

Maverik Fueling Station Traffic Impact Analysis

City of Pinon Hills, California

October 14, 2025

Prepared by:



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CONSULTANTS

October 14, 2025

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,

A handwritten signature in blue ink that reads 'Th Wheat'.

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

A handwritten signature in blue ink that reads 'David Chew'.

David Chew, PTP
Transportation Planner

A handwritten signature in blue ink that reads 'Tiffany Chang'.

Tiffany Chang, EIT
Project Engineer



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David Chew, PTP
Tiffany Chang, EIT



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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 2,569 daily trips, 204 AM peak hour trips, and 192 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 Condition (Existing + Ambient Growth + Cumulative Projects)
- Opening Year Traffic Plus Project Condition (Existing + Ambient Growth + Cumulative Projects + Proposed Project).
- Horizon Year Traffic Condition (Existing + Annual Growth Rate)
- Horizon Year Traffic Plus Project Condition (Existing + Annual Growth Rate + 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			Peak Hour	Existing		Opening Year No Project		Opening Year With Project		Horizon Year No Project		Horizon Year With Project	
1	Oasis Road	Route 138	AM	29.92	C	30.11	C	34.43	C	31.97	C	43.84	D
			PM	31.54	C	33.81	C	34.20	C	47.52	D	48.56	D
2	Oasis Road	Buckthorne Road	AM	8.43	A	8.42	A	9.87	A	8.43	A	9.82	A
			PM	8.50	A	8.50	A	10.34	B	8.97	A	10.00	B
3	Project Dwy #1	Buckthorne Road	AM	-	-	-	-	8.75	A	-	-	8.75	A
			PM	-	-	-	-	8.73	A	-	-	8.73	A
4	Project Dwy #2	Buckthorne Road	AM	-	-	-	-	9.17	A	-	-	9.17	A
			PM	-	-	-	-	9.12	A	-	-	9.12	A
5	Oasis Road	Project Dwy #3	AM	-	-	-	-	8.53	A	-	-	8.53	A
			PM	-	-	-	-	8.53	A	-	-	8.53	A
6	Route 138	Mountain Road	AM	13.54	B	15.21	C	26.79	D	35.16	E	41.10	E
			PM	18.39	C	21.48	C	23.28	C	90.09	F	112.68	F
7	Route 138	Soledad Road	AM	13.10	B	14.08	B	14.63	B	19.10	C	19.98	C
			PM	15.42	C	16.72	C	17.44	C	26.58	D	28.09	D
8	Route 138	263 rd Street East	AM	12.74	B	13.83	B	14.28	B	18.54	C	19.29	C
			PM	13.32	B	14.77	B	15.35	C	21.69	C	22.87	C
9	Route 138	Ponderosa Road	AM	14.14	B	15.40	C	16.21	C	18.71	C	19.70	C
			PM	15.37	C	16.71	C	17.47	C	29.25	D	30.75	D
10	Route 138	Desert View Road	AM	16.50	C	18.32	C	20.16	C	23.81	C	30.62	D
			PM	15.47	C	16.90	C	19.97	C	31.05	D	35.46	E



Intersection			Peak Hour	Existing		Opening Year No Project		Opening Year With Project		Horizon Year No Project		Horizon Year With Project	
11	Route 138	Acorn Road	AM	15.34	B	16.84	C	18.05	C	19.23	C	21.05	C
			PM	17.81	C	19.73	C	19.45	C	30.82	D	34.84	D
12	Route 138	Green Road – Phelan Road	AM	20.11	C	22.51	C	22.77	C	19.09	B	22.49	C
			PM	21.69	C	21.93	C	22.79	C	20.27	C	22.43	C

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

Horizon Year Traffic Conditions

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

- Intersection 6: Mountain Road/Route 138

Horizon Year Plus Project Traffic Conditions

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

- Intersection 6: Mountain Road / Route 138
- Intersection 10: Desert View Road / Route 138



Although intersection 10, Desert View Road and Route 138, is projected to operate at an unacceptable LOS, the trips generated by the project do not surpass the 5.0 second delay threshold. Therefore, per county guidelines, improvements are not required.

1.2 SUMMARY OF IMPROVEMENTS

Analysis of the study intersections found that the following intersections operate below the acceptable LOS and have more than a 5.0 second delay resulting from the trips generated by the proposed project, per *County Guidelines* criteria, will require improvements for *Horizon Year Plus Project* conditions. These intersections are;

- Intersection 6: Mountain Road / Route 138 – **Install Signal**

The study intersection 10, Desert View Road and Route 138 is projected to operate at an unacceptable LOS. However, the trips generated by the project do not surpass the 5.0 second delay threshold and therefore will not require improvements in the *Horizon Year Plus Project* scenario.

Table ES-2
Summary of Improvements and Project Fair Share

Intersection		Improvement	Scenario	Peak Hour	Existing Volume	Total Volume	Project Volume	Project % of Fair Share	
6	Mountain Road	Route 138	Install Signal	Horizon Year Plus Project	AM	1005	1937	71	7.62%
					PM	1198	2247	69	6.58%

Table ES-3
Intersection Analysis – Horizon Year Plus Project with Improvements

Intersection		Improvement	Peak Hour	Horizon Year Plus Project		Horizon Year Plus Project With Improvements Conditions		
				Delay ¹	LOS	Delay ¹	LOS	
6	Mountain Road	Route 138	Install Signal	AM	41.10	E	16.00	B
				PM	112.68	F	25.03	C

1.3 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 Traffic Conditions (Background traffic + Proposed Project)
- Horizon Year Traffic Conditions (Existing + Annual Growth)
- Horizon Year Plus Project Traffic Conditions (Existing + Annual Growth + 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 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

2.4.1 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.

2.4.2 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

2.4.3 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:

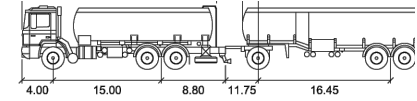
- Project Site
- # Study Intersection Location

Exhibit 1: Project Location



APN: 3068-231-08
 ZONING: GENERAL COMMERCIAL

PINON HILLS, CA 92372-9200
 APN: 3068-231-40-0
 HEMINGWAY FAMILY TRUST /97
 ZONING: GENERAL COMMERCIAL



Custom

- First Unit Width
- Trailer Width
- First Unit Track
- Trailer Track

- feet
 - : 8.00
 - : 8.00
 - : 7.70
 - : 7.70
- Lock to Lock Time
 Steering Angle
 Articulating Angle

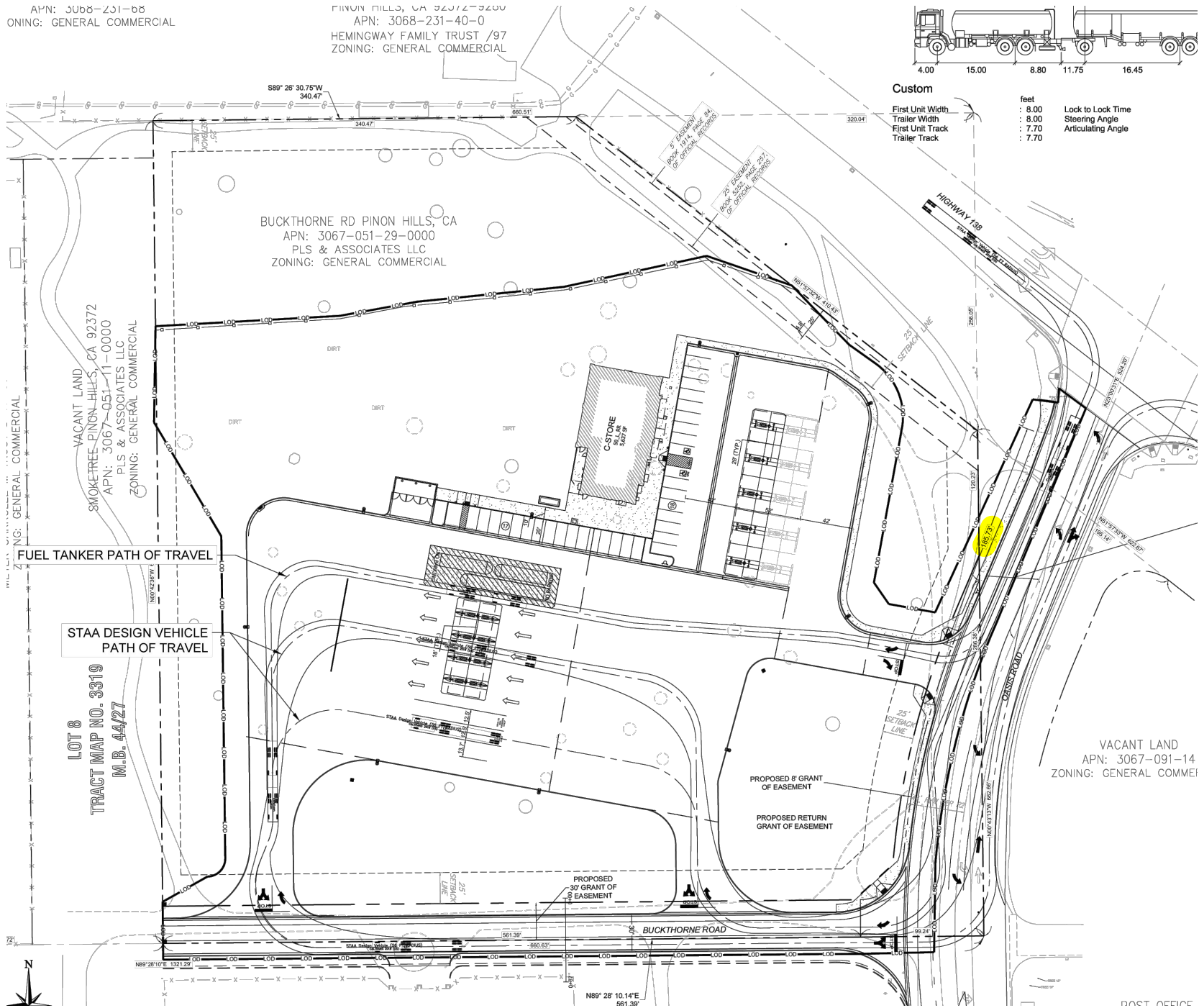


Exhibit 2: Proposed Project Site Plan

Pinon Hills Traffic Impact Analysis

CSG-23-001



Not to Scale

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	35	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
263 rd 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 (VFTA) 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	29.92	C
				PM	31.54	C
2	Oasis Road	Buckthorne Road	TWSC	AM	8.43	A
				PM	8.50	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	13.54	B
				PM	18.39	C
7	Soledad Road	Route 138	TWSC	AM	13.10	B
				PM	15.42	C
8	263 rd Street East	Route 138	TWSC	AM	12.74	B
				PM	13.32	B
9	Ponderosa Road	Route 138	TWSC	AM	14.14	B
				PM	15.37	C
10	Desert View Road	Route 138	TWSC	AM	16.50	C
				PM	15.47	C
11	Acorn Road	Route 138	TWSC	AM	15.34	B
				PM	17.81	C

Intersection			Control Type	Peak Hour	Existing Conditions	
					Delay (s/veh)	LOS
12	Green Road-Phelan Road	Route 138	Signal	AM	20.11	C
				PM	21.69	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 Oasis Road between Route 138 and Buckthorne 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

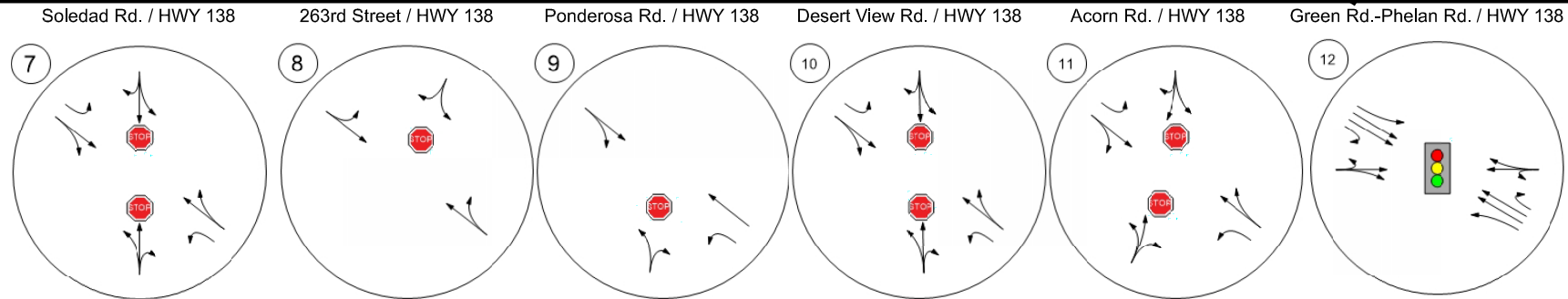
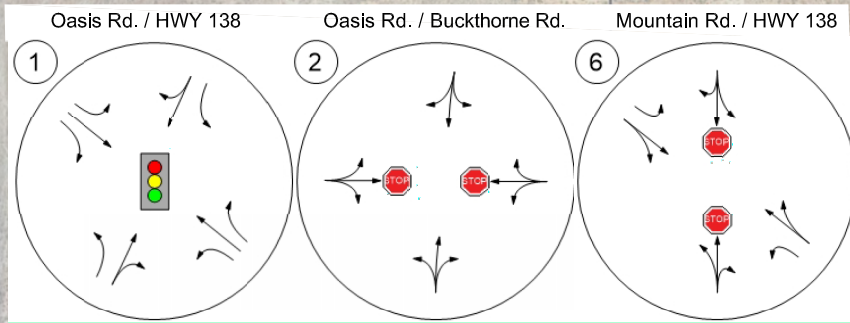
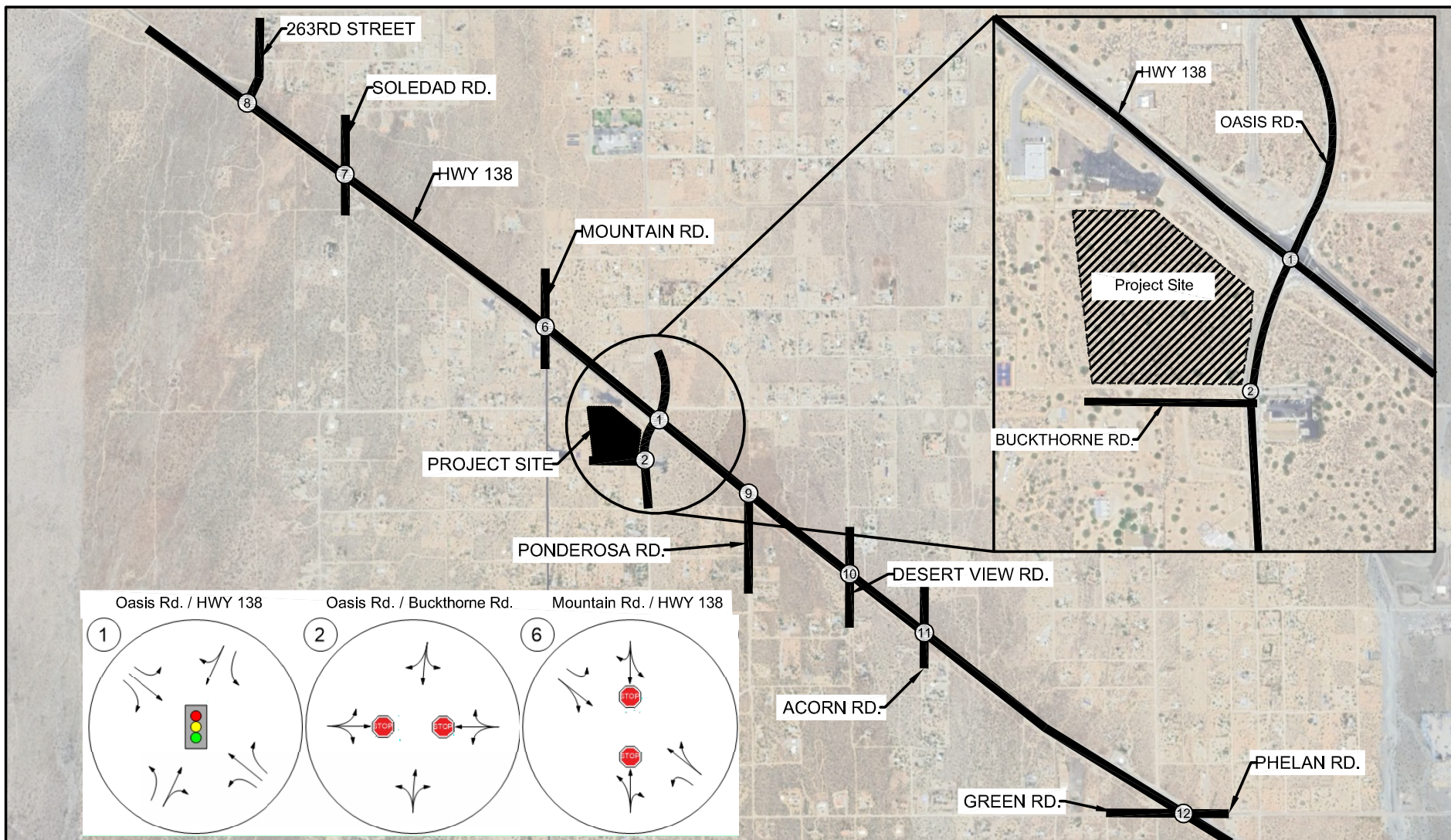


Exhibit 3: Existing Lane Geometry and Intersection Controls

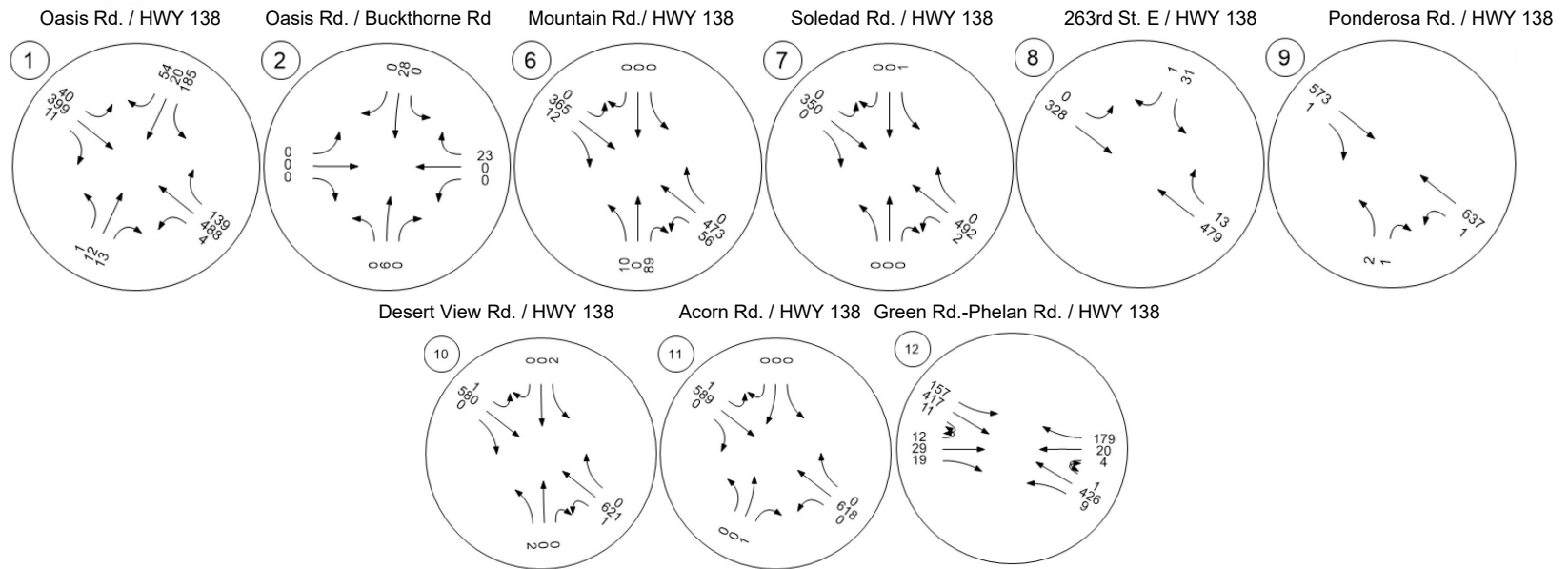
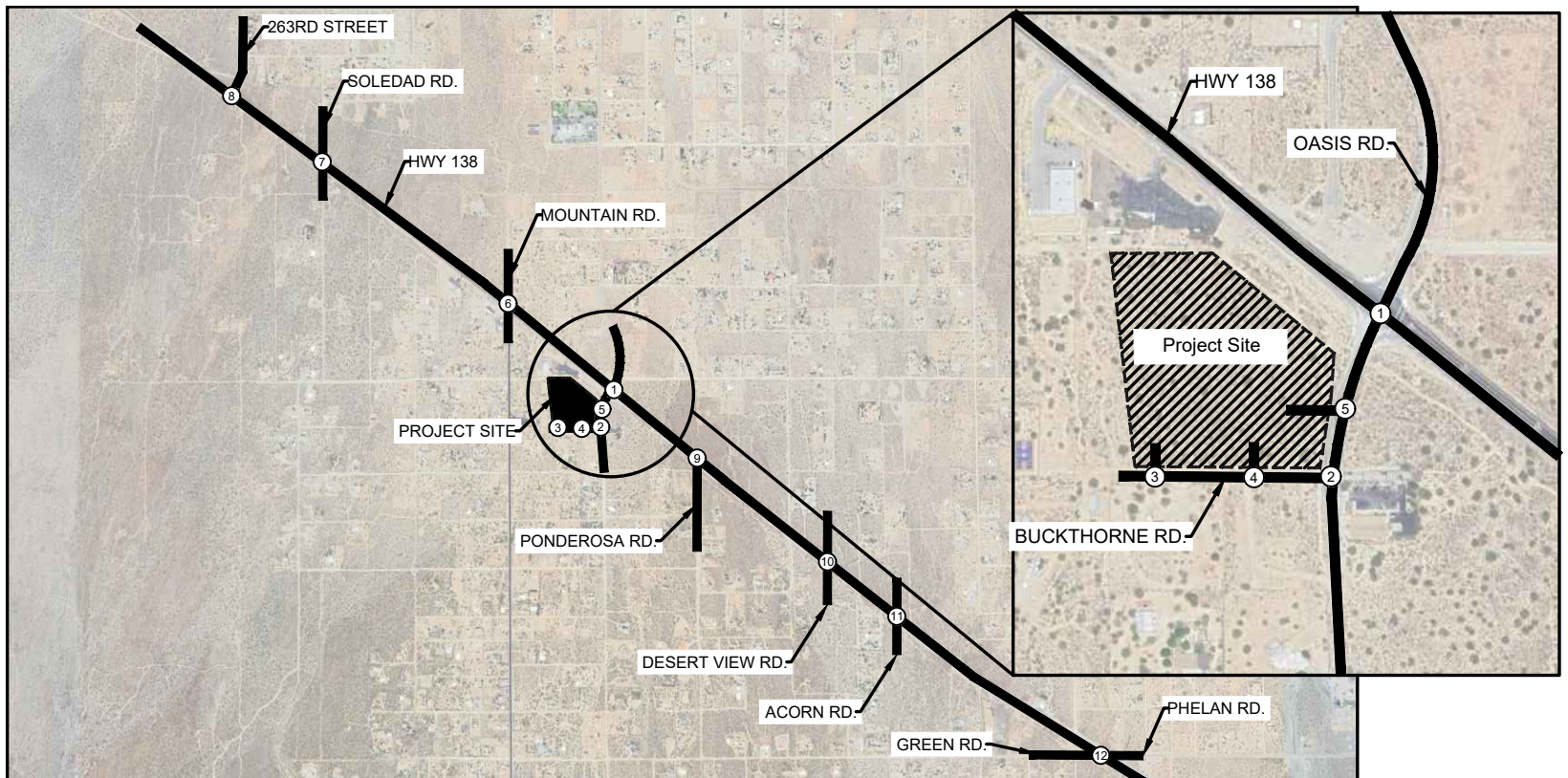


Exhibit 4: Existing AM Peak Hour Volumes

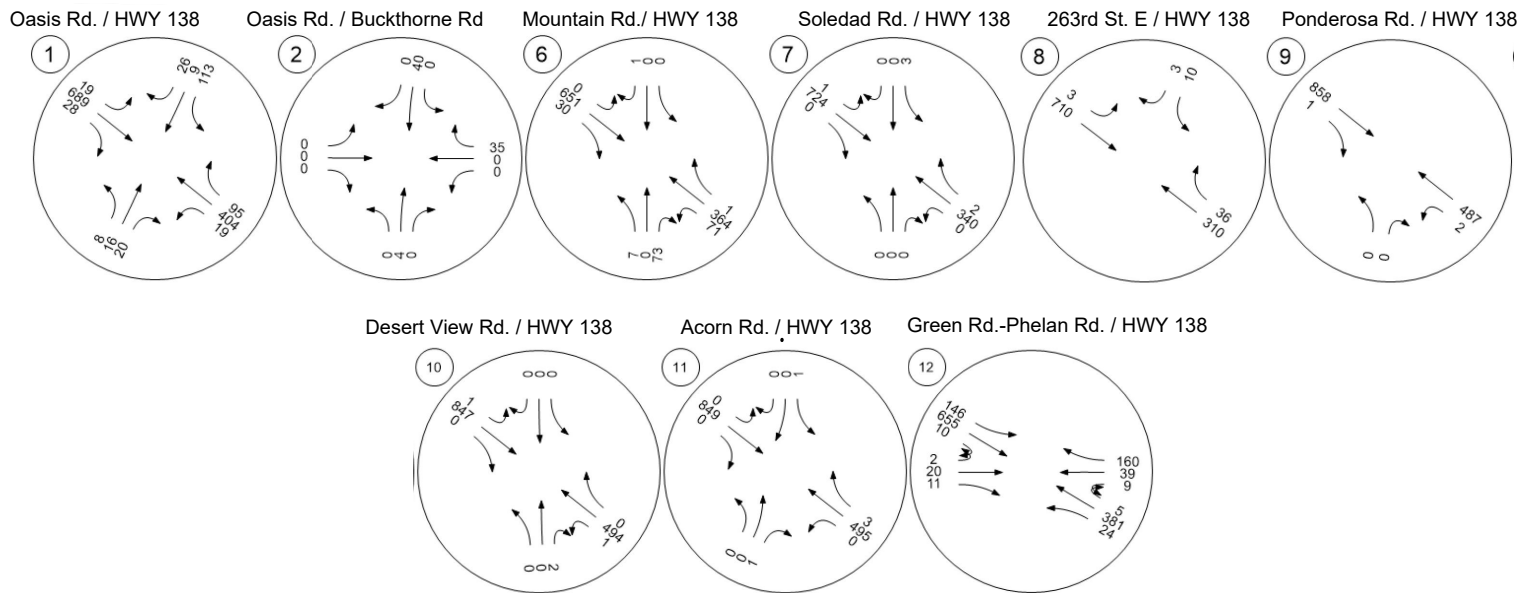
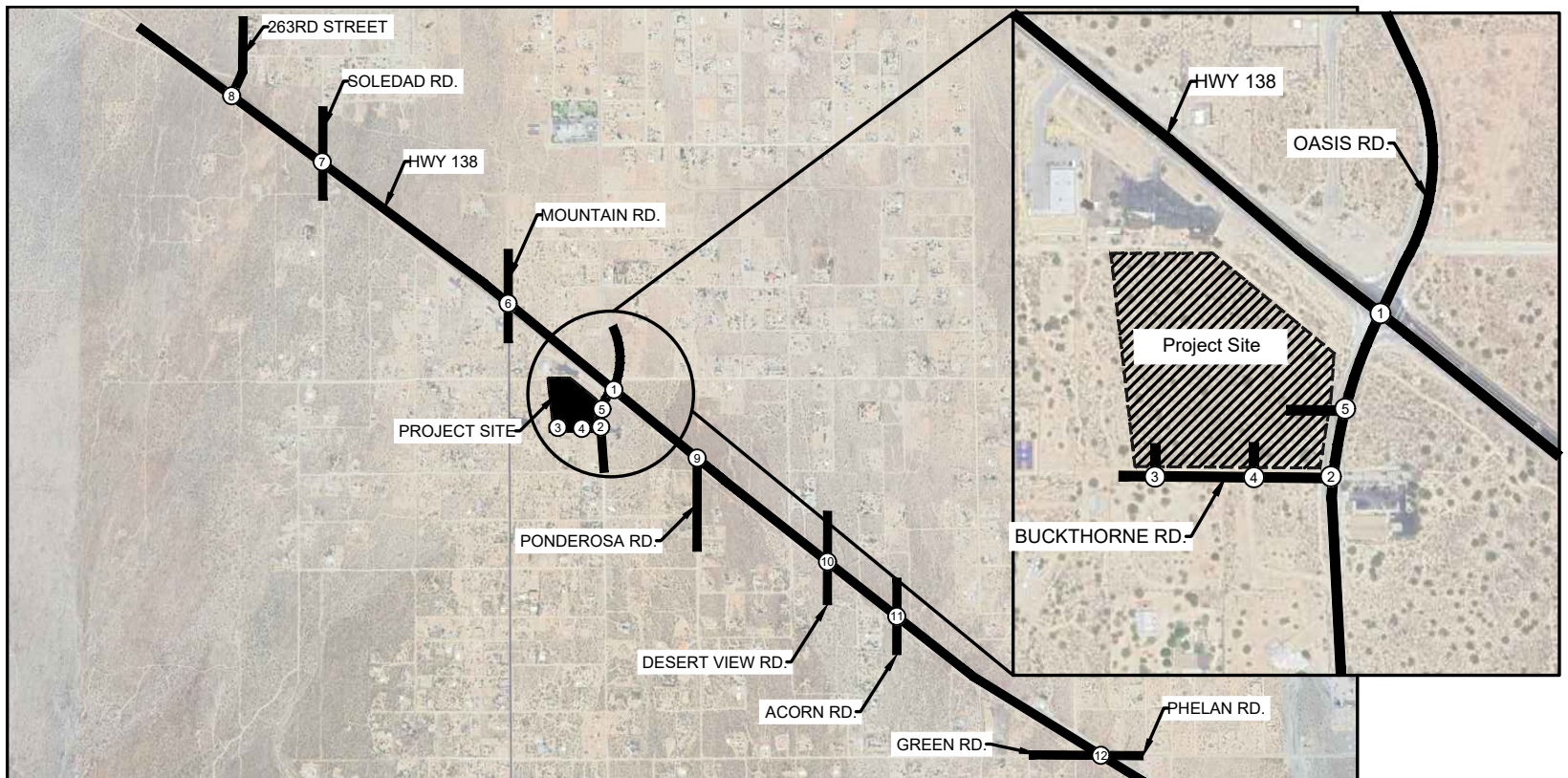


Exhibit 5: Existing PM Peak Hour Volumes

4.0 PROPOSED PROJECT

4.1 PROJECT DESCRIPTION

The proposed project consists of a gas station with fueling pumps for five (5) trucks and twenty (20) standard passenger vehicles with 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 Map. This project complies with 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. This trip generation includes the PCE adjustments made for 4-axle truck traffic. With the PCE trip adjustment, the truck stop included in the proposed project is expected to have 4-axle truck traffic equivalent to the 3,360 passenger cars. With the pass-by trip reduction, the truck stop is proposed to have 4-axle trucks equivalent to 840 passenger cars. The proposed project is projected to generate 2,569 net daily trips with 204 net AM and 192 net PM peak hour trips.

Exhibit 6 shows the truck turning exhibit for the proposed site plan.



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) <i>Pass-By Trips (0.75 Daily, 0.76 AM, 0.75 PM)</i>	945(6)	20	VFP ³	345.75	6,915	31.6	50:50	316	316	632	26.9	50:50	269	269	538
					-5,186			-240	-240	-480			-202	-202	-404
Truck Stop <i>Pass-By Trips (0.75 Daily, 0.76 AM, 0.75 PM)</i>	950	5	VFP ³	224	1,120	13.97	49:51	34	36	70	15.42	53:47	41	36	77
					-840			-26	-27	-53			-31	-27	-58
4-Axle Trucks (100%) <i>PCE Pass-By Trips</i>		3.0	PCE ⁴		3,360			102	108	210			123	108	231
					-2,520			-77	-81	-158			-92	-81	-173
Results				Daily	Volume		AM Peak Hour	In	Out	Total		PM Peak Hour	In	Out	Total
PCE Subtotal					10,275			418	424	842			392	377	769
Pass-By Trips					-7,706			-317	-321	-638			-294	-283	-577
PCE and Pass-By Net Total					2,569			101	103	204			98	94	192

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: Passenger car equipment (PCE) factors from the San Bernardino County Transportation Authority Recommended Traffic Impact Analysis Guidelines for Vehicle Miles Traveled and Level of Service Assessment (February 2020).

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 7 shows the projected trip distribution of proposed project's generated trips.

APN: 3068-231-68
ZONING: GENERAL COMMERCIAL

815 HIGHWAY 138 #1-2
PINON HILLS, CA 92372-9280
APN: 3068-231-40-0
HEMINGWAY FAMILY TRUST /97
ZONING: GENERAL COMMERCIAL

BUCKTHORNE RD PINON HILLS, CA
APN: 3067-051-29-0000
PLS & ASSOCIATES LLC
ZONING: GENERAL COMMERCIAL

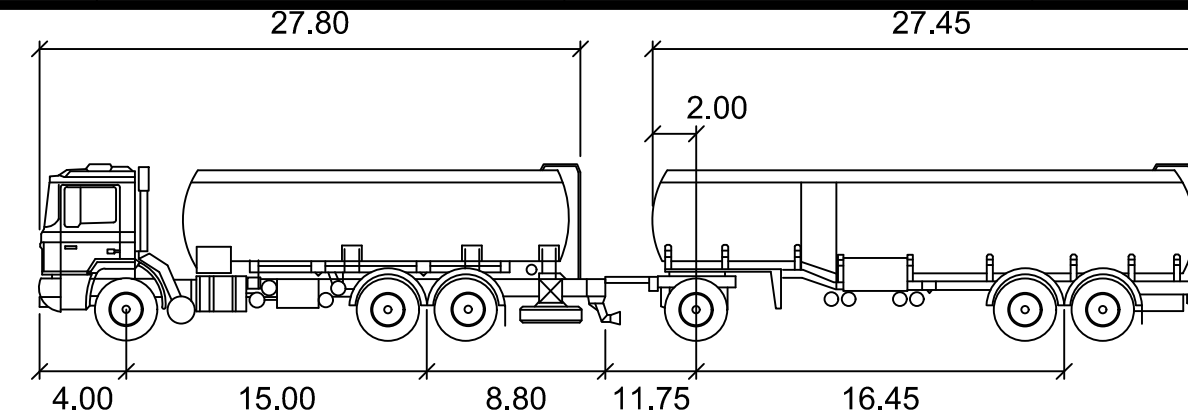
777 SMOKE TREE RD
APN: 3067-051-10-0000
MEYER CARROLEE M TRUST 8-17-09
ZONING: GENERAL COMMERCIAL

VACANT LAND
SMOKETREE-PINON HILLS, CA 92372
APN: 3067-051-11-0000
PLS & ASSOCIATES LLC
ZONING: GENERAL COMMERCIAL

LOT 8
TRACT MAP NO. 3319
M.B. 44/27

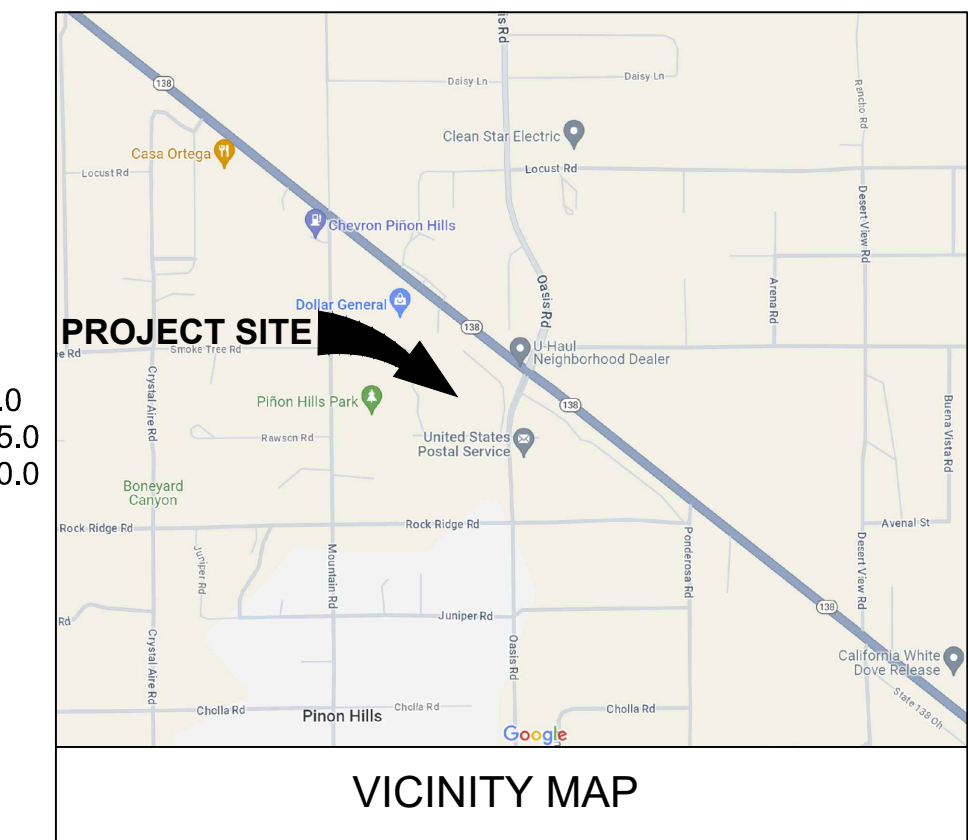
833 BUCKTHORNE RD
PINON HILLS, CA 92372
APN: 3067-051-13-00
ISAIAS A PALMA / DIANA L PALMA
ZONING: SINGLE FAMILY RESIDENTIAL

VACANT LAND
10344 OASIS RD
PINON HILLS, CA 92372



Custom

First Unit Width	: 6.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.00	Steering Angle	: 35.0
First Unit Track	: 7.70	Articulating Angle	: 70.0
Trailer Track	: 7.70		



CORE STATES GROUP

4240 E. Juniper Street, Suite 402
Ontario, CA 91761
Phone (909) 467-8907
sruic@core-states.com

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MAVERIK

811

Know what's below. Call before you dig.

REVISIONS

REV	DATE	COMMENT	BY

DOCUMENT
CONCEPTUAL SITE PLAN
FOR MAVERIK
PROGRAM

SITE LOCATION
10450 OASIS ROAD
PINON HILLS, CA 92372

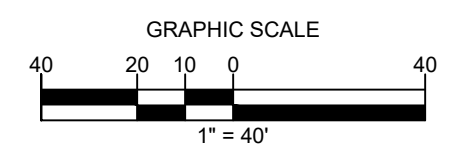
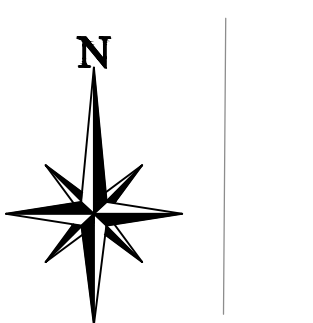
ENGINEER SEAL

NOT FOR CONSTRUCTION

SHEET TITLE
CONCEPTUAL SITE PLAN

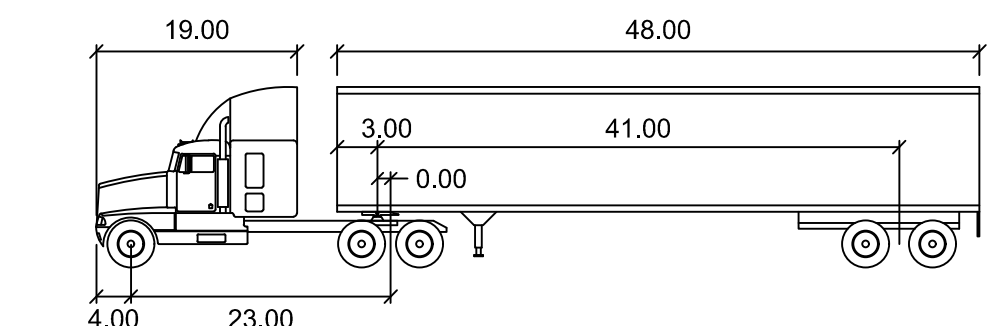
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DATE: 9/18/2025
SCALE:
DRAWN BY: JOC
CHECKED BY: KCH

SHEET NO.
C1.0



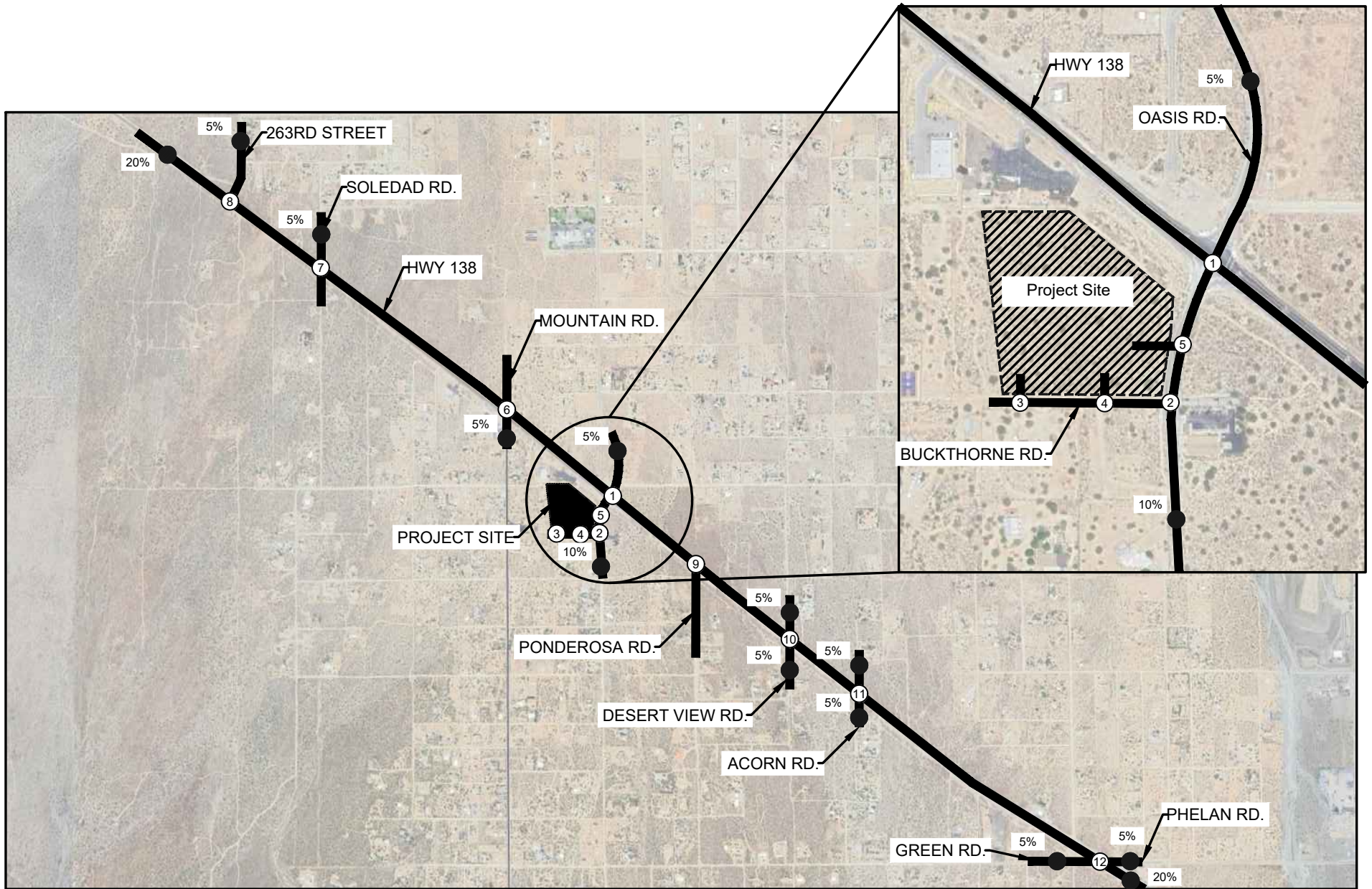
SITE LEGEND

- EXISTING PROPERTY BOUNDARY LINE
- EXISTING ADJOINING PROPERTY LINE
- EXISTING UTILITY EASEMENT
- EXISTING RIGHT OF WAY
- PROPOSED PROPERTY LINE
- PROPOSED EASEMENT
- PROPOSED RIGHT OF WAY
- EXISTING EDGE OF PAVEMENT
- PROPOSED CURB AND GUTTER
- PROPOSED CURB
- PROPOSED ROLLOVER CURB
- PROPOSED BUILDING
- PROPOSED SIDEWALK
- PROPOSED CONCRETE PAVEMENT
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED WATER STRUCTURES
- EXISTING ELECTRIC STRUCTURE
- PROPOSED PARKING COUNT
- EXISTING TREE
- EXISTING SHRUB
- EXISTING JOSHUA TREE
- EXISTING WATER STRUCTURE
- EXISTING GAS MAIN
- EXISTING WATER MAIN
- EXISTING UNDERGROUND ELECTRIC
- EXISTING TELEPHONE
- EXISTING OVERHEAD WIRES



STAA Design Vehicle (56 FT RADIUS)

Tractor Width	: 8.50	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 26.1
Tractor Track	: 8.50	Articulating Angle	: 70.0
Trailer Track	: 8.50		



Legend:

- Project Site
- Ⓝ Study Intersection Location
- XX% Percent Trip Distribution

Exhibit 7: 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 adding one through lane on the southbound side of Oasis Road. The improvements to intersection 2 and the addition of the project driveways are shown in **Exhibit 11**.

