138	
Base Volume Input [veh/h]	2	1	573	1	1	637
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]	4	0	207	4	0	205
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]	6	1	803	5	1	868
Peak Hour Factor	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	0	228	1	0	247
Total Analysis Volume [veh/h]	7	1	913	6	1	986
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	Yes		
Number of Storage Spaces in Median	2	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.00	0.01	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	19.12	16.22	0.00	0.00	9.80	0.00
Movement LOS	C	C	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.09	0.09	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	2.29	2.29	0.00	0.00	0.04	0.04
d_A, Approach Delay [s/veh]	18.76		0.00		0.01	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.08					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 10: Desert View Rd / HWY 138

Control Type:	Two-way stop	Delay (sec / veh):	22.7
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.033

Intersection Setup

Name	Desert View Road			Desert View Road			HWY 138			HWY 138		
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	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	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]	30.00			30.00			55.00			55.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Desert View Road			Desert View Road			HWY 138			HWY 138		
Base Volume Input [veh/h]	2	0	0	2	0	0	1	580	0	1	621	0
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]	4	0	0	0	0	4	4	199	4	0	197	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]	6	0	0	2	0	4	5	802	4	1	843	0
Peak Hour Factor	0.8720	0.8720	0.8720	0.8720	0.8720	0.8720	0.8720	0.8720	0.8720	0.8720	0.8720	0.8720
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	0	0	1	0	1	1	230	1	0	242	0
Total Analysis Volume [veh/h]	7	0	0	2	0	5	6	920	5	1	967	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	Yes	Yes		
Number of Storage Spaces in Median	2	2	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.00	0.00	0.01	0.00	0.02	0.01	0.01	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	22.74	20.96	16.50	22.15	20.62	16.91	10.04	0.00	0.00	9.83	0.00	0.00
Movement LOS	C	C	C	C	C	C	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.10	0.10	0.10	0.08	0.08	0.08	0.03	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	2.58	2.58	2.58	1.95	1.95	1.95	0.63	0.00	0.00	0.10	0.00	0.00
d_A, Approach Delay [s/veh]	22.74			18.41			0.06			0.01		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	0.19											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 11: Acorn Rd / HWY 138

Control Type:	Two-way stop	Delay (sec / veh):	22.8
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.024

Intersection Setup

Name	Acorn Road			Acorn Road			HWY 138			HWY 138		
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	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	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]	30.00			30.00			55.00			55.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Acorn Road			Acorn Road			HWY 138			HWY 138		
Base Volume Input [veh/h]	0	0	1	0	0	0	1	589	0	0	618	0
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]	4	0	0	0	0	4	4	191	4	0	189	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	0	1	0	0	4	5	804	4	0	832	0
Peak Hour Factor	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610
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	0	0	0	0	1	1	233	1	0	242	0
Total Analysis Volume [veh/h]	5	0	1	0	0	5	6	934	5	0	966	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	Yes	Yes		
Number of Storage Spaces in Median	2	2	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.00	0.00	0.02	0.01	0.01	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	22.79	20.99	16.57	22.20	20.62	16.75	10.00	0.00	0.00	9.88	0.00	0.00
Movement LOS	C	C	C	C	C	C	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.08	0.08	0.08	0.05	0.05	0.05	0.01	0.01	0.01	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	2.09	2.09	2.09	1.22	1.22	1.22	0.25	0.25	0.25	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	21.75			16.75			0.06			0.00		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	0.14											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 12: Green Rd-Phelan Rd/ HWY 138

Control Type:	Signalized	Delay (sec / veh):	25.9
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.574

Intersection Setup

Name	Green Road			Phelan Road			HWY 138			HWY 138		
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	0	0	0	0	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	360.00	100.00	445.00	635.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	1	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	1800.00	0.00	350.00	0.00	0.00	0.00
Speed [mph]	45.00			55.00			55.00			55.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			No			No			No		

Volumes

Name	Green Road			Phelan Road			HWY 138			HWY 138		
Base Volume Input [veh/h]	12	29	19	4	20	179	157	417	11	9	426	1
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]	4	6	5	0	5	34	40	147	4	5	151	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]	16	36	25	4	26	220	203	581	15	14	594	1
Peak Hour Factor	0.8790	0.8790	0.8790	0.8790	0.8790	0.8790	0.8790	0.8790	0.8790	0.8790	0.8790	0.8790
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]	5	10	7	1	7	63	58	165	4	4	169	0
Total Analysis Volume [veh/h]	18	41	28	5	30	250	231	661	17	16	676	1
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
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]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	6	0	0	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	14	0	0	14	0	24	36	0	10	22	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	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	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
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
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