5.2 EAC TRAFFIC VOLUMES

Background traffic conditions volume include background traffic plus the addition of the 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 that are provided by the city staff. Since the proposed project is expected to be built and generating trips in 2026, EAC volumes include an ambient growth rate of 2% per year for two year, applied to existing volumes. This ambient growth rate is found through the County guidelines and approved in the project's scoping agreement.

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

Exhibit 9 and **Exhibit 10** EAC AM and PM peak hour volumes at the study intersection.

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 and its associated trip generation is shown on **Table 9**.

Exhibit 8 shows the location of the cumulative projects involved in the proposed project.



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. RM= Rooms; TSF= Thousand Square Feet; VFP= Vehicle Fueling Positions; DU= Dwelling Units.

3: 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

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**.

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	30.11	C
			PM	33.81	C
2 Oasis Road	Buckthorne Road	TWSC	AM	8.42	A
			PM	8.50	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	15.21	C
			PM	21.48	C
7 Soledad Road	Route 138	TWSC	AM	14.08	B
			PM	16.72	C
8 263 rd Street East	Route 138	TWSC	AM	13.83	B
			PM	14.77	B
9 Ponderosa Road	Route 138	TWSC	AM	15.40	C
			PM	16.71	C



Intersection			Control Type	Peak Hour	EAC Conditions	
					Delay (s/veh)	LOS
10	Desert View Road	Route 138	TWSC	AM	18.32	C
				PM	16.90	C
11	Acorn Road	Route 138	TWSC	AM	16.84	C
				PM	19.73	C
12	Green Road-Phelan Road	Route 138	Signal	AM	22.51	C
				PM	21.93	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.

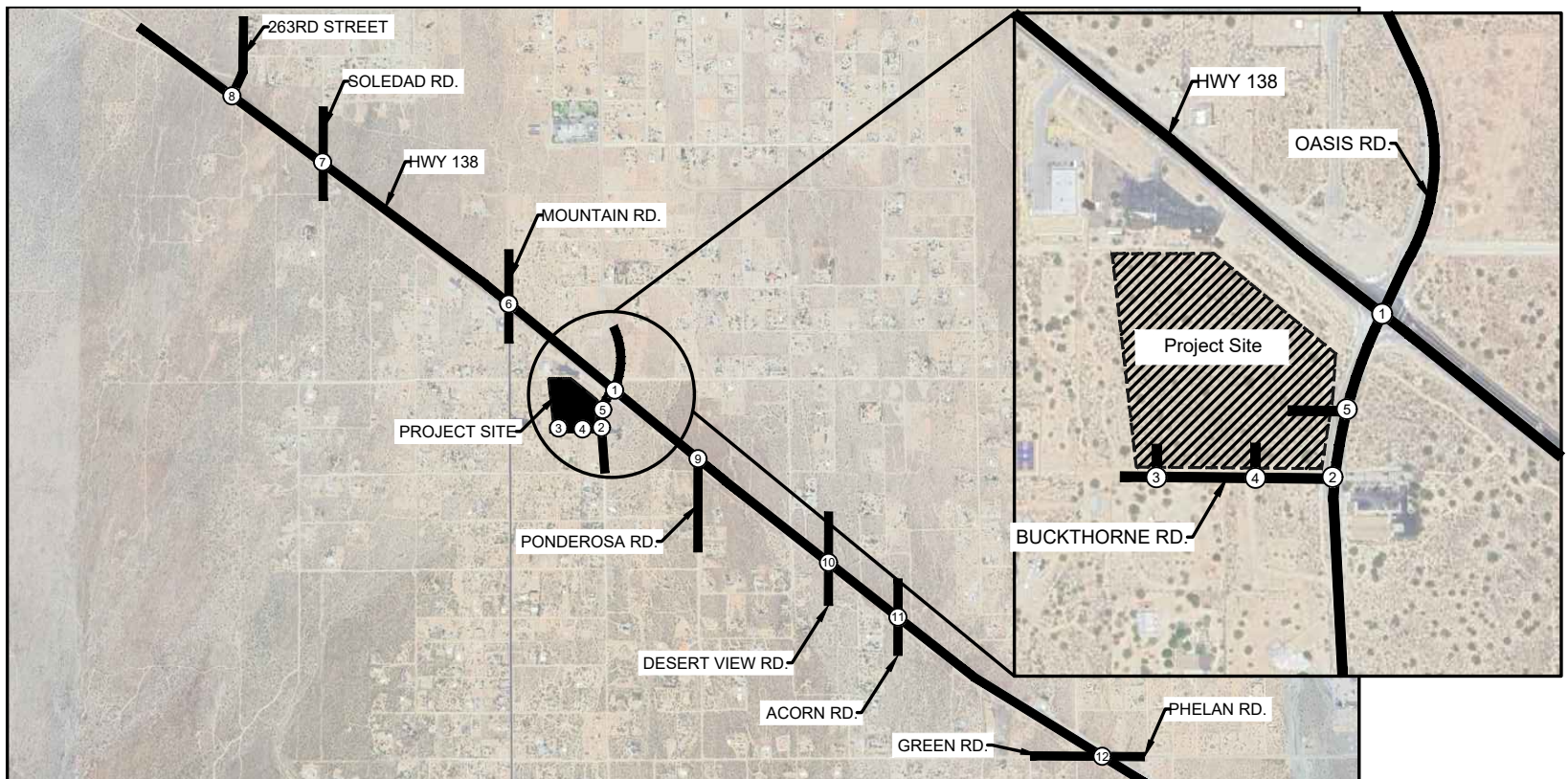


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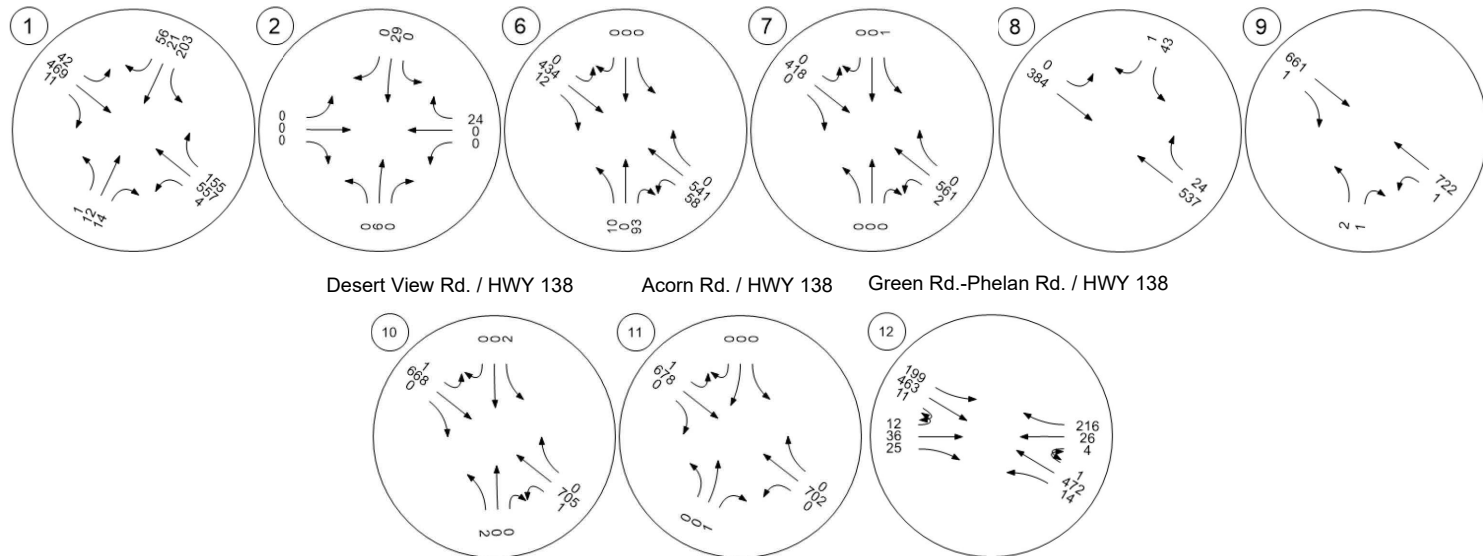
- X Approximate Cumulative Project Locations
- # Study Intersection Location

Exhibit 8: Cumulative Project Location



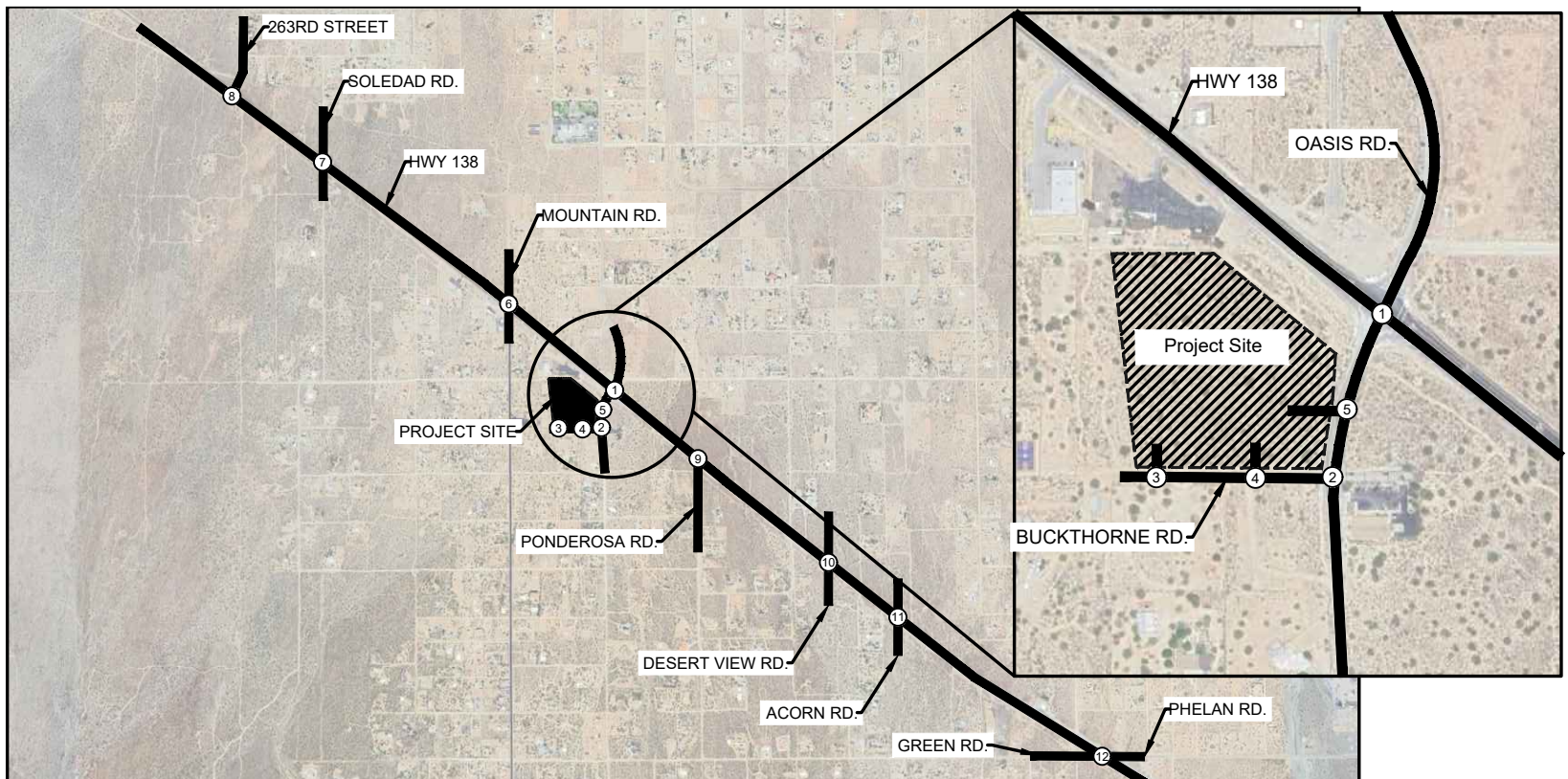


Oasis Rd. / HWY 138 Oasis Rd. / Buckthorne Rd Mountain Rd./ HWY 138 Soledad Rd. / HWY 138 263rd St. E / HWY 138 Ponderosa Rd. / HWY 138



Desert View Rd. / HWY 138 Acorn Rd. / HWY 138 Green Rd.-Phelan Rd. / HWY 138

Exhibit 9: EAC Background AM Peak Hour Volumes



Oasis Rd. / HWY 138 Oasis Rd. / Buckthorne Rd Mountain Rd./ HWY 138 Soledad Rd. / HWY 138 263rd St. E / HWY 138 Ponderosa Rd. / HWY 138

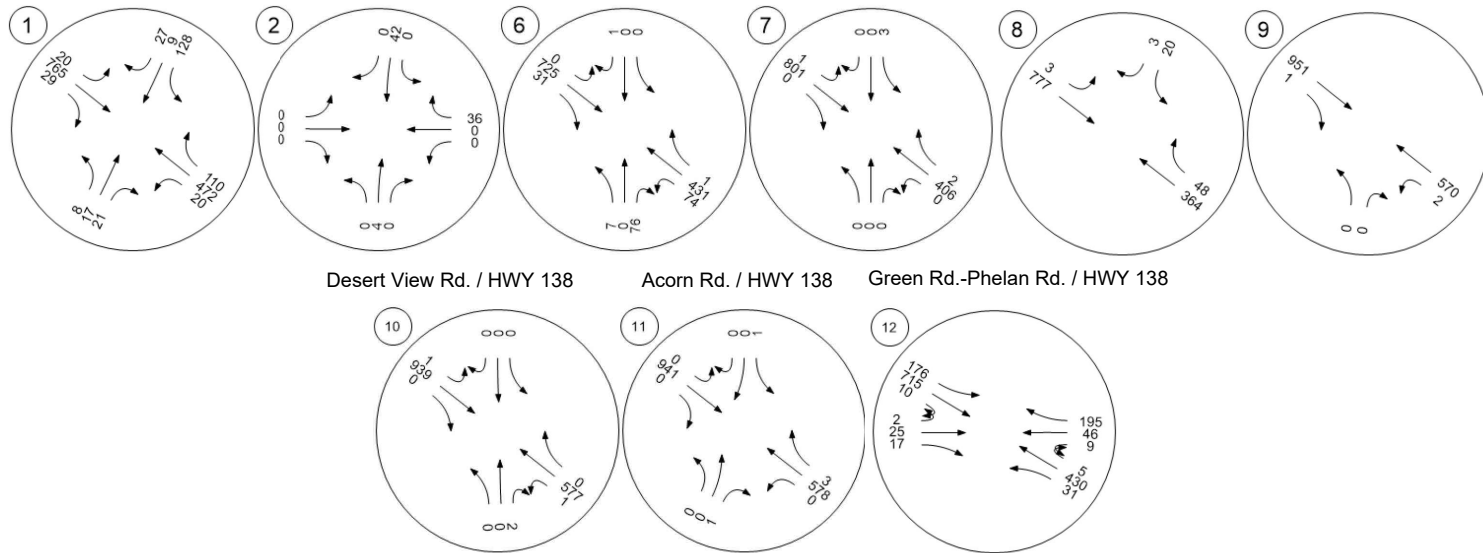


Exhibit 10: EAC Background PM Peak Hour Volumes

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 adding one through lane on the southbound side of Oasis Road. The improvements on intersection 2 and the addition of the project driveways are shown in **Exhibit 11**.

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.

$$EACP \text{ Traffic Volumes} = (\text{Existing (2024) Counts} * 1.02^2) + \text{Cumulative Projects} + \text{Proposed Project}$$

Exhibit 12 and **Exhibit 13** shows *Background Plus 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	30.11	C	34.43	C	-
				PM	33.81	C	34.20	C	-
2	Oasis Road	Buckthorne Road	TWSC	AM	8.42	A	9.87	A	-
				PM	8.50	A	10.34	B	-
3	Project Driveway #1	Buckthorne Road	TWSC	AM	-	-	8.75	A	-
				PM	-	-	8.73	A	-
4	Project Driveway #2	Buckthorne Road	TWSC	AM	-	-	9.17	A	-
				PM	-	-	9.12	A	-
5	Oasis Road	Project Driveway #3	TWSC	AM	-	-	8.53	A	-
				PM	-	-	8.53	A	-
6	Mountain Road	Route 138	TWSC	AM	15.21	C	26.79	D	-
				PM	21.48	C	23.28	C	-



Intersection			Control Type	Peak Hour	EAC Conditions		EACP Conditions		Deficient?
					Delay (s/veh)	LOS	Delay (s/veh)	LOS	
7	Soledad Road	Route 138	TWSC	AM	14.08	B	14.63	B	-
				PM	16.72	C	17.44	C	-
8	263 rd Street East	Route 138	TWSC	AM	13.83	B	14.28	B	-
				PM	14.77	B	15.35	C	-
9	Ponderosa Road	Route 138	TWSC	AM	15.40	C	16.21	C	-
				PM	16.71	C	17.47	C	-
10	Desert View Road	Route 138	TWSC	AM	18.32	C	20.16	C	-
				PM	16.90	C	19.97	C	-
11	Acorn Road	Route 138	TWSC	AM	16.84	C	18.05	C	-
				PM	19.73	C	19.45	C	-
12	Green Road-Phelan Road	Route 138	Signal	AM	22.51	C	22.77	C	-
				PM	21.93	C	22.79	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.

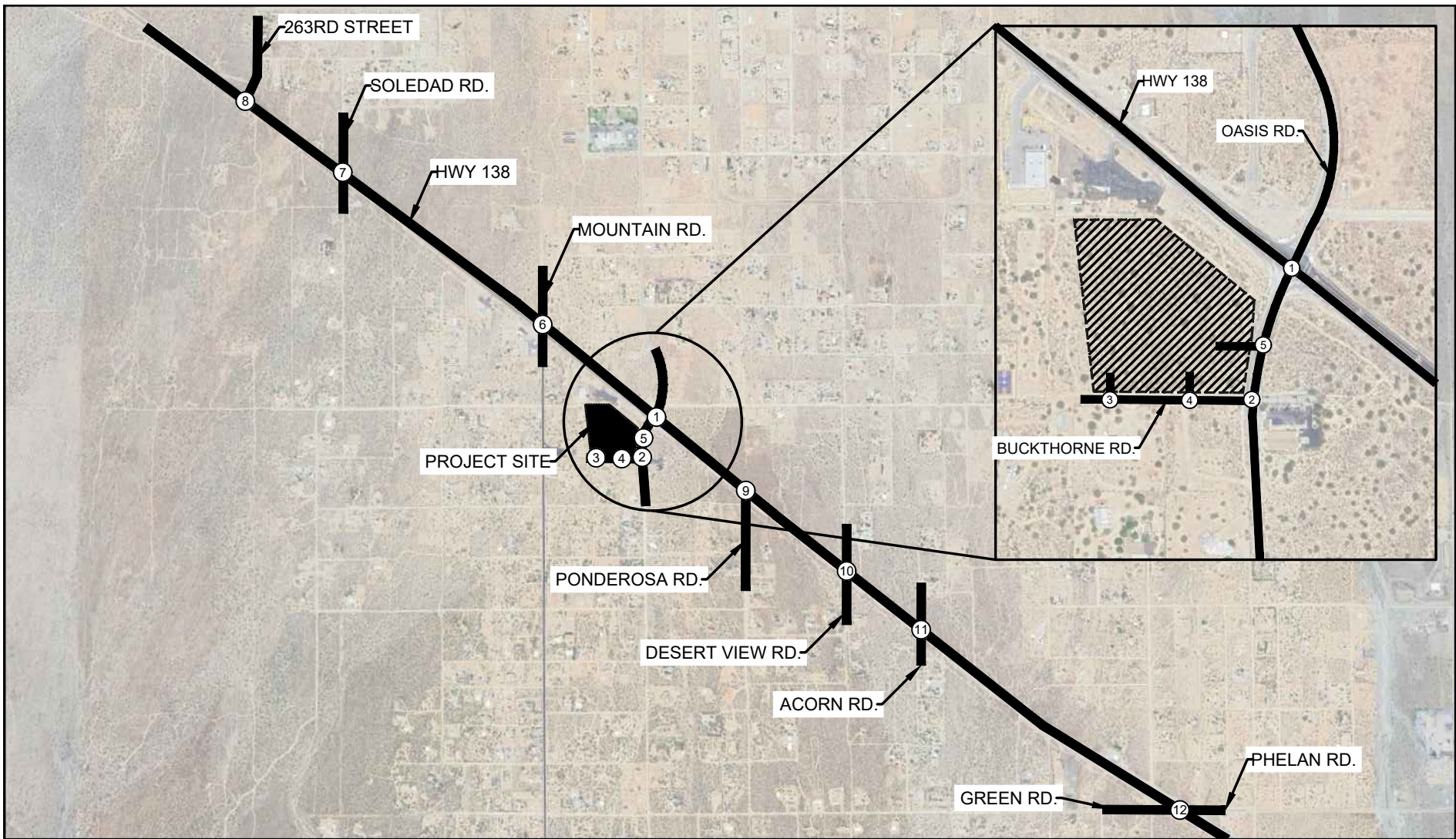
As shown in **Table 12**, the study intersections are projected to continue to operate at an acceptable LOS during the AM and PM peak hours for *Background Plus Project* traffic conditions.

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



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

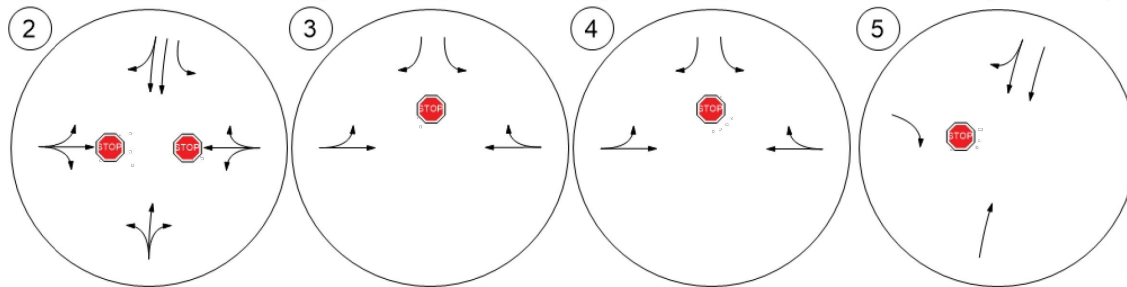


Exhibit 11: Project Lane Geometry and Intersection Controls

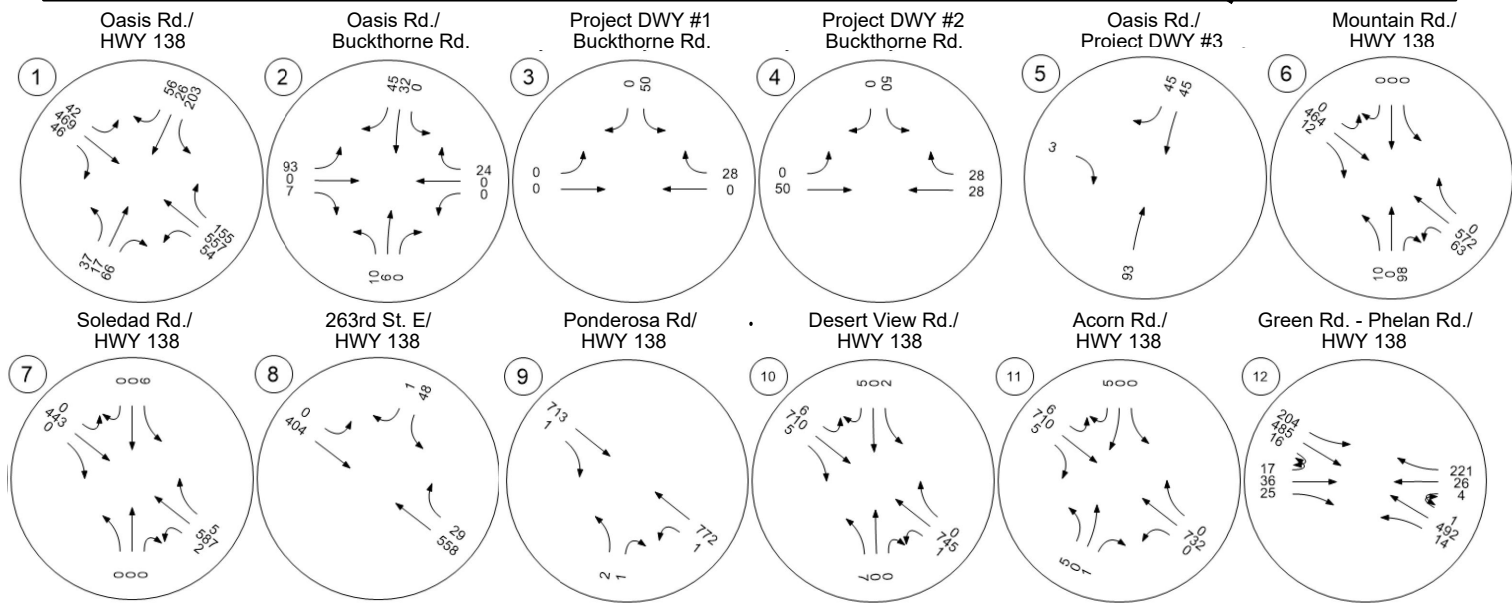
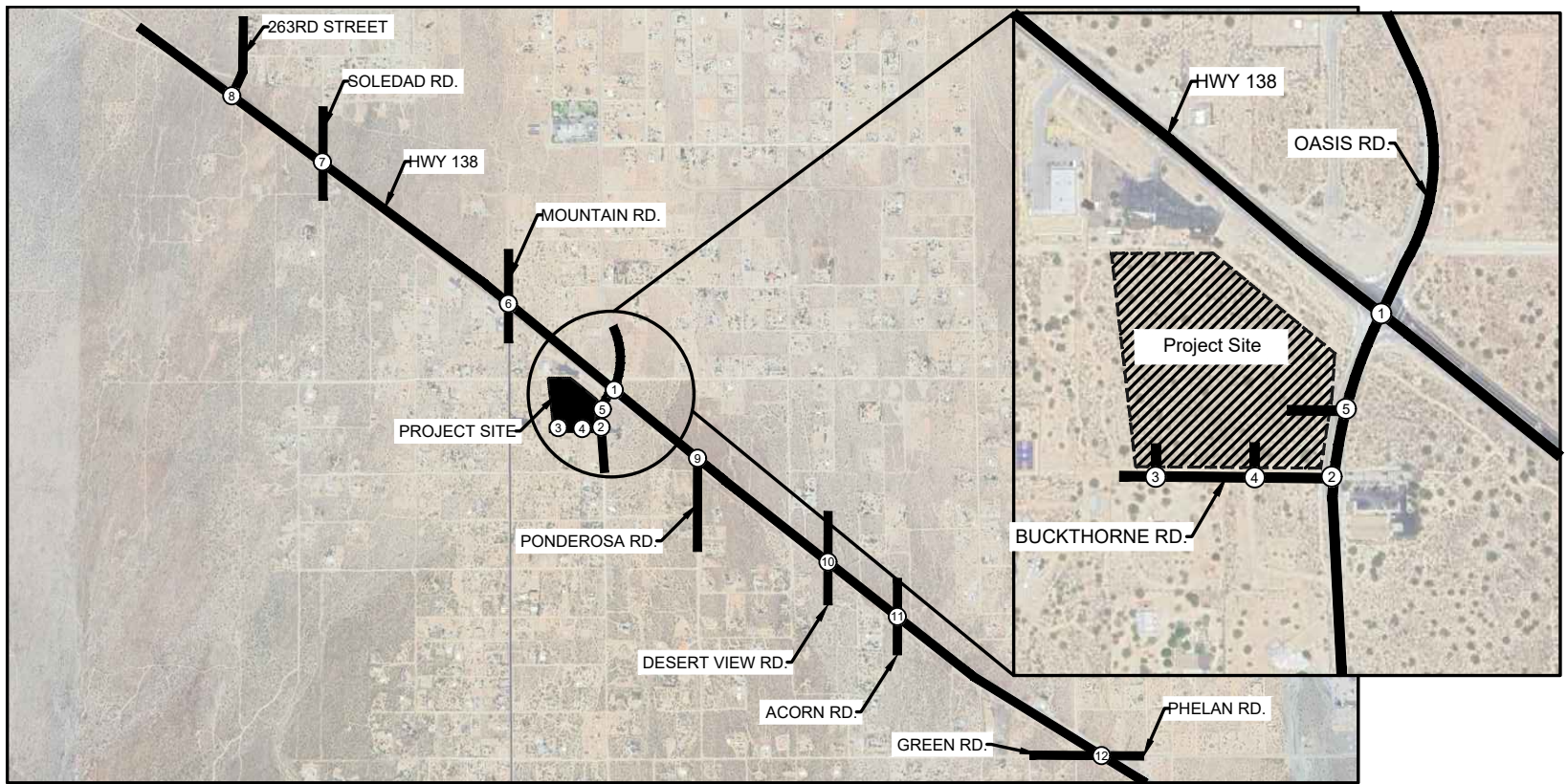


Exhibit 12: EACP Background Plus Project AM Peak Hour Volumes

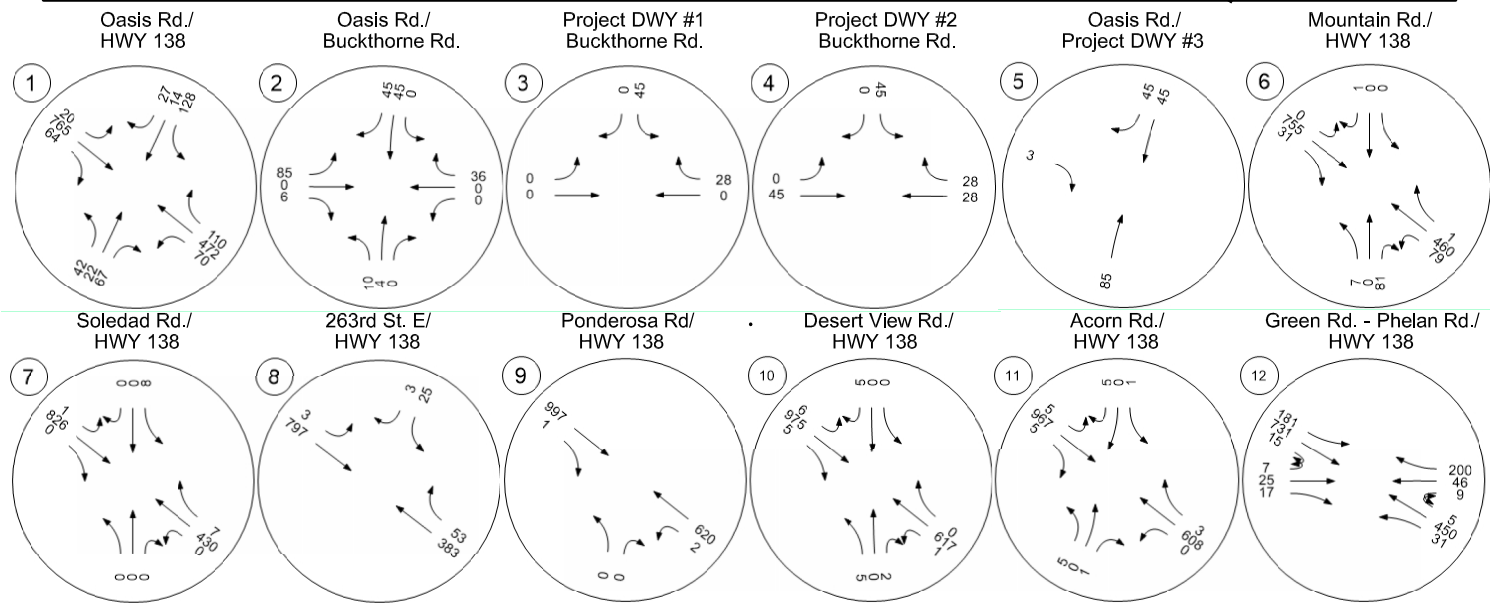
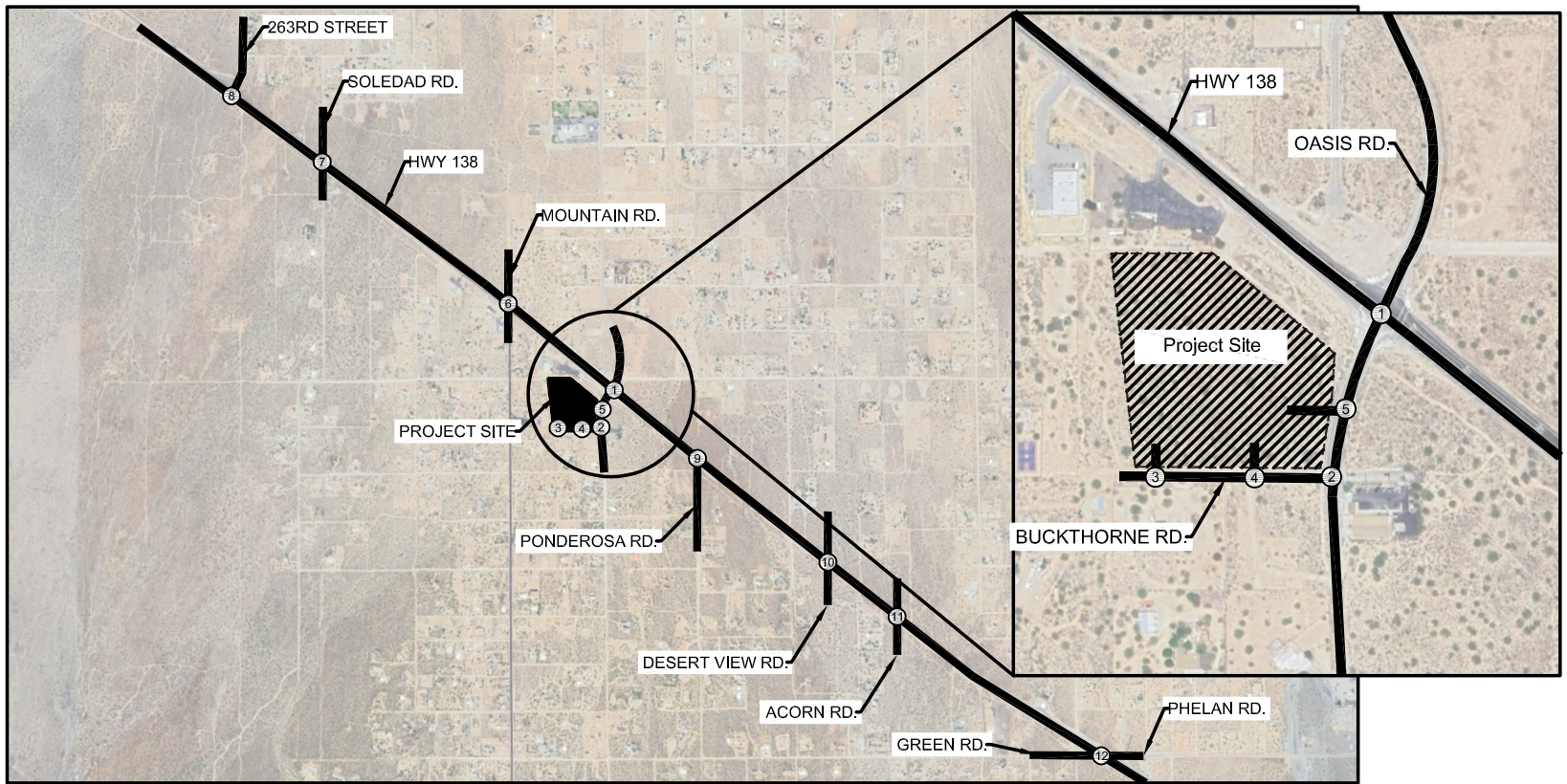


Exhibit 13: EACP Background Plus Project PM Peak Hour Volumes

6.5 BACKGROUND PLUS PROJECT QUEUING ANALYSIS

The queuing analysis is for the following examined movements;

Oasis Road and Highway 138 (Intersection 1)

- Eastbound (EB) right turn movement
- Westbound (WB) left turn movement

Oasis Road and Project Driveway #3 (Intersection 5)

- Southbound (SB) right turn movement

95th percentile queue lengths at this intersection were calculated to determine whether vehicles would have sufficient storage space at each movement.

The analysis utilized the traffic software program PTV Vistro to determine 95th percentile queue lengths for the movements at the study intersections. PTV Vistro uses the proposed project trip generation volumes and trip distribution to calculate the 95th percentile queue lengths in feet for the selected intersection movements. These were then compared to the existing storage lengths of each movement. **Table 14** compares these to the existing storage lengths. Synchro Queuing Reports are in **Appendix E**.

Table 14:
Intersection Queuing Analysis – Background Plus Project Conditions

Intersection			Leg ¹	Movement ²	Storage Length (ft)	95th Percentile Queue Length	
						AM Peak Hour	PM Peak
1	Oasis Road	Highway 138	EB	L	520	63	30
				R	520	37	44
			WB	L	520	75	103
				R	520	112	62
5	Oasis Road	Project Driveway #3	SB	R	-	<5	<5

1: NB = Northbound; SB = Southbound; EB = Eastbound; WB = Westbound.

2: L = Left-Turn; R = Right-Turn; T/R = Through/Right-Turn.

As shown in **Table 14**, the storage lengths for the AM and PM peak hours will be sufficient for the 95th percentile queue lengths during *EACP* traffic conditions.

Regarding the eastbound right-turn movement of Oasis Road and Highway 138, the right-turn pocket is painted 520-feet long. This provides sufficient storage space for the AM peak hour 95th percentile queue length of 37-feet and the PM peak hour 95th percentile queue length of 44-feet.



Regarding the westbound left-turn movement of Oasis Road and Highway 138, the 520-foot westbound left-turn pocket will provide sufficient storage for the AM peak hour 95th percentile queue length of 75-feet and the PM peak hour 95th percentile queue length of 103-feet.

Additionally, the eastbound right-turn 95th percentile queue length of 37-feet and 44-feet will not block the existing property driveways for Smoketree Junction Antiques, 815 State Highway 138, CA 92372.

Lastly, the southbound right-turn movement on Oasis Road into the project driveway #3 has a 95th percentile queue length of less than 5 feet in both AM and PM peak hour.



7.0 HORIZON YEAR CONDITIONS (HY)

Horizon Year (HY) conditions analysis is intended to identify traffic conditions during planned long-term circulation system for the year 2045.

7.1 ROADWAY IMPROVEMENTS

The lane configurations and traffic controls assumed to be in place for the HY scenario are based on the existing lane configurations. The lane configurations are shown in **Exhibit 14**.

7.2 HY TRAFFIC VOLUMES

HY volumes were developed based on SANDAG model volumes for base year and future year for the study area. The resulting ambient growth rate was then applied to existing counts. Due to the significant difference between the north-south volumes and the main corridor, Highway 138, two different growth rates generated by the SANDAG model data will be applied. The resulting growth rates were determined to be:

- N/S direction AM peak hour – 1.77%
- Main corridor AM peak hour – 2.81%
- N/S direction PM peak hour – 1.42%
- Main corridor PM peak hour – 2.74%

Horizon Year (2040) = (Existing (2024) Counts * (1+ annual growth rate) ^21)

Exhibit 15 and **Exhibit 16** show HY AM and PM peak hour volumes at the study intersections.

7.3 HY INTERSECTION LEVEL OF SERVICE ANALYSIS

HY conditions AM and PM peak hour intersection analysis are shown in **Table 15** . HCM analysis sheets are provided in **Appendix C**.