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	L	C	R	L	C	R
C, Cycle Length [s]	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
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	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
g_i, Effective Green Time [s]	38	38	12	28	28	2	18	18
g / C, Green / Cycle	0.48	0.48	0.15	0.35	0.35	0.02	0.22	0.22
(v / s)_i Volume / Saturation Flow Rate	0.05	0.17	0.13	0.18	0.01	0.01	0.19	0.00
s, saturation flow rate [veh/h]	1651	1643	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	842	829	277	1277	570	37	797	356
d1, Uniform Delay [s]	11.51	13.25	32.94	20.51	16.94	38.79	29.94	24.36
k, delay calibration	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
d2, Incremental Delay [s]	0.25	1.13	6.53	0.33	0.02	8.04	2.62	0.00
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	0.10	0.34	0.83	0.52	0.03	0.44	0.85	0.00
d, Delay for Lane Group [s/veh]	11.76	14.38	39.47	20.83	16.96	46.83	32.56	24.36
Lane Group LOS	B	B	D	C	B	D	C	C
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.79	2.88	4.43	4.25	0.18	0.37	5.83	0.01
50th-Percentile Queue Length [ft/ln]	19.85	72.00	110.67	106.19	4.53	9.22	145.67	0.34
95th-Percentile Queue Length [veh/ln]	1.43	5.18	7.88	7.63	0.33	0.66	9.79	0.02
95th-Percentile Queue Length [ft/ln]	35.72	129.59	196.94	190.69	8.16	16.59	244.64	0.61

Movement, Approach, & Intersection Results

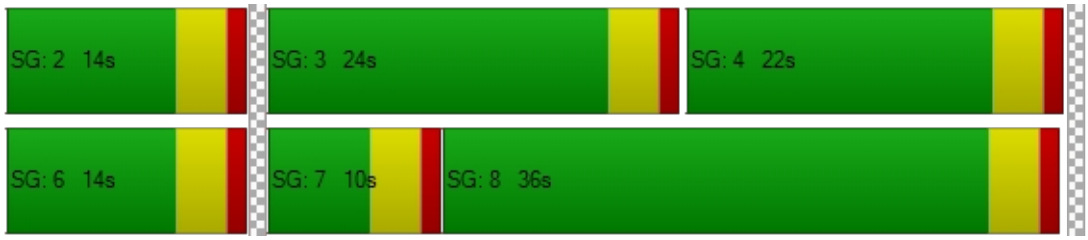
d_M, Delay for Movement [s/veh]	11.76	11.76	11.76	14.38	14.38	14.38	39.47	20.83	16.96	46.83	32.56	24.36
Movement LOS	B	B	B	B	B	B	D	C	B	D	C	C
d_A, Approach Delay [s/veh]	11.76			14.38			25.50			32.88		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	25.88											
Intersection LOS	C											
Intersection V/C	0.574											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	0.0
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	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000	0.000
Crosswalk LOS	F	F	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	250	250	800	450
d_b, Bicycle Delay [s]	30.65	30.65	14.42	24.05
l_b,int, Bicycle LOS Score for Intersection	1.703	2.030	2.310	2.131
Bicycle LOS	A	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 1: Oasis Rd / Route 138

Control Type:	Signalized	Delay (sec / veh):	32.6
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.854

Intersection Setup

Name	Oasis Road			Oasis Road			HWY 138			HWY 138		
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	0	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	120.00	100.00	100.00	525.00	100.00	525.00	525.00	100.00	525.00
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			55.00			0.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Oasis Road			Oasis Road			HWY 138			HWY 138		
Base Volume Input [veh/h]	8	16	20	113	9	26	19	689	28	19	404	95
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]	119	27	128	10	28	0	0	48	121	130	52	11
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]	127	44	149	128	37	27	20	765	150	150	472	110
Peak Hour Factor	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560
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]	33	12	39	33	10	7	5	200	39	39	123	29
Total Analysis Volume [veh/h]	133	46	156	134	39	28	21	800	157	157	494	115
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
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

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												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	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
Split [s]	13	23	0	13	23	0	9	48	0	16	55	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
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	14	0	0	14	0	0	10	0	0	10	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
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	
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
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