Table 15 Intersection Analysis - HY Traffic Conditions

Intersection			Control Type	Peak Hour	HY Conditions	
					Delay (s/veh)	LOS
1	Oasis Road	Route 138	Signal	AM	31.97	C
				PM	47.52	D
2	Oasis Road	Buckthorne Road	TWSC	AM	8.43	A
				PM	8.97	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	35.16	E
				PM	90.09	F
7	Soledad Road	Route 138	TWSC	AM	19.10	C
				PM	26.58	D
8	263 rd Street East	Route 138	TWSC	AM	18.54	C
				PM	21.69	C
9	Ponderosa Road	Route 138	TWSC	AM	18.71	C
				PM	29.25	D
10	Desert View Road	Route 138	TWSC	AM	23.81	C
				PM	31.05	D
11	Acorn Road	Route 138	TWSC	AM	19.23	C
				PM	30.82	D
12	Green Road-Phelan Road	Route 138	Signal	AM	19.09	B
				PM	20.27	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 15**, the study intersections are projected to continue to operate at an acceptable LOS during the AM and PM peak hours for *Horizon Year* traffic conditions with the exception of:

- Intersection 6: Mountain Road/Route 138

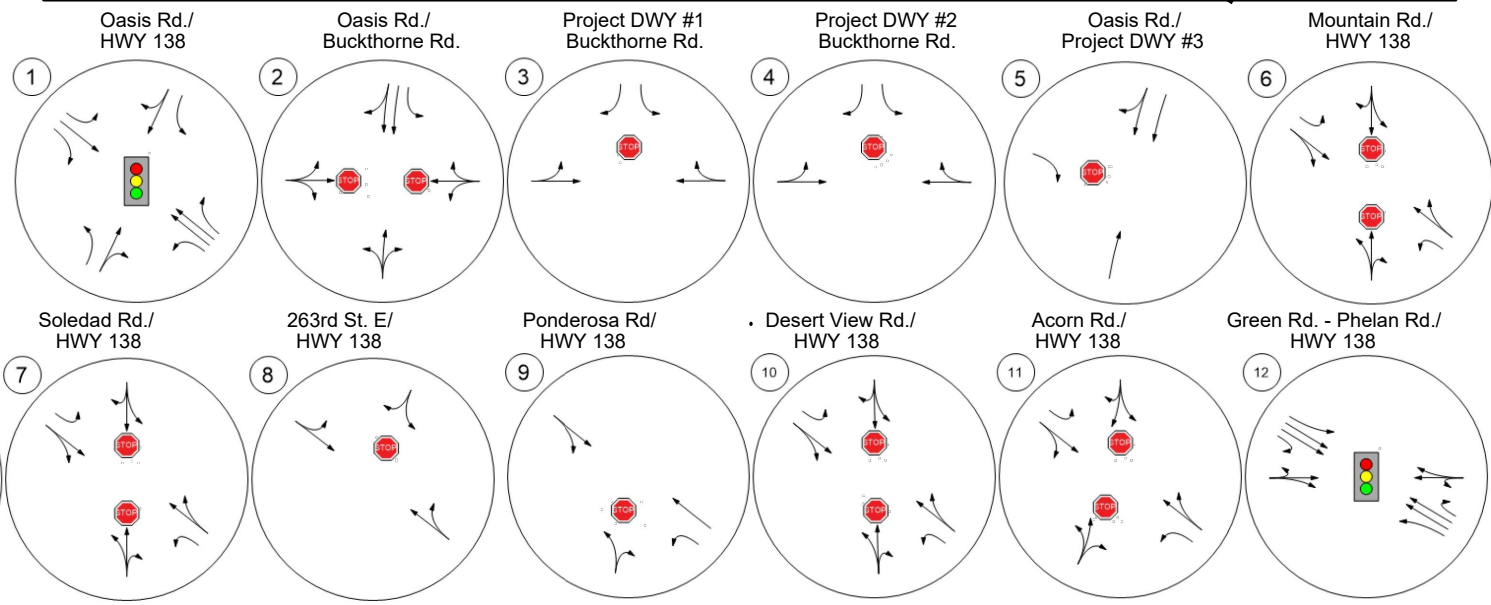
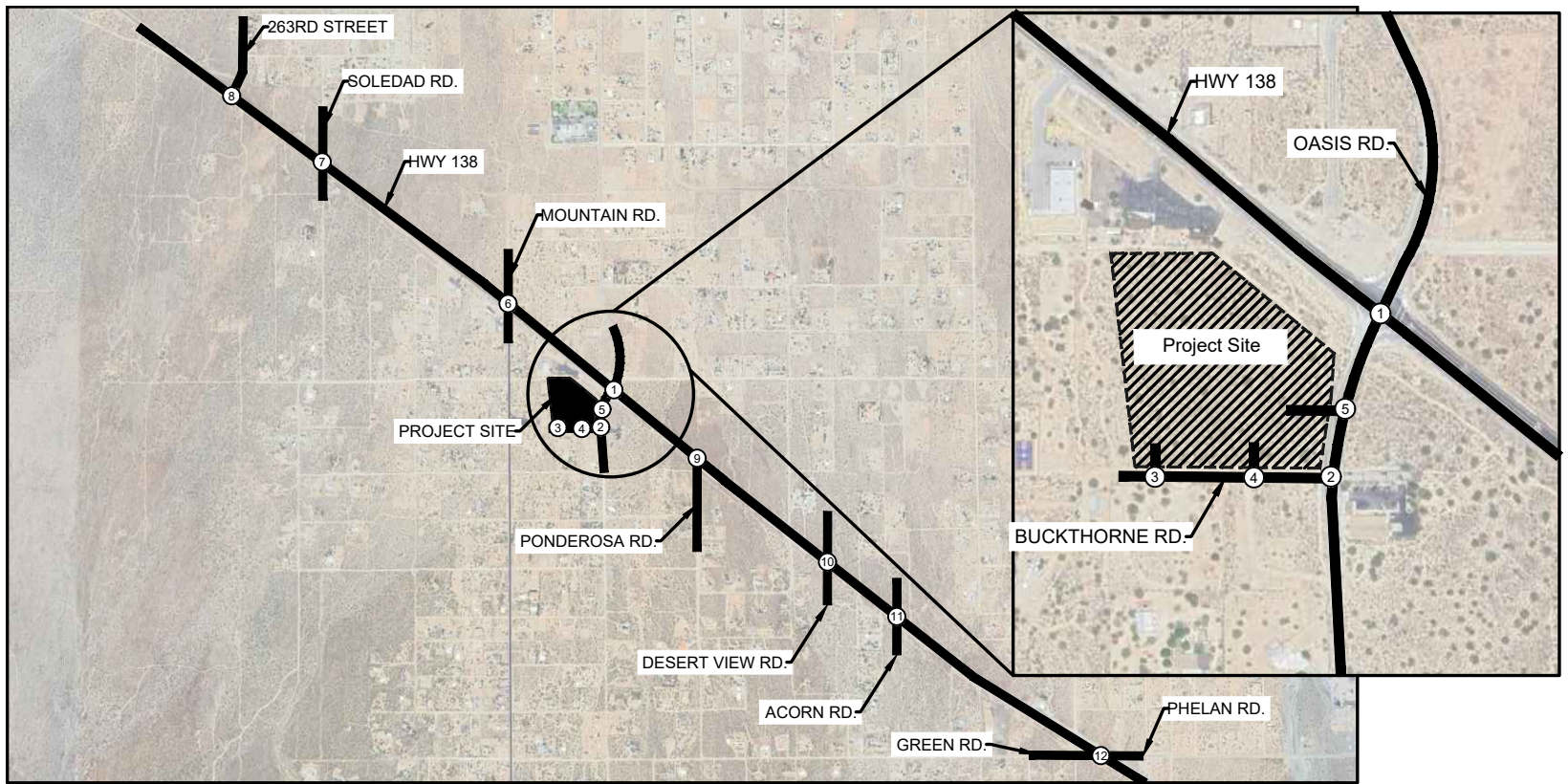


Exhibit 14: Horizon Year Lane Geometry and Intersection Controls

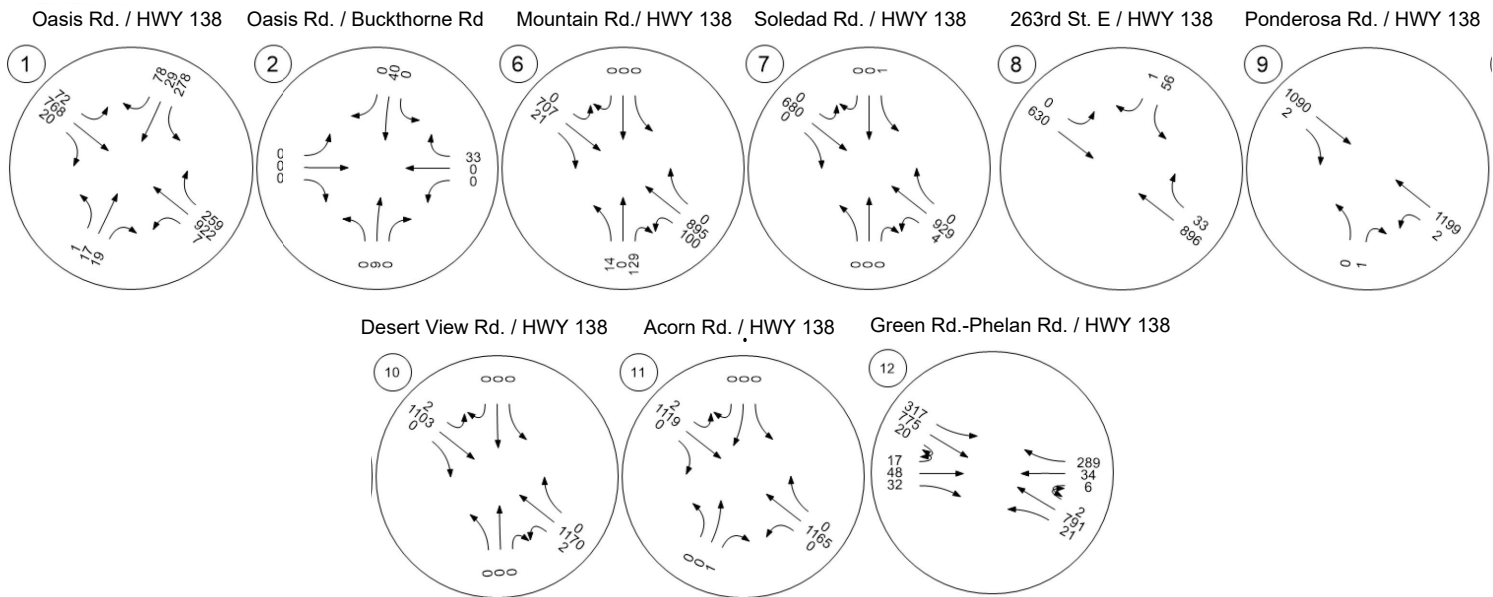
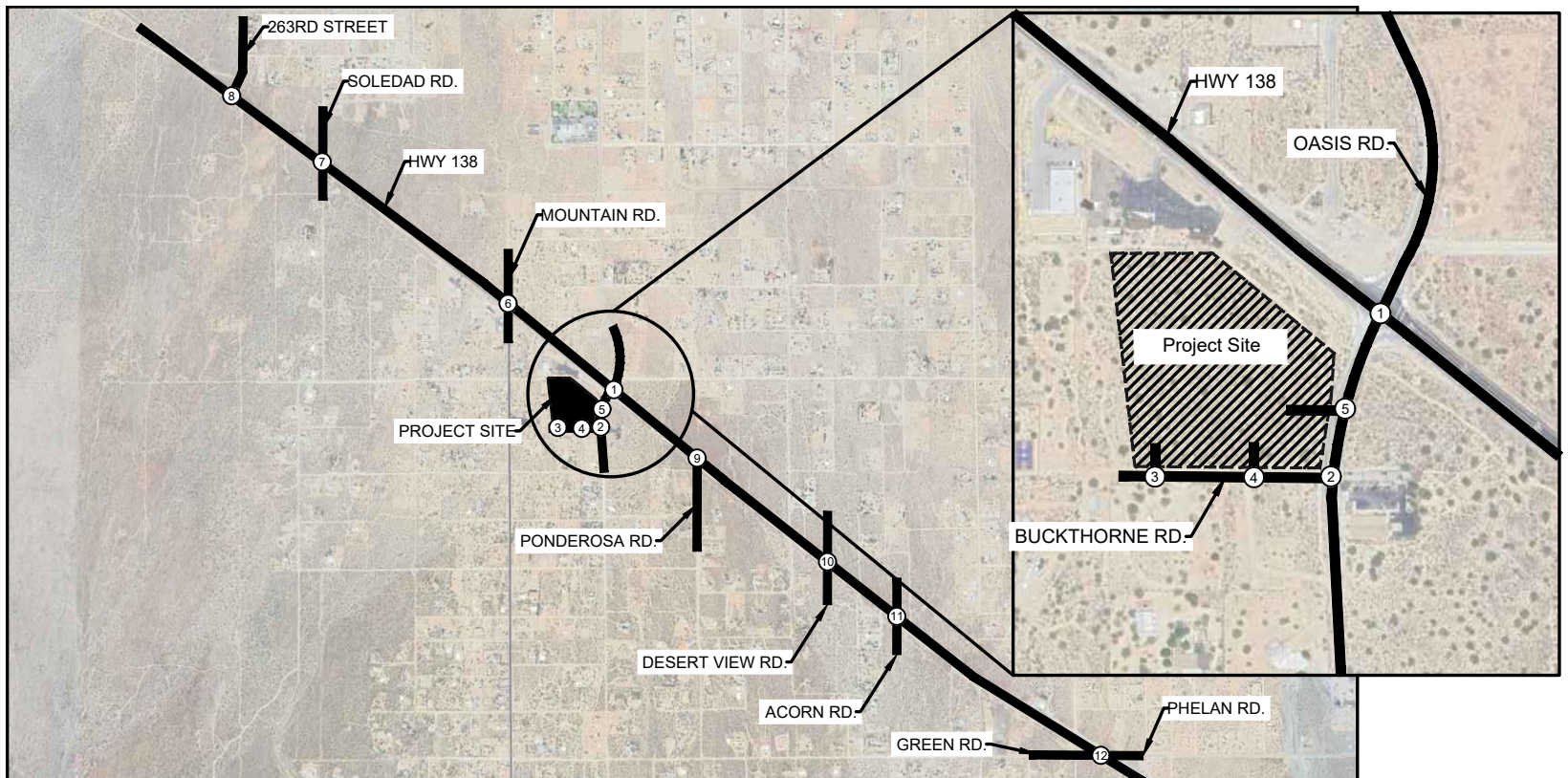
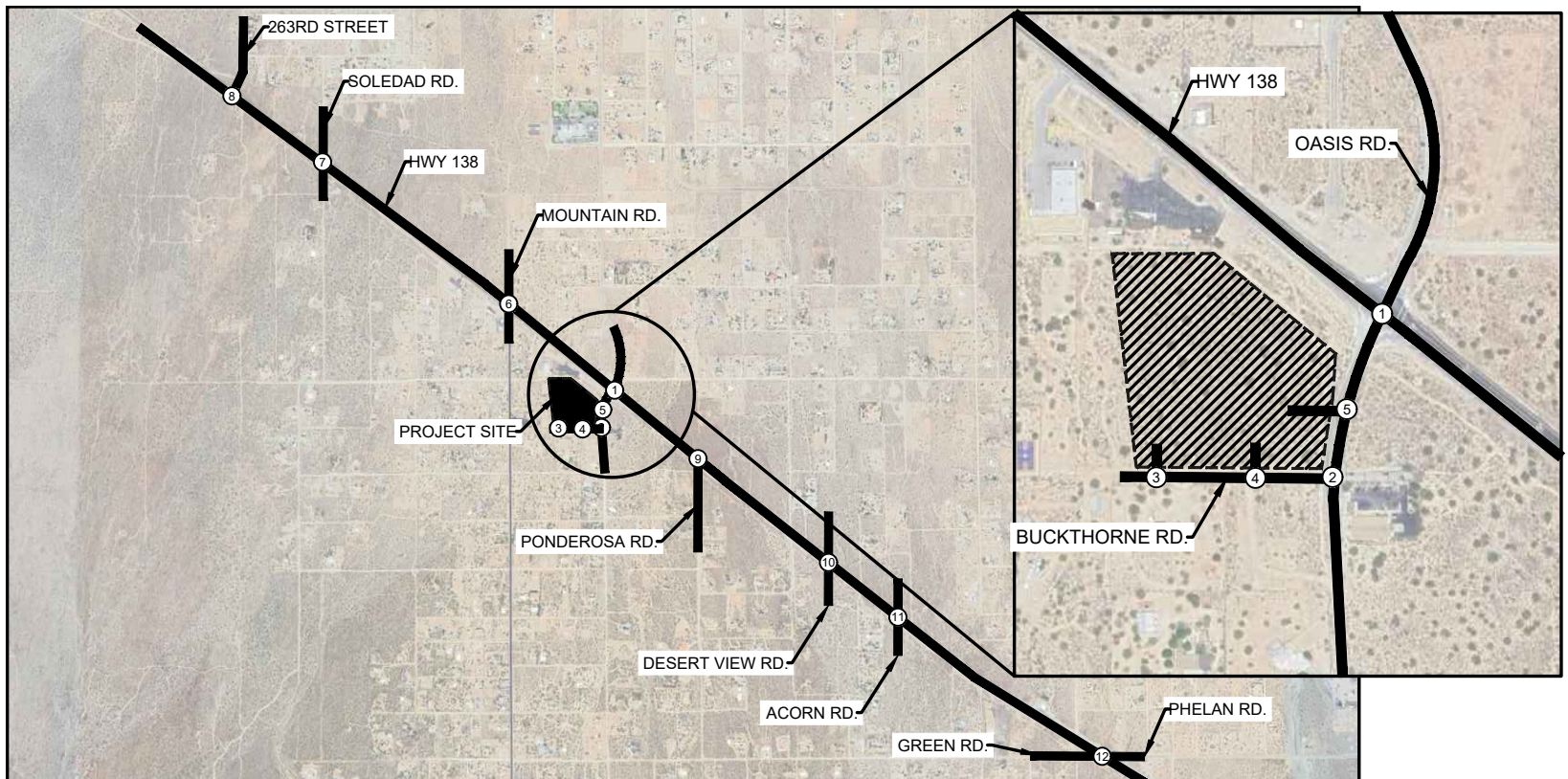


Exhibit 15: Horizon Year AM Peak Hour Volumes



Oasis Rd. / HWY 138 Oasis Rd. / Buckthorne Rd Mountain Rd./ HWY 138 Soledad Rd. / HWY 138 263rd St. E / HWY 138 Ponderosa Rd. / HWY 138

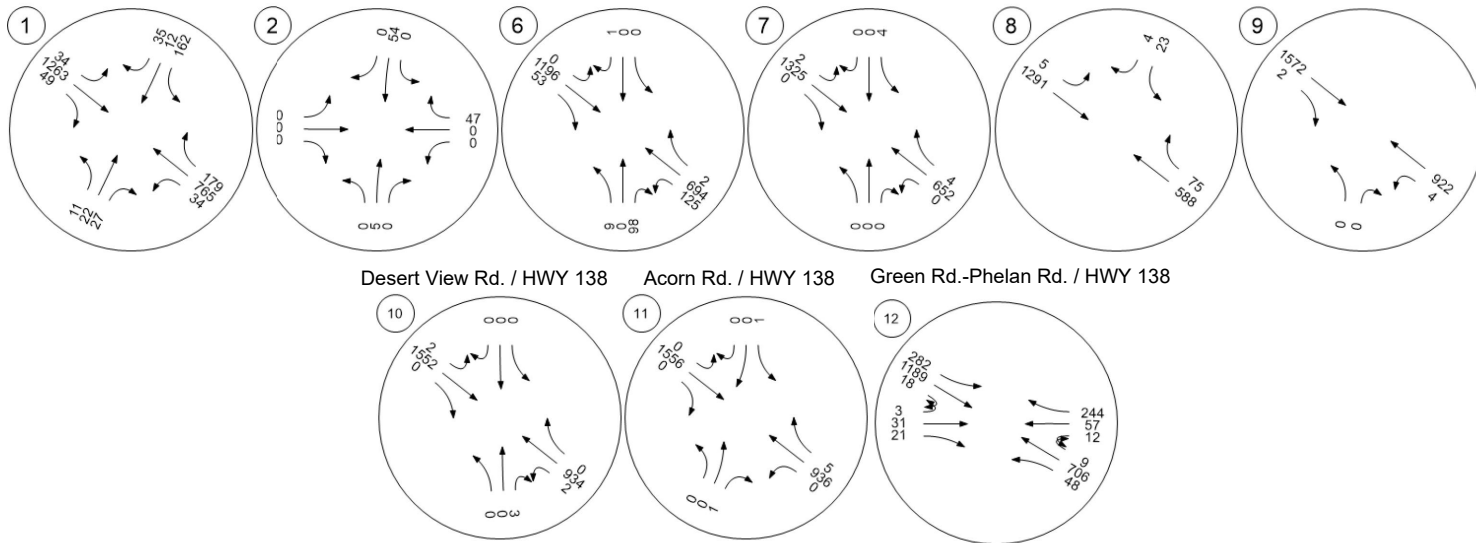


Exhibit 16: Horizon Year PM Peak Hour Volumes

8.0 HORIZON YEAR PLUS PROJECT CONDITIONS (HYP)

Horizon Year Plus Project (HYP) conditions analysis is intended to identify the traffic conditions during the planned horizon year of 2045 and the proposed project impacts on the horizon year of 2045.

8.1 ROADWAY IMPROVEMENTS

The lane configurations and traffic controls assumed to be in place for the HY scenario are based on existing lane geometry. The lane configuration for *Horizon Year Plus Project* scenario is shown in **Exhibit 14**.

8.2 HYP TRAFFIC VOLUMES

HYP volumes were developed based on SANDAG model volumes for base year and future year for the study area. The resulting ambient growth rate was then applied to existing counts. Due to the significant difference between the north-south volumes and the main corridor, Highway 138, two different growth rates generated by the SANDAG model data will be applied. The resulting growth rates were determined to be:

- N/S direction AM peak hour – 1.77%
- Main corridor AM peak hour – 2.81%
- N/S direction PM peak hour – 1.42%
- Main corridor PM peak hour – 2.74%

Horizon Year (2040) = (Existing (2024) Counts * (1+ annual growth rate)²¹) + Proposed Project

Exhibit 17 and **Exhibit 18** shows HYP AM and PM peak hour volumes at the study intersections.

8.3 HYP INTERSECTION LEVEL OF SERVICE ANALYSIS

Horizon year plus project conditions AM and PM peak hour intersection analysis is shown in **Table 16**. HCM analysis sheets are provided in **Appendix E**.

Table 16
Intersection Analysis – HYP Traffic Conditions

Intersection			Control Type	Peak Hour	HY Conditions		HYP Conditions	
					Delay (s/veh)	LOS	Delay (s/veh)	LOS
1	Oasis Road	Route 138	Signal	AM	31.97	C	43.84	D
				PM	47.52	D	48.56	D
2	Oasis Road	Buckthorne Road	TWSC	AM	8.43	A	9.82	A
				PM	8.97	A	10.00	B
3	Project Driveway #1	Buckthorne Road	TWSC	AM	-	-	8.75	A
				PM	-	-	8.73	A



Intersection			Control Type	Peak Hour	HY Conditions		HYP Conditions	
					Delay (s/veh)	LOS	Delay (s/veh)	LOS
4	Project Driveway #2	Buckthorne Road	TWSC	AM	-	-	9.17	A
				PM	-	-	9.12	A
5	Oasis Road	Project Driveway #3	TWSC	AM	-	-	8.53	A
				PM	-	-	8.53	A
6	Mountain Road	Route 138	TWSC	AM	35.16	E	41.10	E
				PM	90.09	F	112.68	F
7	Soledad Road	Route 138	TWSC	AM	19.10	C	19.98	C
				PM	26.58	D	28.09	D
8	263 rd Street East	Route 138	TWSC	AM	18.54	C	19.29	C
				PM	21.69	C	22.87	C
9	Ponderosa Road	Route 138	TWSC	AM	18.71	C	19.70	C
				PM	29.25	D	30.75	D
10	Desert View Road	Route 138	TWSC	AM	23.81	C	30.62	D
				PM	31.05	D	35.46	E
11	Acorn Road	Route 138	TWSC	AM	19.23	C	21.05	C
				PM	30.82	D	34.84	D
12	Green Road-Phelan Road	Route 138	Signal	AM	19.09	B	22.49	C
				PM	20.27	C	22.43	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 16**, the study intersections are projected to continue to operate at an acceptable LOS during the AM and PM peak hours for *Horizon Year Plus Project* traffic conditions with the exception of:

- Intersection 6: Mountain Road / Route 138
- Intersection 10: Desert View Road / Route 138

Although intersection 10, Desert View Road and Route 138, is projected to operate at an unacceptable LOS, the trips generated by the project do not surpass the 5.0 second delay threshold. Therefore, per county guidelines, improvements are not required.

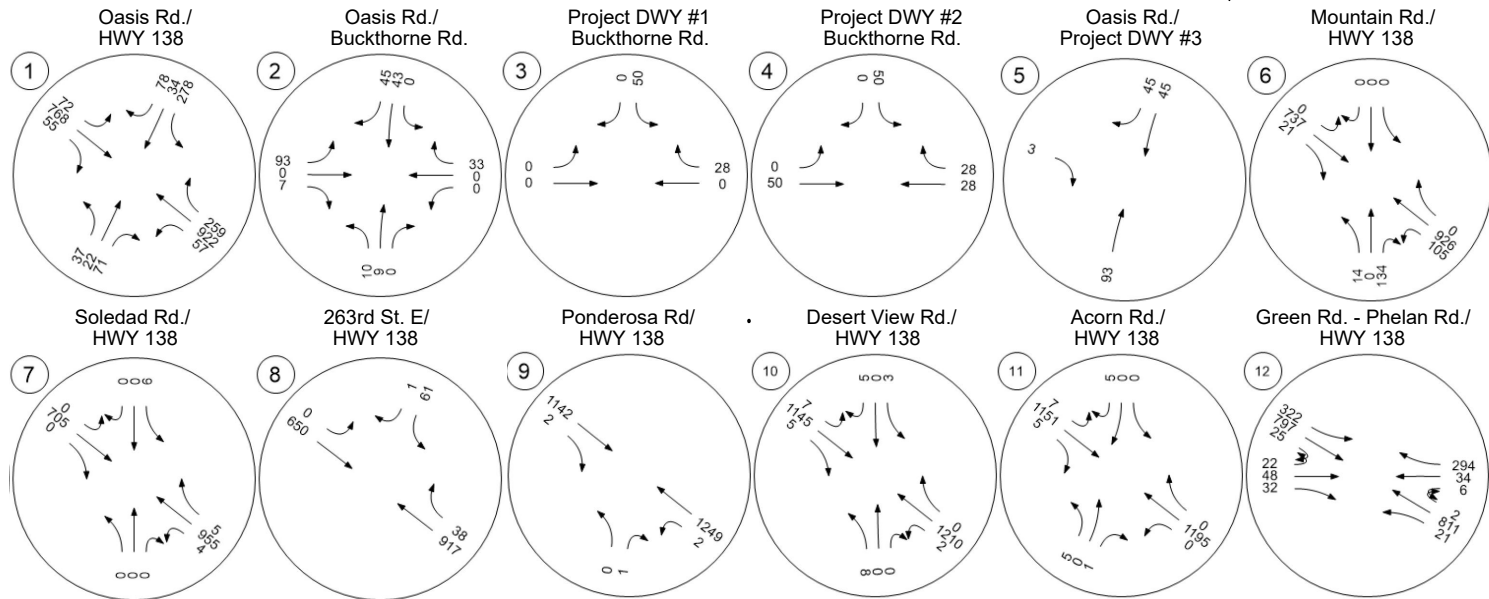
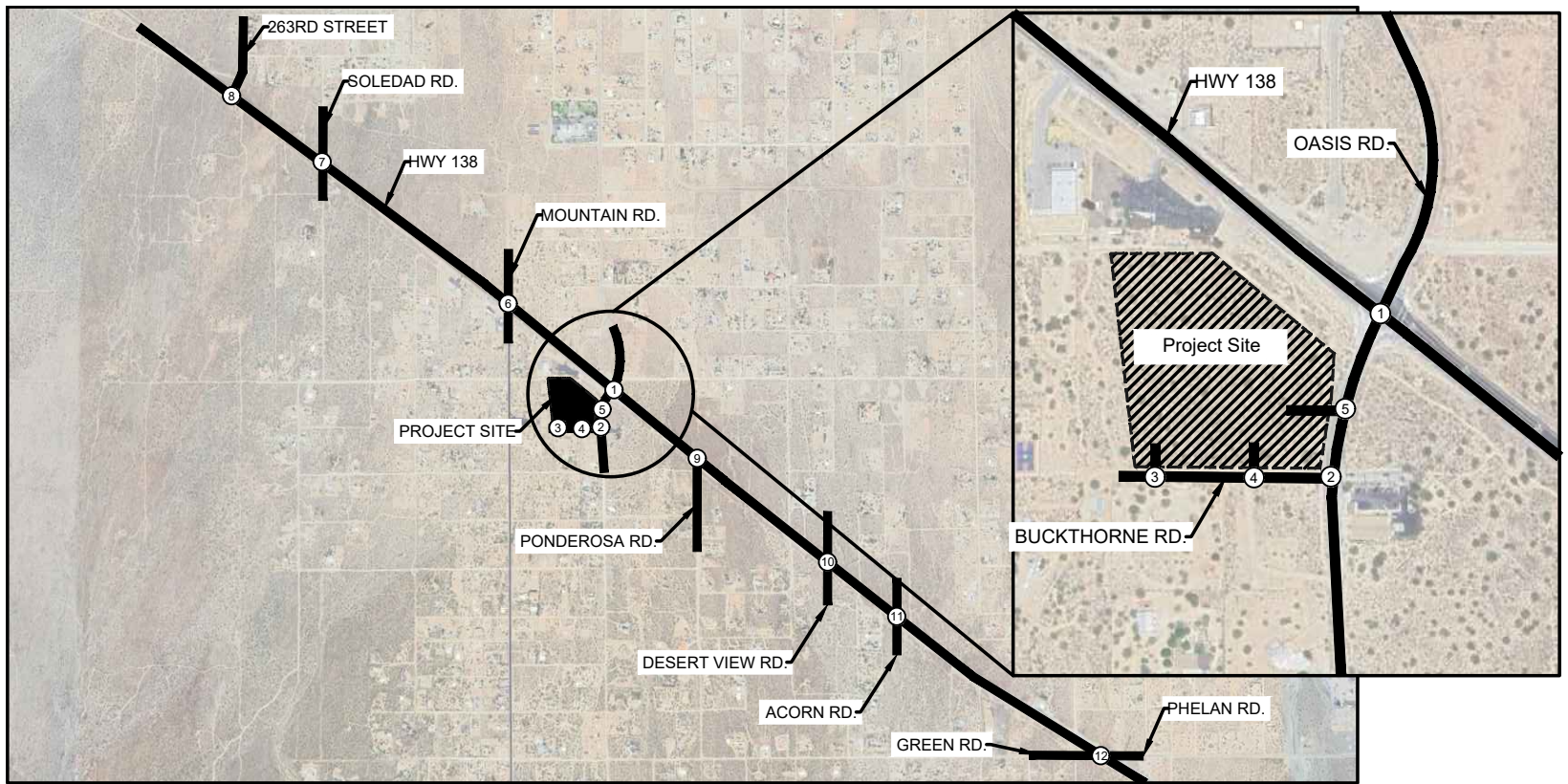


Exhibit 17: Horizon Year Plus Project AM Peak Hour Volumes

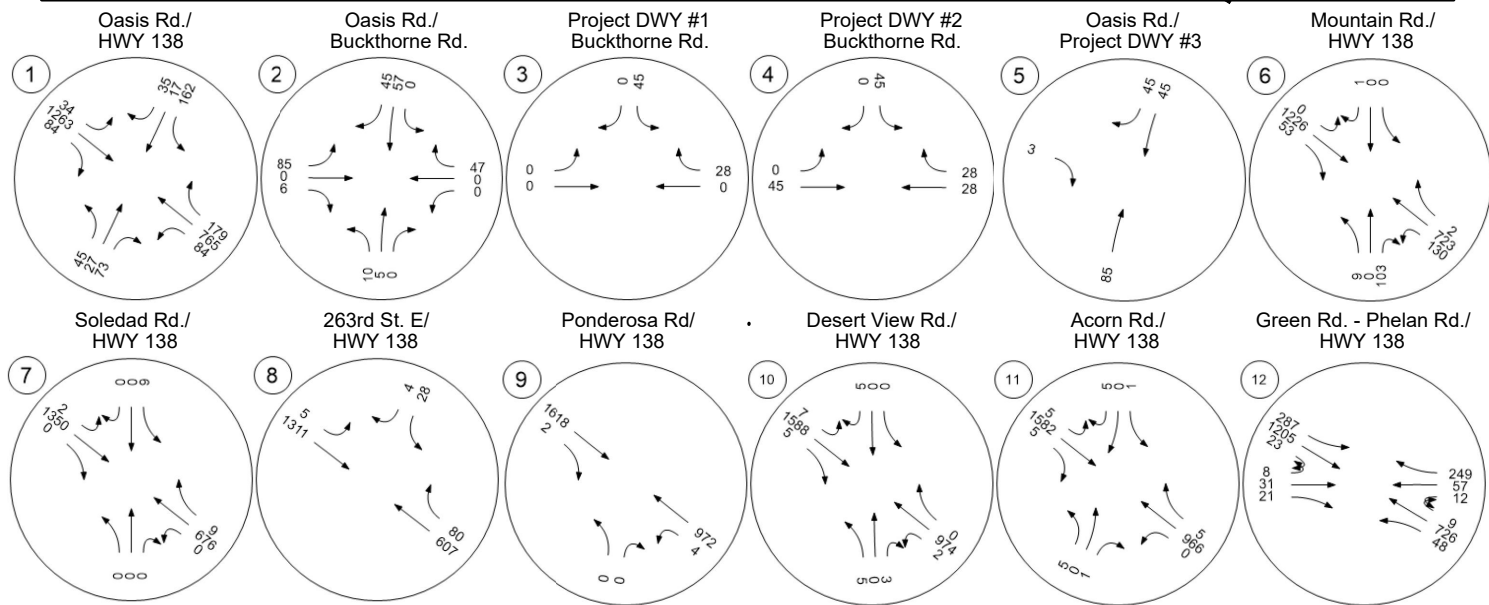
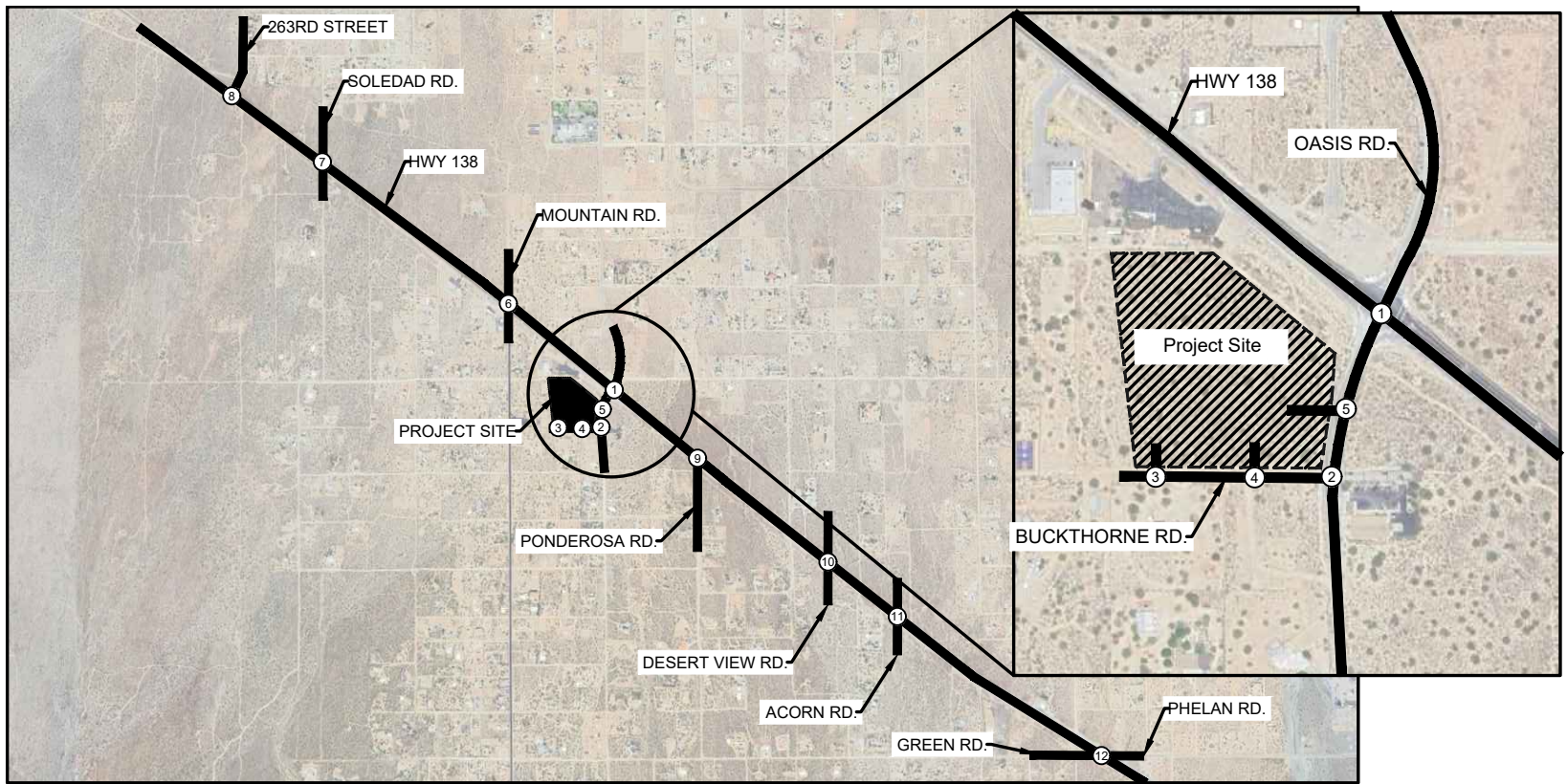


Exhibit 18: Horizon Year Plus Project PM Peak Hour Volumes

8.4 HYP QUEUING ANALYSIS

The queuing analysis is for the following examined movements;

Oasis Road and Highway 138 (Intersection 1)

- Eastbound (EB) right turn movement
- Westbound (WB) left turn movement

Oasis Road and Project Driveway #3 (Intersection 5)

- Southbound (SB) right turn movement

95th percentile queue lengths at this intersection were calculated to determine whether vehicles would have sufficient storage space at each movement.

The analysis utilized the traffic software program PTV Vistro to determine 95th percentile queue lengths for the movements at the study intersections. PTV Vistro uses the proposed project trip generation volumes and trip distribution to calculate the 95th percentile queue lengths in feet for the selected intersection movements. These were then compared to the existing storage lengths of each movement. **Table 17** compares these to the existing storage lengths. Synchro Queuing Reports are in **Appendix E**.

Table 17:
Intersection Queuing Analysis – Horizon Year Plus Project Conditions

Intersection			Leg ¹	Movement ²	Storage Length (ft)	95th Percentile Queue Length	
						AM Peak Hour	PM Peak
1	Oasis Road	Highway 138	EB	L	520	125	95
				R	520	50	66
			WB	L	520	108	244
				R	520	232	116
5	Oasis Road	Project Driveway #3	SB	R	-	<5	<5

1: NB = Northbound; SB = Southbound; EB = Eastbound; WB = Westbound.

2: L = Left-Turn; R = Right-Turn; T/R = Through/Right-Turn.

As shown in **Table 17**, the storage lengths for the AM and PM peak hours will be sufficient for the 95th percentile queue lengths during *EACP* traffic conditions.

Regarding the eastbound right-turn movement of Oasis Road and Highway 138, the right-turn pocket is painted 520-feet long. This provides sufficient storage space for the AM peak hour 95th percentile queue length of 50-feet and the PM peak hour 95th percentile queue length of 66-feet.



Regarding the westbound left-turn movement of Oasis Road and Highway 138, the 520-foot westbound left-turn pocket will provide sufficient storage for the AM peak hour 95th percentile queue length of 108-feet and the PM peak hour 95th percentile queue length of 244-feet.

Additionally, the eastbound right-turn 95th percentile queue length of 50-feet and 66-feet will not block the existing property driveways for Smoketree Junction Antiques, 815 State Highway 138, CA 92372.

Lastly, the southbound right-turn movement on Oasis Road into the project driveway #3 has a 95th percentile queue length of less than 5 feet in both AM and PM peak hour.

8.5 HYP DECELERATION LENGTH

In correspondence with Caltrans, the deceleration length has been requested for the left turn westbound movement for Route 138 at intersection #1, Oasis Road and Route 138. Route 138 is currently operating at a 50-mph speed limit, and the westbound left turn movement currently has one left turn pocket at 520 feet.

According to Table 405.2B found in the CA MUTCD, the recommended deceleration length for a 50-mph speed limit is 435 feet. Caltrans recommends that some, or all, of a vehicle's left-turn deceleration occur within the left-turn pocket. Since the westbound left turn movement on Route 138 and Oasis Road has a 520 feet left turn pocket, the recommended length of 435 feet of deceleration lane length satisfies Caltrans requirements.

Deceleration Length Design: it has been determined that the deceleration length portion of the westbound left turn pocket shall be 435-feet per Caltrans standards.

Table 405.2B
Deceleration Lane Length

Design Speed (mph)	Length to Stop (feet)
30	235
40	315
50	435
60	530

9.0 INTERSECTION IMPROVEMENTS

Analysis of the study intersections found that the following intersections operate below the acceptable LOS and have more than a 5.0 second delay resulting from the trips generated by the proposed project, per *County Guidelines* criteria, will require improvements for *Horizon Year Plus Project* conditions. These intersections are;

- Intersection 6: Mountain Road / Route 138

The study intersection 10, Desert View Road and Route 138 is projected to operate at an unacceptable LOS. However, the trips generated by the project do not surpass the 5.0 second delay threshold and therefore will not require improvements in the *Horizon Year Plus Project* scenario.

9.1 INTERSECTION MITIGATIONS

Due to the deficient operations at the intersections listed above for either AM and PM peak hours, a traffic signal warrant analysis was conducted. The *California Manual on Uniform Traffic Control Devices* (MUTCD) Figure 4C-3 was utilized to determine if traffic signals are warranted here. As shown in **Table 18**, based on AM and PM peak hour volumes for *Horizon Year Plus Project* conditions, the traffic signal warrants were satisfied for the intersections listed above. Signal warrant analysis worksheets based on Figure 4C-3 are provided in **Appendix F**.

Table 18:
Traffic Signal Warrant Analysis

Roadway Segment			Peak Hour	Signal Warrant Satisfied ¹
6	Mountain Road	Route 138	AM	Yes
			PM	Yes

1: California Manual on Uniform Traffic Control Devices (MUTCD) Figure 4C-3.

9.2 FAIR SHARE ANALYSIS

The project fair share percentage for each recommended improvement is identified in **Table 19**. Fair 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 as a result of all other proposed projects.

Table 19:
Fair Share Analysis

Intersection			Improvement	Scenario	Peak Hour	Existing Volume	Total Volume	Project Volume	Project % of Fair Share
6	Mountain Road	Route 138	Install Signal	Horizon Year Plus Project	AM	1005	1937	71	7.62%
					PM	1198	2247	69	6.58%

9.3 WITH IMPROVEMENTS AM/PM PEAK HOUR INTERSECTION LOS ANALYSIS

The *Horizon Year Plus Project with Improvements* conditions AM and PM peak hour intersection analysis is shown in **Table 20**. HCM analysis sheets are provided in **Appendix E**.

Table 20:
Intersection Analysis – Horizon Year Plus Project with Improvements Conditions AM/PM Peak Hours

Intersection			Improvement	Peak Hour	Horizon Year Plus Project		Horizon Year Plus Project With Improvements Conditions	
					Delay ¹	LOS	Delay ¹	LOS
6	Mountain Road	Route 138	Install Signal	AM	41.10	E	16.00	B
				PM	112.68	F	25.03	C

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

10.0 STOPPING SIGHT DISTANCE AND CORNER SIGHT DISTANCE

10.1 STOPPING SIGHT DISTANCE ANALYSIS

This sight distance analysis has been prepared based on applicable HDM and CA MUTCD standards for sight distance analysis. Topic 405.1 of the HDM discusses intersection design standards and sight distance. Sight distance refers to length of roadway ahead visible to the driver. Stopping sight distance refers to the distance required for the driver of a vehicle to perceive a situation requiring a stop, realize that stopping is necessary, apply the brake, and come to a complete stop. Per the HDM, stopping sight distance is to be provided for all users at all elements of intersections at grade.

Table 201.1 of the HDM, shown below, contains sight distance requirements based on design speeds used to determine the various geometric design features of a roadway.

Table 201.1
Sight Distance Standards

Design Speed (mph)	Stopping (feet)
10	50
15	100
20	125
25	150
30	200
35	250
40	300
45	360
50	430
55	500
60	580
65	660
70	750
75	840
80	930

Source: California Highway Design Manual (HDM) 7th Edition (July 2020).

As shown in Table 201.1, based on the 35 mile per hour speed limit on Oasis Road, the minimum sight distance for signal visibility is 250-feet.

Table 4D-2 of the CA MUTCD, shown below, discusses minimum stopping sight distance requirements for signal visibility based on the speed of the roadway.



Table 4D-2
Minimum Sight Distance for Signal Visibility

85th Percentile Speed (mph)	Minimum Sight Distance (feet)
20	175
25	215
30	270
35	325
40	390
45	460
50	540
55	625
60	715

Source: California Manual on Uniform Traffic Control Devices (CA MUTCD) Revision 8 (January 2024).

Note: Distances in this table are derived from stopping sight distance plus an assumed queue length for shoulder cycle lengths (60 to 75 seconds).

As shown in Table 4D-2, based on the 35 mile per hour speed limit on NB Oasis Road, the minimum sight distance for signal visibility is 325-feet.

10.2 CORNER SIGHT DISTANCE ANALYSIS

This corner sight distance analysis has been prepared based on applicable HDM and CA MUTCD standards for corner sight distance analysis. Topic 405.1 of the HDM discusses corner sight distance. Corner sight distance refers to the area of the roadway that will allow the stopped vehicle to turn into the appropriate lane on the road. In accordance with the HDM, the minimum corner sight distance equation, $1.47V_m T_g$ with V_m representing the design speed(mph) of the major road and T_g is the time gap (seconds) for the minor road vehicles, is used. Table 405.1A of the highway design manual, shown below, discusses corner sight distance time gap for unsignalized intersection.

Table 405.1A
 Corner Sight Distance Time Gap (Tg) for unsignalized intersection

Design Vehicle	Left-turn from Stop (s)	Right-turn from Stop and Crossing Maneuver (s)
Passenger Car Private Road Intersection Rural Driveway	7.5	6.5
Single-Unit Truck Public Road Intersection	9.5	8.5
Combination Truck Major and Minor Roads on Routes: National Network Terminal or Service Access	11.5	10.5

Source: Highway Design Manual on Intersection Design Standards (July 1, 2020).

As shown in table 405.1A design vehicle of passenger car utilizes 7.5 seconds for left turn from stop and 6.5 for right turn from stop. With the 35 miles per hour speed limit on the south side of Oasis Road and the time gap, we are able to determine a 335' corner sight distance for right turns and 386' corner sight distance for left turns.

Exhibit 19 shows corner sight distance for both the intersection on Oasis Road of driveway #3 and Buckthorne Road.

NOTE: FOR URBAN DRIVEWAYS, SECTION 405.1 OF THE HDM RECOMMENDS PARKING RESTRICTIONS BE SET PER CA MUTCD SECTION 3B.19.

* SECTION 3B.19 RECOMMENDS A CLEARANCE OF 6- FEET MEASURED FROM CURB RETURN SHOULD BE PROVIDED AT BOTH SIDES OF A DRIVEWAY.

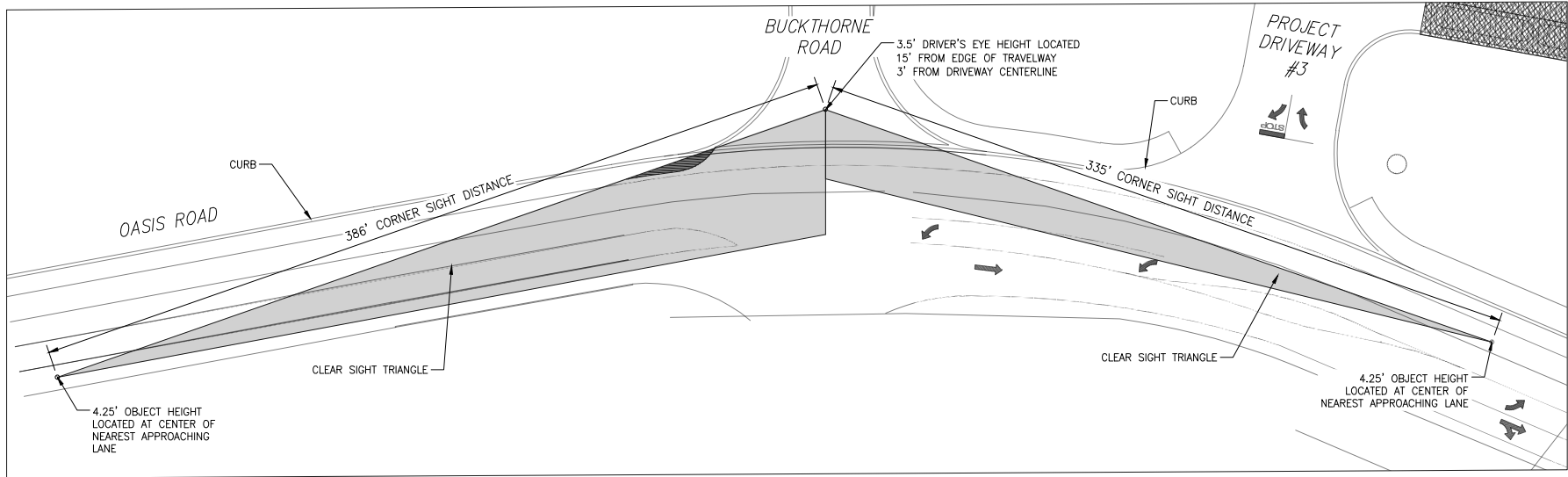
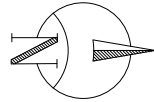
CORNER SIGHT DISTANCE NOTES:

FOR PRIVATE ROAD/RURAL DRIVEWAYS, THE HIGHWAY DESIGN MANUAL (HDM) RECOMMENDS CORNER SIGHT DISTANCE EQUAL $(1.47)(V_m)(T_g)$.

RIGHT-TURN: $V_m=35\text{MPH}$, $T_g=6.5$
CORNER SIGHT DISTANCE: 335"

LEFT-TURN: $V_m=35\text{MPH}$, $T_g=7.5$
CORNER SIGHT DISTANCE: 386"

Intersection #2 – Buckthorne Road/
Oasis Road (35 MPH)



Intersection #5 – Project Driveway #3/
Oasis Road (35 MPH)

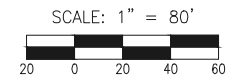
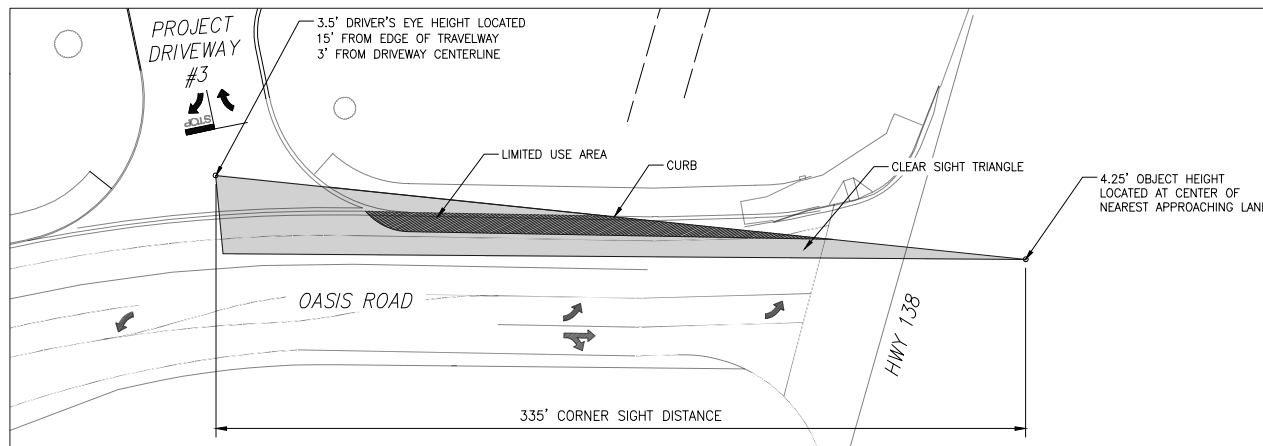
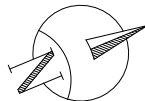


Exhibit 19: Corner Sight Distance Analysis



11.0 VEHICLE MILES TRAVELED (VMT) ANALYSIS

11.1 VEHICLE MILES TRAVELED (VMT) SCREENING

Senate Bill (SB) 743 was adopted in 2013 requiring the Governor’s Office of Planning and Research (OPR) to identify new metrics for identifying and mitigating transportation impacts within the California Environmental Quality Act (CEQA). For land use projects, OPR has identified VMT as the new metric for transportation analysis under CEQA. The regulatory changes to the CEQA guidelines that implement SB 743 were approved on December 28th, 2018, with an implementation date of July 1st, 2020, as the new metric.

OPR Technical Advisory on Evaluating Transportation Impacts in CEQA

The OPR Technical Advisory and the CEQA Guidelines Section 15064.3(a) states “For the purposes of this section, ‘vehicle miles traveled’ refers to the amount of distance of automobile travel attributable to a project.” Here, the term “automobile” refers to on-road passenger vehicles, specifically cars and light trucks. Additionally, the emissions and energy impacts of heavy-duty trucks are already regulated under other programs, such as the federal Clean Air Act. VMT analysis is intended to facilitate infill development and reduce passenger car emissions, and not to hinder goods movement and production requiring the use of heavy-duty trucks. Thus, per state guidance and regulations, heavy-duty truck VMT need not be included in VMT analysis. As the five (5) diesel fueling pumps of the proposed project will be exclusively for heavy-duty diesel trucks, the diesel fueling portion of the project screens out from a formal VMT analysis.

Additionally, the guidelines set forth in the *Caltrans Vehicle Miles Traveled – Focused Transportation Impact Study Guide (May 2020)* will screen this project out from a formal VMT analysis. According to the Caltrans Guidelines, any project that is a “locally serving retail project (such a project typically reduces vehicle travel by providing a more proximate shopping destination, i.e., better accessibility)” is presumed to have a less than significant transportation impact and therefore would not need a VMT analysis. **The proposed project is considered to be a local serving gas station and satisfies the screen criteria in the Caltrans guidelines. Therefore, this project will not require a VMT analysis.**

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	1 st	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:		I – Institute of Transportation Engineers; S – San Diego Traffic Generators;							Edition:		11th			
ITE Trip Generation		C – County; O – Other:												
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	263 rd 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
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7. Other:

Traffic counts may be conducted immediately per the following:
<ul style="list-style-type: none"> • Must be taken on Tuesdays, Wednesdays or Thursdays. • Certain projects may need to collect traffic counts on Friday or Sunday
<ul style="list-style-type: none"> • Must exclude holidays, and the first weekdays before and after the holiday.
<ul style="list-style-type: none"> • Must be taken on days when local schools or colleges are in session.
<ul style="list-style-type: none"> • Must be taken on days of good weather, and avoid atypical conditions (e.g., road construction, detours, or major traffic incidents).
<ul style="list-style-type: none"> • 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%.
<ul style="list-style-type: none"> • 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.
<ul style="list-style-type: none"> • 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.
<ul style="list-style-type: none"> • For all cumulative mitigation measures, a cost estimate for the improvement shall be submitted.
<ul style="list-style-type: none"> • Raw traffic counts data must be included with traffic analysis study
<ul style="list-style-type: none"> • 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.



SCOPE FOR TRAFFIC STUDY

Project Name:	Maverik Fueling Station
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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

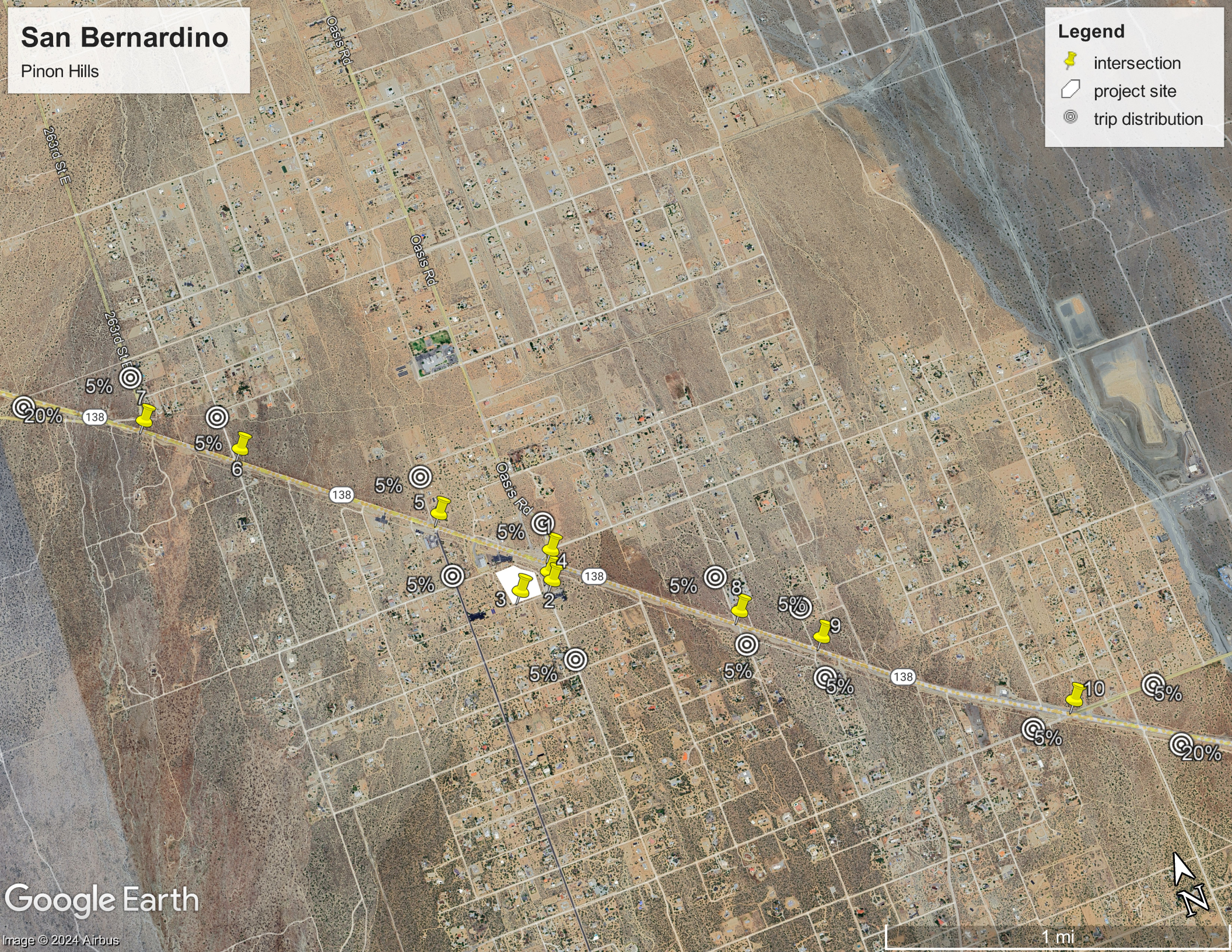
Email: Eric.Valencia@dpw.sbcounty.gov or Oswaldo.Roque@dpw.sbcounty.gov

San Bernardino

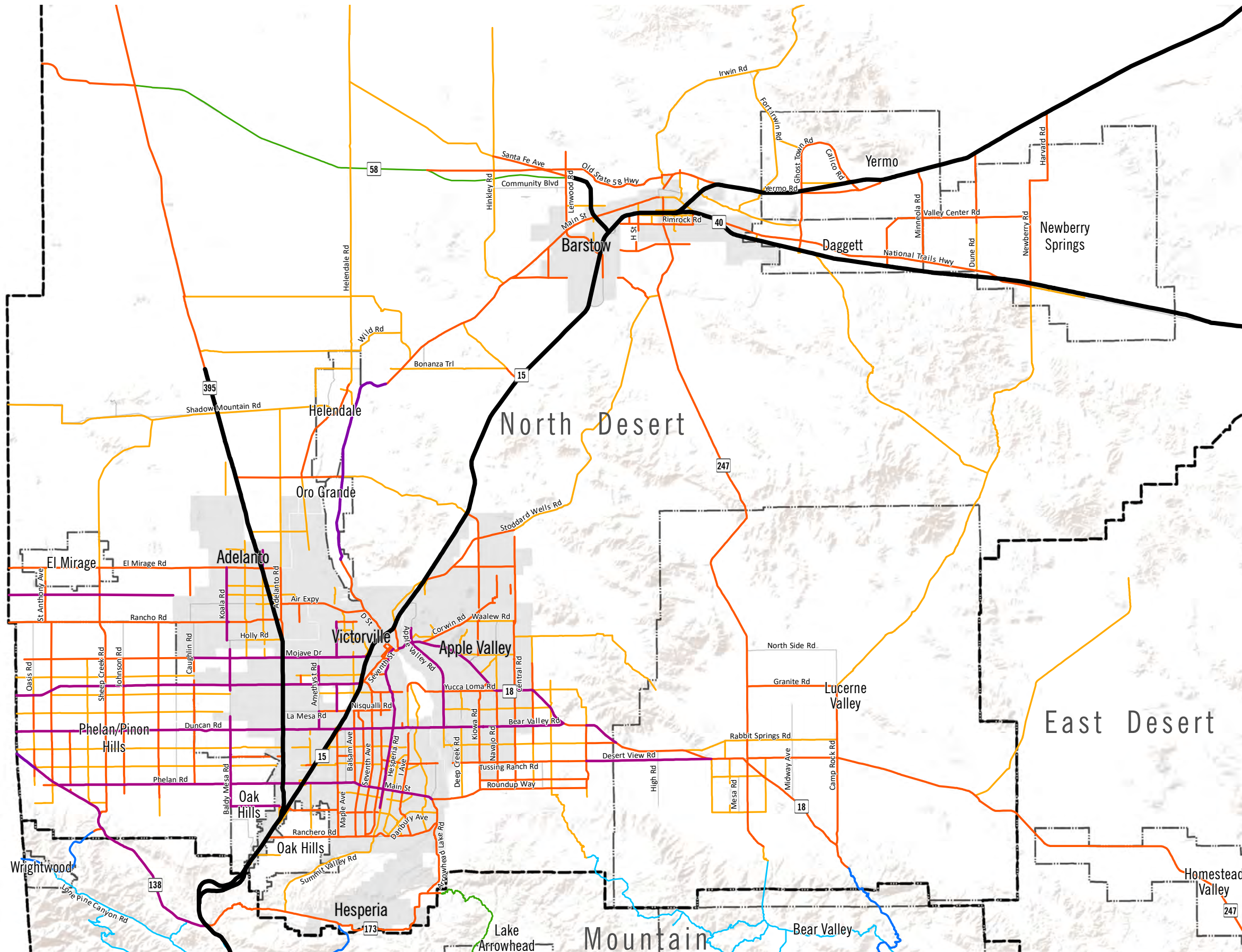
Pinon Hills

Legend

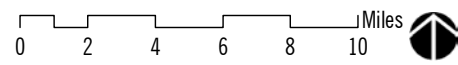
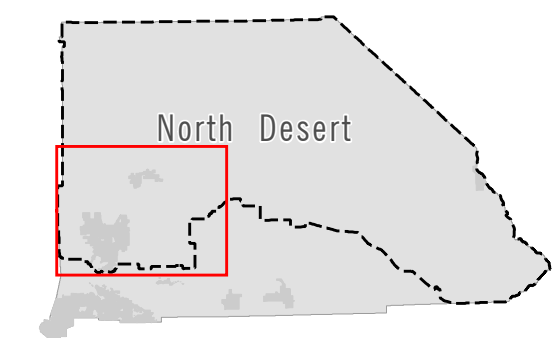
-  intersection
-  project site
-  trip distribution



Policy Map TM-1C Roadway Network | North Desert Region, Victor Valley & Barstow



- County Region
- Community Planning Area
- Incorporated City/Town
- Major Roadway w/o Designation
- Roadway Designation**
- Freeway
- Major Divided Highway
- Major Arterial Highway
- Major Highway
- Secondary Highway
- Controlled/Limited Access Collector
- Mountain Major Highway
- Mountain Secondary Highway
- State Highway (Special Standards or Conditions)



Date: 10/27/20 Created by PlaceWorks, Fehr & Peers | Source: County of San Bernardino 2018

DRAFT



COUNTYWIDE PLAN
POLICY PLAN

APPENDIX B

EXISTING TRAFFIC COUNTS AND MODEL VOLUMES

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

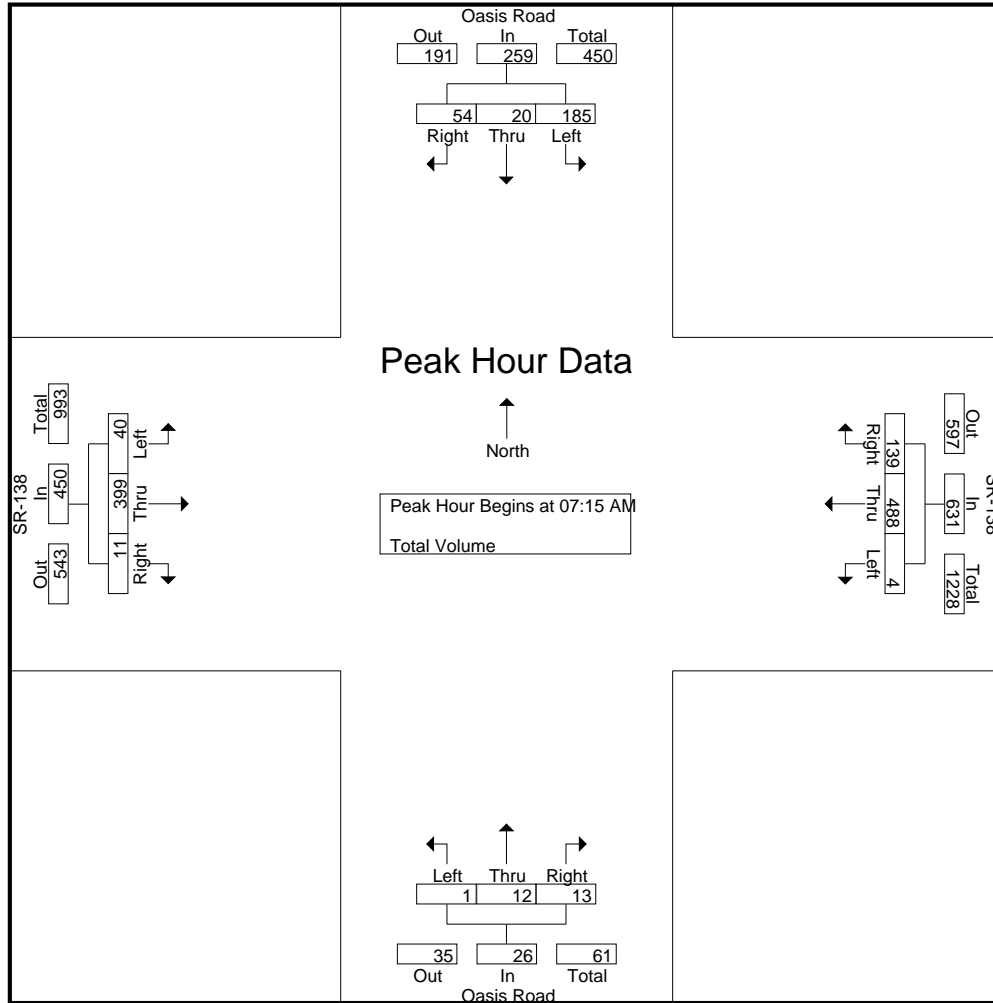
Groups Printed- Total Volume

Start Time	Oasis Road Southbound				SR-138 Westbound				Oasis Road Northbound				SR-138 Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	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	

Start Time	Oasis Road Southbound				SR-138 Westbound				Oasis Road Northbound				SR-138 Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
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

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



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

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

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

Groups Printed- Total Volume

Start Time	Oasis Road Southbound				SR-138 Westbound				Oasis Road Northbound				SR-138 Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	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	

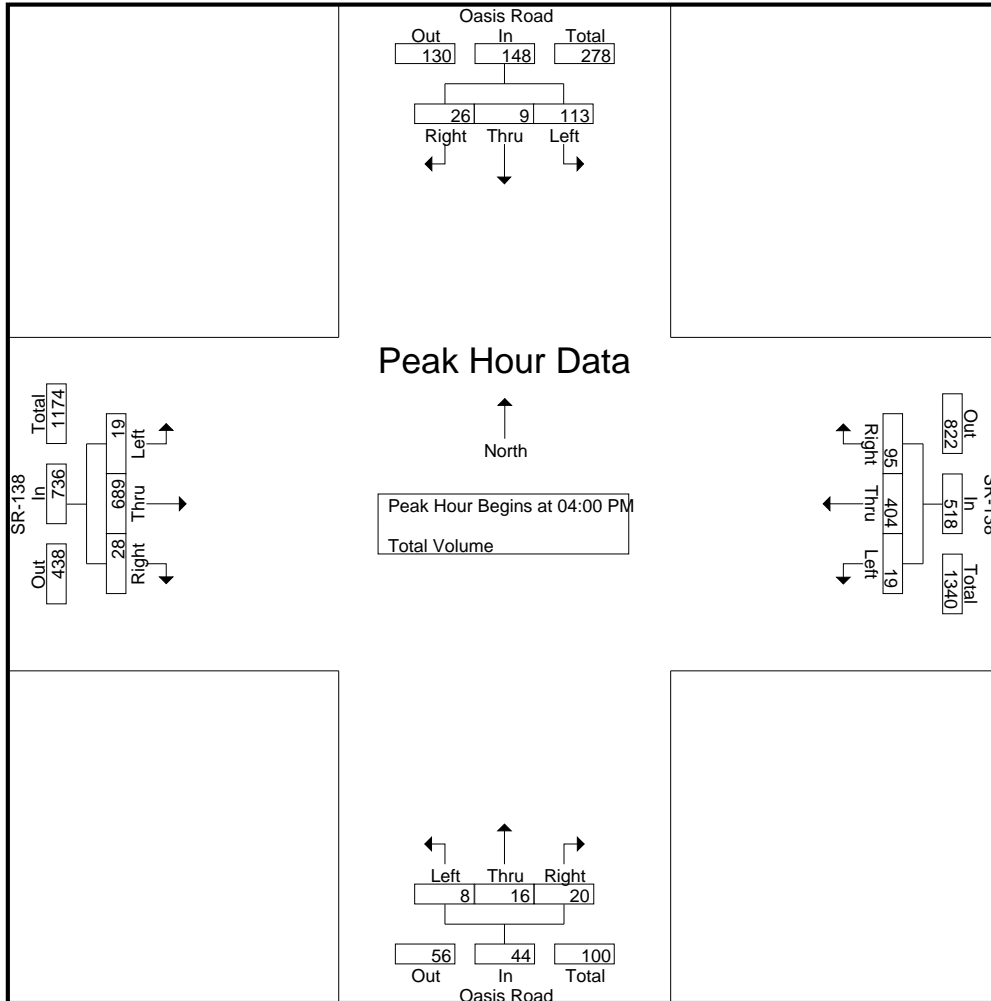
Start Time	Oasis Road Southbound				SR-138 Westbound				Oasis Road Northbound				SR-138 Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	27	5	5	37	8	105	27	140	4	5	4	13	4	177	7	188	378
04:15 PM	25	2	7	34	5	106	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

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

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

File Name : 01_CSB_Oasis_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				04:00 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

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

Start Time	Oasis Road Southbound				US Postal Service Driveway Westbound				Oasis Road Northbound				Buckthorne Road Eastbound				Int. Total	
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total		
07:00 AM	0	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0	0	3
07:15 AM	0	3	0	3	0	0	4	4	0	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	1	13
07:45 AM	0	10	0	10	0	0	7	7	0	2	0	2	0	0	0	0	0	19
Total	0	20	1	21	1	0	13	14	0	6	0	6	0	0	1	1	1	42
08:00 AM	0	5	0	5	0	0	8	8	0	1	0	1	0	0	0	0	0	14
08:15 AM	0	6	0	6	0	0	1	1	0	3	0	3	0	0	0	0	0	10
08:30 AM	0	7	0	7	0	0	7	7	0	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	0	7
Total	0	21	0	21	0	0	19	19	0	5	0	5	0	0	0	0	0	45
Grand Total	0	41	1	42	1	0	32	33	0	11	0	11	0	0	1	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		

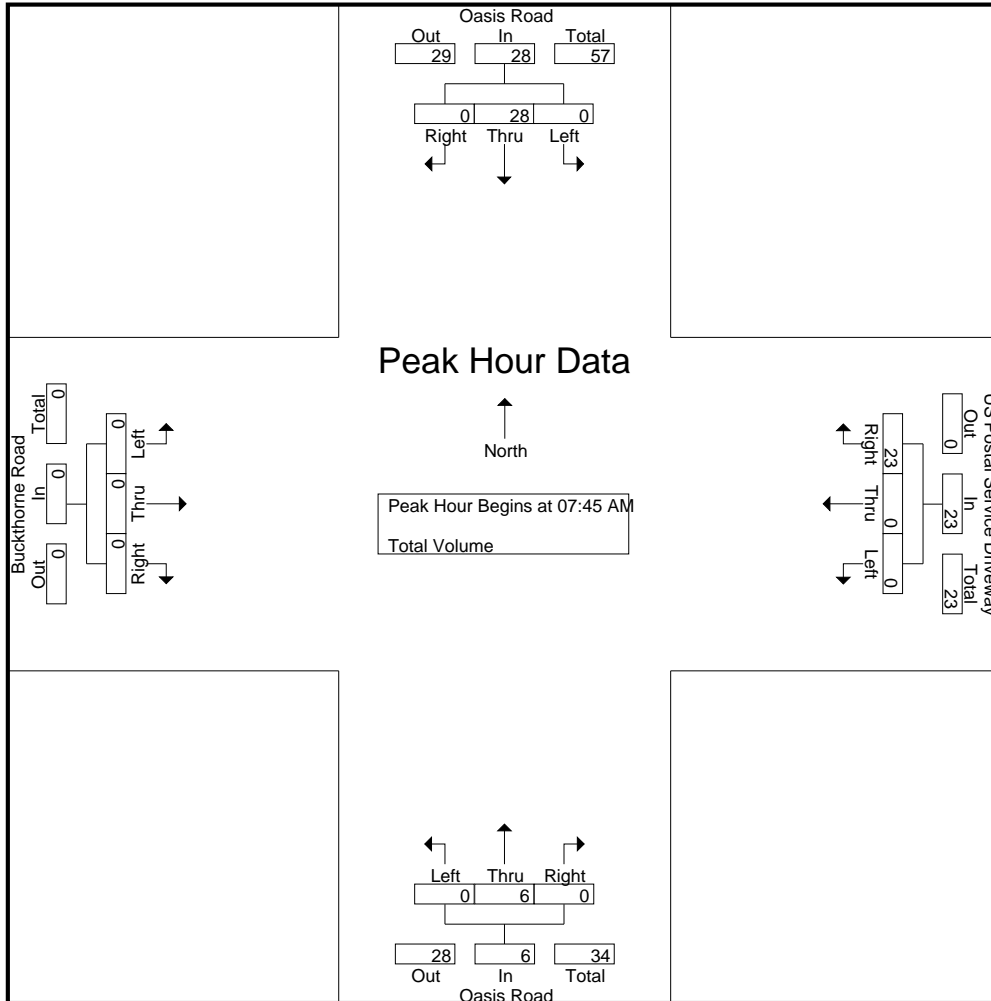
Start Time	Oasis Road Southbound				US Postal Service Driveway Westbound				Oasis Road Northbound				Buckthorne Road Eastbound				Int. Total	
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total		
07:45 AM	0	10	0	10	0	0	7	7	0	2	0	2	0	0	0	0	0	19
08:00 AM	0	5	0	5	0	0	8	8	0	1	0	1	0	0	0	0	0	14
08:15 AM	0	6	0	6	0	0	1	1	0	3	0	3	0	0	0	0	0	10
08:30 AM	0	7	0	7	0	0	7	7	0	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	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	.000	.750

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

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 : 2



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	100	0	0	100	100	0	100	0	100	0	0	100	100
PHF	.000	.700	.000	.700	.000	.000	.719	.719	.000	.750	.000	.750	.000	.000	.250	.250

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
 Page No : 1

Groups Printed- Total Volume

Start Time	Oasis Road Southbound				US Postal Service Driveway Westbound				Oasis Road Northbound				Buckthorne Road Eastbound				Int. Total	
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total		
04:00 PM	0	17	0	17	0	0	13	13	0	2	0	2	0	0	0	0	0	32
04:15 PM	0	12	0	12	0	0	12	12	0	2	0	2	0	0	0	0	0	26
04:30 PM	0	6	0	6	2	0	6	8	0	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	0	9
Total	0	40	0	40	2	0	35	37	0	4	0	4	0	0	0	0	0	81
05:00 PM	0	10	1	11	1	0	6	7	0	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	0	12
05:30 PM	0	7	0	7	1	0	5	6	0	3	0	3	0	0	0	0	0	16
05:45 PM	0	6	0	6	1	0	4	5	0	2	0	2	1	0	0	0	1	14
Total	0	28	2	30	3	0	19	22	0	7	0	7	1	0	0	0	1	60
Grand Total	0	68	2	70	5	0	54	59	0	11	0	11	1	0	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		

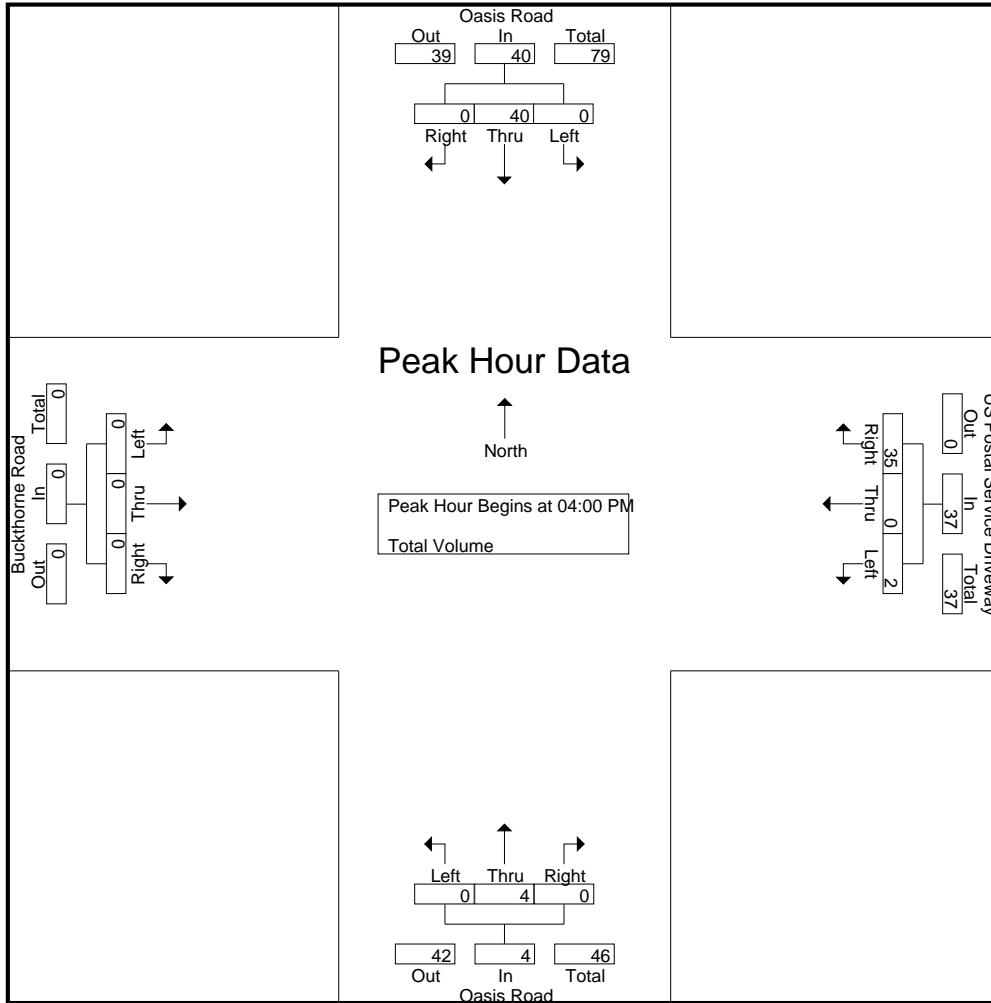
Start Time	Oasis Road Southbound				US Postal Service Driveway Westbound				Oasis Road Northbound				Buckthorne Road Eastbound				Int. Total	
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total		
04:00 PM	0	17	0	17	0	0	13	13	0	2	0	2	0	0	0	0	0	32
04:15 PM	0	12	0	12	0	0	12	12	0	2	0	2	0	0	0	0	0	26
04:30 PM	0	6	0	6	2	0	6	8	0	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	0	9
Total Volume	0	40	0	40	2	0	35	37	0	4	0	4	0	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	.000	.633

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

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
 Page No : 2



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

	04:00 PM				04:00 PM				05:00 PM				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

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
 Page No : 1

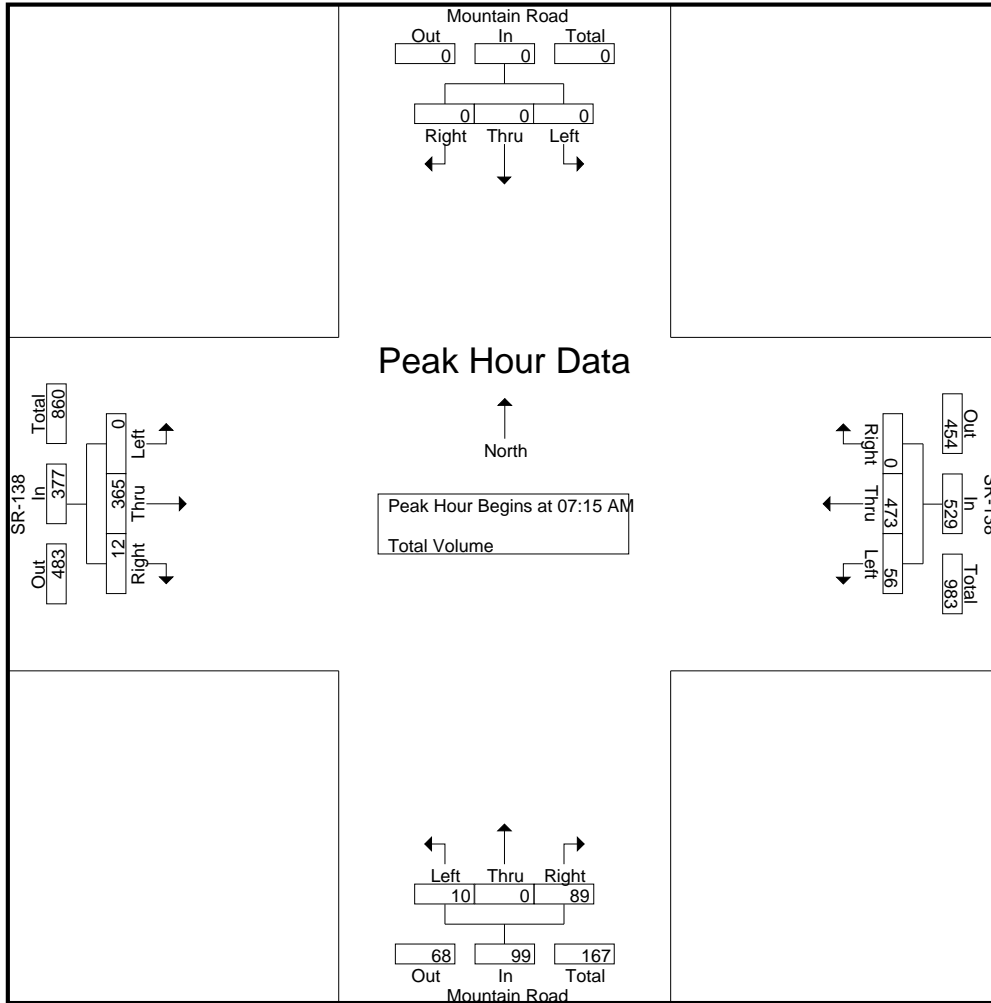
Groups Printed- Total Volume

Start Time	Mountain Road Southbound				SR-138 Westbound				Mountain Road Northbound				SR-138 Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	0	0	0	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		4.8	48.5	0	53.3	1.1	0	8	9.1	0	36.3	1.2	37.6	

Start Time	Mountain Road Southbound				SR-138 Westbound				Mountain Road Northbound				SR-138 Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 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

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
 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:

	07:00 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	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

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

File Name : 05_CSB_Mtn_SR138 PM
 Site Code : 23624355
 Start Date : 4/24/2024
 Page No : 1

Groups Printed- Total Volume

Start Time	Mountain Road Southbound				SR-138 Westbound				Mountain Road Northbound				SR-138 Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	0	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	

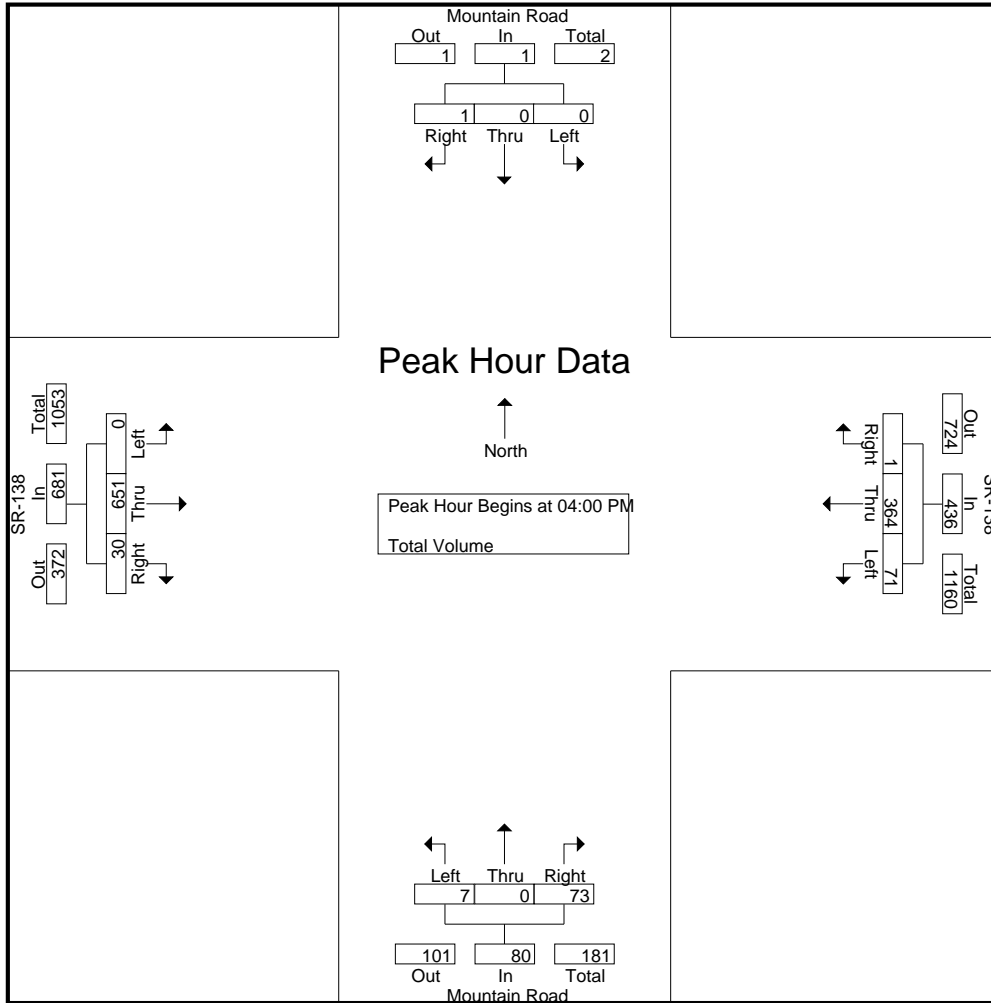
Start Time	Mountain Road Southbound				SR-138 Westbound				Mountain Road Northbound				SR-138 Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	0	1	1	14	105	0	119	4	0	19	23	0	174	9	183	326
04:15 PM	0	0	0	0	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

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

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

File Name : 05_CSB_Mtn_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				04:45 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

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
 Page No : 1

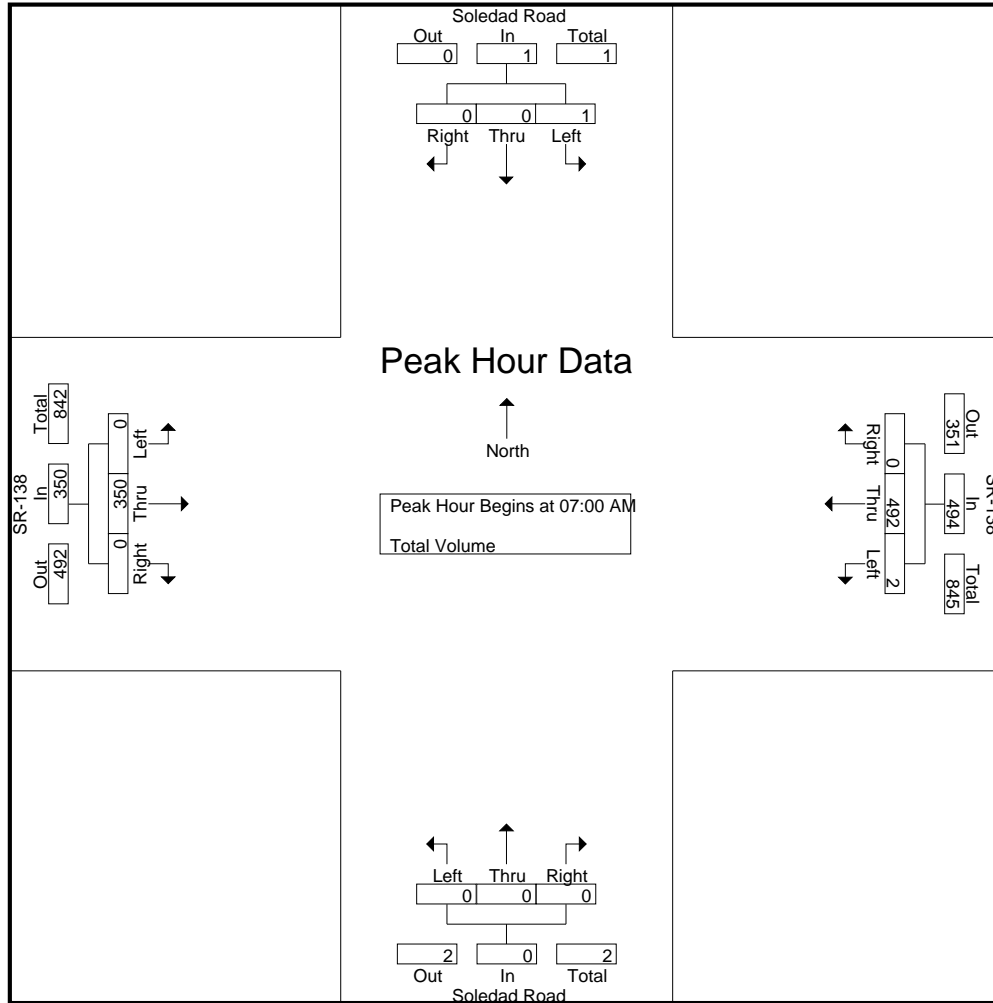
Groups Printed- Total Volume

Start Time	Soledad Road Southbound				SR-138 Westbound				Soledad Road Northbound				SR-138 Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	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	

Start Time	Soledad Road Southbound				SR-138 Westbound				Soledad Road Northbound				SR-138 Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	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

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
 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:

	07:45 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	0.4	99.6	0	0	0	0	0	0	0	100	0	0
PHF	.375	.000	.000	.375	.500	.969	.000	.972	.000	.000	.000	.000	.000	.855	.000	.855

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 : 1

Groups Printed- Total Volume

Start Time	Soledad Road Southbound				SR-138 Westbound				Soledad Road Northbound				SR-138 Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	0	0	0	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	