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	L	C	R	L	C	R
C, 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]	8	16	8	16	2	40	40	10	48	48
g / C, Green / Cycle	0.09	0.18	0.09	0.18	0.02	0.45	0.45	0.11	0.53	0.53
(v / s)_i Volume / Saturation Flow Rate	0.07	0.12	0.07	0.04	0.01	0.42	0.10	0.09	0.26	0.07
s, saturation flow rate [veh/h]	1810	1672	1810	1770	1810	1900	1615	1810	1900	1615
c, Capacity [veh/h]	167	292	168	310	44	851	723	194	1008	857
d1, Uniform Delay [s]	40.09	34.93	40.06	31.87	43.45	23.75	15.23	39.36	13.42	10.69
k, delay calibration	0.11	0.50	0.11	0.50	0.11	0.33	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
d2, Incremental Delay [s]	8.30	12.65	8.29	1.59	8.01	14.46	0.15	7.83	0.37	0.07
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	0.80	0.69	0.80	0.22	0.48	0.94	0.22	0.81	0.49	0.13
d, Delay for Lane Group [s/veh]	48.39	47.58	48.35	33.46	51.45	38.22	15.38	47.20	13.79	10.76
Lane Group LOS	D	D	D	C	D	D	B	D	B	B
Critical Lane Group	No	Yes	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.14	4.95	3.09	1.29	0.58	20.37	2.16	3.61	5.40	1.00
50th-Percentile Queue Length [ft/ln]	78.41	123.73	77.32	32.33	14.59	509.18	54.08	90.34	135.03	24.98
95th-Percentile Queue Length [veh/ln]	5.65	8.60	5.57	2.33	1.05	27.77	3.89	6.50	9.21	1.80
95th-Percentile Queue Length [ft/ln]	141.14	214.94	139.18	58.20	26.26	694.21	97.34	162.62	230.32	44.97

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	48.39	47.58	47.58	48.35	33.46	33.46	51.45	38.22	15.38	47.20	13.79	10.76
Movement LOS	D	D	D	D	C	C	D	D	B	D	B	B
d_A, Approach Delay [s/veh]	47.90			43.39			34.83			20.18		
Approach LOS	D			D			C			C		
d_I, Intersection Delay [s/veh]	32.58											
Intersection LOS	C											
Intersection V/C	0.854											

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]	36.49	36.49	36.49	36.49
l_p,int, Pedestrian LOS Score for Intersection	2.277	2.170	2.133	2.887
Crosswalk LOS	B	B	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	422	422	977	1132
d_b, Bicycle Delay [s]	28.05	28.05	11.79	8.48
l_b,int, Bicycle LOS Score for Intersection	2.112	1.891	3.173	2.824
Bicycle LOS	B	A	C	C

Sequence

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



Intersection Level Of Service Report
Intersection 2: Oasis Rd / Buckthorne Rd

Control Type:	Two-way stop	Delay (sec / veh):	9.4
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.039

Intersection Setup

Name	Oasis Road			Oasis Road			Buckthorne Road			Buckthorne Road		
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	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	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			45.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Oasis Road			Oasis Road			Buckthorne Road			Buckthorne Road		
Base Volume Input [veh/h]	0	4	0	0	40	0	0	0	0	0	0	35
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]	31	0	0	0	10	140	274	0	21	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]	31	4	0	0	52	140	274	0	21	0	0	36
Peak Hour Factor	1.0000	0.6330	0.6330	1.0000	0.6330	0.6330	1.0000	1.0000	0.6330	1.0000	1.0000	0.6330
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]	8	2	0	0	21	55	69	0	8	0	0	14
Total Analysis Volume [veh/h]	31	6	0	0	82	221	274	0	33	0	0	57
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane				
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.05
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.38	0.00	0.00	8.51
Movement LOS		A	A		A	A			A			A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.00	0.17
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.01	0.00	0.00	4.16
d_A, Approach Delay [s/veh]	0.00			0.00			9.38			8.51		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	1.99											
Intersection LOS	A											

Intersection Level Of Service Report
Intersection 3: Project Driveway #1/ Buckthorne Rd

Control Type:	Two-way stop	Delay (sec / veh):	9.4
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.151

Intersection Setup

Name	Project Driveway #1		Buckthorne Road		Buckthorne Road	
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]	15.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Project Driveway #1		Buckthorne Road		Buckthorne Road	
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]	147	0	0	0	0	85
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]	147	0	0	0	0	85
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]	37	0	0	0	0	21
Total Analysis Volume [veh/h]	147	0	0	0	0	85
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
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	0.15	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	9.35	8.48	7.36	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.53	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	13.27	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	9.35		3.68		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	5.93					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 4: Project Driveway #2/Buckthorne Rd

Control Type:	Two-way stop	Delay (sec / veh):	11.3
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.204

Intersection Setup

Name	Project Driveway #2		Buckthorne Road		Buckthorne Road	
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]	15.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Project Driveway #2		Buckthorne Road		Buckthorne Road	
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]	147	0	0	147	85	85
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]	147	0	0	147	85	85
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]	37	0	0	37	21	21
Total Analysis Volume [veh/h]	147	0	0	147	85	85
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
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	0.20	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	11.28	8.88	7.54	0.00	0.00	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.76	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	19.06	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	11.28		0.00		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	3.58					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 5: Oasis Rd/ Project Driveway #3

Control Type:	Two-way stop	Delay (sec / veh):	9.4
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.012

Intersection Setup

Name	Oasis Road		Oasis Road		Project Driveway #3	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	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		45.00		15.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Oasis Road		Oasis Road		Project Driveway #3	
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]	0	274	140	140	0	10
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]	0	274	140	140	0	10
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]	0	69	35	35	0	3
Total Analysis Volume [veh/h]	0	274	140	140	0	10
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
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	0.00	0.00	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	7.78	0.00	0.00	0.00	11.60	9.36
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.04
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.91
d_A, Approach Delay [s/veh]	0.00		0.00		9.36	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.17					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 6: Mountain Rd/ HWY 138

Control Type:	Two-way stop	Delay (sec / veh):	89.0
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.066

Intersection Setup

Name	Moutain Road			Mountain Road			HWY 138			HWY 138		
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	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	120.00	100.00	100.00	250.00	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]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Moutain Road			Mountain Road			HWY 138			HWY 138		
Base Volume Input [veh/h]	7	0	73	0	0	1	0	651	30	71	364	1
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	0	3	3	0	0	0	163	0	3	165	3
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]	7	0	79	3	0	1	0	840	31	77	544	4
Peak Hour Factor	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190
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	0	21	1	0	0	0	229	8	21	148	1
Total Analysis Volume [veh/h]	8	0	86	3	0	1	0	914	34	84	592	4
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
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	0.12	0.00	0.26	0.07	0.00	0.00	0.00	0.01	0.00	0.11	0.01	0.00
d_M, Delay for Movement [s/veh]	68.77	57.36	24.99	89.00	53.79	16.53	8.64	0.00	0.00	10.55	0.00	0.00
Movement LOS	F	F	C	F	F	C	A	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	1.72	1.72	1.72	0.21	0.21	0.21	0.00	0.00	0.00	0.39	0.00	0.00
95th-Percentile Queue Length [ft/ln]	43.06	43.06	43.06	5.33	5.33	5.33	0.00	0.00	0.00	9.67	0.00	0.00
d_A, Approach Delay [s/veh]	28.72			70.88			0.00			1.30		
Approach LOS	D			F			A			A		
d_I, Intersection Delay [s/veh]	2.24											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 7: Soledad Rd/ HWY 138

Control Type:	Two-way stop	Delay (sec / veh):	19.1
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.023

Intersection Setup

Name	Soledad Rd			Soledad Rd			HWY 138			HWY 138		
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	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	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]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Soledad Rd			Soledad Rd			HWY 138			HWY 138		
Base Volume Input [veh/h]	0	0	0	3	0	0	1	724	0	0	340	2
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	0	0	3	0	0	0	160	0	0	162	3
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]	0	0	0	6	0	0	1	913	0	0	516	5
Peak Hour Factor	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350
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]	0	0	0	2	0	0	0	244	0	0	138	1
Total Analysis Volume [veh/h]	0	0	0	6	0	0	1	976	0	0	552	5
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	Yes	Yes		
Number of Storage Spaces in Median	2	2	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	18.82	17.78	16.71	19.14	18.09	12.05	8.52	0.00	0.00	10.04	0.00	0.00
Movement LOS	C	C	C	C	C	B	A	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.07	0.07	0.07	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	1.76	1.76	1.76	0.04	0.04	0.04	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	17.77			19.14			0.01			0.00		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	0.08											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 8: 263rd Street East/ HWY 138

Control Type:	Two-way stop	Delay (sec / veh):	17.2
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.078

Intersection Setup

Name	263rd Street East		HWY 138		HWY 138	
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		50.00		50.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	263rd Street East		HWY 138		HWY 138	
Base Volume Input [veh/h]	10	3	3	710	310	36
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]	13	0	0	147	148	14
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]	23	3	3	886	471	51
Peak Hour Factor	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	1	1	238	126	14
Total Analysis Volume [veh/h]	25	3	3	952	506	55
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	Yes		
Number of Storage Spaces in Median	2	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.08	0.01	0.00	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	17.21	12.52	8.53	0.00	0.00	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.27	0.27	0.01	0.01	0.00	0.00
95th-Percentile Queue Length [ft/ln]	6.78	6.78	0.13	0.13	0.00	0.00
d_A, Approach Delay [s/veh]	16.71		0.03		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.32					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 9: Ponderosa Rd / HWY 138