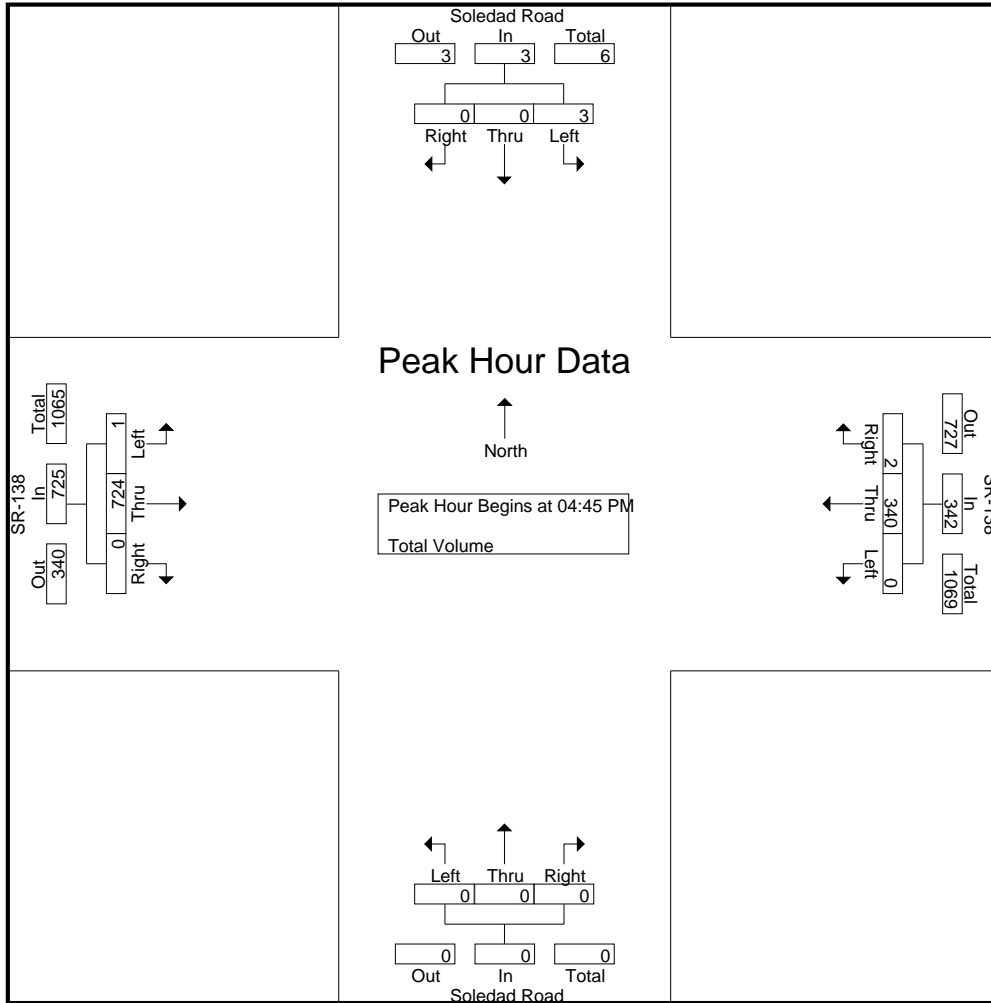
Start Time	Soledad Road Southbound				SR-138 Westbound				Soledad Road Northbound				SR-138 Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:45 PM	1	0	0	1	0	80	0	80	0	0	0	0	0	205	0	205	286
05:00 PM	1	0	0	1	0	88	0	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

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

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	0.8	98.6	0.6	0	0	0	0	0	0.1	99.9	0	0
PHF	.750	.000	.000	.750	.250	.893	.500	.870	.000	.000	.000	.000	.250	.883	.000	.884

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

Start Time	263rd Street E Southbound			SR-138 Westbound			SR-138 Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. 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	

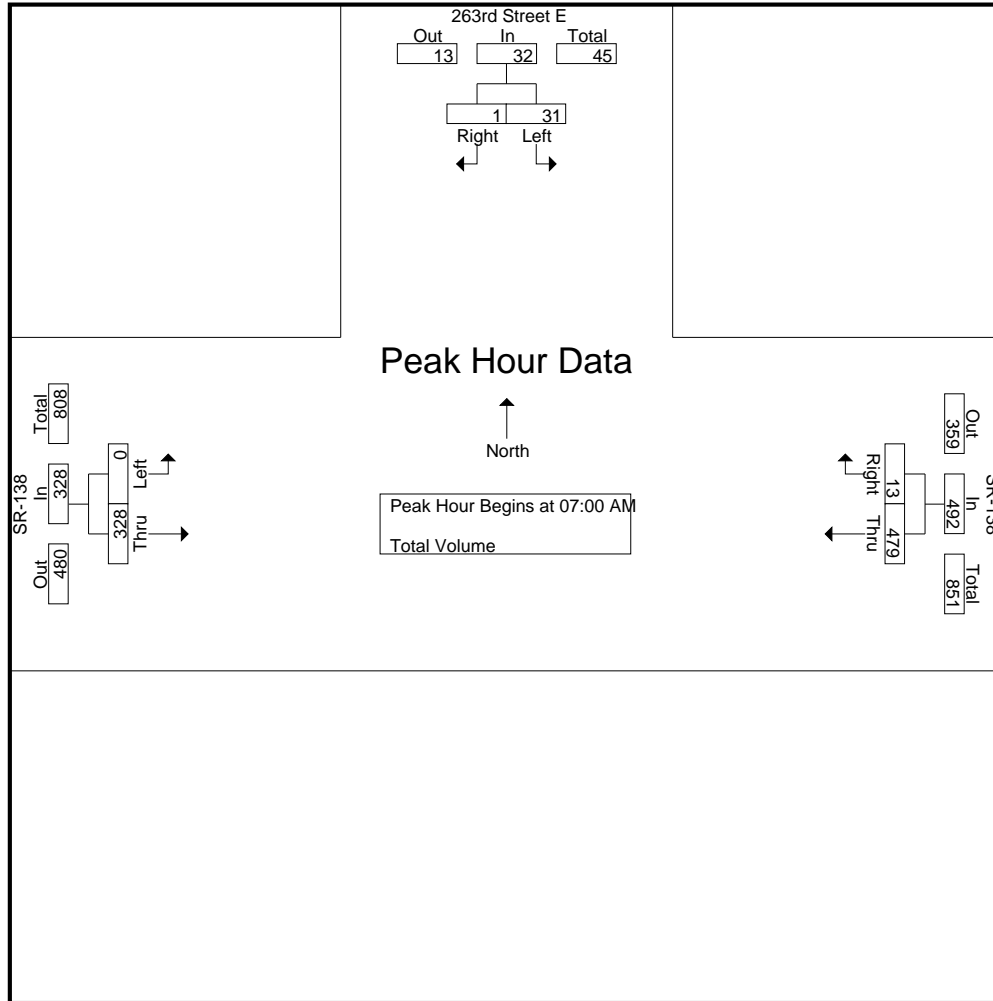
Start Time	263rd Street E Southbound			SR-138 Westbound			SR-138 Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
07:00 AM	7	0	7	120	6	126	0	65	65	198
07:15 AM	6	0	6	115	3	118	0	78	78	202
07:30 AM	4	1	5	139	0	139	0	93	93	237
07:45 AM	14	0	14	105	4	109	0	92	92	215
Total 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

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

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 : 2



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

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

Start Time	263rd Street E Southbound			SR-138 Westbound			SR-138 Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. 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	

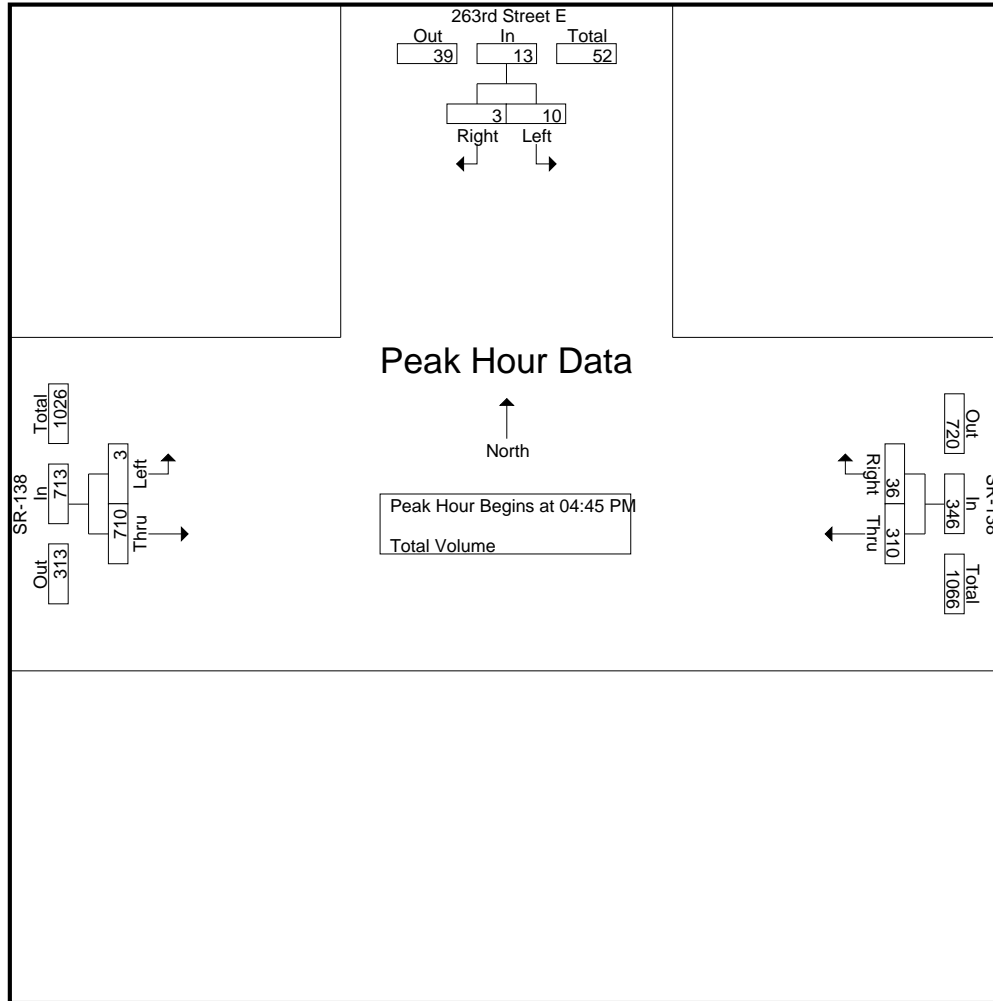
Start Time	263rd Street E Southbound			SR-138 Westbound			SR-138 Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
04:45 PM	4	1	5	80	6	86	1	196	197	288
05:00 PM	1	1	2	76	11	87	1	172	173	262
05:15 PM	3	0	3	75	7	82	0	157	157	242
05:30 PM	2	1	3	79	12	91	1	185	186	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

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

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

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

Start Time	SR-138 Westbound			Ponderosa Road Northbound			SR-138 Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. 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	

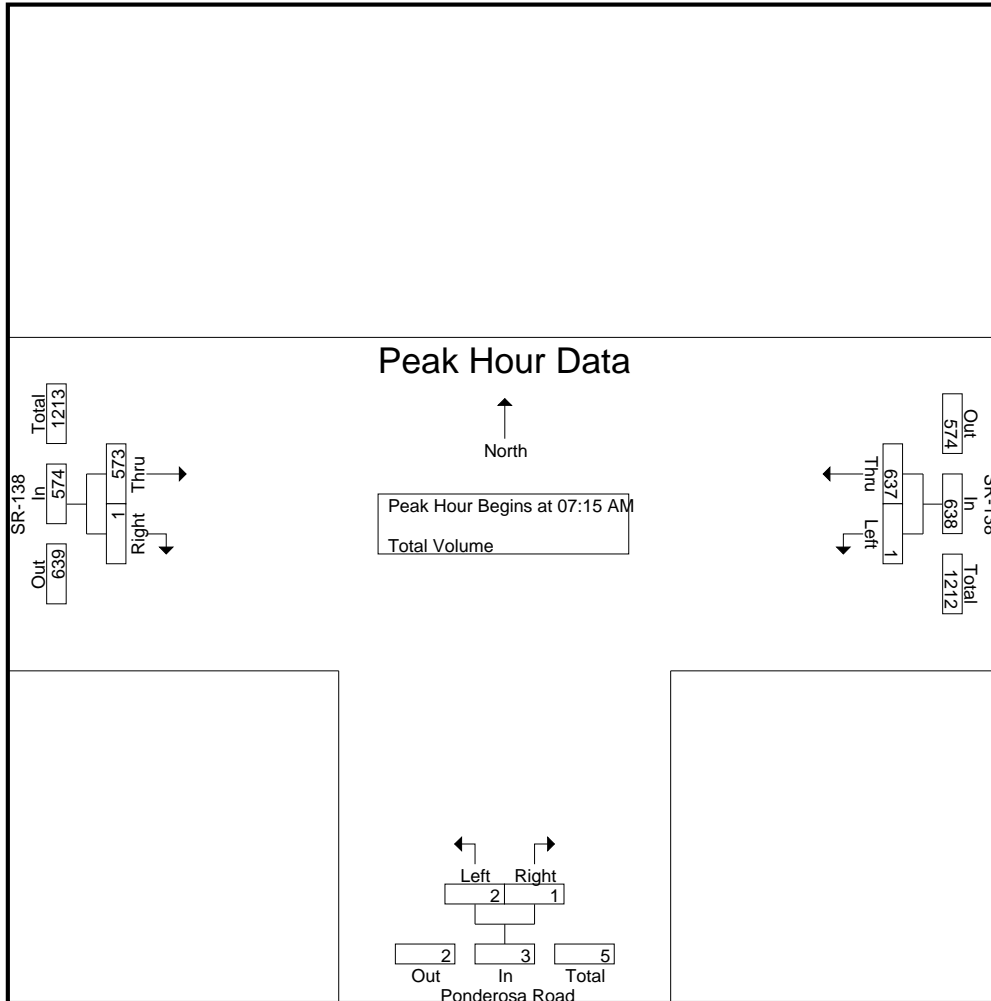
Start Time	SR-138 Westbound			Ponderosa Road Northbound			SR-138 Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:15 AM	1	158	159	0	0	0	107	0	107	266
07:30 AM	0	160	160	2	1	3	157	1	158	321
07:45 AM	0	182	182	0	0	0	163	0	163	345
08:00 AM	0	137	137	0	0	0	146	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

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

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 : 2



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

	07:15 AM			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

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

Start Time	SR-138 Westbound			Ponderosa Road Northbound			SR-138 Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. 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	

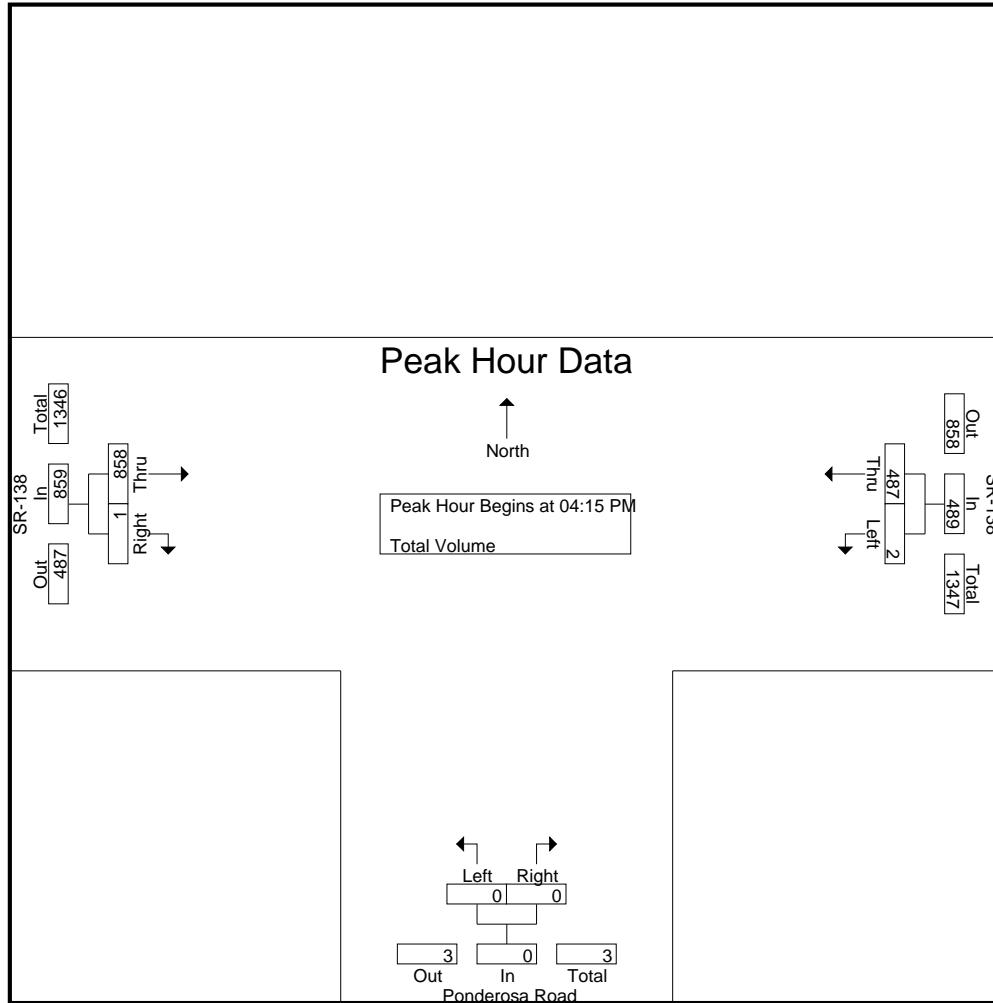
Start Time	SR-138 Westbound			Ponderosa Road Northbound			SR-138 Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:15 PM	0	133	133	0	0	0	191	0	191	324
04:30 PM	1	112	113	0	0	0	219	0	219	332
04:45 PM	0	122	122	0	0	0	225	0	225	347
05:00 PM	1	120	121	0	0	0	223	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

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

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 : 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			04:15 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

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

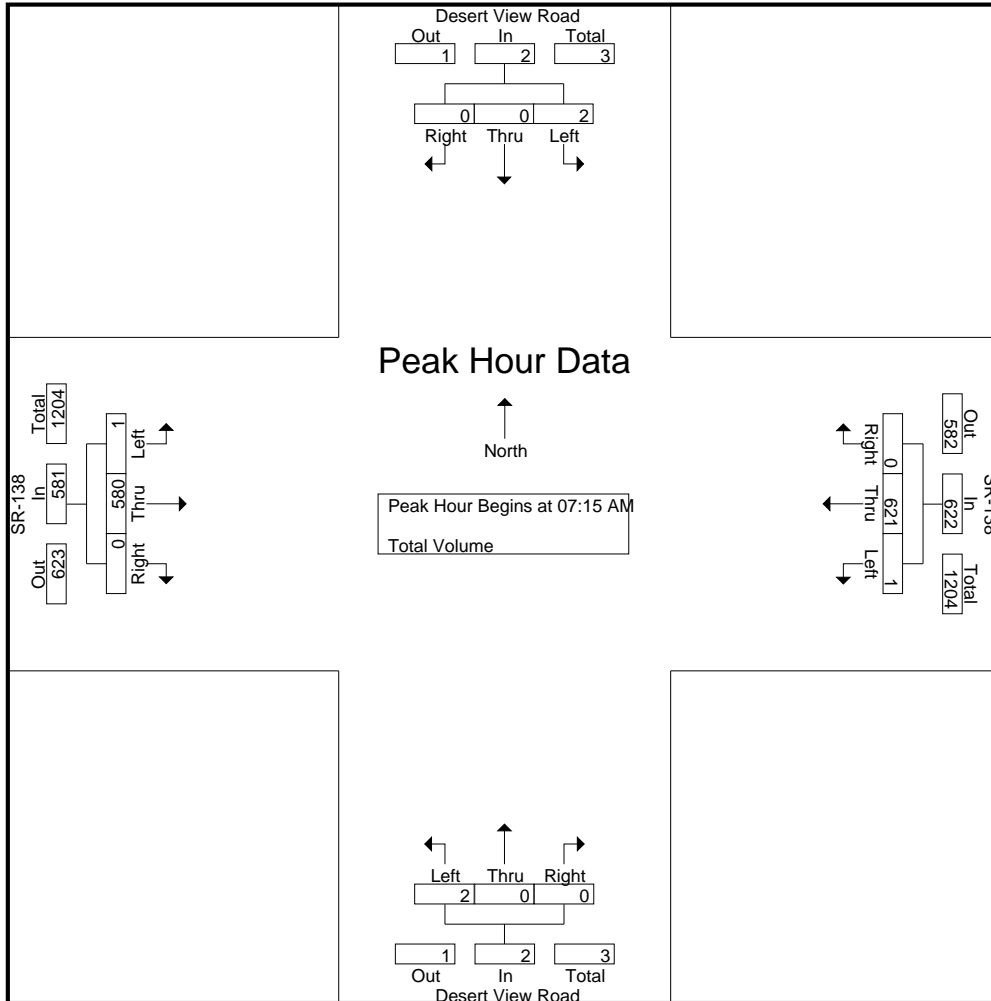
Groups Printed- Total Volume

Start Time	Desert View Road Southbound				SR-138 Westbound				Desert View Road Northbound				SR-138 Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	0	0	0	0	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	

Start Time	Desert View Road Southbound				SR-138 Westbound				Desert View Road Northbound				SR-138 Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
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

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



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	0.2	99.8	0	0	66.7	0	33.3	0	0.2	99.7	0.2	0
PHF	.500	.000	.000	.500	.250	.872	.000	.869	.500	.000	.250	.750	.250	.911	.250	.909

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

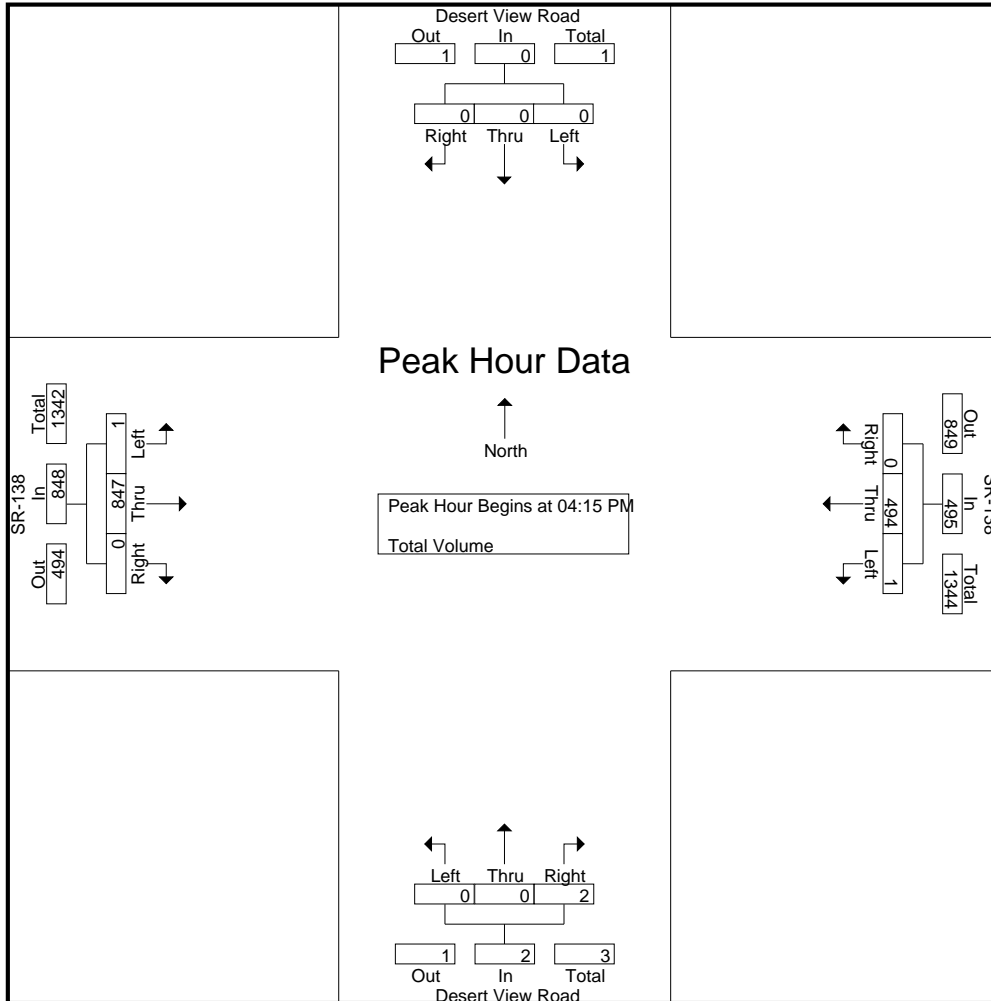
Groups Printed- Total Volume

Start Time	Desert View Road Southbound				SR-138 Westbound				Desert View Road Northbound				SR-138 Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	0	0	0	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		0.1	36.8	0	36.9	0	0	0.1	0.1	0.1	62.9	0	63	

Start Time	Desert View Road Southbound				SR-138 Westbound				Desert View Road Northbound				SR-138 Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 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

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	0.4	99.6	0	0	0	0	100	0	0.1	99.9	0	0
PHF	.000	.000	.000	.000	.500	.931	.000	.935	.000	.000	.750	.750	.250	.921	.000	.922

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

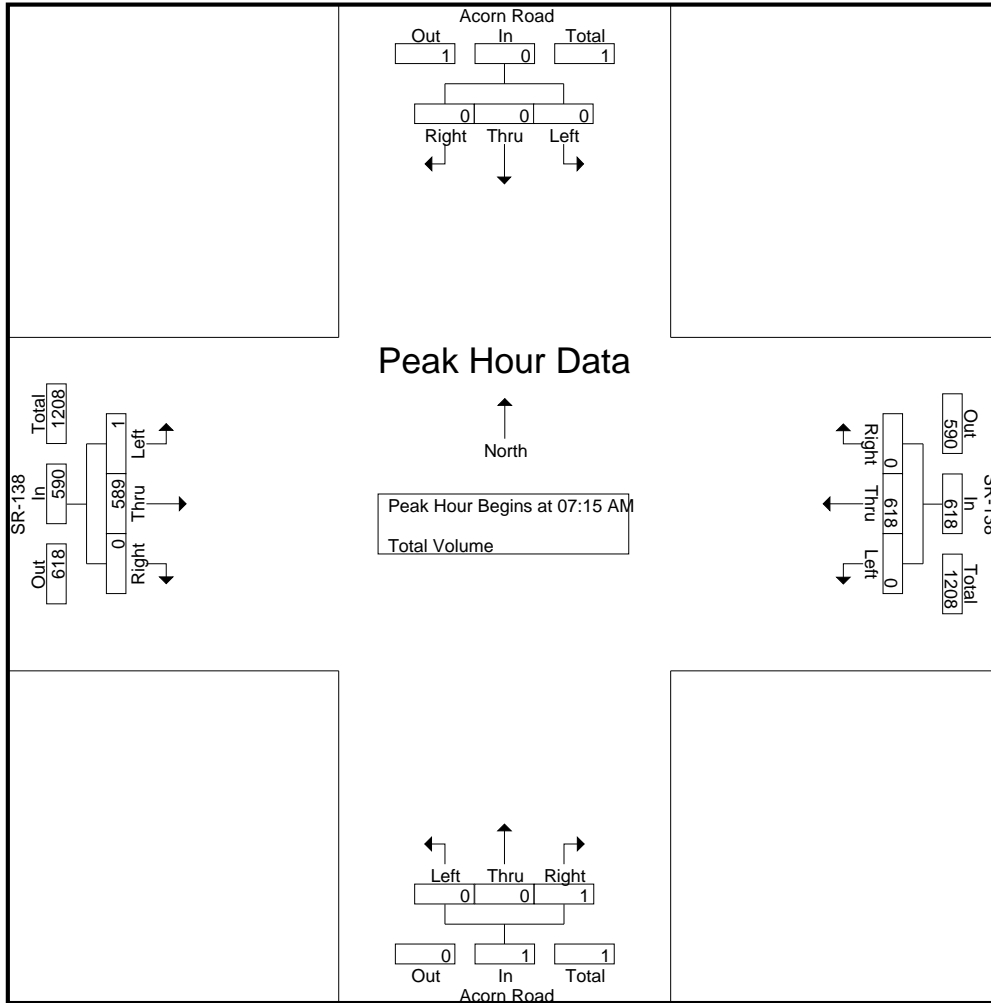
Groups Printed- Total Volume

Start Time	Acorn Road Southbound				SR-138 Westbound				Acorn Road Northbound				SR-138 Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	0	0	0	0	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	51.5	0		0	0	0		0	48.4	0		

Start Time	Acorn Road Southbound				SR-138 Westbound				Acorn Road Northbound				SR-138 Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 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

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 : 2



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	0	100	0	100	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

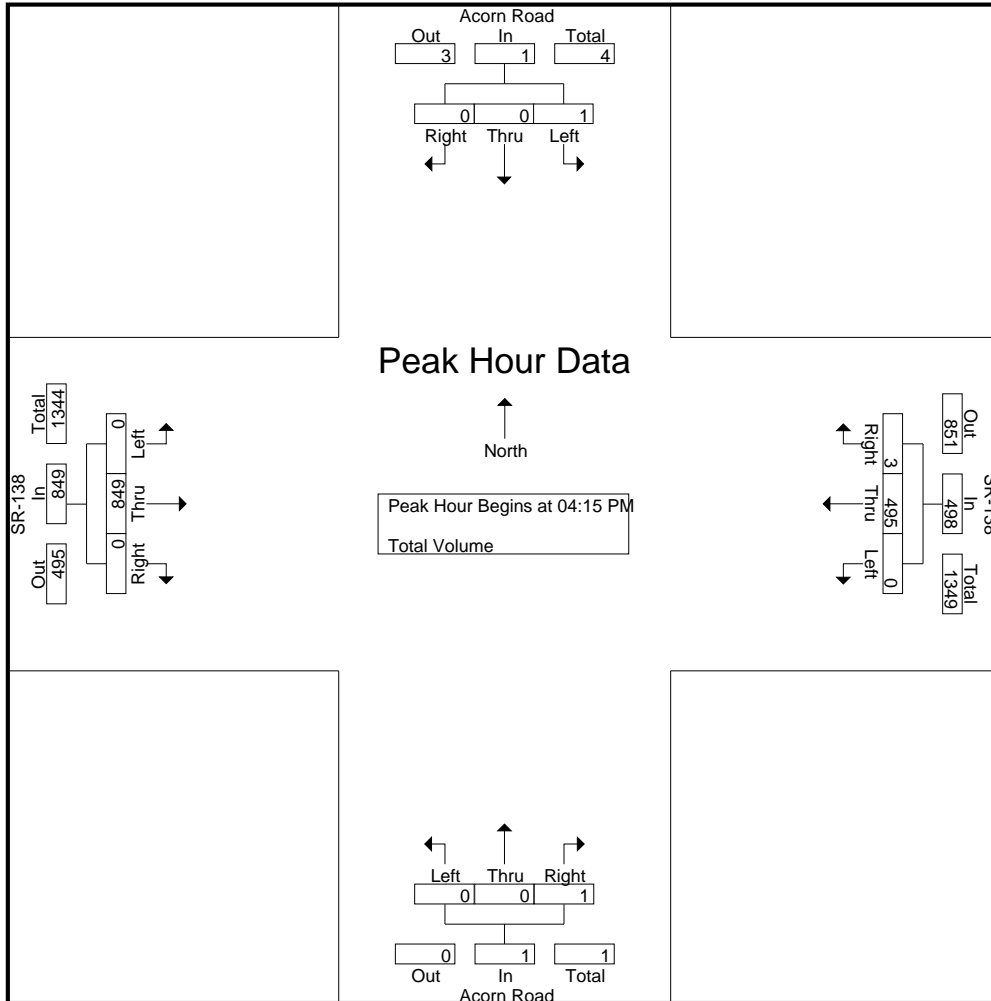
County of San Bernardino
 N/S: Acorn Road
 E/W: SR-138
 Weather: Clear

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

Groups Printed- Total Volume

Start Time	Acorn Road Southbound				SR-138 Westbound				Acorn Road Northbound				SR-138 Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	0	0	0	0	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	37.2	0.1	37.3	0	0	0.1	0.1	0	62.6	0	62.6	

Start Time	Acorn Road Southbound				SR-138 Westbound				Acorn Road Northbound				SR-138 Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 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



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	0	99.6	0.4	100	0	0	100	100	0	100	0	100
PHF	.250	.000	.000	.250	.000	.937	.500	.934	.000	.000	.500	.500	.000	.888	.000	.888

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
 Page No : 1

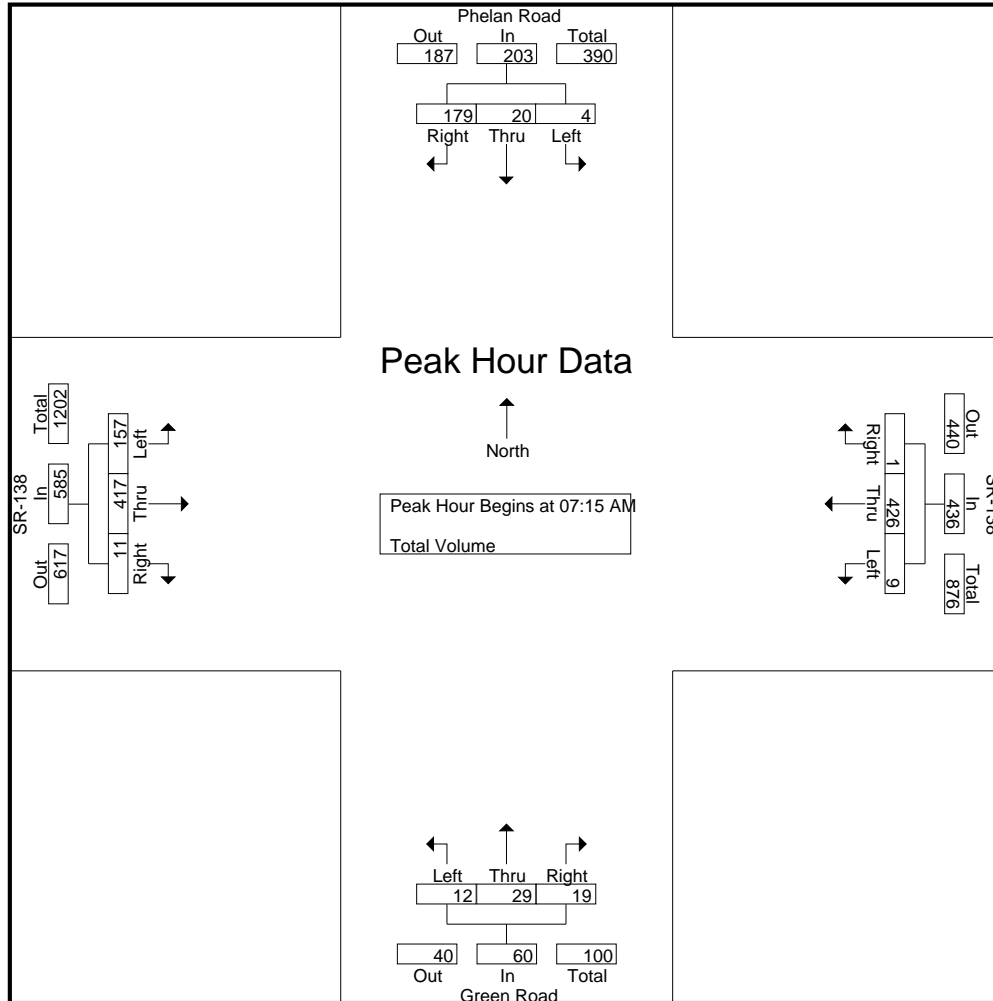
Groups Printed- Total Volume

Start Time	Phelan Road Southbound				SR-138 Westbound				Green Road Northbound				SR-138 Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	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	

Start Time	Phelan Road Southbound				SR-138 Westbound				Green Road Northbound				SR-138 Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
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

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



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

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
 Start Date : 4/24/2024
 Page No : 1

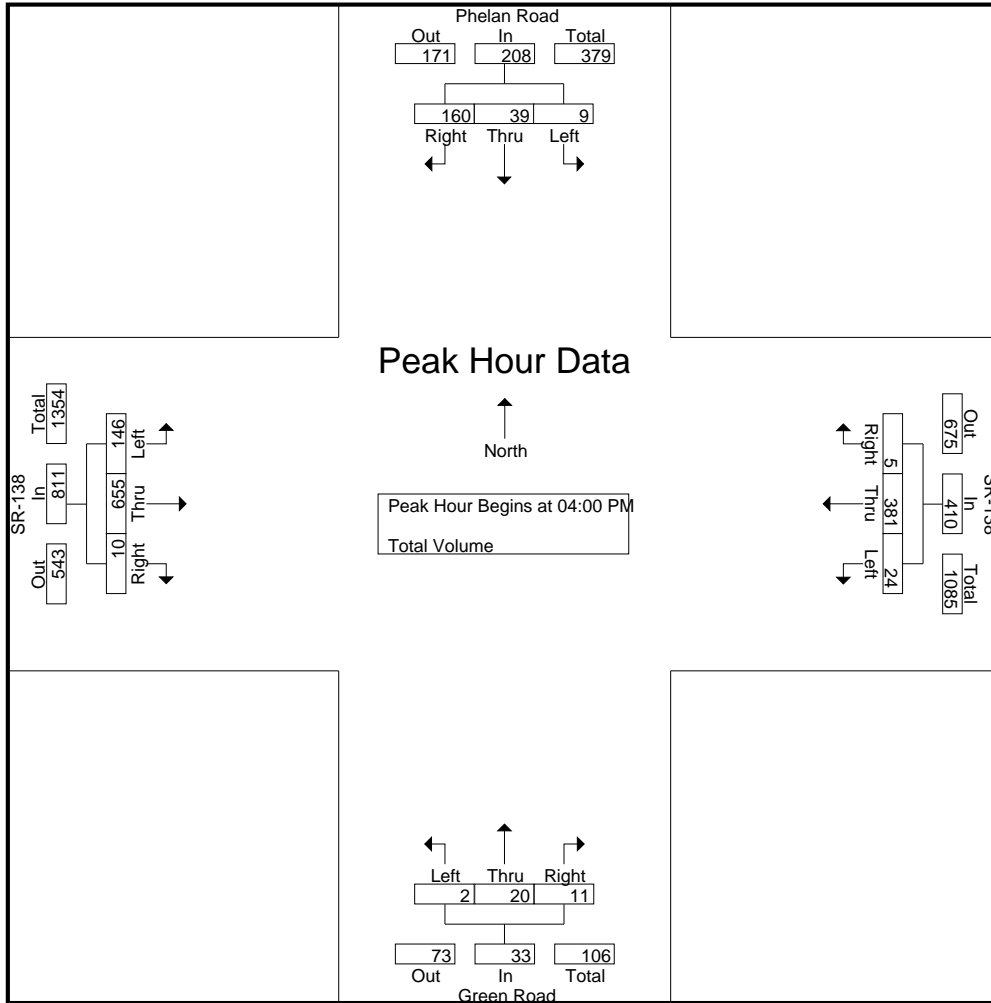
Groups Printed- Total Volume

Start Time	Phelan Road Southbound				SR-138 Westbound				Green Road Northbound				SR-138 Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	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	

Start Time	Phelan Road Southbound				SR-138 Westbound				Green Road Northbound				SR-138 Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	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

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



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

Counts Unlimited, Inc.