Control Type:	Two-way stop	Delay (sec / veh):	18.9
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.011

Intersection Setup

Name	Ponderosa Road		HWY 138		HWY 138	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
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		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Ponderosa Road		HWY 138		HWY 138	
Base Volume Input [veh/h]	0	0	858	1	2	487
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	0	183	3	0	190
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	0	1076	4	2	697
Peak Hour Factor	0.9710	0.9710	0.9710	0.9710	0.9710	0.9710
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	277	1	1	179
Total Analysis Volume [veh/h]	3	0	1108	4	2	718
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	Yes		
Number of Storage Spaces in Median	2	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.01	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	18.88	19.17	0.00	0.00	10.67	0.00
Movement LOS	C	C	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.03	0.03	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.87	0.87	0.00	0.00	0.08	0.08
d_A, Approach Delay [s/veh]	18.88		0.00		0.03	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.04					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 6: Mountain Rd/ HWY 138

Control Type:	Signalized	Delay (sec / veh):	7.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.464

Intersection Setup

Name	Moutain Road			Mountain Road			HWY 138			HWY 138		
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	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	120.00	100.00	100.00	250.00	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]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			No			No			No		

Volumes

Name	Moutain Road			Mountain Road			HWY 138			HWY 138		
Base Volume Input [veh/h]	10	0	89	0	0	0	0	365	12	56	473	0
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	0	18	18	0	0	0	160	0	18	155	18
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	0	111	18	0	0	0	540	12	76	647	18
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
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	0	30	5	0	0	0	147	3	21	176	5
Total Analysis Volume [veh/h]	11	0	121	20	0	0	0	587	13	83	703	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]	70
Coordination Type	Time of Day Pattern Isolated
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

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	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
Split [s]	0	25	0	0	25	0	0	45	0	0	45	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
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	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
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
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
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

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	L	C	L	C
C, Cycle Length [s]	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	9	9	53	53	53	53
g / C, Green / Cycle	0.13	0.13	0.75	0.75	0.75	0.75
(v / s)_i Volume / Saturation Flow Rate	0.08	0.02	0.00	0.32	0.10	0.38
s, saturation flow rate [veh/h]	1623	1125	742	1893	832	1891
c, Capacity [veh/h]	274	254	513	1422	596	1421
d1, Uniform Delay [s]	28.53	26.74	0.00	3.16	6.43	3.50
k, delay calibration	0.11	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.32	0.13	0.00	0.92	0.49	1.30
d3, Initial Queue Delay [s]	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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.48	0.08	0.00	0.42	0.14	0.51
d, Delay for Lane Group [s/veh]	29.85	26.87	0.00	4.08	6.91	4.80
Lane Group LOS	C	C	A	A	A	A
Critical Lane Group	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.11	0.29	0.00	1.26	0.46	1.70
50th-Percentile Queue Length [ft/ln]	52.66	7.35	0.00	31.40	11.44	42.61
95th-Percentile Queue Length [veh/ln]	3.79	0.53	0.00	2.26	0.82	3.07
95th-Percentile Queue Length [ft/ln]	94.79	13.23	0.00	56.52	20.60	76.69

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	29.85	29.85	29.85	26.87	26.87	26.87	0.00	4.08	4.08	6.91	4.80	4.80
Movement LOS	C	C	C	C	C	C	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	29.85			26.87			4.08			5.02		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	7.04											
Intersection LOS	A											
Intersection V/C	0.464											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	0.0
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	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	0.000	0.000
Crosswalk LOS	F	F	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	600	600	1172	1172
d_b, Bicycle Delay [s]	17.15	17.15	6.00	6.00
l_b,int, Bicycle LOS Score for Intersection	1.777	1.593	2.550	2.890
Bicycle LOS	A	A	B	C

Sequence

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



Intersection Level Of Service Report
Intersection 6: Mountain Rd/ HWY 138

Control Type:	Signalized	Delay (sec / veh):	7.3
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.557

Intersection Setup

Name	Moutain Road			Mountain Road			HWY 138			HWY 138		
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	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	120.00	100.00	100.00	250.00	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]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			No			No			No		

Volumes

Name	Moutain Road			Mountain Road			HWY 138			HWY 138		
Base Volume Input [veh/h]	7	0	73	0	0	1	0	651	30	71	364	1
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	0	16	16	0	0	0	142	0	15	143	15
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	0	92	16	0	1	0	819	31	89	522	16
Peak Hour Factor	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190
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	0	25	4	0	0	0	223	8	24	142	4
Total Analysis Volume [veh/h]	8	0	100	17	0	1	0	891	34	97	568	17
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
Coordination Type	Time of Day Pattern Isolated
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

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	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
Split [s]	0	26	0	0	26	0	0	64	0	0	64	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
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	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
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
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
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

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	L	C	L	C
C, Cycle Length [s]	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
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	9	9	73	73	73	73
g / C, Green / Cycle	0.10	0.10	0.81	0.81	0.81	0.81
(v / s)_i Volume / Saturation Flow Rate	0.07	0.02	0.00	0.49	0.16	0.31
s, saturation flow rate [veh/h]	1621	1094	843	1888	614	1890
c, Capacity [veh/h]	212	192	661	1523	440	1525
d1, Uniform Delay [s]	38.60	36.62	0.00	3.30	9.13	2.44
k, delay calibration	0.11	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.88	0.21	0.00	1.81	1.15	0.73
d3, Initial Queue Delay [s]	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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.51	0.09	0.00	0.61	0.22	0.38
d, Delay for Lane Group [s/veh]	40.48	36.83	0.00	5.11	10.28	3.17
Lane Group LOS	D	D	A	A	B	A
Critical Lane Group	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.37	0.37	0.00	2.63	0.89	1.18
50th-Percentile Queue Length [ft/ln]	59.15	9.20	0.00	65.85	22.31	29.57
95th-Percentile Queue Length [veh/ln]	4.26	0.66	0.00	4.74	1.61	2.13
95th-Percentile Queue Length [ft/ln]	106.47	16.56	0.00	118.52	40.16	53.23

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	40.48	40.48	40.48	36.83	36.83	36.83	0.00	5.11	5.11	10.28	3.17	3.17
Movement LOS	D	D	D	D	D	D	A	A	A	B	A	A
d_A, Approach Delay [s/veh]	40.48			36.83			5.11			4.18		
Approach LOS	D			D			A			A		
d_I, Intersection Delay [s/veh]	7.28											
Intersection LOS	A											
Intersection V/C	0.557											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	0.0
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	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	0.000	0.000
Crosswalk LOS	F	F	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	489	489	1334	1334
d_b, Bicycle Delay [s]	25.67	25.67	4.99	4.99
l_b,int, Bicycle LOS Score for Intersection	1.738	1.589	3.086	2.685
Bicycle LOS	A	A	C	B