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

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

CSB001
 Site Code: 236-24355

Start Time	4/24/2024 Wed	Northbound		Hour Totals		Southbound		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	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):	0.583

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		
	1	12	13	185	20	54	40	399	11	4	488	139
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]	80
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

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

Phasing & Timing: Pattern 1

Split [s]	9.0	23.0	0.0	9.0	23.0	0.0	9.0	39.0	0.0	9.0	39.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	L	C	R	L	C	R
C, Calculated Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	0.1	22.6	11.4	33.9	3.2	29.4	29.4	0.5	26.7	26.7
g / C, Green / Cycle	0.00	0.28	0.14	0.42	0.04	0.37	0.37	0.01	0.33	0.33
(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	493	257	714	73	699	594	12	635	540
d1, Uniform Delay [s]	39.90	20.90	33.47	14.01	37.80	21.24	16.11	39.58	25.45	19.74
k, delay calibration	0.11	0.50	0.16	0.50	0.11	0.11	0.11	0.11	0.21	0.11
l, 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]	68.20	0.23	10.79	0.35	8.95	1.14	0.01	21.01	9.37	0.31
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	0.85	0.12	0.64	0.67	0.02	0.41	0.91	0.30
d, Delay for Lane Group [s/veh]	108.10	21.12	44.26	14.37	46.75	22.38	16.12	60.59	34.82	20.05
Lane Group LOS	F	C	D	B	D	C	B	E	C	C
Critical Lane Group	No	Yes	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.07	0.40	4.50	0.89	1.14	8.05	0.17	0.16	10.75	2.06
50th-Percentile Queue Length [ft/ln]	1.75	9.91	112.39	22.14	28.42	201.27	4.16	4.06	268.71	51.40
95th-Percentile Queue Length [veh/ln]	0.13	0.71	7.97	1.59	2.05	12.70	0.30	0.29	16.13	3.70
95th-Percentile Queue Length [ft/ln]	3.14	17.83	199.32	39.85	51.16	317.61	7.48	7.30	403.13	92.51

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	108.10	21.12	21.12	44.26	14.37	14.37	46.75	22.38	16.12	60.59	34.82	20.05
Movement LOS	F	C	C	D	B	B	D	C	B	E	C	C
d_A, Approach Delay [s/veh]	24.02			35.66			24.39			31.74		
Approach LOS	C			D			C			C		
d_I, Intersection Delay [s/veh]	29.92											
Intersection LOS	C											
Intersection V/C	0.583											

Emissions

Vehicle Miles Traveled [mph]	0.06	1.69	6.24	2.52	16.72	167.56	4.62	1.48	170.63	48.58
Stops [stops/h]	3.14	17.83	202.30	39.85	51.16	362.29	7.48	7.30	483.68	92.51
Fuel consumption [US gal/h]	0.06	0.40	5.93	1.08	1.71	14.76	0.39	0.22	17.22	3.72
CO [g/h]	4.41	28.26	414.51	75.62	119.23	1031.65	27.32	15.61	1203.70	259.77
NOx [g/h]	0.86	5.50	80.65	14.71	23.20	200.72	5.31	3.04	234.20	50.54
VOC [g/h]	1.02	6.55	96.07	17.53	27.63	239.09	6.33	3.62	278.97	60.21

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.51	31.51	31.51	31.51
I_p,int, Pedestrian LOS Score for Intersectio	1.971	2.252	2.127	2.715
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	875	875
d_b, Bicycle Delay [s]	23.26	23.26	12.66	12.66
I_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			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	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]	7.27	0.00	0.00	7.21	0.00	0.00	8.94	9.23	8.46	8.84	9.33	8.43
Movement LOS	A	A	A	A	A	A	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	0.09	0.09	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	2.22	2.22	2.22
d_A, Approach Delay [s/veh]	0.00			0.00			8.88			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
 Analysis Method: HCM 7th Edition
 Analysis Period: 15 minutes

Delay (sec / veh): 24.8
 Level Of Service: C
 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	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			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	13.12	10.35	13.10	13.15	11.54	8.44	0.00	0.00	8.03	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	0.01	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	0.13	0.00	0.00
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	1	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	8.82	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	0.08	0.00
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
 Analysis Method: HCM 7th Edition
 Analysis Period: 15 minutes

Delay (sec / veh): 13.0
 Level Of Service: B
 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	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	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	3	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]	15.58	15.17	12.98	16.61	16.08	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	0.08	0.00	0.00	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
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing (Basic)

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												
Maximum Green [s]	0	17	0	0	17	0	15	18	0	13	16	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
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	10.0	0.0	0.0	10.0	0.0	0.0	10.0	0.0	0.0	10.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	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
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0.0	14.0	0.0	0.0	14.0	0.0	31.0	37.0	0.0	9.0	15.0	0.0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	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
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	L	C	R	L	C	R
C, Calculated Cycle Length [s]	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	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]	29.6	29.6	7.7	17.6	17.6	0.8	10.6	10.6
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]	1664	1642	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	892	870	236	1062	474	25	640	286
d1, Uniform Delay [s]	8.03	8.99	25.17	17.23	15.10	29.33	23.47	20.34
k, delay calibration	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
l, 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	4.94	0.30	0.02	9.86	1.87	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	0.40	0.76	0.00
d, Delay for Lane Group [s/veh]	8.20	9.74	30.11	17.53	15.12	39.19	25.34	20.34
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	1.37	2.41	2.16	0.10	0.19	2.88	0.01
50th-Percentile Queue Length [ft/ln]	9.78	34.33	60.22	54.05	2.62	4.84	72.04	0.25
95th-Percentile Queue Length [veh/ln]	0.70	2.47	4.34	3.89	0.19	0.35	5.19	0.02
95th-Percentile Queue Length [ft/ln]	17.61	61.80	108.40	97.30	4.72	8.72	129.67	0.45

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	8.20	8.20	8.20	9.74	9.74	9.74	30.11	17.53	15.12	39.19	25.34	20.34
Movement LOS	A	A	A	A	A	A	C	B	B	D	C	C
d_A, Approach Delay [s/veh]	8.20			9.74			20.86			25.61		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	20.11											
Intersection LOS	C											
Intersection V/C	0.468											

Emissions

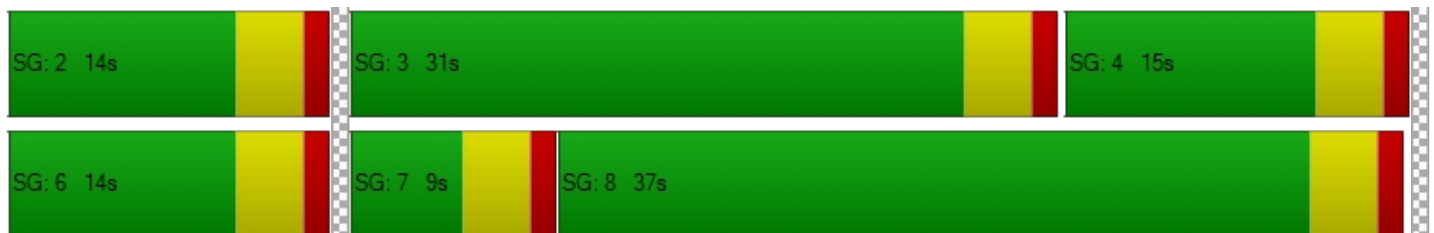
Vehicle Miles Traveled [mph]	5.71	21.40	139.82	370.25	10.15	1.11	53.84	0.11
Stops [stops/h]	23.47	82.40	144.53	259.45	6.29	11.63	345.78	0.60
Fuel consumption [US gal/h]	0.60	2.71	8.46	18.90	0.50	0.33	10.72	0.02
CO [g/h]	42.13	189.18	591.27	1320.80	34.71	23.26	749.67	1.33
NOx [g/h]	8.20	36.81	115.04	256.98	6.75	4.53	145.86	0.26
VOC [g/h]	9.76	43.84	137.03	306.11	8.04	5.39	173.74	0.31

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	0.00
I_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]	333	333	1100	367
d_b, Bicycle Delay [s]	20.83	20.83	6.08	20.01
I_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):	31.5
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.581

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]	90
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

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

Phasing & Timing: Pattern 1

Split [s]	9.0	23.0	0.0	9.0	23.0	0.0	19.0	49.0	0.0	9.0	39.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	L	C	R	L	C	R
C, Calculated Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	0.9	27.9	7.5	34.5	2.0	36.6	36.6	2.0	36.6	36.6
g / C, Green / Cycle	0.01	0.31	0.08	0.38	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	537	149	642	42	774	657	40	772	656
d1, Uniform Delay [s]	44.26	21.88	40.51	17.53	43.43	25.49	16.11	43.51	20.41	16.90
k, delay calibration	0.11	0.50	0.11	0.50	0.11	0.25	0.11	0.11	0.11	0.11
l, 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]	14.38	0.25	8.92	0.17	8.36	11.64	0.03	9.31	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	0.79	0.06	0.48	0.93	0.04	0.50	0.55	0.15
d, Delay for Lane Group [s/veh]	58.64	22.14	49.43	17.70	51.79	37.14	16.13	52.83	21.02	17.01
Lane Group LOS	E	C	D	B	D	D	B	D	C	B
Critical Lane Group	No	Yes	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.25	0.57	2.76	0.45	0.56	17.93	0.40	0.52	6.14	1.18
50th-Percentile Queue Length [ft/ln]	6.14	14.24	68.93	11.23	13.99	448.32	9.93	13.03	153.45	29.59
95th-Percentile Queue Length [veh/ln]	0.44	1.03	4.96	0.81	1.01	24.88	0.71	0.94	10.20	2.13
95th-Percentile Queue Length [ft/ln]	11.05	25.63	124.07	20.22	25.18	621.95	17.87	23.46	255.03	53.26

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	58.64	22.14	22.14	49.43	17.70	17.70	51.79	37.14	16.13	52.83	21.02	17.01
Movement LOS	E	C	C	D	B	B	D	D	B	D	C	B
d_A, Approach Delay [s/veh]	28.48			42.01			36.73			21.46		
Approach LOS	C			D			D			C		
d_I, Intersection Delay [s/veh]	31.54											
Intersection LOS	C											
Intersection V/C	0.581											

Emissions

Vehicle Miles Traveled [mph]	0.47	2.21	3.38	1.03	7.11	256.49	10.32	5.92	125.31	29.33
Stops [stops/h]	9.82	22.78	110.28	17.98	22.39	717.31	15.89	20.85	245.52	47.34
Fuel consumption [US gal/h]	0.23	0.53	3.35	0.50	0.75	24.76	0.87	0.73	9.77	2.05
CO [g/h]	16.32	37.06	234.06	34.81	52.17	1730.49	60.94	51.27	683.22	143.39
NOx [g/h]	3.18	7.21	45.54	6.77	10.15	336.69	11.86	9.98	132.93	27.90
VOC [g/h]	3.78	8.59	54.24	8.07	12.09	401.06	14.12	11.88	158.34	33.23

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersectio	1.992	2.114	2.133	2.702
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]	422	422	1000	778
d_b, Bicycle Delay [s]	28.01	28.01	11.25	16.81
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
 Analysis Method: HCM 7th Edition
 Analysis Period: 15 minutes

Delay (sec / veh): 8.5
 Level Of Service: A
 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			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	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]	7.32	0.00	0.00	7.21	0.00	0.00	9.26	9.36	8.57	9.06	9.54	8.50
Movement LOS	A	A	A	A	A	A	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	0.16	0.16	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	4.01	4.01	4.01
d_A, Approach Delay [s/veh]	0.00			0.00			9.06			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
 Analysis Method: HCM 7th Edition
 Analysis Period: 15 minutes

Delay (sec / veh): 35.5
 Level Of Service: E
 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
 Analysis Method: HCM 7th Edition
 Analysis Period: 15 minutes

Delay (sec / veh): 15.4
 Level Of Service: C
 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	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			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]	15.33	14.95	13.96	15.42	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	0.06	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	14.75			15.42			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	1	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	9.67	0.00
Movement LOS	C	C	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.01	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.19	0.00
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
 Analysis Method: HCM 7th Edition
 Analysis Period: 15 minutes

Delay (sec / veh): 17.8
 Level Of Service: C
 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	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	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	3	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]	16.85	16.11	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):	21.7
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
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing (Basic)

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												
Maximum Green [s]	0	11	0	0	11	0	27	32	0	5	10	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
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	10.0	0.0	0.0	10.0	0.0	0.0	10.0	0.0	0.0	10.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	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
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0.0	15.0	0.0	0.0	15.0	0.0	31.0	36.0	0.0	9.0	14.0	0.0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	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
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	L	C	R	L	C	R
C, Calculated Cycle Length [s]	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	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]	31.1	31.1	6.9	15.1	15.1	1.8	10.0	10.0
g / C, Green / Cycle	0.52	0.52	0.12	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]	980	923	212	917	409	55	602	269
d1, Uniform Delay [s]	7.16	8.11	25.62	20.80	16.83	28.63	23.53	20.91
k, delay calibration	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
l, 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	5.14	1.43	0.03	6.32	1.39	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	0.77	0.03	0.48	0.69	0.02
d, Delay for Lane Group [s/veh]	7.23	8.74	30.76	22.23	16.86	34.95	24.92	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	2.16	3.91	0.10	0.42	2.42	0.05
50th-Percentile Queue Length [ft/ln]	4.58	30.10	53.97	97.78	2.41	10.41	60.44	1.29
95th-Percentile Queue Length [veh/ln]	0.33	2.17	3.89	7.04	0.17	0.75	4.35	0.09
95th-Percentile Queue Length [ft/ln]	8.24	54.18	97.15	176.00	4.34	18.73	108.79	2.32

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	7.23	7.23	7.23	8.74	8.74	8.74	30.76	22.23	16.86	34.95	24.92	20.93
Movement LOS	A	A	A	A	A	A	C	C	B	C	C	C
d_A, Approach Delay [s/veh]	7.23			8.74			23.70			25.46		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	21.69											
Intersection LOS	C											
Intersection V/C	0.432											

Emissions

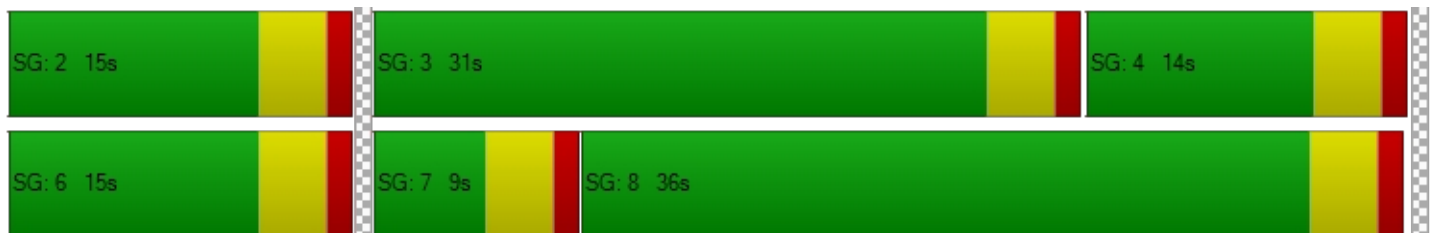
Vehicle Miles Traveled [mph]	2.98	20.76	123.42	554.60	8.59	2.89	45.85	0.56
Stops [stops/h]	10.99	72.24	129.53	469.33	5.79	24.98	290.12	3.09
Fuel consumption [US gal/h]	0.29	2.44	7.52	30.48	0.43	0.75	9.02	0.10
CO [g/h]	20.39	170.29	525.90	2130.73	30.24	52.11	630.30	6.80
NOx [g/h]	3.97	33.13	102.32	414.56	5.88	10.14	122.63	1.32
VOC [g/h]	4.73	39.47	121.88	493.82	7.01	12.08	146.08	1.58

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	0.00
I_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]	367	367	1067	333
d_b, Bicycle Delay [s]	20.01	20.01	6.53	20.83
I_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):	30.1
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.656

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		
	1	12	13	185	20	54	40	399	11	4	488	139
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]	80
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

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

Phasing & Timing: Pattern 1

Split [s]	15.0	14.0	0.0	20.0	19.0	0.0	11.0	33.0	0.0	13.0	35.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	L	C	R	L	C	R
C, Calculated Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	0.2	18.2	12.6	30.6	3.4	32.7	32.7	0.6	29.9	29.9
g / C, Green / Cycle	0.00	0.23	0.16	0.38	0.04	0.41	0.41	0.01	0.37	0.37
(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]	4	393	285	643	77	776	660	13	710	603
d1, Uniform Delay [s]	39.83	24.35	32.74	16.17	37.73	19.75	14.11	39.52	24.01	17.70
k, delay calibration	0.11	0.50	0.11	0.50	0.11	0.18	0.11	0.11	0.31	0.11
l, 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]	24.18	0.39	6.69	0.46	9.06	2.06	0.01	16.36	13.97	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	0.23	0.08	0.84	0.14	0.65	0.71	0.02	0.37	0.93	0.30
d, Delay for Lane Group [s/veh]	64.01	24.75	39.43	16.63	46.79	21.81	14.12	55.88	37.98	17.98
Lane Group LOS	E	C	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]	0.05	0.47	4.60	1.02	1.21	9.51	0.15	0.15	12.95	2.14
50th-Percentile Queue Length [ft/ln]	1.21	11.81	114.95	25.40	30.20	237.81	3.85	3.81	323.70	53.42
95th-Percentile Queue Length [veh/ln]	0.09	0.85	8.11	1.83	2.17	14.57	0.28	0.27	18.85	3.85
95th-Percentile Queue Length [ft/ln]	2.17	21.27	202.86	45.72	54.35	364.27	6.94	6.86	471.23	96.15

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	64.01	24.75	24.75	39.43	16.63	16.63	46.79	21.81	14.12	55.88	37.98	17.98
Movement LOS	E	C	C	D	B	B	D	C	B	E	D	B
d_A, Approach Delay [s/veh]	25.97			33.16			23.68			33.76		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	30.11											
Intersection LOS	C											
Intersection V/C	0.656											

Emissions

Vehicle Miles Traveled [mph]	0.06	1.80	6.87	2.61	17.79	197.08	4.62	1.48	194.92	54.21
Stops [stops/h]	2.17	21.27	206.90	45.72	54.35	428.06	6.94	6.86	582.66	96.15
Fuel consumption [US gal/h]	0.04	0.48	6.00	1.24	1.82	17.30	0.39	0.21	20.56	3.96
CO [g/h]	2.94	33.72	419.32	86.98	126.87	1208.96	26.95	14.80	1436.96	276.87
NOx [g/h]	0.57	6.56	81.58	16.92	24.68	235.22	5.24	2.88	279.58	53.87
VOC [g/h]	0.68	7.81	97.18	20.16	29.40	280.19	6.25	3.43	333.03	64.17

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0		0.0		0.0		0.0	
M_corner, Corner Circulation Area [ft ² /ped]	0.00		0.00		0.00		0.00	
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00		0.00		0.00		0.00	
d_p, Pedestrian Delay [s]	0.00		0.00		0.00		0.00	
I_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]	250		375		725		775	
d_b, Bicycle Delay [s]	30.63		26.41		16.26		15.01	
I_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	1	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			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	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]	7.27	0.00	0.00	7.21	0.00	0.00	8.96	9.24	8.40	8.76	9.34	8.42
Movement LOS	A	A	A	A	A	A	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	0.09	0.09	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	2.28	2.28	2.28
d_A, Approach Delay [s/veh]	0.00			0.00			8.87			8.42		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	3.41											
Intersection LOS	A											

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

Control Type: Two-way stop
 Analysis Method: HCM 7th Edition
 Analysis Period: 15 minutes

Delay (sec / veh): 30.6
 Level Of Service: D
 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
 Analysis Method: HCM 7th Edition
 Analysis Period: 15 minutes

Delay (sec / veh): 14.1
 Level Of Service: B
 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	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			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]	14.05	13.95	10.88	14.08	13.98	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	0.01	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	0.13	0.00	0.00
d_A, Approach Delay [s/veh]	12.96			14.08			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	1	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]	16.20	13.79	0.00	0.00	9.16	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	0.09	0.00
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
 Analysis Method: HCM 7th Edition
 Analysis Period: 15 minutes

Delay (sec / veh): 14.1
 Level Of Service: B
 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	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	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	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	Yes	Yes		
Number of Storage Spaces in Median	3	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]	17.19	16.47	14.14	18.47	17.58	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]	0.01	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]	0.19	0.19	0.19	0.00	0.00	0.00	0.09	0.00	0.00	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):	22.5
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.555

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]	60
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing (Basic)

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												
Maximum Green [s]	0	17	0	0	17	0	16	18	0	13	15	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
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	10.0	0.0	0.0	10.0	0.0	0.0	10.0	0.0	0.0	10.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	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
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0.0	14.0	0.0	0.0	14.0	0.0	24.0	37.0	0.0	9.0	22.0	0.0
Lead / Lag	-	-	-	-	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	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
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	L	C	R	L	C	R
C, Calculated Cycle Length [s]	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	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]	27.2	27.2	9.5	11.5	11.5	9.3	11.3	11.3
g / C, Green / Cycle	0.45	0.45	0.16	0.19	0.19	0.16	0.19	0.19
(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]	1681	1643	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	831	805	286	696	311	280	684	305
d1, Uniform Delay [s]	9.42	10.83	24.29	22.90	19.72	21.62	23.17	19.74
k, delay calibration	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.24	1.19	4.84	1.71	0.05	0.08	2.04	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	0.35	0.79	0.76	0.04	0.06	0.79	0.00
d, Delay for Lane Group [s/veh]	9.66	12.03	29.13	24.62	19.78	21.71	25.21	19.75
Lane Group LOS	A	B	C	C	B	C	C	B
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.54	1.99	2.97	3.08	0.13	0.17	3.19	0.01
50th-Percentile Queue Length [ft/ln]	13.44	49.74	74.32	77.09	3.22	4.22	79.74	0.25
95th-Percentile Queue Length [veh/ln]	0.97	3.58	5.35	5.55	0.23	0.30	5.74	0.02
95th-Percentile Queue Length [ft/ln]	24.19	89.52	133.77	138.75	5.79	7.60	143.54	0.44

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	9.66	9.66	9.66	12.03	12.03	12.03	29.13	24.62	19.78	21.71	25.21	19.75
Movement LOS	A	A	A	B	B	B	C	C	B	C	C	B
d_A, Approach Delay [s/veh]	9.66			12.03			25.87			25.10		
Approach LOS	A			B			C			C		
d_I, Intersection Delay [s/veh]	22.51											
Intersection LOS	C											
Intersection V/C	0.555											

Emissions

Vehicle Miles Traveled [mph]	6.87	25.92	176.53	411.65	10.15	1.78	59.61	0.11
Stops [stops/h]	32.25	119.37	178.36	370.01	7.72	10.14	382.77	0.59
Fuel consumption [US gal/h]	0.80	3.77	10.56	23.28	0.54	0.32	11.86	0.02
CO [g/h]	55.88	263.67	738.02	1627.50	37.43	22.26	828.96	1.31
NOx [g/h]	10.87	51.30	143.59	316.65	7.28	4.33	161.29	0.25
VOC [g/h]	12.95	61.11	171.04	377.19	8.67	5.16	192.12	0.30

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	0.00
I_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]	333	333	1100	600
d_b, Bicycle Delay [s]	20.83	20.83	6.08	14.70
I_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):	33.8
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.644

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]	90
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	5	19	0	5	19	0	15	45	0	5	35	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	14.0	0.0	0.0	14.0	0.0	0.0	10.0	0.0	0.0	10.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	15.0	23.0	0.0	15.0	23.0	0.0	17.0	43.0	0.0	9.0	35.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	L	C	R	L	C	R
C, Calculated Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	1.0	24.0	8.3	31.3	2.1	39.6	39.6	2.1	39.6	39.6
g / C, Green / Cycle	0.01	0.27	0.09	0.35	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]	21	461	168	581	45	837	711	42	834	709
d1, Uniform Delay [s]	44.14	24.82	40.00	19.63	43.32	24.35	14.36	43.44	19.14	15.25
k, delay calibration	0.11	0.50	0.11	0.50	0.11	0.39	0.11	0.11	0.14	0.11
l, 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]	10.47	0.37	8.38	0.21	7.57	18.87	0.02	8.91	0.85	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	0.37	0.09	0.80	0.06	0.47	0.96	0.04	0.50	0.59	0.16
d, Delay for Lane Group [s/veh]	54.61	25.20	48.38	19.84	50.88	43.22	14.39	52.35	20.00	15.36
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	0.65	3.09	0.50	0.58	21.59	0.39	0.54	7.02	1.29
50th-Percentile Queue Length [ft/ln]	5.81	16.32	77.30	12.47	14.49	539.65	9.63	13.56	175.39	32.14
95th-Percentile Queue Length [veh/ln]	0.42	1.17	5.57	0.90	1.04	29.21	0.69	0.98	11.36	2.31
95th-Percentile Queue Length [ft/ln]	10.45	29.37	139.13	22.44	26.07	730.14	17.34	24.41	283.99	57.85

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	54.61	25.20	25.20	48.38	19.84	19.84	50.88	43.22	14.39	52.35	20.00	15.36
Movement LOS	D	C	C	D	B	B	D	D	B	D	B	B
d_A, Approach Delay [s/veh]	30.10			42.21			42.39			20.23		
Approach LOS	C			D			D			C		
d_I, Intersection Delay [s/veh]	33.81											
Intersection LOS	C											
Intersection V/C	0.644											

Emissions

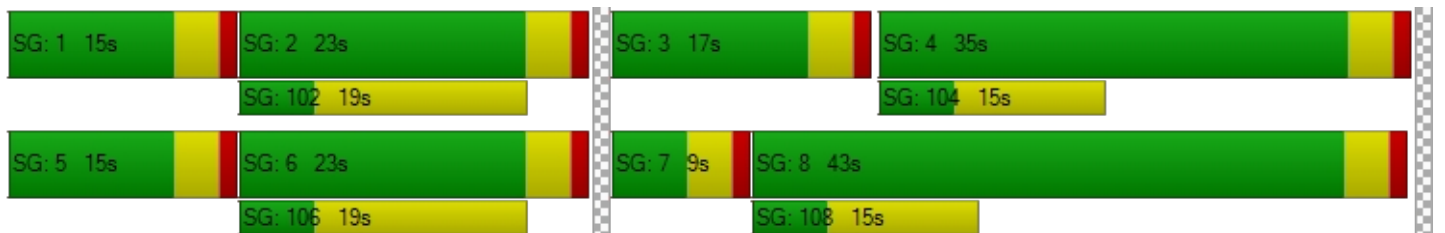
Vehicle Miles Traveled [mph]	0.47	2.33	3.84	1.06	7.47	284.60	10.67	6.22	146.34	34.07
Stops [stops/h]	9.29	26.11	123.67	19.95	23.18	863.45	15.41	21.69	280.63	51.42
Fuel consumption [US gal/h]	0.22	0.61	3.74	0.56	0.78	28.46	0.89	0.77	11.22	2.29
CO [g/h]	15.40	42.61	261.76	38.82	54.51	1989.32	62.30	53.48	784.17	160.04
NOx [g/h]	3.00	8.29	50.93	7.55	10.61	387.05	12.12	10.40	152.57	31.14
VOC [g/h]	3.57	9.87	60.67	9.00	12.63	461.04	14.44	12.39	181.74	37.09

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
I_p,int, Pedestrian LOS Score for Intersectio	2.172	2.135	2.133	2.777
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	867	689
d_b, Bicycle Delay [s]	28.01	28.01	14.45	19.34
I_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
 Analysis Method: HCM 7th Edition
 Analysis Period: 15 minutes

Delay (sec / veh): 8.5
 Level Of Service: A
 Volume to Capacity (v/c): 0.052

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	1	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			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	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]	7.32	0.00	0.00	7.21	0.00	0.00	9.32	9.38	8.46	8.91	9.56	8.50
Movement LOS	A	A	A	A	A	A	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	0.17	0.17	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	4.15	4.15	4.15
d_A, Approach Delay [s/veh]	0.00			0.00			9.05			8.50		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	3.75											
Intersection LOS	A											

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

Control Type: Two-way stop
 Analysis Method: HCM 7th Edition
 Analysis Period: 15 minutes

Delay (sec / veh): 45.5
 Level Of Service: E
 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
Analysis Method: HCM 7th Edition
Analysis Period: 15 minutes

Delay (sec / veh): 16.7
Level Of Service: C
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	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			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]	16.61	16.00	15.00	16.72	16.11	10.87	8.18	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	0.07	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	15.87			16.72			0.01			0.00		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	0.04											
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	1	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	10.07	0.00
Movement LOS	C	C	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.01	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.21	0.00
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
 Analysis Method: HCM 7th Edition
 Analysis Period: 15 minutes

Delay (sec / veh): 19.7
 Level Of Service: C
 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	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	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	3	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]	18.55	17.45	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):	21.9
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.497

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]	60
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing (Basic)

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												
Maximum Green [s]	0	10	0	0	10	0	28	33	0	5	10	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
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	10.0	0.0	0.0	10.0	0.0	0.0	10.0	0.0	0.0	10.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	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
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0.0	22.0	0.0	0.0	22.0	0.0	19.0	23.0	0.0	15.0	19.0	0.0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	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
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	L	C	R	L	C	R
C, Calculated Cycle Length [s]	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	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]	29.8	29.8	8.0	16.0	16.0	2.2	10.2	10.2
g / C, Green / Cycle	0.50	0.50	0.13	0.27	0.27	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]	1767	1664	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	937	886	243	964	430	69	617	275
d1, Uniform Delay [s]	7.86	9.13	25.14	20.54	16.25	28.27	23.69	20.70
k, delay calibration	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.10	0.89	5.55	1.62	0.02	5.26	1.91	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	0.31	0.79	0.80	0.03	0.49	0.76	0.02
d, Delay for Lane Group [s/veh]	7.96	10.02	30.69	22.16	16.27	33.54	25.60	20.73
Lane Group LOS	A	B	C	C	B	C	C	C
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.26	1.64	2.60	4.26	0.09	0.52	2.79	0.05
50th-Percentile Queue Length [ft/ln]	6.50	40.92	64.97	106.49	2.34	12.95	69.67	1.28
95th-Percentile Queue Length [veh/ln]	0.47	2.95	4.68	7.64	0.17	0.93	5.02	0.09
95th-Percentile Queue Length [ft/ln]	11.69	73.66	116.95	191.11	4.21	23.32	125.41	2.30

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	7.96	7.96	7.96	10.02	10.02	10.02	30.69	22.16	16.27	33.54	25.60	20.73
Movement LOS	A	A	A	B	B	B	C	C	B	C	C	C
d_A, Approach Delay [s/veh]	7.96			10.02			23.76			26.09		
Approach LOS	A			B			C			C		
d_I, Intersection Delay [s/veh]	21.93											
Intersection LOS	C											
Intersection V/C	0.497											

Emissions

Vehicle Miles Traveled [mph]	3.89	25.00	149.19	605.37	8.59	3.77	51.73	0.56
Stops [stops/h]	15.59	98.21	155.94	511.16	5.62	31.09	334.42	3.07
Fuel consumption [US gal/h]	0.40	3.21	9.08	33.24	0.43	0.94	10.37	0.10
CO [g/h]	28.19	224.60	634.69	2323.48	29.93	65.41	724.85	6.76
NOx [g/h]	5.48	43.70	123.49	452.07	5.82	12.73	141.03	1.32
VOC [g/h]	6.53	52.05	147.10	538.49	6.94	15.16	167.99	1.57

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	0.00
I_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	633	500
d_b, Bicycle Delay [s]	14.70	14.70	14.01	16.88
I_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):	34.4
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.688

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		
	1	12	13	185	20	54	40	399	11	4	488	139
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]	36	5	52	11	5	0	0	54	35	50	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]	37	17	66	203	26	56	42	469	46	54	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]	11	5	19	60	8	17	12	138	14	16	164	46
Total Analysis Volume [veh/h]	44	20	78	240	31	66	50	554	54	64	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
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

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

Phasing & Timing: Pattern 1

Split [s]	9.0	23.0	0.0	9.0	23.0	0.0	9.0	49.0	0.0	9.0	49.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	L	C	R	L	C	R
C, Calculated Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3.3	22.9	13.7	33.3	3.6	33.2	33.2	4.1	33.8	33.8
g / C, Green / Cycle	0.04	0.25	0.15	0.37	0.04	0.37	0.37	0.05	0.38	0.38
(v / s)_i Volume / Saturation Flow Rate	0.02	0.06	0.13	0.06	0.03	0.29	0.03	0.04	0.35	0.11
s, saturation flow rate [veh/h]	1810	1666	1810	1696	1810	1900	1615	1810	1900	1615
c, Capacity [veh/h]	67	426	274	628	72	701	596	83	713	606
d1, Uniform Delay [s]	42.76	26.48	37.34	18.92	42.68	25.29	18.53	42.49	26.88	19.82
k, delay calibration	0.11	0.50	0.19	0.50	0.11	0.15	0.11	0.11	0.22	0.11
l, 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]	10.35	1.26	14.04	0.52	11.49	2.73	0.06	14.18	10.33	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	0.66	0.23	0.87	0.15	0.70	0.79	0.09	0.77	0.92	0.30
d, Delay for Lane Group [s/veh]	53.11	27.73	51.38	19.44	54.17	28.02	18.60	56.66	37.21	20.10
Lane Group LOS	D	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]	1.12	1.72	5.82	1.30	1.38	11.66	0.81	1.66	13.95	2.49
50th-Percentile Queue Length [ft/ln]	27.94	42.94	145.47	32.42	34.61	291.56	20.15	41.42	348.81	62.21
95th-Percentile Queue Length [veh/ln]	2.01	3.09	9.78	2.33	2.49	17.26	1.45	2.98	20.08	4.48
95th-Percentile Queue Length [ft/ln]	50.30	77.29	244.38	58.36	62.29	431.57	36.26	74.55	501.96	111.97

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	53.11	27.73	27.73	51.38	19.44	19.44	54.17	28.02	18.60	56.66	37.21	20.10
Movement LOS	D	C	C	D	B	B	D	C	B	E	D	C
d_A, Approach Delay [s/veh]	35.60			42.19			29.23			35.13		
Approach LOS	D			D			C			D		
d_I, Intersection Delay [s/veh]	34.43											
Intersection LOS	C											
Intersection V/C	0.688											

Emissions

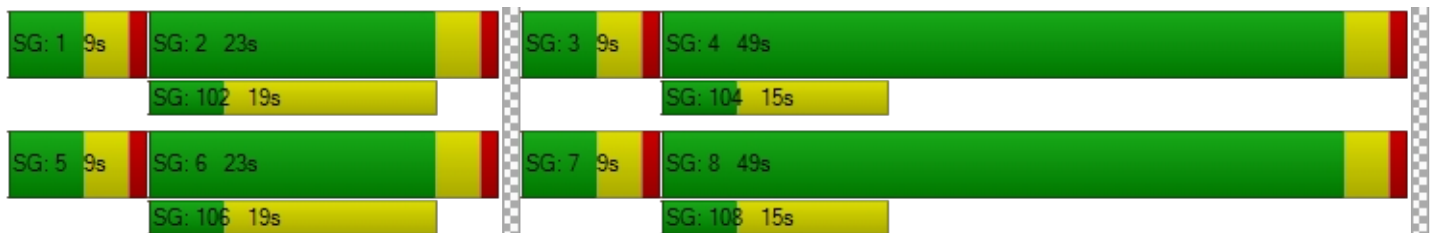
Vehicle Miles Traveled [mph]	2.56	5.70	6.87	2.78	17.79	197.08	19.21	18.96	194.92	54.21
Stops [stops/h]	44.71	68.70	232.76	51.87	55.37	466.49	32.23	66.27	558.09	99.53
Fuel consumption [US gal/h]	1.12	1.60	7.06	1.44	1.89	18.00	1.65	2.39	20.08	4.09
CO [g/h]	78.23	112.03	493.68	100.67	132.12	1257.86	115.37	167.07	1403.37	286.01
NOx [g/h]	15.22	21.80	96.05	19.59	25.71	244.73	22.45	32.51	273.04	55.65
VOC [g/h]	18.13	25.97	114.41	23.33	30.62	291.52	26.74	38.72	325.24	66.29

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersectio	2.239	2.293	2.133	2.854
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	1000	1000
d_b, Bicycle Delay [s]	28.01	28.01	11.25	11.25
l_b,int, Bicycle LOS Score for Intersection	1.794	2.116	2.645	3.053
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):	9.9
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.112

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	1	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]	10	0	0	0	3	45	93	0	7	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	6	0	0	32	45	93	0	7	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]	3	2	0	0	11	15	23	0	2	0	0	8
Total Analysis Volume [veh/h]	10	8	0	0	43	60	93	0	9	0	0	32
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.01	0.00	0.00	0.03
d_M, Delay for Movement [s/veh]	7.41	0.00	0.00	7.21	0.00	0.00	9.94	10.16	9.15	8.95	9.85	8.42
Movement LOS	A	A	A	A	A	A	A	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.02	0.00	0.00	0.00	0.41	0.41	0.41	0.09	0.09	0.09
95th-Percentile Queue Length [ft/ln]	0.42	0.42	0.42	0.00	0.00	0.00	10.31	10.31	10.31	2.28	2.28	2.28
d_A, Approach Delay [s/veh]	4.12			0.00			9.87			8.42		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	5.30											
Intersection LOS	A											

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

Control Type:	Two-way stop	Delay (sec / veh):	8.7
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.049

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]	50	0	0	0	0	28
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]	50	0	0	0	0	28
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]	13	0	0	0	0	7
Total Analysis Volume [veh/h]	50	0	0	0	0	28
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	0.05	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.75	8.36	7.25	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.16	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	3.90	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.75		3.63		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	5.61					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 4: Project Driveway #2/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):	0.055

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]	50	0	0	50	28	28
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]	50	0	0	50	28	28
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]	13	0	0	13	7	7
Total Analysis Volume [veh/h]	50	0	0	50	28	28
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	0.05	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	9.17	8.48	7.31	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.17	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	4.34	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	9.17		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	2.94					
Intersection LOS	A					

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

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):	0.003

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	93	45	45	0	3
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	93	45	45	0	3
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	23	11	11	0	1
Total Analysis Volume [veh/h]	0	93	45	45	0	3
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	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	8.53
Movement LOS		A	A	A		A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.01
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.22
d_A, Approach Delay [s/veh]	0.00		0.00		8.53	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.14					
Intersection LOS	A					

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

Control Type: Two-way stop
 Analysis Method: HCM 7th Edition
 Analysis Period: 15 minutes

Delay (sec / veh): 34.2
 Level Of Service: D
 Volume to Capacity (v/c): 0.080

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	5	0	0	0	0	84	0	5	80	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	98	0	0	0	0	464	12	63	572	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	27	0	0	0	0	126	3	17	155	0
Total Analysis Volume [veh/h]	11	0	107	0	0	0	0	504	13	68	622	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	2	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.08	0.00	0.19	0.00	0.00	0.00	0.00	0.01	0.00	0.06	0.01	0.00
d_M, Delay for Movement [s/veh]	34.22	30.63	14.34	40.19	27.84	12.34	8.72	0.00	0.00	8.63	0.00	0.00
Movement LOS	D	D	B	E	D	B	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	1.07	1.07	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.00	0.00
95th-Percentile Queue Length [ft/ln]	26.86	26.86	26.86	0.00	0.00	0.00	0.00	0.00	0.00	5.14	0.00	0.00
d_A, Approach Delay [s/veh]	16.19			26.79			0.00			0.85		
Approach LOS	C			D			A			A		
d_I, Intersection Delay [s/veh]	1.88											
Intersection LOS	D											

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

Control Type: Two-way stop
 Analysis Method: HCM 7th Edition
 Analysis Period: 15 minutes

Delay (sec / veh): 14.6
 Level Of Service: B
 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	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			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	5	0	0	0	79	0	0	75	5
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	0	443	0	2	587	5
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	2	0	0	0	119	0	1	158	1
Total Analysis Volume [veh/h]	0	0	0	6	0	0	0	478	0	2	633	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	0.00	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	14.46	14.32	11.09	14.63	14.46	12.62	8.77	0.00	0.00	8.29	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	0.05	0.05	0.05	0.00	0.00	0.00	0.01	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	1.20	1.20	1.20	0.00	0.00	0.00	0.14	0.00	0.00
d_A, Approach Delay [s/veh]	13.29			14.63			0.00			0.03		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	0.09											
Intersection LOS	B											

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

Control Type:	Two-way stop	Delay (sec / veh):	14.3
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.120

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]	16	0	0	63	60	15
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]	48	1	0	404	558	29
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	112	155	8
Total Analysis Volume [veh/h]	53	1	0	449	621	32
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	0.12	0.00	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	14.30	13.62	8.82	0.00	0.00	0.00
Movement LOS	B	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.41	0.41	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	10.36	10.36	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	14.28		0.00		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.67					
Intersection LOS	B					

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

Control Type:	Two-way stop	Delay (sec / veh):	17.1
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.007

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	1	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	117	0	0	109
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	713	1	1	772
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	203	0	0	219
Total Analysis Volume [veh/h]	2	1	810	1	1	877
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]	17.07	14.51	0.00	0.00	9.37	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]	0.70	0.70	0.00	0.00	0.09	0.00
d_A, Approach Delay [s/veh]	16.21		0.00		0.01	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.03					
Intersection LOS	C					

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

Control Type:	Two-way stop	Delay (sec / veh):	20.2
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]	5	0	0	0	0	5	5	107	5	0	99	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	0	2	0	5	6	710	5	1	745	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	2	204	1	0	214	0
Total Analysis Volume [veh/h]	8	0	0	2	0	6	7	814	6	1	854	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]	20.16	18.93	14.98	19.65	18.64	15.24	9.57	0.00	0.00	9.41	0.00	0.00
Movement LOS	C	C	B	C	C	C	A	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]	2.52	2.52	2.52	1.89	1.89	1.89	0.67	0.00	0.00	0.09	0.00	0.00
d_A, Approach Delay [s/veh]	20.16			16.34			0.08			0.01		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	0.22											
Intersection LOS	C											

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

Control Type: Two-way stop
 Analysis Method: HCM 7th Edition
 Analysis Period: 15 minutes

Delay (sec / veh): 18.6
 Level Of Service: C
 Volume to Capacity (v/c): 0.022

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	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	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]	5	0	0	0	0	5	5	97	5	0	89	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]	5	0	1	0	0	5	6	710	5	0	732	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	2	206	1	0	213	0
Total Analysis Volume [veh/h]	6	0	1	0	0	6	7	825	6	0	850	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	3	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]	18.57	17.53	14.95	19.58	18.54	15.07	9.56	0.00	0.00	9.44	0.00	0.00
Movement LOS	C	C	B	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	0.03	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	1.90	1.90	1.90	1.26	1.26	1.26	0.66	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	18.05			15.07			0.08			0.00		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	0.17											
Intersection LOS	C											

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

Control Type:	Signalized	Delay (sec / veh):	22.8
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.571

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]	5	6	5	0	5	35	41	51	5	5	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
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	17	36	25	4	26	221	204	485	16	14	492	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	138	5	4	140	0
Total Analysis Volume [veh/h]	19	41	28	5	30	251	232	552	18	16	560	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
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing (Basic)

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												
Maximum Green [s]	0	17	0	0	17	0	16	18	0	13	15	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
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	10.0	0.0	0.0	10.0	0.0	0.0	10.0	0.0	0.0	10.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	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
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0.0	21.0	0.0	0.0	21.0	0.0	20.0	22.0	0.0	17.0	19.0	0.0
Lead / Lag	-	-	-	-	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	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
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	L	C	R	L	C	R
C, Calculated Cycle Length [s]	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	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]	26.9	26.9	9.6	11.6	11.6	9.5	11.5	11.5
g / C, Green / Cycle	0.45	0.45	0.16	0.19	0.19	0.16	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.05	0.17	0.13	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]	817	795	291	703	314	287	695	310
d1, Uniform Delay [s]	9.65	11.11	24.23	22.98	19.69	21.42	23.17	19.59
k, delay calibration	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.27	1.27	4.96	1.98	0.08	0.08	2.26	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	0.11	0.36	0.80	0.78	0.06	0.06	0.81	0.00
d, Delay for Lane Group [s/veh]	9.91	12.37	29.19	24.95	19.77	21.50	25.43	19.60
Lane Group LOS	A	B	C	C	B	C	C	B
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.58	2.07	3.06	3.26	0.18	0.17	3.35	0.01
50th-Percentile Queue Length [ft/ln]	14.53	51.78	76.42	81.52	4.45	4.20	83.73	0.25
95th-Percentile Queue Length [veh/ln]	1.05	3.73	5.50	5.87	0.32	0.30	6.03	0.02
95th-Percentile Queue Length [ft/ln]	26.16	93.21	137.55	146.74	8.01	7.56	150.72	0.44

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	9.91	9.91	9.91	12.37	12.37	12.37	29.19	24.95	19.77	21.50	25.43	19.60
Movement LOS	A	A	A	B	B	B	C	C	B	C	C	B
d_A, Approach Delay [s/veh]	9.91			12.37			26.06			25.31		
Approach LOS	A			B			C			C		
d_I, Intersection Delay [s/veh]	22.77											
Intersection LOS	C											
Intersection V/C	0.571											

Emissions

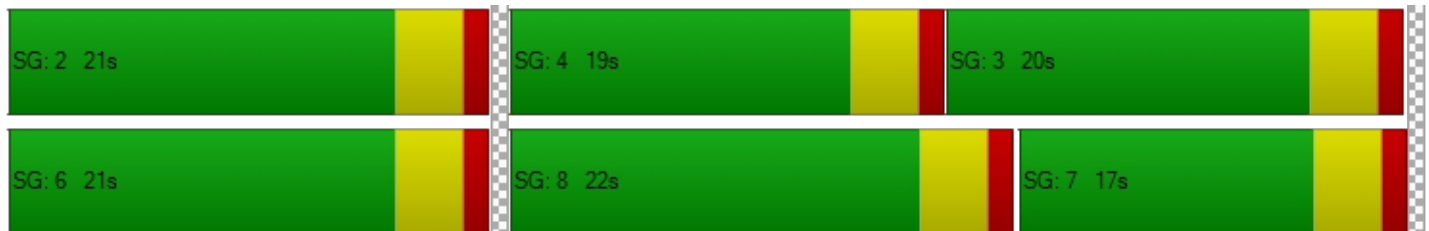
Vehicle Miles Traveled [mph]	7.28	26.38	181.22	431.18	14.06	1.78	62.17	0.11
Stops [stops/h]	34.88	124.28	183.40	391.32	10.68	10.08	401.92	0.59
Fuel consumption [US gal/h]	0.86	3.91	10.85	24.50	0.74	0.32	12.44	0.02
CO [g/h]	60.17	273.39	758.19	1712.24	51.81	22.13	869.76	1.30
NOx [g/h]	11.71	53.19	147.52	333.14	10.08	4.31	169.22	0.25
VOC [g/h]	13.95	63.36	175.72	396.83	12.01	5.13	201.58	0.30

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	0.00
I_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]	567	567	600	500
d_b, Bicycle Delay [s]	15.41	15.41	14.70	16.88
I_b,int, Bicycle LOS Score for Intersection	1.705	2.032	2.221	2.036
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):	34.2
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.703

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]	34	5	46	10	5	0	0	48	35	50	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]	42	22	67	128	14	27	20	765	64	70	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]	11	6	18	33	4	7	5	200	17	18	123	29
Total Analysis Volume [veh/h]	44	23	70	134	15	28	21	800	67	73	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]	100
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

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

Phasing & Timing: Pattern 1

Split [s]	9.0	23.0	0.0	9.0	23.0	0.0	9.0	59.0	0.0	9.0	59.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	L	C	R	L	C	R
C, Calculated Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3.5	25.3	9.1	30.8	2.2	44.6	44.6	5.0	47.4	47.4
g / C, Green / Cycle	0.04	0.25	0.09	0.31	0.02	0.45	0.45	0.05	0.47	0.47
(v / s)_i Volume / Saturation Flow Rate	0.02	0.06	0.07	0.03	0.01	0.42	0.04	0.04	0.26	0.07
s, saturation flow rate [veh/h]	1810	1677	1810	1704	1810	1900	1615	1810	1900	1615
c, Capacity [veh/h]	64	425	163	525	40	848	721	90	901	766
d1, Uniform Delay [s]	47.68	29.52	44.68	24.55	48.35	26.46	15.98	47.02	18.68	14.89
k, delay calibration	0.11	0.50	0.11	0.50	0.11	0.30	0.11	0.17	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	12.27	1.18	9.67	0.31	9.97	13.57	0.06	22.22	0.52	0.09
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	0.69	0.22	0.82	0.08	0.52	0.94	0.09	0.81	0.55	0.15
d, Delay for Lane Group [s/veh]	59.95	30.71	54.36	24.86	58.33	40.03	16.04	69.24	19.21	14.98
Lane Group LOS	E	C	D	C	E	D	B	E	B	B
Critical Lane Group	No	Yes	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.27	1.83	3.51	0.71	0.66	22.31	0.98	2.28	7.35	1.36
50th-Percentile Queue Length [ft/ln]	31.65	45.83	87.78	17.87	16.41	557.84	24.45	56.93	183.70	33.94
95th-Percentile Queue Length [veh/ln]	2.28	3.30	6.32	1.29	1.18	30.06	1.76	4.10	11.79	2.44
95th-Percentile Queue Length [ft/ln]	56.97	82.49	158.01	32.17	29.53	751.51	44.01	102.48	294.84	61.10

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	59.95	30.71	30.71	54.36	24.86	24.86	58.33	40.03	16.04	69.24	19.21	14.98
Movement LOS	E	C	C	D	C	C	E	D	B	E	B	B
d_A, Approach Delay [s/veh]	40.10			47.19			38.65			23.85		
Approach LOS	D			D			D			C		
d_I, Intersection Delay [s/veh]	34.20											
Intersection LOS	C											
Intersection V/C	0.703											