Sequence

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



APPENDIX D

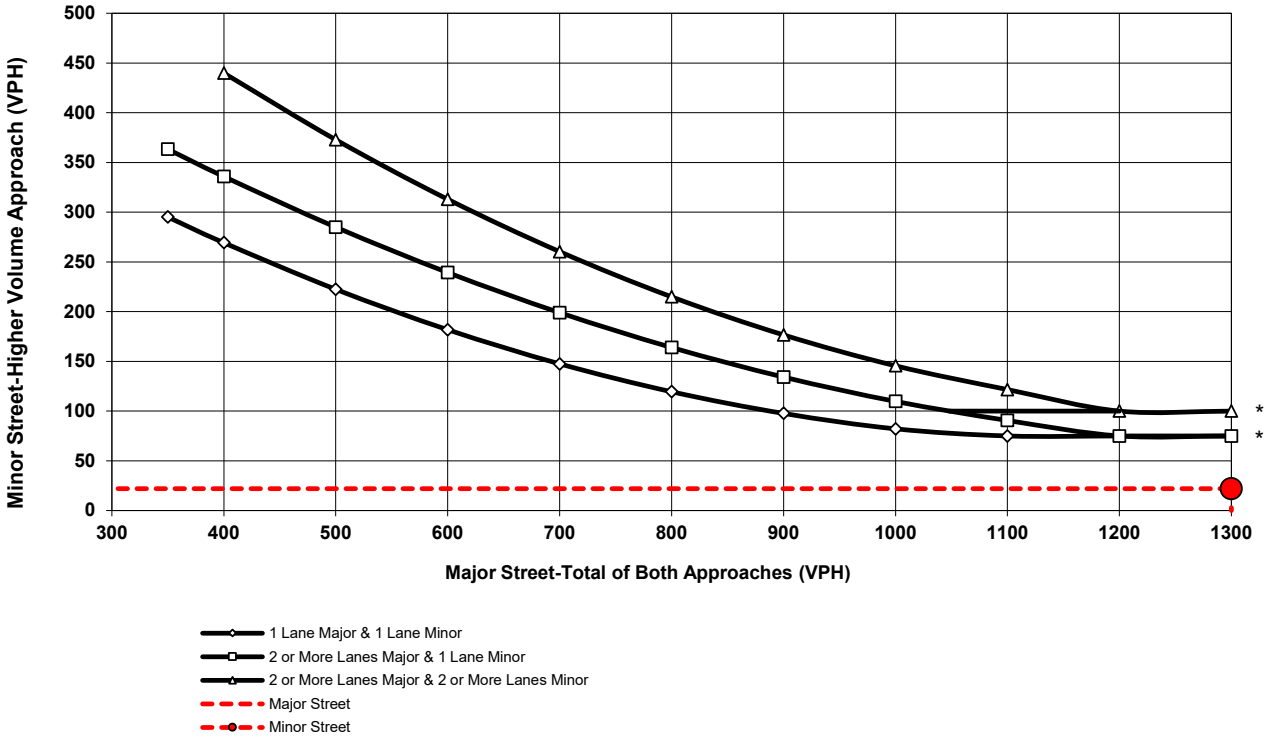
SIGNAL WARRANT REPORTS

PEAK HOUR VOLUME WARRANT
RURAL CONDITIONS
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h (40 mph) ON MAJOR STREET)

Peak Hour:	**AM**	**Scenario:**	**PC (Lefts Restricted)**
Major Street:	**Highway 138**	**Minor Street:**	**Desert View Road**
Total of Both Approaches (VPH):	**1887**	Higher Volume Approach (VPH):	**22**
Number of Approach Lanes:	**2**	Number of Approach Lanes:	**1**

SIGNAL WARRANT NOT SATISFIED

Figure 4C-4. Peak Hour Warrant (Rural)



* Note:
100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 75 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)

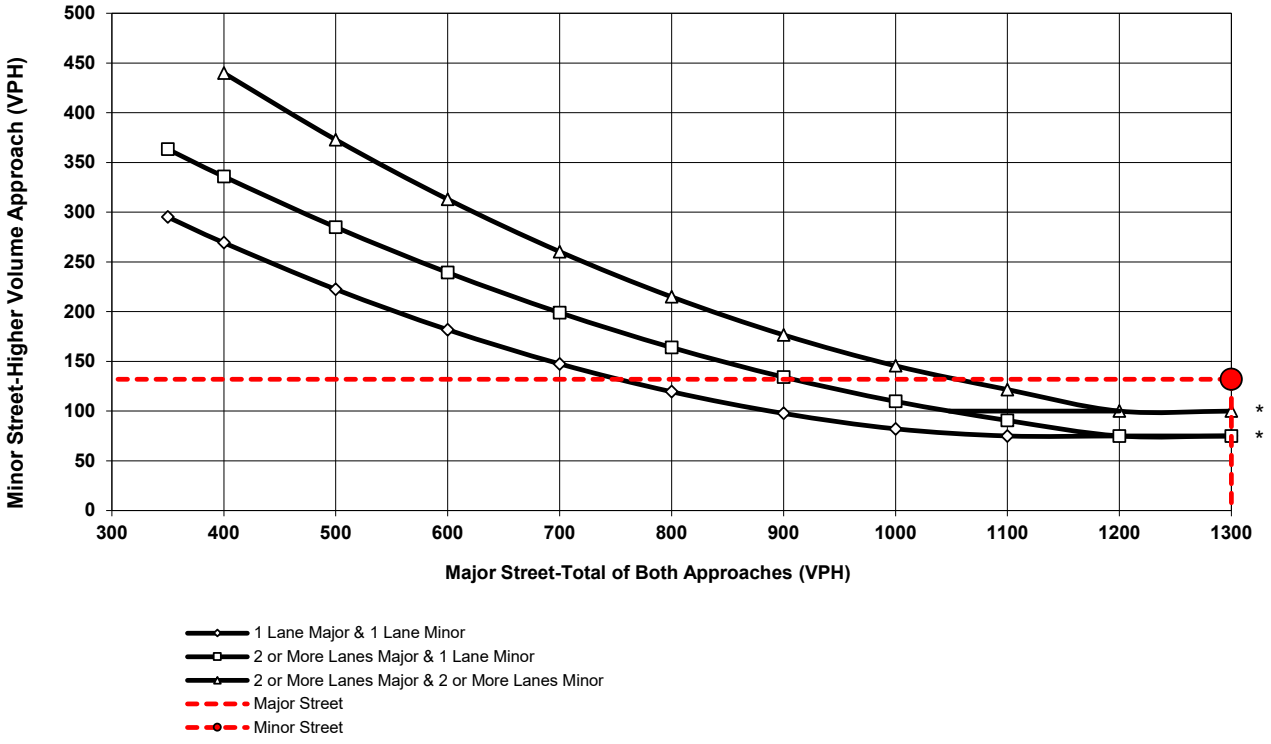
PC (Lefts Restricted) Conditions
AM Peak Hour Volume Warrant
Highway 138 / Desert View Road