Emissions

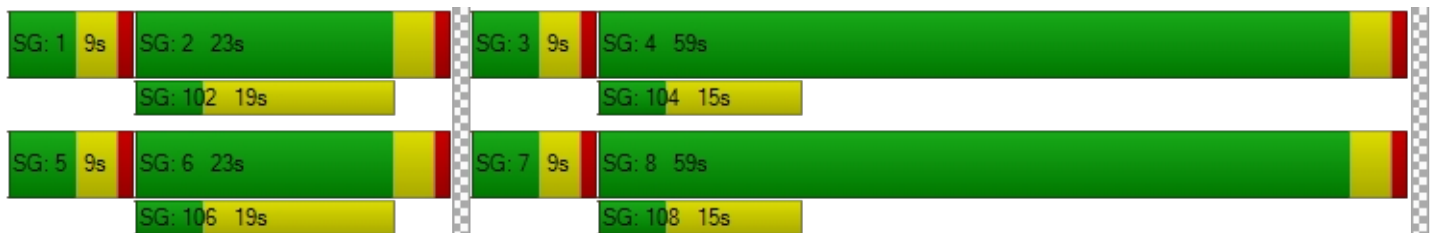
Vehicle Miles Traveled [mph]	2.56	5.41	3.84	1.23	7.47	284.60	23.83	21.62	146.34	34.07
Stops [stops/h]	45.57	65.99	126.41	25.74	23.62	803.29	35.21	81.98	264.53	48.88
Fuel consumption [US gal/h]	1.19	1.59	3.96	0.74	0.81	27.94	2.01	3.01	10.89	2.24
CO [g/h]	83.26	110.94	276.70	51.50	56.73	1953.01	140.71	210.48	761.35	156.69
NOx [g/h]	16.20	21.58	53.84	10.02	11.04	379.98	27.38	40.95	148.13	30.49
VOC [g/h]	19.30	25.71	64.13	11.94	13.15	452.63	32.61	48.78	176.45	36.31

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
I_p,int, Pedestrian LOS Score for Intersectio	2.244	2.147	2.138	2.823
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]	380	380	1100	1100
d_b, Bicycle Delay [s]	32.81	32.81	10.13	10.13
I_b,int, Bicycle LOS Score for Intersection	1.786	1.852	3.025	2.685
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):	10.4
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.113

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	1	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]	10	0	0	0	3	45	85	0	6	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	4	0	0	45	45	85	0	6	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]	3	2	0	0	18	18	21	0	2	0	0	14
Total Analysis Volume [veh/h]	10	6	0	0	71	71	85	0	9	0	0	57
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.01	0.00	0.00	0.05
d_M, Delay for Movement [s/veh]	7.49	0.00	0.00	7.21	0.00	0.00	10.44	10.41	9.31	9.11	10.16	8.50
Movement LOS	A	A	A	A	A	A	B	B	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.02	0.00	0.00	0.00	0.42	0.42	0.42	0.17	0.17	0.17
95th-Percentile Queue Length [ft/ln]	0.42	0.42	0.42	0.00	0.00	0.00	10.40	10.40	10.40	4.15	4.15	4.15
d_A, Approach Delay [s/veh]	4.68			0.00			10.34			8.50		
Approach LOS	A			A			B			A		
d_I, Intersection Delay [s/veh]	4.95											
Intersection LOS	B											

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

Control Type:	Two-way stop	Delay (sec / veh):	8.7
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.045

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]	45	0	0	0	0	28
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]	45	0	0	0	0	28
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]	11	0	0	0	0	7
Total Analysis Volume [veh/h]	45	0	0	0	0	28
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	0.04	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.73	8.36	7.25	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.14	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	3.49	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.73		3.63		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	5.38					
Intersection LOS	A					

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

Control Type:	Two-way stop	Delay (sec / veh):	9.1
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.049

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]	45	0	0	45	28	28
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]	45	0	0	45	28	28
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]	11	0	0	11	7	7
Total Analysis Volume [veh/h]	45	0	0	45	28	28
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	0.05	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	9.12	8.48	7.31	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.15	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	3.86	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	9.12		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	2.81					
Intersection LOS	A					

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

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):	0.003

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	85	45	45	0	3
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	85	45	45	0	3
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	21	11	11	0	1
Total Analysis Volume [veh/h]	0	85	45	45	0	3
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	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	8.53
Movement LOS		A	A	A		A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.01
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.22
d_A, Approach Delay [s/veh]	0.00		0.00		8.53	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.14					
Intersection LOS	A					

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

Control Type: Two-way stop
 Analysis Method: HCM 7th Edition
 Analysis Period: 15 minutes

Delay (sec / veh): 51.6
 Level Of Service: F
 Volume to Capacity (v/c): 0.090

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	5	0	0	0	0	78	0	5	81	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	81	0	0	1	0	755	31	79	460	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	22	0	0	0	0	205	8	21	125	0
Total Analysis Volume [veh/h]	8	0	88	0	0	1	0	822	34	86	501	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	0.09	0.00	0.24	0.00	0.00	0.00	0.00	0.01	0.00	0.11	0.01	0.00
d_M, Delay for Movement [s/veh]	51.65	44.30	20.71	62.24	39.15	11.29	8.36	0.00	0.00	10.09	0.00	0.00
Movement LOS	F	E	C	F	E	B	A	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	1.39	1.39	1.39	0.01	0.01	0.01	0.00	0.00	0.00	0.36	0.00	0.00
95th-Percentile Queue Length [ft/ln]	34.82	34.82	34.82	0.13	0.13	0.13	0.00	0.00	0.00	9.09	0.00	0.00
d_A, Approach Delay [s/veh]	23.28			11.29			0.00			1.48		
Approach LOS	C			B			A			A		
d_I, Intersection Delay [s/veh]	2.02											
Intersection LOS	F											

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

Control Type: Two-way stop
 Analysis Method: HCM 7th Edition
 Analysis Period: 15 minutes

Delay (sec / veh): 17.4
 Level Of Service: C
 Volume to Capacity (v/c): 0.030

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	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			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	5	0	0	0	73	0	0	76	5
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	8	0	0	1	826	0	0	430	7
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	221	0	0	115	2
Total Analysis Volume [veh/h]	0	0	0	9	0	0	1	883	0	0	460	7
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	0.03	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	17.07	16.38	15.35	17.44	16.74	11.35	8.26	0.00	0.00	9.65	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	0.09	0.09	0.09	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	2.33	2.33	2.33	0.07	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	16.27			17.44			0.01			0.00		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	0.12											
Intersection LOS	C											

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

Control Type:	Two-way stop	Delay (sec / veh):	15.8
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.075

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]	15	0	0	58	60	16
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]	25	3	3	797	383	53
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]	7	1	1	214	103	14
Total Analysis Volume [veh/h]	27	3	3	856	411	57
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	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	15.77	11.61	8.26	0.00	0.00	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.26	0.26	0.01	0.01	0.00	0.00
95th-Percentile Queue Length [ft/ln]	6.43	6.43	0.13	0.13	0.00	0.00
d_A, Approach Delay [s/veh]	15.35		0.03		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.36					
Intersection LOS	C					

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

Control Type:	Two-way stop	Delay (sec / veh):	10.3
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	1	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	104	0	0	113
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	997	1	2	620
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	257	0	1	160
Total Analysis Volume [veh/h]	0	0	1027	1	2	639
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]	17.39	17.54	0.00	0.00	10.28	0.00
Movement LOS	C	C	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.01	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.22	0.00
d_A, Approach Delay [s/veh]	17.47		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):	20.8
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.021

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]	5	0	0	0	0	5	5	94	5	0	103	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]	5	0	2	0	0	5	6	975	5	1	617	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]	1	0	1	0	0	1	2	255	1	0	162	0
Total Analysis Volume [veh/h]	5	0	2	0	0	5	6	1021	5	1	646	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	0.01	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	20.80	19.40	17.90	20.49	19.08	12.66	8.82	0.00	0.00	10.27	0.00	0.00
Movement LOS	C	C	C	C	C	B	A	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	0.09	0.09	0.09	0.03	0.03	0.03	0.02	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	2.18	2.18	2.18	0.80	0.80	0.80	0.48	0.00	0.00	0.11	0.00	0.00
d_A, Approach Delay [s/veh]	19.97			12.66			0.05			0.02		
Approach LOS	C			B			A			A		
d_I, Intersection Delay [s/veh]	0.16											
Intersection LOS	C											

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

Control Type: Two-way stop
 Analysis Method: HCM 7th Edition
 Analysis Period: 15 minutes

Delay (sec / veh): 20.7
 Level Of Service: C
 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	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	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]	5	0	0	0	0	5	5	84	5	0	93	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]	5	0	1	1	0	5	5	967	5	0	608	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]	1	0	0	0	0	1	1	259	1	0	163	1
Total Analysis Volume [veh/h]	5	0	1	1	0	5	5	1038	5	0	652	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	3	2	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	19.72	18.40	18.10	20.70	19.30	12.79	8.84	0.00	0.00	10.34	0.00	0.00
Movement LOS	C	C	C	C	C	B	A	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	0.07	0.07	0.07	0.05	0.05	0.05	0.02	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	1.80	1.80	1.80	1.14	1.14	1.14	0.40	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	19.45			14.11			0.04			0.00		
Approach LOS	C			B			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):	22.8
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.512

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	Yes			Yes			No			Yes		

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]	5	4	6	0	5	34	29	50	5	6	54	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	25	17	9	46	200	181	731	15	31	450	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]	2	7	5	2	12	54	49	198	4	8	122	1
Total Analysis Volume [veh/h]	8	27	18	10	50	217	196	792	16	34	488	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
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing (Basic)

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												
Maximum Green [s]	0	26	0	0	26	0	10	17	0	5	12	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
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	21.0	0.0	0.0	10.0	0.0	0.0	7.0	0.0	0.0	7.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	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
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0.0	30.0	0.0	0.0	30.0	0.0	14.0	21.0	0.0	9.0	16.0	0.0
Lead / Lag	-	-	-	-	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	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
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	L	C	R	L	C	R
C, Calculated Cycle Length [s]	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	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]	29.7	29.7	8.1	15.2	15.2	3.0	10.1	10.1
g / C, Green / Cycle	0.50	0.50	0.14	0.25	0.25	0.05	0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.03	0.17	0.11	0.22	0.01	0.02	0.13	0.00
s, saturation flow rate [veh/h]	1691	1663	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	905	884	247	920	411	93	613	274
d1, Uniform Delay [s]	7.91	9.20	25.10	21.35	16.85	27.51	23.92	20.76
k, delay calibration	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.12	0.93	5.74	2.51	0.04	2.39	2.42	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	0.06	0.31	0.79	0.86	0.04	0.37	0.80	0.02
d, Delay for Lane Group [s/veh]	8.03	10.13	30.84	23.86	16.88	29.91	26.34	20.79
Lane Group LOS	A	B	C	C	B	C	C	C
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.30	1.68	2.68	4.59	0.14	0.47	2.98	0.05
50th-Percentile Queue Length [ft/ln]	7.39	42.10	66.89	114.66	3.51	11.77	74.49	1.28
95th-Percentile Queue Length [veh/ln]	0.53	3.03	4.82	8.10	0.25	0.85	5.36	0.09
95th-Percentile Queue Length [ft/ln]	13.30	75.79	120.41	202.46	6.32	21.19	134.07	2.31

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	8.03	8.03	8.03	10.13	10.13	10.13	30.84	23.86	16.88	29.91	26.34	20.79
Movement LOS	A	A	A	B	B	B	C	C	B	C	C	C
d_A, Approach Delay [s/veh]	8.03			10.13			25.11			26.52		
Approach LOS	A			B			C			C		
d_I, Intersection Delay [s/veh]	22.79											
Intersection LOS	C											
Intersection V/C	0.512											

Emissions

Vehicle Miles Traveled [mph]	4.38	25.55	153.10	618.65	12.50	3.77	54.17	0.56
Stops [stops/h]	17.73	101.05	160.54	550.35	8.42	28.25	357.53	3.08
Fuel consumption [US gal/h]	0.46	3.30	9.33	34.76	0.63	0.86	11.07	0.10
CO [g/h]	31.97	230.85	652.40	2429.97	44.00	59.97	773.73	6.78
NOx [g/h]	6.22	44.92	126.93	472.78	8.56	11.67	150.54	1.32
VOC [g/h]	7.41	53.50	151.20	563.17	10.20	13.90	179.32	1.57

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	0.00	21.68
I_p,int, Pedestrian LOS Score for Intersectio	1.807	2.147	0.000	2.849
Crosswalk LOS	A	B	F	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	867	867	567	400
d_b, Bicycle Delay [s]	9.63	9.63	15.41	19.20
I_b,int, Bicycle LOS Score for Intersection	1.647	2.017	2.388	1.994
Bicycle LOS	A	B	B	A

Sequence

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



HORIZON 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):	0.833

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		
	1	12	13	185	20	54	40	399	11	4	488	139
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	1.4454	1.4454	1.4454	1.4454	1.4454	1.4454	1.7895	1.7895	1.7895	1.7895	1.7895	1.7895
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	17	19	278	29	78	72	768	20	7	922	259
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	4	5	70	7	20	18	192	5	2	231	65
Total Analysis Volume [veh/h]	1	17	19	278	29	78	72	768	20	7	922	259
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

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

Phasing & Timing (Basic)

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

Phasing & Timing: Pattern 1

Split [s]	9.0	14.0	0.0	9.0	14.0	0.0	9.0	68.0	0.0	9.0	68.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	L	C	R	L	C	R
C, Calculated Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
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]	0.1	10.7	17.0	27.7	5.0	55.3	55.3	0.9	51.2	51.2
g / C, Green / Cycle	0.00	0.11	0.17	0.28	0.05	0.55	0.55	0.01	0.51	0.51
(v / s)_i Volume / Saturation Flow Rate	0.00	0.02	0.15	0.06	0.04	0.40	0.01	0.00	0.49	0.16
s, saturation flow rate [veh/h]	1810	1738	1810	1683	1810	1900	1615	1810	1900	1615
c, Capacity [veh/h]	2	188	307	465	90	1051	894	16	973	827
d1, Uniform Delay [s]	49.89	40.61	40.72	27.95	46.99	16.75	10.10	49.31	23.12	14.17
k, delay calibration	0.11	0.50	0.32	0.50	0.16	0.17	0.11	0.11	0.29	0.11
l, 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]	80.70	2.25	23.45	1.15	20.50	1.54	0.01	17.68	12.71	0.21
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	0.40	0.19	0.91	0.23	0.80	0.73	0.02	0.44	0.95	0.31
d, Delay for Lane Group [s/veh]	130.59	42.86	64.17	29.10	67.49	18.29	10.11	66.99	35.83	14.39
Lane Group LOS	F	D	E	C	E	B	B	E	D	B
Critical Lane Group	No	Yes	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.08	0.90	8.25	1.99	2.38	14.46	0.22	0.25	20.92	3.06
50th-Percentile Queue Length [ft/ln]	2.00	22.45	206.21	49.64	59.46	361.46	5.56	6.13	522.90	76.49
95th-Percentile Queue Length [veh/ln]	0.14	1.62	12.96	3.57	4.28	20.69	0.40	0.44	28.42	5.51
95th-Percentile Queue Length [ft/ln]	3.60	40.41	323.96	89.35	107.02	517.36	10.01	11.04	710.41	137.69

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	130.59	42.86	42.86	64.17	29.10	29.10	67.49	18.29	10.11	66.99	35.83	14.39
Movement LOS	F	D	D	E	C	C	E	B	B	E	D	B
d_A, Approach Delay [s/veh]	45.24			54.42			22.22			31.34		
Approach LOS	D			D			C			C		
d_I, Intersection Delay [s/veh]	31.97											
Intersection LOS	C											
Intersection V/C	0.833											

Emissions

Vehicle Miles Traveled [mph]	0.06	2.10	7.96	3.06	25.61	273.21	7.11	2.07	273.13	76.72
Stops [stops/h]	2.88	32.33	296.94	71.48	85.62	520.51	8.01	8.83	752.98	110.15
Fuel consumption [US gal/h]	0.06	0.79	9.41	2.06	2.92	23.43	0.58	0.30	27.43	5.02
CO [g/h]	4.50	55.07	657.89	144.27	203.89	1637.45	40.32	21.00	1917.17	350.80
NOx [g/h]	0.88	10.71	128.00	28.07	39.67	318.59	7.84	4.09	373.01	68.25
VOC [g/h]	1.04	12.76	152.47	33.43	47.25	379.50	9.34	4.87	444.32	81.30

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0		0.0		0.0		0.0	
M_corner, Corner Circulation Area [ft ² /ped]	0.00		0.00		0.00		0.00	
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00		0.00		0.00		0.00	
d_p, Pedestrian Delay [s]	0.00		0.00		0.00		0.00	
I_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]	200		200		1280		1280	
d_b, Bicycle Delay [s]	40.50		40.50		6.48		6.48	
I_b,int, Bicycle LOS Score for Intersection	1.621		2.195		2.979		3.520	
Bicycle LOS	A		B		C		D	

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
 Analysis Method: HCM 7th Edition
 Analysis Period: 15 minutes

Delay (sec / veh): 8.4
 Level Of Service: A
 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	1	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	1.4454	1.4454	1.4454	1.4454	1.4454	1.4454	1.4454	1.4454	1.4454	1.4454	1.4454	1.4454
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	9	0	0	40	0	0	0	0	0	0	33
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	2	0	0	10	0	0	0	0	0	0	8
Total Analysis Volume [veh/h]	0	9	0	0	40	0	0	0	0	0	0	33
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	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]	7.27	0.00	0.00	7.22	0.00	0.00	8.98	9.25	8.40	8.77	9.36	8.43
Movement LOS	A	A	A	A	A	A	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	0.09	0.09	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	2.35	2.35	2.35
d_A, Approach Delay [s/veh]	0.00			0.00			8.88			8.43		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	3.39											
Intersection LOS	A											

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

Control Type: Two-way stop
 Analysis Method: HCM 7th Edition
 Analysis Period: 15 minutes

Delay (sec / veh): 87.4
 Level Of Service: F
 Volume to Capacity (v/c): 0.257

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	1	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	49.21
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	1.4454	1.4454	1.4454	1.4454	1.4454	1.4454	1.7895	1.7895	1.7895	1.7895	1.7895	1.7895
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]	14	0	129	0	0	0	0	707	21	100	895	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	0	32	0	0	0	0	177	5	25	224	0
Total Analysis Volume [veh/h]	14	0	129	0	0	0	0	707	21	100	895	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	0.26	0.00	0.30	0.00	0.00	0.00	0.00	0.01	0.00	0.11	0.01	0.00
d_M, Delay for Movement [s/veh]	87.36	72.36	29.49	99.30	56.96	15.52	9.70	0.00	0.00	9.59	0.00	0.00
Movement LOS	F	F	D	F	F	C	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	3.08	3.08	3.08	0.00	0.00	0.00	0.00	0.00	0.00	0.38	0.00	0.00
95th-Percentile Queue Length [ft/ln]	77.11	77.11	77.11	0.00	0.00	0.00	0.00	0.00	0.00	9.52	0.00	0.00
d_A, Approach Delay [s/veh]	35.16			57.26			0.00			0.96		
Approach LOS	E			F			A			A		
d_I, Intersection Delay [s/veh]	3.21											
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):	0.004

Intersection Setup

Name	Soledad Rd			Soledad Rd			HWY 138			HWY 138		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			T			T		
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	2
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	74.61
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	1.4454	1.4454	1.4454	1.4454	1.4454	1.4454	1.7895	1.7895	1.7895	1.7895	1.7895	1.7895
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	680	0	4	929	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	0	0	0	170	0	1	232	0
Total Analysis Volume [veh/h]	0	0	0	1	0	0	0	680	0	4	929	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]	19.01	17.99	12.92	19.10	18.08	16.06	9.84	0.00	0.00	8.92	0.00	0.00
Movement LOS	C	C	B	C	C	C	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	0.01	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.29	0.29	0.29	0.00	0.00	0.00	0.33	0.00	0.00
d_A, Approach Delay [s/veh]	16.64			19.10			0.00			0.04		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	0.03											
Intersection LOS	C											

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

Control Type:	Two-way stop	Delay (sec / veh):	18.5
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.174

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	1.4454	1.4454	1.7895	1.7895	1.7895	1.7895
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]	56	1	0	630	896	33
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]	14	0	0	158	224	8
Total Analysis Volume [veh/h]	56	1	0	630	896	33
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	0.17	0.00	0.00	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	18.55	18.14	9.84	0.00	0.00	0.00
Movement LOS	C	C	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.63	0.63	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	15.79	15.79	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	18.54		0.00		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.65					
Intersection LOS	C					

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

Control Type:	Two-way stop	Delay (sec / veh):	18.7
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.004

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	1	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	1	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	49.21	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	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	1.4454	1.4454	1.7895	1.7895	1.7895	1.7895
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]	0	1	1090	2	2	1199
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	0	273	1	1	300
Total Analysis Volume [veh/h]	0	1	1090	2	2	1199
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]	22.54	18.71	0.00	0.00	10.58	0.00
Movement LOS	C	C	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.00	0.00	0.01	0.00
95th-Percentile Queue Length [ft/ln]	0.29	0.29	0.00	0.00	0.23	0.00
d_A, Approach Delay [s/veh]	18.71		0.00		0.02	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.02					
Intersection LOS	C					

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

Control Type:	Two-way stop	Delay (sec / veh):	11.0
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.003

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	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.21	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	0	0	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	1.4454	1.4454	1.4454	1.4454	1.4454	1.4454	1.7895	1.7895	1.7895	1.7895	1.7895	1.7895
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	0	0	0	0	2	1103	0	2	1170	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	0	0	1	276	0	1	293	0
Total Analysis Volume [veh/h]	0	0	0	0	0	0	2	1103	0	2	1170	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]	27.04	24.25	18.88	27.02	24.24	20.18	10.98	0.00	0.00	10.64	0.00	0.00
Movement LOS	D	C	C	D	C	C	B	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.00	0.23	0.00	0.00
d_A, Approach Delay [s/veh]	23.39			23.81			0.02			0.02		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	0.02											
Intersection LOS	B											

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

Control Type: Two-way stop
 Analysis Method: HCM 7th Edition
 Analysis Period: 15 minutes

Delay (sec / veh): 19.2
 Level Of Service: C
 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	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	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.21	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	1.4454	1.4454	1.4454	1.4454	1.4454	1.4454	1.7895	1.7895	1.7895	1.7895	1.7895	1.7895
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	2	1119	0	0	1165	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	0	0	1	280	0	0	291	0
Total Analysis Volume [veh/h]	0	0	1	0	0	0	2	1119	0	0	1165	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	3	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]	24.70	22.28	19.23	27.03	24.21	20.08	10.95	0.00	0.00	10.70	0.00	0.00
Movement LOS	C	C	C	D	C	C	B	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.01	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.30	0.30	0.30	0.00	0.00	0.00	0.25	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	19.23			23.77			0.02			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):	19.1
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.743

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	2	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	1800.00	0.00	199.61	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	1.4454	1.4454	1.4454	1.4454	1.4454	1.4454	1.7895	1.7895	1.7895	1.7895	1.7895	1.7895
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]	17	48	32	6	34	289	317	775	20	21	791	2
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	12	8	2	9	72	79	194	5	5	198	1
Total Analysis Volume [veh/h]	17	48	32	6	34	289	317	775	20	21	791	2
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing (Basic)

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												
Maximum Green [s]	0	10	0	0	10	0	25	33	0	5	13	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
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	10.0	0.0	0.0	10.0	0.0	0.0	10.0	0.0	0.0	10.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	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
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0.0	14.0	0.0	0.0	14.0	0.0	29.0	37.0	0.0	9.0	17.0	0.0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	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
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	L	C	R	L	C	R
C, Calculated Cycle Length [s]	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	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]	19.4	19.4	12.6	27.1	27.1	1.5	15.9	15.9
g / C, Green / Cycle	0.32	0.32	0.21	0.45	0.45	0.03	0.27	0.27
(v / s)_i Volume / Saturation Flow Rate	0.06	0.20	0.18	0.21	0.01	0.01	0.22	0.00
s, saturation flow rate [veh/h]	1728	1642	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	629	592	384	1629	727	48	958	428
d1, Uniform Delay [s]	14.53	17.18	22.59	11.53	9.18	28.77	20.75	16.23
k, delay calibration	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.52	3.74	4.56	0.22	0.02	6.20	1.88	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	0.15	0.56	0.83	0.48	0.03	0.44	0.83	0.00
d, Delay for Lane Group [s/veh]	15.05	20.92	27.15	11.75	9.19	34.97	22.62	16.24
Lane Group LOS	B	C	C	B	A	C	C	B
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.88	3.60	4.00	2.58	0.11	0.34	4.41	0.02
50th-Percentile Queue Length [ft/ln]	22.04	89.97	99.90	64.45	2.67	8.55	110.20	0.42
95th-Percentile Queue Length [veh/ln]	1.59	6.48	7.19	4.64	0.19	0.62	7.85	0.03
95th-Percentile Queue Length [ft/ln]	39.68	161.94	179.82	116.01	4.81	15.39	196.28	0.76

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	15.05	15.05	15.05	20.92	20.92	20.92	27.15	11.75	9.19	34.97	22.62	16.24
Movement LOS	B	B	B	C	C	C	C	B	A	C	C	B
d_A, Approach Delay [s/veh]	15.05			20.92			16.09			22.93		
Approach LOS	B			C			B			C		
d_I, Intersection Delay [s/veh]	19.09											
Intersection LOS	B											
Intersection V/C	0.743											

Emissions

Vehicle Miles Traveled [mph]	8.03	30.35	247.62	605.37	15.62	2.33	87.81	0.22
Stops [stops/h]	52.91	215.92	239.76	309.35	6.41	20.53	528.97	1.02
Fuel consumption [US gal/h]	1.23	6.43	14.49	27.85	0.68	0.61	16.40	0.03
CO [g/h]	85.98	449.22	1012.71	1946.69	47.47	42.55	1146.69	2.30
NOx [g/h]	16.73	87.40	197.04	378.76	9.24	8.28	223.10	0.45
VOC [g/h]	19.93	104.11	234.70	451.16	11.00	9.86	265.76	0.53

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	0.00
I_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]	333	333	1100	433
d_b, Bicycle Delay [s]	20.83	20.83	6.08	18.41
I_b,int, Bicycle LOS Score for Intersection	1.720	2.102	2.477	2.231
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):	47.5
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.864

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	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.21	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			No			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	1.3446	1.3446	1.3446	1.3446	1.3446	1.3446	1.7641	1.7641	1.7641	1.7641	1.7641	1.7641
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]	11	22	27	162	12	35	34	1263	49	34	765	179
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	6	7	41	3	9	9	316	12	9	191	45
Total Analysis Volume [veh/h]	11	22	27	162	12	35	34	1263	49	34	765	179
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]	220
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	24	29	0	5	10	0	5	15	0	5	15	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	24.0	0.0	0.0	10.0	0.0	0.0	10.0	0.0	0.0	10.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	28.0	33.0	0.0	9.0	14.0	0.0	159.0	169.0	0.0	9.0	19.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	L	C	R	L	C	R
C, Calculated Cycle Length [s]	220	220	220	220	220	220	220	220	220	220
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]	2.4	29.1	21.0	47.6	5.4	148.9	148.9	5.0	148.5	148.5
g / C, Green / Cycle	0.01	0.13	0.10	0.22	0.02	0.68	0.68	0.02	0.68	0.68
(v / s)_i Volume / Saturation Flow Rate	0.01	0.03	0.09	0.03	0.02	0.66	0.03	0.02	0.21	0.11
s, saturation flow rate [veh/h]	1810	1732	1810	1679	1810	1900	1615	1810	3618	1615
c, Capacity [veh/h]	20	229	172	364	45	1286	1093	41	2442	1090
d1, Uniform Delay [s]	108.22	85.22	98.89	69.47	106.65	34.25	11.84	107.07	14.73	13.07
k, delay calibration	0.11	0.50	0.39	0.50	0.11	0.40	0.11	0.18	0.11	0.11
l, 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]	21.10	2.12	46.33	0.73	23.08	18.63	0.02	46.74	0.07	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	0.55	0.21	0.94	0.13	0.76	0.98	0.04	0.83	0.31	0.16
d, Delay for Lane Group [s/veh]	129.32	87.34	145.22	70.20	129.73	52.88	11.86	153.81	14.81	13.14
Lane Group LOS	F	F	F	E	F	D	B	F	B	B
Critical Lane Group	No	Yes	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.75	2.63	11.34	2.19	2.30	75.23	0.92	2.47	7.82	3.26
50th-Percentile Queue Length [ft/ln]	18.68	65.75	283.43	54.87	57.44	1880.78	23.12	61.80	195.47	81.40
95th-Percentile Queue Length [veh/ln]	1.35	4.73	16.86	3.95	4.14	89.46	1.66	4.45	12.40	5.86
95th-Percentile Queue Length [ft/ln]	33.63	118.35	421.49	98.77	103.40	2236.39	41.62	111.24	310.12	146.52

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	129.32	87.34	87.34	145.22	70.20	70.20	129.73	52.88	11.86	153.81	14.81	13.14
Movement LOS	F	F	F	F	E	E	F	D	B	F	B	B
d_A, Approach Delay [s/veh]	95.04			128.35			53.33			19.33		
Approach LOS	F			F			D			B		
d_I, Intersection Delay [s/veh]	47.52											
Intersection LOS	D											
Intersection V/C	0.864											

Emissions

Vehicle Miles Traveled [mph]	0.64	2.85	4.64	1.35	12.10	449.31	17.43	10.07	226.62	53.03
Stops [stops/h]	12.23	43.04	185.52	35.92	37.60	1231.05	15.14	40.45	255.89	53.28
Fuel consumption [US gal/h]	0.46	1.50	8.39	1.38	1.81	47.41	1.43	2.02	13.82	3.07
CO [g/h]	32.39	105.10	586.30	96.70	126.37	3314.18	99.99	141.35	966.16	214.74
NOx [g/h]	6.30	20.45	114.07	18.82	24.59	644.82	19.45	27.50	187.98	41.78
VOC [g/h]	7.51	24.36	135.88	22.41	29.29	768.09	23.17	32.76	223.92	49.77

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	101.18	101.18	0.00	101.18
I_p,int, Pedestrian LOS Score for Intersectio	2.230	2.247	0.000	3.132
Crosswalk LOS	B	B	F	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	264	91	1500	136
d_b, Bicycle Delay [s]	82.91	100.23	6.88	95.51
I_b,int, Bicycle LOS Score for Intersection	1.659	1.904	3.781	2.366
Bicycle LOS	A	A	D	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
 Analysis Method: HCM 7th Edition
 Analysis Period: 15 minutes

Delay (sec / veh): 8.5
 Level Of Service: A
 Volume to Capacity (v/c): 0.043

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	1	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	1.3446	1.3446	1.3446	1.3446	1.3446	1.3446	1.3446	1.3446	1.3446	1.3446	1.3446	1.3446
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	5	0	0	54	0	0	0	0	0	0	47
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	0	0	14	0	0	0	0	0	0	12
Total Analysis Volume [veh/h]	0	5	0	0	54	0	0	0	0	0	0	47
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
d_M, Delay for Movement [s/veh]	7.30	0.00	0.00	7.21	0.00	0.00	9.16	9.31	8.43	8.83	9.46	8.46
Movement LOS	A	A	A	A	A	A	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	0.14	0.14	0.14
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.39	3.39	3.39
d_A, Approach Delay [s/veh]	0.00			0.00			8.97			8.46		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	3.75											
Intersection LOS	A											

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

Control Type: Two-way stop
 Analysis Method: HCM 7th Edition
 Analysis Period: 15 minutes

Delay (sec / veh): 198.9
 Level Of Service: F
 Volume to Capacity (v/c): 0.338

Intersection Setup

Name	Mountain 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	2
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	74.61
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	Mountain 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	1.3446	1.3446	1.3446	1.3446	1.3446	1.3446	1.7641	1.7641	1.7641	1.7641	1.7641	1.7641
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]	9	0	98	0	0	1	0	1196	53	125	694	2
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	0	25	0	0	0	0	299	13	31	174	1
Total Analysis Volume [veh/h]	9	0	98	0	0	1	0	1196	53	125	694	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	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.34	0.00	0.44	0.00	0.00	0.00	0.00	0.01	0.00	0.22	0.01	0.00
d_M, Delay for Movement [s/veh]	198.91	161.18	80.10	247.09	106.08	13.10	8.96	0.00	0.00	13.19	0.00	0.00
Movement LOS	F	F	F	F	F	B	A	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	4.73	4.73	4.73	0.01	0.01	0.01	0.00	0.00	0.00	0.84	0.00	0.00
95th-Percentile Queue Length [ft/ln]	118.34	118.34	118.34	0.17	0.17	0.17	0.00	0.00	0.00	21.03	0.00	0.00
d_A, Approach Delay [s/veh]	90.09			13.10			0.00			2.01		
Approach LOS	F			B			A			A		
d_I, Intersection Delay [s/veh]	5.19											
Intersection LOS	F											

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

Control Type:	Two-way stop	Delay (sec / veh):	26.6
Analysis Method:	HCM 7th Edition	Level Of Service:	D
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	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	2
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	74.61
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	1.3446	1.3446	1.3446	1.3446	1.3446	1.3446	1.7641	1.7641	1.7641	1.7641	1.7641	1.7641
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	4	0	0	2	1325	0	0	652	4
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	1	0	0	1	331	0	0	163	1
Total Analysis Volume [veh/h]	0	0	0	4	0	0	2	1325	0	0	652	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]	26.09	23.21	23.71	26.58	23.70	13.16	8.83	0.00	0.00	11.82	0.00	0.00
Movement LOS	D	C	C	D	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	0.01	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	1.79	1.79	1.79	0.16	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	24.34			26.58			0.01			0.00		
Approach LOS	C			D			A			A		
d_I, Intersection Delay [s/veh]	0.06											
Intersection LOS	D											

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

Control Type:	Two-way stop	Delay (sec / veh):	23.0
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.103

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	1.3446	1.3446	1.7641	1.7641	1.7641	1.7641
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]	23	4	5	1291	588	75
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]	6	1	1	323	147	19
Total Analysis Volume [veh/h]	23	4	5	1291	588	75
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	0.10	0.01	0.01	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	22.98	14.22	8.85	0.00	0.00	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.37	0.37	0.01	0.01	0.00	0.00
95th-Percentile Queue Length [ft/ln]	9.26	9.26	0.21	0.21	0.00	0.00
d_A, Approach Delay [s/veh]	21.69		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):	13.6
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.009

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	1	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	1.3446	1.3446	1.7641	1.7641	1.7641	1.7641
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	1572	2	4	922
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	0	393	1	1	231
Total Analysis Volume [veh/h]	0	0	1572	2	4	922
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	0.02	0.00	0.01	0.01
d_M, Delay for Movement [s/veh]	27.26	31.24	0.00	0.00	13.57	0.00
Movement LOS	D	D	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.03	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.71	0.00
d_A, Approach Delay [s/veh]	29.25		0.00		0.06	
Approach LOS	D		A		A	
d_I, Intersection Delay [s/veh]	0.02					
Intersection LOS	B					

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

Control Type:	Two-way stop	Delay (sec / veh):	31.0
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.021

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	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.21	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	1.3446	1.3446	1.3446	1.3446	1.3446	1.3446	1.7641	1.7641	1.7641	1.7641	1.7641	1.7641
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	3	0	0	0	2	1552	0	2	934	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	1	0	0	0	1	388	0	1	234	0
Total Analysis Volume [veh/h]	0	0	3	0	0	0	2	1552	0	2	934	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	0.02	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	34.91	29.84	31.05	35.26	29.47	16.08	9.87	0.00	0.00	13.36	0.00	0.00
Movement LOS	D	D	D	E	D	C	A	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	0.06	0.06	0.06	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.00	0.00
95th-Percentile Queue Length [ft/ln]	1.62	1.62	1.62	0.00	0.00	0.00	0.20	0.00	0.00	0.35	0.00	0.00
d_A, Approach Delay [s/veh]	31.05			26.94			0.01			0.03		
Approach LOS	D			D			A			A		
d_I, Intersection Delay [s/veh]	0.06											
Intersection LOS	D											

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

Control Type: Two-way stop
 Analysis Method: HCM 7th Edition
 Analysis Period: 15 minutes

Delay (sec / veh): 30.8
 Level Of Service: D
 Volume to Capacity (v/c): 0.007

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	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	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.21	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	1.3446	1.3446	1.3446	1.3446	1.3446	1.3446	1.7641	1.7641	1.7641	1.7641	1.7641	1.7641
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	1556	0	0	936	5
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	0	0	0	389	0	0	234	1
Total Analysis Volume [veh/h]	0	0	1	1	0	0	0	1556	0	0	936	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	3	2	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.02	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	32.23	27.44	30.82	25.75	29.29	16.26	9.89	0.00	0.00	13.35	0.00	0.00
Movement LOS	D	D	D	D	D	C	A	A	A	B	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]	0.54	0.54	0.54	0.43	0.43	0.43	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	30.82			25.75			0.00			0.00		
Approach LOS	D			D			A			A		
d_I, Intersection Delay [s/veh]	0.02											
Intersection LOS	D											

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

Control Type:	Signalized	Delay (sec / veh):	20.3
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.679

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	2	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	1800.00	0.00	199.61	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	1.3446	1.3446	1.3446	1.3446	1.3446	1.3446	1.7641	1.7641	1.7641	1.7641	1.7641	1.7641
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]	3	31	21	12	57	244	282	1189	18	48	706	9
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	8	5	3	14	61	71	297	5	12	177	2
Total Analysis Volume [veh/h]	3	31	21	12	57	244	282	1189	18	48	706	9
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing (Basic)

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												
Maximum Green [s]	0	10	0	0	10	0	26	33	0	5	12	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
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	10.0	0.0	0.0	10.0	0.0	0.0	10.0	0.0	0.0	10.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	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
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0.0	14.0	0.0	0.0	14.0	0.0	30.0	37.0	0.0	9.0	16.0	0.0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	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
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	L	C	R	L	C	R
C, Calculated Cycle Length [s]	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	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]	21.6	21.6	11.5	23.6	23.6	2.8	14.9	14.9
g / C, Green / Cycle	0.36	0.36	0.19	0.39	0.39	0.05	0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.03	0.19	0.16	0.33	0.01	0.03	0.20	0.01
s, saturation flow rate [veh/h]	1763	1663	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	696	659	349	1425	636	85	897	401
d1, Uniform Delay [s]	12.72	15.17	23.15	16.42	11.15	27.99	21.08	17.06
k, delay calibration	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.22	2.44	4.45	1.35	0.02	5.73	1.57	0.02
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	0.47	0.81	0.83	0.03	0.56	0.79	0.02
d, Delay for Lane Group [s/veh]	12.94	17.61	27.60	17.77	11.16	33.72	22.65	17.08
Lane Group LOS	B	B	C	B	B	C	C	B
Critical Lane Group	No	Yes	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.45	3.01	3.59	5.65	0.11	0.72	3.92	0.08
50th-Percentile Queue Length [ft/ln]	11.15	75.23	89.78	141.34	2.85	18.02	98.06	1.98
95th-Percentile Queue Length [veh/ln]	0.80	5.42	6.46	9.55	0.20	1.30	7.06	0.14
95th-Percentile Queue Length [ft/ln]	20.08	135.41	161.60	238.83	5.12	32.44	176.51	3.57

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	12.94	12.94	12.94	17.61	17.61	17.61	27.60	17.77	11.16	33.72	22.65	17.08
Movement LOS	B	B	B	B	B	B	C	B	B	C	C	B
d_A, Approach Delay [s/veh]	12.94			17.61			19.55			23.28		
Approach LOS	B			B			B			C		
d_I, Intersection Delay [s/veh]	20.27											
Intersection LOS	C											
Intersection V/C	0.679											

Emissions

Vehicle Miles Traveled [mph]	4.55	28.87	220.28	928.76	14.06	5.33	78.38	1.00
Stops [stops/h]	26.77	180.55	215.47	678.43	6.83	43.26	470.69	4.76
Fuel consumption [US gal/h]	0.63	5.44	12.95	47.97	0.64	1.31	14.62	0.15
CO [g/h]	44.29	380.34	905.54	3353.06	44.61	91.65	1021.89	10.71
NOx [g/h]	8.62	74.00	176.18	652.38	8.68	17.83	198.82	2.08
VOC [g/h]	10.27	88.15	209.87	777.10	10.34	21.24	236.83	2.48

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	0.00
I_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]	333	333	1100	400
d_b, Bicycle Delay [s]	20.83	20.83	6.08	19.20
I_b,int, Bicycle LOS Score for Intersection	1.650	2.076	2.788	2.189
Bicycle LOS	A	B	C	B

Sequence

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



HORIZON YEAR WITH PROJECT
TRAFFIC CONDITIONS

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

Control Type:	Signalized	Delay (sec / veh):	43.8
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.735

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	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.21	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		
	1	12	13	185	20	54	40	399	11	4	488	139
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	1.4454	1.4454	1.4454	1.4454	1.4454	1.4454	1.7895	1.7895	1.7895	1.7895	1.7895	1.7895
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	36	5	52	11	5	0	0	54	35	50	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]	37	22	71	278	34	78	72	768	55	57	922	259
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	6	18	70	9	20	18	192	14	14	231	65
Total Analysis Volume [veh/h]	37	22	71	278	34	78	72	768	55	57	922	259
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]	130
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	12	29	0	9	26	0	5	21	0	5	21	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	24.0	0.0	0.0	21.0	0.0	0.0	10.0	0.0	0.0	10.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	12.0	33.0	0.0	9.0	30.0	0.0	69.0	79.0	0.0	9.0	19.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	L	C	R	L	C	R
C, Calculated Cycle Length [s]	130	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3.7	31.9	21.8	50.1	6.7	55.3	55.3	5.0	53.5	53.5
g / C, Green / Cycle	0.03	0.25	0.17	0.39	0.05	0.43	0.43	0.04	0.41	0.41
(v / s)_i Volume / Saturation Flow Rate	0.02	0.06	0.15	0.07	0.04	0.40	0.03	0.03	0.25	0.16
s, saturation flow rate [veh/h]	1810	1674	1810	1692	1810	1900	1615	1810	3618	1615
c, Capacity [veh/h]	51	412	303	652	94	808	686	70	1489	665
d1, Uniform Delay [s]	62.65	39.12	53.24	26.32	60.85	36.07	22.25	62.05	30.20	26.80
k, delay calibration	0.11	0.50	0.30	0.50	0.11	0.25	0.11	0.17	0.11	0.11
l, 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]	17.24	1.27	24.21	0.57	12.22	13.48	0.05	29.90	0.42	0.37
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	0.72	0.23	0.92	0.17	0.77	0.95	0.08	0.82	0.62	0.39
d, Delay for Lane Group [s/veh]	79.89	40.39	77.45	26.89	73.08	49.54	22.29	91.95	30.62	27.17
Lane Group LOS	E	D	E	C	E	D	C	F	C	C
Critical Lane Group	No	Yes	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.44	2.48	10.59	2.28	2.77	27.80	1.10	2.40	10.89	5.45
50th-Percentile Queue Length [ft/ln]	35.91	61.91	264.70	57.12	69.26	695.01	27.60	59.96	272.15	136.32
95th-Percentile Queue Length [veh/ln]	2.59	4.46	15.92	4.11	4.99	36.45	1.99	4.32	16.30	9.28
95th-Percentile Queue Length [ft/ln]	64.64	111.44	398.11	102.81	124.67	911.18	49.67	107.93	407.42	232.06

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	79.89	40.39	40.39	77.45	26.89	26.89	73.08	49.54	22.29	91.95	30.62	27.17
Movement LOS	E	D	D	E	C	C	E	D	C	F	C	C
d_A, Approach Delay [s/veh]	51.63			62.93			49.76			32.72		
Approach LOS	D			E			D			C		
d_I, Intersection Delay [s/veh]	43.84											
Intersection LOS	D											
Intersection V/C	0.735											

Emissions

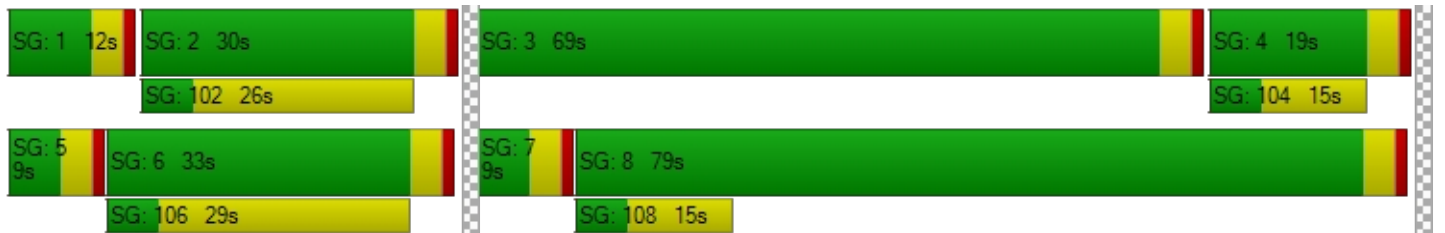
Vehicle Miles Traveled [mph]	2.15	5.41	7.96	3.21	25.61	273.21	19.57	16.89	273.13	76.72
Stops [stops/h]	39.78	68.58	293.20	63.27	76.72	769.85	30.57	66.42	602.91	151.00
Fuel consumption [US gal/h]	1.17	1.80	10.09	1.90	3.00	28.31	1.72	2.65	24.15	6.32
CO [g/h]	81.77	126.00	705.54	132.49	209.61	1978.81	120.40	185.34	1687.84	441.72
NOx [g/h]	15.91	24.51	137.27	25.78	40.78	385.00	23.43	36.06	328.39	85.94
VOC [g/h]	18.95	29.20	163.52	30.71	48.58	458.61	27.90	42.95	391.17	102.37

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	56.31	56.31	56.31	56.31
I_p,int, Pedestrian LOS Score for Intersectio	2.251	2.402	2.319	3.084
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]	446	400	1154	231
d_b, Bicycle Delay [s]	39.23	41.60	11.63	50.87
I_b,int, Bicycle LOS Score for Intersection	1.774	2.203	3.036	2.581
Bicycle LOS	A	B	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):	9.9
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.111

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	1	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	1.4454	1.4454	1.4454	1.4454	1.4454	1.4454	1.4454	1.4454	1.4454	1.4454	1.4454	1.4454
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	10	0	0	0	3	45	93	0	7	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	9	0	0	43	45	93	0	7	0	0	33
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	2	0	0	11	11	23	0	2	0	0	8
Total Analysis Volume [veh/h]	10	9	0	0	43	45	93	0	7	0	0	33
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.01	0.00	0.00	0.03
d_M, Delay for Movement [s/veh]	7.38	0.00	0.00	7.22	0.00	0.00	9.88	10.10	9.09	8.95	9.77	8.43
Movement LOS	A	A	A	A	A	A	A	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.02	0.00	0.00	0.00	0.40	0.40	0.40	0.09	0.09	0.09
95th-Percentile Queue Length [ft/ln]	0.42	0.42	0.42	0.00	0.00	0.00	10.01	10.01	10.01	2.35	2.35	2.35
d_A, Approach Delay [s/veh]	3.88			0.00			9.82			8.43		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	5.56											
Intersection LOS	A											

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

Control Type:	Two-way stop	Delay (sec / veh):	8.7
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.049

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	1.4454	1.4454	1.4454	1.4454	1.4454	1.4454
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	50	0	0	0	0	28
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]	50	0	0	0	0	28
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]	13	0	0	0	0	7
Total Analysis Volume [veh/h]	50	0	0	0	0	28
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	0.05	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.75	8.36	7.25	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.16	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	3.90	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.75		3.63		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	5.61					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 4: Project Driveway #2/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):	0.055

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	1.4454	1.4454	1.4454	1.4454	1.4454	1.4454
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	50	0	0	50	28	28
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]	50	0	0	50	28	28
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]	13	0	0	13	7	7
Total Analysis Volume [veh/h]	50	0	0	50	28	28
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	0.05	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	9.17	8.48	7.31	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.17	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	4.34	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	9.17		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	2.94					
Intersection LOS	A					

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

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):	0.003

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	1.5780	1.4454	1.4454	1.4454	1.5780	1.4454
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	93	45	45	0	3
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	93	45	45	0	3
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	23	11	11	0	1
Total Analysis Volume [veh/h]	0	93	45	45	0	3
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	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	8.53
Movement LOS		A	A	A		A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.01
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.22
d_A, Approach Delay [s/veh]	0.00		0.00		8.53	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.14					
Intersection LOS	A					

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

Control Type: Two-way stop
 Analysis Method: HCM 7th Edition
 Analysis Period: 15 minutes

Delay (sec / veh): 101.2
 Level Of Service: F
 Volume to Capacity (v/c): 0.292

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	2
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	74.61
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	1.4454	1.4454	1.4454	1.4454	1.4454	1.4454	1.7895	1.7895	1.7895	1.7895	1.7895	1.7895
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	5	0	0	0	0	84	0	5	80	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]	14	0	134	0	0	0	0	737	21	105	926	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	0	34	0	0	0	0	184	5	26	232	0
Total Analysis Volume [veh/h]	14	0	134	0	0	0	0	737	21	105	926	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	2	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.29	0.00	0.32	0.00	0.00	0.00	0.00	0.01	0.00	0.12	0.01	0.00
d_M, Delay for Movement [s/veh]	101.18	83.38	34.82	115.67	63.08	15.96	9.82	0.00	0.00	9.75	0.00	0.00
Movement LOS	F	F	D	F	F	C	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	3.63	3.63	3.63	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.00	0.00
95th-Percentile Queue Length [ft/ln]	90.86	90.86	90.86	0.00	0.00	0.00	0.00	0.00	0.00	10.35	0.00	0.00
d_A, Approach Delay [s/veh]	41.10			64.90			0.00			0.99		
Approach LOS	E			F			A			A		
d_I, Intersection Delay [s/veh]	3.67											
Intersection LOS	F											

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

Control Type:	Two-way stop	Delay (sec / veh):	20.0
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.024

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	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	2
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	74.61
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	1.4454	1.4454	1.4454	1.4454	1.4454	1.4454	1.7895	1.7895	1.7895	1.7895	1.7895	1.7895
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	5	0	0	0	79	0	0	75	5
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	0	705	0	4	955	5
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	2	0	0	0	176	0	1	239	1
Total Analysis Volume [veh/h]	0	0	0	6	0	0	0	705	0	4	955	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]	19.58	18.47	13.19	19.98	18.84	16.79	9.97	0.00	0.00	9.01	0.00	0.00
Movement LOS	C	C	B	C	C	C	A	A	A	A	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	0.01	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	1.87	1.87	1.87	0.00	0.00	0.00	0.33	0.00	0.00
d_A, Approach Delay [s/veh]	17.08			19.98			0.00			0.04		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	0.09											
Intersection LOS	C											

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

Control Type:	Two-way stop	Delay (sec / veh):	19.3
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.195

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	1.4454	1.4454	1.7895	1.7895	1.7895	1.7895
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	16	0	0	63	60	15
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]	61	1	0	650	917	38
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]	15	0	0	163	229	10
Total Analysis Volume [veh/h]	61	1	0	650	917	38
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	0.19	0.00	0.00	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	19.29	18.91	9.95	0.00	0.00	0.00
Movement LOS	C	C	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.72	0.72	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	18.07	18.07	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	19.29		0.00		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.72					
Intersection LOS	C					

**Intersection Level Of Service Report
Intersection 9: Ponderosa 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	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	1	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	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	1.4454	1.4454	1.7895	1.7895	1.7895	1.7895
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	117	0	0	109
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	1	1142	2	2	1249
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	0	286	1	1	312
Total Analysis Volume [veh/h]	0	1	1142	2	2	1249
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]	23.67	19.70	0.00	0.00	10.84	0.00
Movement LOS	C	C	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.00	0.00	0.01	0.00
95th-Percentile Queue Length [ft/ln]	0.31	0.31	0.00	0.00	0.24	0.00
d_A, Approach Delay [s/veh]	19.70		0.00		0.02	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.02					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 10: Desert View 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):	0.054

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	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.21	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	1.4454	1.4454	1.4454	1.4454	1.4454	1.4454	1.7895	1.7895	1.7895	1.7895	1.7895	1.7895
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	5	0	0	0	0	5	5	107	5	0	99	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]	8	0	0	3	0	5	7	1145	5	2	1210	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	0	0	1	0	1	2	286	1	1	303	0
Total Analysis Volume [veh/h]	8	0	0	3	0	5	7	1145	5	2	1210	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	0.05	0.00	0.00	0.02	0.00	0.02	0.01	0.01	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	30.62	27.05	21.11	29.45	26.31	21.85	11.24	0.00	0.00	10.87	0.00	0.00
Movement LOS	D	D	C	D	D	C	B	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	0.17	0.17	0.17	0.13	0.13	0.13	0.04	0.00	0.00	0.01	0.00	0.00
95th-Percentile Queue Length [ft/ln]	4.23	4.23	4.23	3.26	3.26	3.26	0.91	0.00	0.00	0.24	0.00	0.00
d_A, Approach Delay [s/veh]	30.62			24.70			0.07			0.02		
Approach LOS	D			C			A			A		
d_I, Intersection Delay [s/veh]	0.23											
Intersection LOS	D											

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

Control Type: Two-way stop
 Analysis Method: HCM 7th Edition
 Analysis Period: 15 minutes

Delay (sec / veh): 21.1
 Level Of Service: C
 Volume to Capacity (v/c): 0.022

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	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	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.21	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	1.4454	1.4454	1.4454	1.4454	1.4454	1.4454	1.7895	1.7895	1.7895	1.7895	1.7895	1.7895
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	5	0	0	0	0	5	5	97	5	0	89	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]	5	0	1	0	0	5	7	1151	5	0	1195	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	0	0	0	1	2	288	1	0	299	0
Total Analysis Volume [veh/h]	5	0	1	0	0	5	7	1151	5	0	1195	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	3	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]	20.15	23.61	20.22	28.66	25.56	21.05	11.16	0.00	0.00	10.89	0.00	0.00
Movement LOS	C	C	C	D	D	C	B	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	0.08	0.08	0.08	0.07	0.07	0.07	0.04	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	1.89	1.89	1.89	1.67	1.67	1.67	0.90	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	20.17			21.05			0.07			0.00		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	0.13											
Intersection LOS	C											

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

Control Type:	Signalized	Delay (sec / veh):	22.5
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.757

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	2	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	1800.00	0.00	199.61	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	1.4454	1.4454	1.4454	1.4454	1.4454	1.4454	1.7895	1.7895	1.7895	1.7895	1.7895	1.7895
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	5	6	5	0	5	35	41	51	5	5	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
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	22	48	32	6	34	294	322	797	25	21	811	2
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	12	8	2	9	74	81	199	6	5	203	1
Total Analysis Volume [veh/h]	22	48	32	6	34	294	322	797	25	21	811	2
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing (Basic)

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												
Maximum Green [s]	0	10	0	0	10	0	17	33	0	5	21	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
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	10.0	0.0	0.0	10.0	0.0	0.0	10.0	0.0	0.0	10.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	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
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0.0	14.0	0.0	0.0	14.0	0.0	21.0	37.0	0.0	9.0	25.0	0.0
Lead / Lag	-	-	-	-	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	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
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	L	C	R	L	C	R
C, Calculated Cycle Length [s]	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	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]	19.2	19.2	12.7	16.4	16.4	12.4	16.0	16.0
g / C, Green / Cycle	0.32	0.32	0.21	0.27	0.27	0.21	0.27	0.27
(v / s)_i Volume / Saturation Flow Rate	0.06	0.20	0.18	0.22	0.02	0.01	0.22	0.00
s, saturation flow rate [veh/h]	1663	1641	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	605	586	384	991	442	373	969	433
d1, Uniform Delay [s]	14.72	17.42	22.64	20.29	16.07	19.12	20.73	16.10
k, delay calibration	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.60	3.99	4.89	1.59	0.05	0.06	2.01	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	0.17	0.57	0.84	0.80	0.06	0.06	0.84	0.00
d, Delay for Lane Group [s/veh]	15.32	21.41	27.53	21.87	16.12	19.18	22.74	16.11
Lane Group LOS	B	C	C	C	B	B	C	B
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.94	3.71	4.09	4.36	0.21	0.20	4.55	0.02
50th-Percentile Queue Length [ft/ln]	23.51	92.78	102.28	108.95	5.30	5.05	113.75	0.42
95th-Percentile Queue Length [veh/ln]	1.69	6.68	7.36	7.78	0.38	0.36	8.05	0.03
95th-Percentile Queue Length [ft/ln]	42.32	167.00	184.11	194.54	9.55	9.09	201.21	0.76

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	15.32	15.32	15.32	21.41	21.41	21.41	27.53	21.87	16.12	19.18	22.74	16.11
Movement LOS	B	B	B	C	C	C	C	C	B	B	C	B
d_A, Approach Delay [s/veh]	15.32			21.41			23.34			22.63		
Approach LOS	B			C			C			C		
d_I, Intersection Delay [s/veh]	22.49											
Intersection LOS	C											
Intersection V/C	0.757											

Emissions

Vehicle Miles Traveled [mph]	8.44	30.81	251.52	622.56	19.53	2.33	90.03	0.22
Stops [stops/h]	56.42	222.66	245.48	522.97	12.73	12.11	546.00	1.01
Fuel consumption [US gal/h]	1.31	6.62	14.78	34.09	0.97	0.38	16.91	0.03
CO [g/h]	91.49	462.87	1032.94	2382.71	67.92	26.91	1181.74	2.29
NOx [g/h]	17.80	90.06	200.97	463.59	13.22	5.24	229.92	0.45
VOC [g/h]	21.20	107.27	239.39	552.22	15.74	6.24	273.88	0.53

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	0.00
I_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]	333	333	1100	700
d_b, Bicycle Delay [s]	20.83	20.83	6.08	12.68
I_b,int, Bicycle LOS Score for Intersection	1.728	2.111	2.503	2.248
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):	48.6
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.935

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	1.3446	1.3446	1.3446	1.3446	1.3446	1.3446	1.7641	1.7641	1.7641	1.7641	1.7641	1.7641
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	34	5	46	10	5	0	0	48	35	50	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]	45	27	73	162	17	35	34	1263	84	84	765	179
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	7	18	41	4	9	9	316	21	21	191	45
Total Analysis Volume [veh/h]	45	27	73	162	17	35	34	1263	84	84	765	179
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]	200
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

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

Phasing & Timing: Pattern 1

Split [s]	9.0	23.0	0.0	9.0	23.0	0.0	149.0	154.0	0.0	14.0	19.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	L	C	R	L	C	R
C, Calculated Cycle Length [s]	200	200	200	200	200	200	200	200	200	200
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6.4	19.1	19.3	32.0	4.9	135.6	135.6	10.0	140.7	140.7
g / C, Green / Cycle	0.03	0.10	0.10	0.16	0.02	0.68	0.68	0.05	0.70	0.70
(v / s)_i Volume / Saturation Flow Rate	0.02	0.06	0.09	0.03	0.02	0.66	0.05	0.05	0.40	0.11
s, saturation flow rate [veh/h]	1810	1683	1810	1698	1810	1900	1615	1810	1900	1615
c, Capacity [veh/h]	58	161	174	272	45	1288	1095	90	1336	1136
d1, Uniform Delay [s]	96.09	86.90	89.76	72.81	96.94	30.91	10.93	94.64	14.73	9.89
k, delay calibration	0.11	0.50	0.37	0.50	0.11	0.40	0.11	0.32	0.12	0.11
l, 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]	19.54	16.55	43.79	1.56	22.80	18.25	0.03	58.87	0.42	0.06
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.78	0.62	0.93	0.19	0.76	0.98	0.08	0.93	0.57	0.16
d, Delay for Lane Group [s/veh]	115.63	103.45	133.55	74.37	119.74	49.16	10.96	153.52	15.15	9.96
Lane Group LOS	F	F	F	E	F	D	B	F	B	A
Critical Lane Group	No	Yes	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.63	5.71	10.33	2.41	2.11	68.09	1.46	5.79	16.40	2.57
50th-Percentile Queue Length [ft/ln]	65.79	142.64	258.22	60.15	52.68	1702.37	36.42	144.87	410.05	64.35
95th-Percentile Queue Length [veh/ln]	4.74	9.62	15.60	4.33	3.79	81.63	2.62	9.74	23.04	4.63
95th-Percentile Queue Length [ft/ln]	118.42	240.58	389.99	108.27	94.82	2040.70	65.56	243.56	576.10	115.82

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	115.63	103.45	103.45	133.55	74.37	74.37	119.74	49.16	10.96	153.52	15.15	9.96
Movement LOS	F	F	F	F	E	E	F	D	B	F	B	A
d_A, Approach Delay [s/veh]	107.23			119.17			48.57			25.55		
Approach LOS	F			F			D			C		
d_I, Intersection Delay [s/veh]	48.56											
Intersection LOS	D											
Intersection V/C	0.935											

Emissions

Vehicle Miles Traveled [mph]	2.62	5.82	4.64	1.49	12.10	449.31	29.88	24.88	226.62	53.03
Stops [stops/h]	47.37	102.70	185.92	43.31	37.93	1225.71	26.23	104.30	295.24	46.33
Fuel consumption [US gal/h]	1.74	3.58	8.01	1.64	1.74	46.46	2.44	5.06	14.48	2.85
CO [g/h]	121.45	250.33	559.93	114.72	121.54	3247.33	170.34	353.56	1012.13	199.19
NOx [g/h]	23.63	48.70	108.94	22.32	23.65	631.81	33.14	68.79	196.92	38.75
VOC [g/h]	28.15	58.02	129.77	26.59	28.17	752.60	39.48	81.94	234.57	46.16

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	91.20	91.20	91.20	91.20
I_p,int, Pedestrian LOS Score for Intersectio	2.290	2.249	2.169	3.196
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]	190	190	1500	150
d_b, Bicycle Delay [s]	81.90	81.90	6.25	85.56
I_b,int, Bicycle LOS Score for Intersection	1.799	1.913	3.838	3.256
Bicycle LOS	A	A	D	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):	10.1
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.106

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	1	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	1.3446	1.3446	1.3446	1.3446	1.3446	1.3446	1.3446	1.3446	1.3446	1.3446	1.3446	1.3446
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	10	0	0	0	3	45	85	0	6	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	5	0	0	57	45	85	0	6	0	0	47
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	1	0	0	14	11	21	0	2	0	0	12
Total Analysis Volume [veh/h]	10	5	0	0	57	45	85	0	6	0	0	47
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.01	0.00	0.00	0.04
d_M, Delay for Movement [s/veh]	7.41	0.00	0.00	7.21	0.00	0.00	10.06	10.15	9.12	9.01	9.87	8.46
Movement LOS	A	A	A	A	A	A	B	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.02	0.00	0.00	0.00	0.38	0.38	0.38	0.14	0.14	0.14
95th-Percentile Queue Length [ft/ln]	0.42	0.42	0.42	0.00	0.00	0.00	9.44	9.44	9.44	3.39	3.39	3.39
d_A, Approach Delay [s/veh]	4.94			0.00			10.00			8.46		
Approach LOS	A			A			B			A		
d_I, Intersection Delay [s/veh]	5.42											
Intersection LOS	B											

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

Control Type:	Two-way stop	Delay (sec / veh):	8.7
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.045

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	1.3446	1.3446	1.3446	1.3446	1.3446	1.3446
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	45	0	0	0	0	28
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]	45	0	0	0	0	28
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]	11	0	0	0	0	7
Total Analysis Volume [veh/h]	45	0	0	0	0	28
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	0.04	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.73	8.36	7.25	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.14	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	3.49	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.73		3.63		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	5.38					
Intersection LOS	A					

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

Control Type:	Two-way stop	Delay (sec / veh):	9.1
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.049

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	1.3446	1.3446	1.3446	1.3446	1.3446	1.3446
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	45	0	0	45	28	28
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]	45	0	0	45	28	28
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]	11	0	0	11	7	7
Total Analysis Volume [veh/h]	45	0	0	45	28	28
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	0.05	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	9.12	8.48	7.31	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.15	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	3.86	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	9.12		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	2.81					
Intersection LOS	A					

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

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):	0.003

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	1.4428	1.3446	1.3446	1.3446	1.4428	1.3446
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	85	45	45	0	3
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	85	45	45	0	3
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	21	11	11	0	1
Total Analysis Volume [veh/h]	0	85	45	45	0	3
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	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	8.53
Movement LOS		A	A	A		A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.01
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.22
d_A, Approach Delay [s/veh]	0.00		0.00		8.53	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.14					
Intersection LOS	A					

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

Control Type: Two-way stop
 Analysis Method: HCM 7th Edition
 Analysis Period: 15 minutes

Delay (sec / veh): 238.9
 Level Of Service: F
 Volume to Capacity (v/c): 0.386

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	1	0	0	2
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	74.61
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	1.3446	1.3446	1.3446	1.3446	1.3446	1.3446	1.7641	1.7641	1.7641	1.7641	1.7641	1.7641
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	5	0	0	0	0	78	0	5	81	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]	9	0	103	0	0	1	0	1226	53	130	723	2
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	0	26	0	0	0	0	307	13	33	181	1
Total Analysis Volume [veh/h]	9	0	103	0	0	1	0	1226	53	130	723	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	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.39	0.00	0.49	0.00	0.00	0.00	0.00	0.01	0.00	0.24	0.01	0.00
d_M, Delay for Movement [s/veh]	238.92	194.47	101.65	304.07	118.97	13.41	9.06	0.00	0.00	13.57	0.00	0.00
Movement LOS	F	F	F	F	F	B	A	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	5.53	5.53	5.53	0.01	0.01	0.01	0.00	0.00	0.00	0.91	0.00	0.00
95th-Percentile Queue Length [ft/ln]	138.17	138.17	138.17	0.18	0.18	0.18	0.00	0.00	0.00	22.84	0.00	0.00
d_A, Approach Delay [s/veh]	112.68			13.41			0.00			2.06		
Approach LOS	F			B			A			A		
d_I, Intersection Delay [s/veh]	6.41											
Intersection LOS	F											

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

Control Type: Two-way stop
 Analysis Method: HCM 7th Edition
 Analysis Period: 15 minutes

Delay (sec / veh): 28.1
 Level Of Service: D
 Volume to Capacity (v/c): 0.055

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	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	2
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	74.61
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	1.3446	1.3446	1.3446	1.3446	1.3446	1.3446	1.7641	1.7641	1.7641	1.7641	1.7641	1.7641
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	5	0	0	0	73	0	0	76	5
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	9	0	0	2	1350	0	0	676	9
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	2	0	0	1	338	0	0	169	2
Total Analysis Volume [veh/h]	0	0	0	9	0	0	2	1350	0	0	676	9
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	0.05	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	26.84	23.79	24.36	28.09	25.01	14.18	8.93	0.00	0.00	11.97	0.00	0.00
Movement LOS	D	C	C	D	D	B	A	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.17	0.17	0.17	0.01	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	4.29	4.29	4.29	0.16	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	25.00			28.09			0.01			0.00		
Approach LOS	C			D			A			A		
d_I, Intersection Delay [s/veh]	0.13											
Intersection LOS	D											

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

Control Type:	Two-way stop	Delay (sec / veh):	24.0
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.129

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	1.3446	1.3446	1.7641	1.7641	1.7641	1.7641
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	15	0	0	58	60	16
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]	28	4	5	1311	607	80
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]	7	1	1	328	152	20
Total Analysis Volume [veh/h]	28	4	5	1311	607	80
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	0.13	0.01	0.01	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	23.99	15.02	8.93	0.00	0.00	0.00
Movement LOS	C	C	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.47	0.47	0.01	0.01	0.00	0.00
95th-Percentile Queue Length [ft/ln]	11.71	11.71	0.21	0.21	0.00	0.00
d_A, Approach Delay [s/veh]	22.87		0.03		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.38					
Intersection LOS	C					

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

Control Type:	Two-way stop	Delay (sec / veh):	13.9
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.010

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	1	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	1	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	49.21	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	1.3446	1.3446	1.7641	1.7641	1.7641	1.7641
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	104	0	0	113
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	1618	2	4	972
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	0	405	1	1	243
Total Analysis Volume [veh/h]	0	0	1618	2	4	972
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	0.02	0.00	0.01	0.01
d_M, Delay for Movement [s/veh]	28.55	32.95	0.00	0.00	13.92	0.00
Movement LOS	D	D	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.03	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.74	0.00
d_A, Approach Delay [s/veh]	30.75		0.00		0.06	
Approach LOS	D		A		A	
d_I, Intersection Delay [s/veh]	0.02					
Intersection LOS	B					

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

Control Type:	Two-way stop	Delay (sec / veh):	36.5
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.041

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	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.21	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	1.3446	1.3446	1.3446	1.3446	1.3446	1.3446	1.7641	1.7641	1.7641	1.7641	1.7641	1.7641
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	5	0	0	0	0	5	5	94	5	0	103	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]	5	0	3	0	0	5	7	1588	5	2	974	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	1	0	0	1	2	397	1	1	244	0
Total Analysis Volume [veh/h]	5	0	3	0	0	5	7	1588	5	2	974	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	0.04	0.00	0.02	0.00	0.00	0.02	0.01	0.02	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	36.46	32.87	33.80	37.81	31.34	16.87	10.08	0.00	0.00	13.67	0.00	0.00
Movement LOS	E	D	D	E	D	C	B	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	0.20	0.20	0.20	0.05	0.05	0.05	0.03	0.00	0.00	0.01	0.00	0.00
95th-Percentile Queue Length [ft/ln]	5.01	5.01	5.01	1.24	1.24	1.24	0.74	0.00	0.00	0.36	0.00	0.00
d_A, Approach Delay [s/veh]	35.46			16.87			0.04			0.03		
Approach LOS	E			C			A			A		
d_I, Intersection Delay [s/veh]	0.18											
Intersection LOS	E											

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

Control Type: Two-way stop
 Analysis Method: HCM 7th Edition
 Analysis Period: 15 minutes

Delay (sec / veh): 36.6
 Level Of Service: E
 Volume to Capacity (v/c): 0.009

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	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	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.21	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	1.3446	1.3446	1.3446	1.3446	1.3446	1.3446	1.7641	1.7641	1.7641	1.7641	1.7641	1.7641
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	5	0	0	0	0	5	5	84	5	0	93	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]	5	0	1	1	0	5	5	1582	5	0	966	5
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	0	0	0	1	1	396	1	0	242	1
Total Analysis Volume [veh/h]	5	0	1	1	0	5	5	1582	5	0	966	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	3	2	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.00	0.01	0.01	0.00	0.02	0.01	0.02	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	35.20	29.88	33.06	36.56	30.87	16.97	10.05	0.00	0.00	13.58	0.00	0.00
Movement LOS	E	D	D	E	D	C	B	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	0.15	0.15	0.15	0.08	0.08	0.08	0.02	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	3.69	3.69	3.69	1.90	1.90	1.90	0.53	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	34.84			20.24			0.03			0.00		
Approach LOS	D			C			A			A		
d_I, Intersection Delay [s/veh]	0.15											
Intersection LOS	E											

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

Control Type:	Signalized	Delay (sec / veh):	22.4
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.689

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	2	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	1800.00	0.00	199.61	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	1.3446	1.3446	1.3446	1.3446	1.3446	1.3446	1.7641	1.7641	1.7641	1.7641	1.7641	1.7641
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	5	4	6	0	5	34	29	50	5	6	54	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	31	21	12	57	249	287	1205	23	48	726	9
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	8	5	3	14	62	72	301	6	12	182	2
Total Analysis Volume [veh/h]	8	31	21	12	57	249	287	1205	23	48	726	9
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing (Basic)

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												
Maximum Green [s]	0	10	0	0	10	0	17	33	0	5	21	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
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	10.0	0.0	0.0	10.0	0.0	0.0	10.0	0.0	0.0	10.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	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
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0.0	21.0	0.0	0.0	21.0	0.0	19.0	26.0	0.0	13.0	20.0	0.0
Lead / Lag	-	-	-	-	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	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
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	L	C	R	L	C	R
C, Calculated Cycle Length [s]	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	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]	22.4	22.4	11.4	21.6	21.6	3.9	14.1	14.1
g / C, Green / Cycle	0.37	0.37	0.19	0.36	0.36	0.07	0.24	0.24
(v / s)_i Volume / Saturation Flow Rate	0.03	0.19	0.16	0.33	0.01	0.03	0.20	0.01
s, saturation flow rate [veh/h]	1722	1662	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	709	681	347	1304	582	121	854	381
d1, Uniform Delay [s]	12.23	14.60	23.30	18.40	12.45	26.82	21.91	17.61
k, delay calibration	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.23	2.29	5.32	3.30	0.03	2.08	2.49	0.02
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	0.47	0.83	0.92	0.04	0.40	0.85	0.02
d, Delay for Lane Group [s/veh]	12.46	16.89	28.62	21.70	12.47	28.90	24.40	17.63
Lane Group LOS	B	B	C	C	B	C	C	B
Critical Lane Group	No	Yes	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.47	2.95	3.74	6.60	0.16	0.64	4.26	0.08
50th-Percentile Queue Length [ft/ln]	11.82	73.85	93.54	164.90	3.98	15.99	106.39	2.04
95th-Percentile Queue Length [veh/ln]	0.85	5.32	6.73	10.81	0.29	1.15	7.64	0.15
95th-Percentile Queue Length [ft/ln]	21.27	132.93	168.37	270.20	7.17	28.78	190.98	3.67

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	12.46	12.46	12.46	16.89	16.89	16.89	28.62	21.70	12.47	28.90	24.40	17.63
Movement LOS	B	B	B	B	B	B	C	C	B	C	C	B
d_A, Approach Delay [s/veh]	12.46			16.89			22.87			24.60		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	22.43											
Intersection LOS	C											
Intersection V/C	0.689											

Emissions

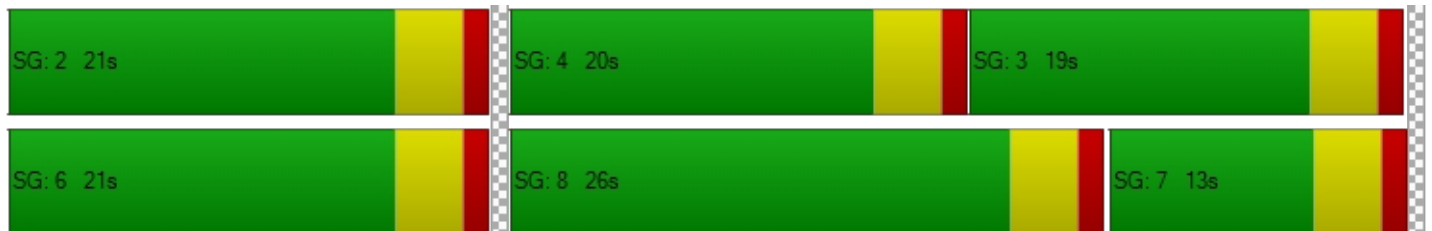
Vehicle Miles Traveled [mph]	4.96	29.34	224.18	941.25	17.97	5.33	80.60	1.00
Stops [stops/h]	28.37	177.24	224.49	791.53	9.56	38.38	510.69	4.89
Fuel consumption [US gal/h]	0.67	5.37	13.34	51.51	0.84	1.17	15.79	0.16
CO [g/h]	47.18	375.11	932.52	3600.58	58.50	82.02	1103.50	10.95
NOx [g/h]	9.18	72.98	181.43	700.54	11.38	15.96	214.70	2.13
VOC [g/h]	10.93	86.94	216.12	834.47	13.56	19.01	255.75	2.54

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	0.00
I_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]	567	567	733	533
d_b, Bicycle Delay [s]	15.41	15.41	12.03	16.13
I_b,int, Bicycle LOS Score for Intersection	1.659	2.084	2.809	2.206
Bicycle LOS	A	B	C	B

Sequence

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



HORIZON YEAR WITH PROJECT WITH IMPROVEMENT
TRAFFIC CONDITIONS

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

Control Type:	Signalized	Delay (sec / veh):	16.0
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.611

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	2
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	74.61
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	1.4454	1.4454	1.4454	1.4454	1.4454	1.4454	1.7895	1.7895	1.7895	1.7895	1.7895	1.7895
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	5	0	0	0	0	84	0	5	80	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]	14	0	134	0	0	0	0	737	21	105	926	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	0	34	0	0	0	0	184	5	26	232	0
Total Analysis Volume [veh/h]	14	0	134	0	0	0	0	737	21	105	926	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	10	10	0	10	10	0	5	52	0	5	52	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	10.0	0.0	0.0	10.0	0.0	0.0	10.0	0.0	0.0	10.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	9.0	14.0	0.0	9.0	14.0	0.0	9.0	37.0	0.0	20.0	48.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	Yes	No		Yes	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	L	C	L	C
C, Calculated Cycle Length [s]	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
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	0.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	14.0	14.0	0.0	47.9	6.1	53.9
g / C, Green / Cycle	0.18	0.18	0.00	0.60	0.08	0.67
(v / s)_i Volume / Saturation Flow Rate	0.09	0.00	0.00	0.40	0.06	0.49
s, saturation flow rate [veh/h]	1659	1794	1810	1891	1810	1900
c, Capacity [veh/h]	391	389	2	1129	139	1279
d1, Uniform Delay [s]	28.96	0.00	0.00	10.83	36.17	8.33
k, delay calibration	0.50	0.11	0.11	0.50	0.11	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.78	0.00	0.00	3.19	7.95	3.59
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	0.38	0.00	0.00	0.67	0.75	0.72
d, Delay for Lane Group [s/veh]	31.74	0.00	0.00	14.02	44.12	11.92
Lane Group LOS	C	A	A	B	D	B
Critical Lane Group	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.80	0.00	0.00	7.49	2.17	7.50
50th-Percentile Queue Length [ft/ln]	70.11	0.00	0.00	187.34	54.32	187.54
95th-Percentile Queue Length [veh/ln]	5.05	0.00	0.00	11.98	3.91	11.99
95th-Percentile Queue Length [ft/ln]	126.20	0.00	0.00	299.57	97.78	299.83

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	31.74	31.74	31.74	0.00	0.00	0.00	0.00	14.02	14.02	44.12	11.92	11.92
Movement LOS	C	C	C	A	A	A	A	B	B	D	B	B
d_A, Approach Delay [s/veh]	31.74			0.00			14.02			15.20		
Approach LOS	C			A			B			B		
d_I, Intersection Delay [s/veh]	16.00											
Intersection LOS	B											
Intersection V/C	0.611											

Emissions

Vehicle Miles Traveled [mph]	3.50	0.00	0.00	481.16	37.35	329.42
Stops [stops/h]	126.20	0.00	0.00	337.21	97.78	337.57
Fuel consumption [US gal/h]	1.80	0.00	0.00	23.45	3.69	18.46
CO [g/h]	125.62	0.00	0.00	1639.33	258.25	1290.33
NOx [g/h]	24.44	0.00	0.00	318.95	50.25	251.05
VOC [g/h]	29.11	0.00	0.00	379.93	59.85	299.05

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	0.00
I_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]	475	475	825	1100
d_b, Bicycle Delay [s]	23.26	23.26	13.81	8.10
I_b,int, Bicycle LOS Score for Intersection	1.804	1.560	2.810	3.261
Bicycle LOS	A	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 6: Mountain Rd/ HWY 138**

Control Type:	Signalized	Delay (sec / veh):	25.0
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.824

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	1	0	0	2
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	74.61
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	1.3446	1.3446	1.3446	1.3446	1.3446	1.3446	1.7641	1.7641	1.7641	1.7641	1.7641	1.7641
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	5	0	0	0	0	78	0	5	81	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]	9	0	103	0	0	1	0	1226	53	130	723	2
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	0	26	0	0	0	0	307	13	33	181	1
Total Analysis Volume [veh/h]	9	0	103	0	0	1	0	1226	53	130	723	2
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]	200
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	10	10	0	10	10	0	5	139	0	30	164	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	10.0	0.0	0.0	10.0	0.0	0.0	10.0	0.0	0.0	10.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No		No			No			No		
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	9.0	14.0	0.0	9.0	14.0	0.0	9.0	143.0	0.0	34.0	168.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	Yes	No		Yes	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	L	C	L	C
C, Calculated Cycle Length [s]	200	200	200	200	200	200
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	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	0.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	14.3	14.3	0.0	157.2	16.5	173.6
g / C, Green / Cycle	0.07	0.07	0.00	0.79	0.08	0.87
(v / s)_i Volume / Saturation Flow Rate	0.07	0.00	0.00	0.68	0.07	0.38
s, saturation flow rate [veh/h]	1658	1390	1810	1886	1810	1899
c, Capacity [veh/h]	158	124	1	1481	150	1648
d1, Uniform Delay [s]	90.63	86.20	0.00	14.31	90.65	2.83
k, delay calibration	0.50	0.11	0.11	0.50	0.11	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	23.45	0.03	0.00	6.90	13.86	0.86
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	0.71	0.01	0.00	0.86	0.87	0.44
d, Delay for Lane Group [s/veh]	114.08	86.22	0.00	21.21	104.51	3.68
Lane Group LOS	F	F	A	C	F	A
Critical Lane Group	Yes	Yes	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	6.81	0.05	0.00	35.03	7.19	4.54
50th-Percentile Queue Length [ft/ln]	170.15	1.24	0.00	875.87	179.63	113.45
95th-Percentile Queue Length [veh/ln]	11.08	0.09	0.00	44.74	11.58	8.03
95th-Percentile Queue Length [ft/ln]	277.12	2.23	0.00	1118.54	289.54	200.79

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	114.08	114.08	114.08	86.22	86.22	86.22	0.00	21.21	21.21	104.51	3.68	3.68
Movement LOS	F	F	F	F	F	F	A	C	C	F	A	A
d_A, Approach Delay [s/veh]	114.08			86.22			21.21			19.01		
Approach LOS	F			F			C			B		
d_I, Intersection Delay [s/veh]	25.03											
Intersection LOS	C											
Intersection V/C	0.824											

Emissions

Vehicle Miles Traveled [mph]	2.65	0.02	0.00	811.87	46.25	257.92
Stops [stops/h]	122.51	0.89	0.00	630.62	129.34	81.68
Fuel consumption [US gal/h]	3.39	0.02	0.00	42.39	6.30	10.43
CO [g/h]	236.64	1.64	0.00	2963.01	440.25	729.38
NOx [g/h]	46.04	0.32	0.00	576.49	85.66	141.91
VOC [g/h]	54.84	0.38	0.00	686.71	102.03	169.04

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	0.00
I_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]	190	190	1390	1640
d_b, Bicycle Delay [s]	81.90	81.90	9.30	3.24
I_b,int, Bicycle LOS Score for Intersection	1.744	1.561	3.670	2.970
Bicycle LOS	A	A	D	C

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	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: **HYP**

Major Street: **Route 138**

Minor Street: **Mountain Road**

Total of Both Approaches (VPH): **1789**

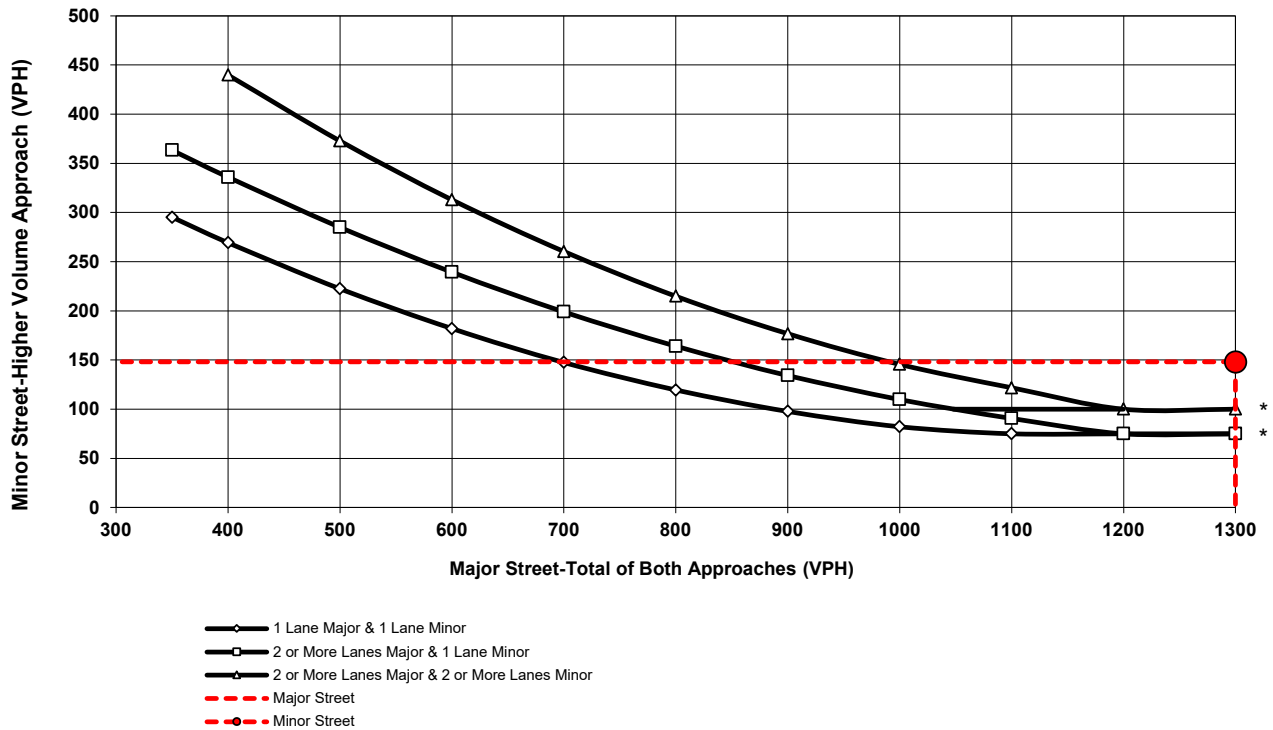
Higher Volume Approach (VPH): **148**

Number of Approach Lanes: **4**

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)

HYP Conditions
AM Peak Hour Volume Warrant
Route 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: **HYP**

Major Street: **Route 138**

Minor Street: **Mountain Road**

Total of Both Approaches (VPH): **2134**

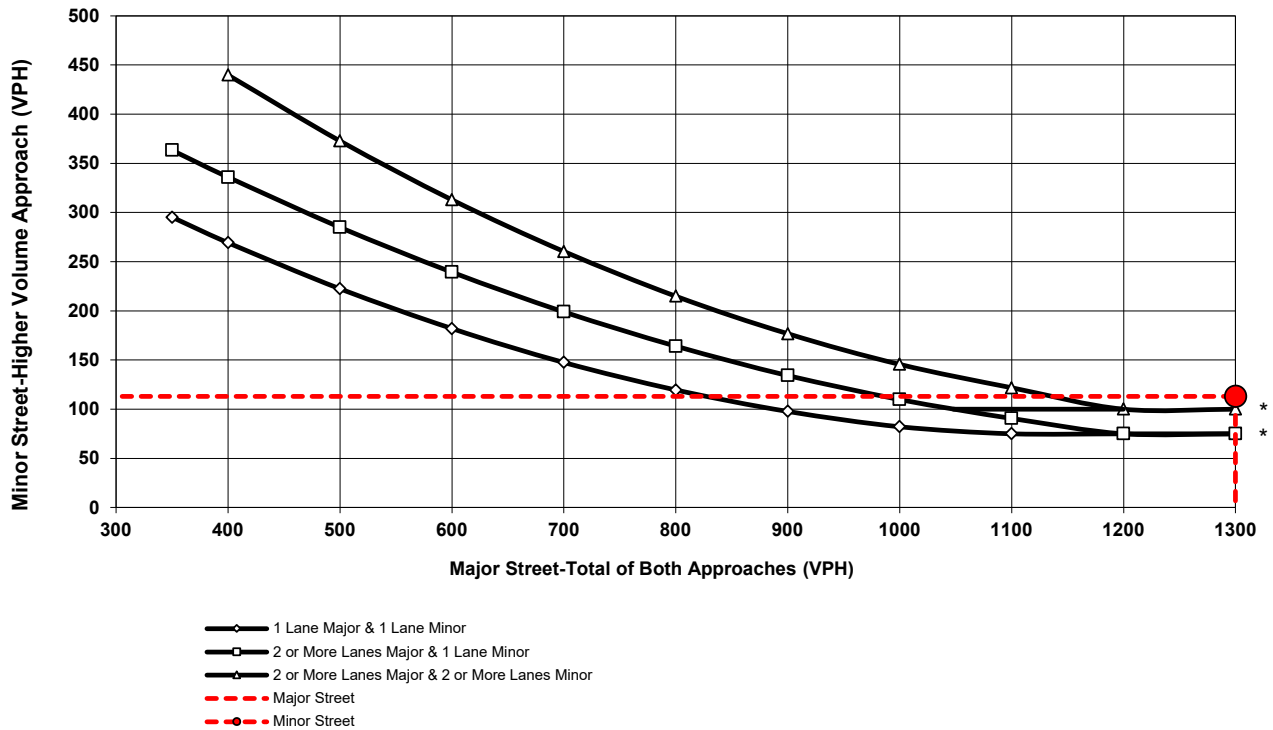
Higher Volume Approach (VPH): **113**

Number of Approach Lanes: **4**

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)

HYP Conditions
PM Peak Hour Volume Warrant
Route 138 / Mountain Road