PEAK HOUR VOLUME WARRANT
RURAL CONDITIONS
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h (40 mph) ON MAJOR STREET)

Peak Hour:	**AM**	**Scenario:**	**PC (Lefts Restricted)**
Major Street:	**Highway 138**	**Minor Street:**	**Mountain Road**
Total of Both Approaches (VPH):	**1406**	Higher Volume Approach (VPH):	**132**
Number of Approach Lanes:	**2**	Number of Approach Lanes:	**1**

SIGNAL WARRANT SATISFIED

Figure 4C-4. Peak Hour Warrant (Rural)



* Note:
100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 75 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)

PC (Lefts Restricted) Conditions
AM Peak Hour Volume Warrant
Highway 138 / Mountain Road

PEAK HOUR VOLUME WARRANT
RURAL CONDITIONS
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h (40 mph) ON MAJOR STREET)

Peak Hour: PM

Scenario: PC (Lefts Restricted)

Major Street: Highway 138

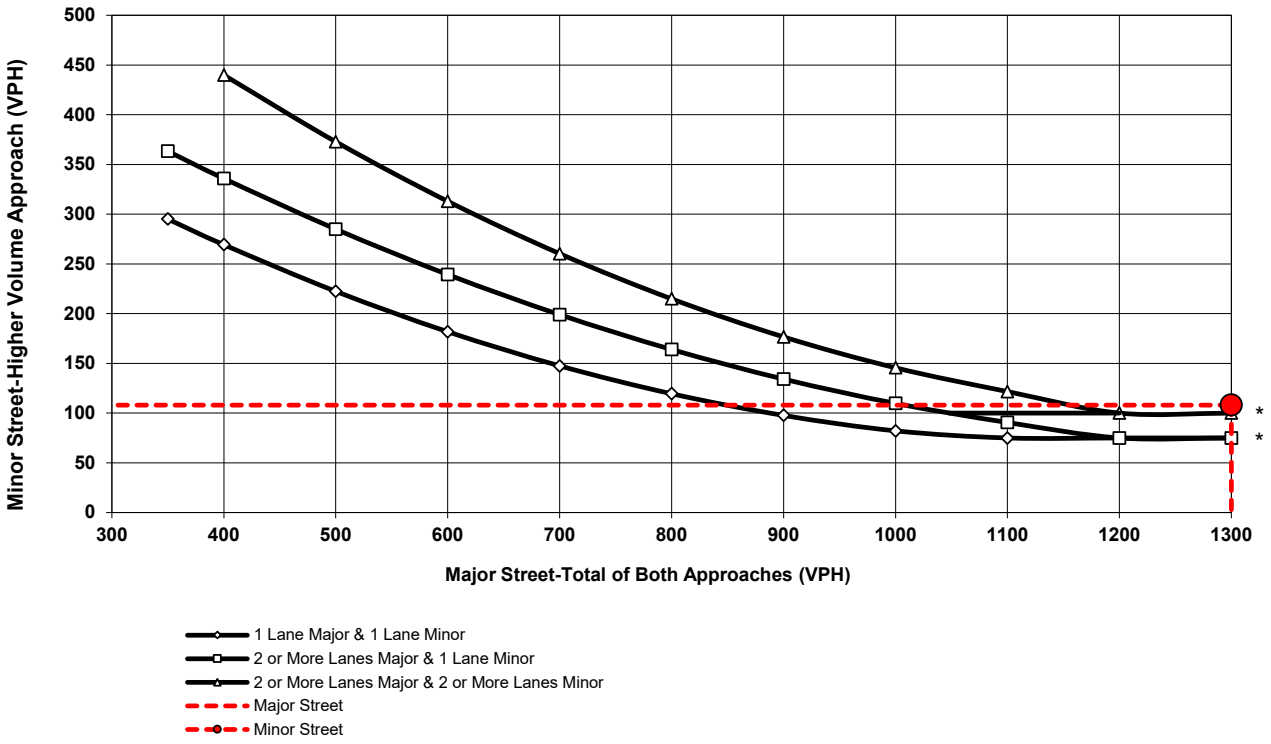
Minor Street: Mountain Road

Total of Both Approaches (VPH): 1587
Number of Approach Lanes: 2

Higher Volume Approach (VPH): 108
Number of Approach Lanes: 1

SIGNAL WARRANT SATISFIED

Figure 4C-4. Peak Hour Warrant (Rural)



* Note:
100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 75 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)

PC (Lefts Restricted) Conditions
PM Peak Hour Volume Warrant
Highway 138 / Mountain Road