

REVISED TRAFFIC IMPACT ANALYSIS REPORT

ROCKPORT RANCH

Menifee, California

January 18, 2018

(Revision of the July 16, 2017 Report)

Prepared for:

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EXECUTIVE SUMMARY

Project Description

- The Rockport Ranch project site is located in the City of Menifee, California. The proposed Project will consist of the construction of 305 single-family detached dwelling units on approximately 80 acres. The site is located on the southwest quadrant of Briggs Road and Old Newport Road. Access to the Project site will be provided along Briggs Road, Tres Lagos Drive, and Old Newport Road. It should be noted that in conjunction with the Project development, the Project is required to widen and construct Old Newport Road, Briggs Road and Tres Lagos Drive to their ultimate half width cross-sections per the *City of Menifee General Plan*. The proposed Project is expected to be completed and fully occupied by Year 2020.

Project Trip Generation Forecast

- The trip generation potential for the proposed Project was forecast using the ITE Land Use Code 210: Single-Family Detached Housing rates. The Project is expected to generate 2,904 daily trips (one half arrive, one half departing), with 229 trips (57 inbound, 172 outbound) produced in the AM peak hour and 305 trips (192 inbound, 113 outbound) produced in the PM peak hour on a “typical” weekday.

Key Intersections and Roadway Segments

- The Project study area covers thirteen (13) key study intersections for the Existing, Year 2020 and Year 2040 Intersection capacity analyses, listed as follows:
 1. I-215 SB Ramps at Newport Road
 2. I-215 NB Ramps at Newport Road
 3. Antelope Road at Newport Road
 4. Menifee Road at Newport Road
 5. Laguna Vista Drive at Newport Road
 6. Menifee Road at Rockport Road
 7. Laguna Vista Drive at Rockport Road
 8. Menifee Road at Loire Valley Lane/Tres Lagos Drive
 9. Laguna Vista Drive at Tres Lagos Drive
 10. Menifee Road at Holland Road
 11. Briggs Road at Holland Road
 12. Briggs Road at Old Newport Road

13. Briggs Road at Tres Lagos Drive/Gold Crest Drive

- The Project study area covers fourteen (14) key study roadway segments for the Existing, Year 2020 and Year 2040 Intersection capacity analyses, listed as follows:
 1. Newport Road, west of I-215 SB Ramps
 2. Newport Road, between I-215 NB Ramps and Antelope Road
 3. Newport Road, between Antelope Road and Menifee Road
 4. Newport Road, between Menifee Road and Laguna Vista Drive
 5. Menifee Road, between Newport Road and Rockport Road
 6. Rockport Road, between Menifee Road and Laguna Vista Drive
 7. Old Newport Road, east of Laguna Vista Drive
 8. Menifee Road, between Rockport Road and Loire Valley Lane/Tres Lagos Drive
 9. Tres Lagos Drive, east of Menifee Road
 10. Briggs Road, between Old Newport Road and Tres Lagos Drive/Gold Crest Drive
 11. Briggs Road, between Tres Lagos Drive/Gold Crest Drive and Holland Road
 12. Holland Road, between Antelope Road and Hanover Lane
 13. Holland Road, between Hanover Lane and Menifee Road
 14. Holland Road, between Southshore Drive and Briggs Road

Intersection Capacity Analysis

- Under Existing traffic conditions, all thirteen (13) key existing study intersections currently operate at acceptable levels of service (LOS D or better) during the AM and PM peak hours.
- Under Existing With Project traffic conditions, all thirteen (13) key study intersections are forecast to operate at acceptable levels of service (LOS D or better) with the addition of Project traffic during the AM and PM peak hours.
- Under Existing With Ambient Growth Year 2020 With Project traffic conditions, all thirteen (13) key study intersections are forecast to operate at acceptable levels of service (LOS D or better) during the AM and PM peak hours.
- Under the Existing With Ambient Growth Year 2020 With Cumulative With Project traffic conditions, all thirteen (13) key study intersections are forecast to operate at acceptable levels of service (LOS D or better) during the AM and PM peak hours.
- Under Existing With Ambient Growth Year 2040 With Cumulative With Project traffic conditions, two (2) of the key study intersections are forecast to operate at unacceptable levels of service based on the LOS impact criteria mentioned in this report. The remaining key study intersections are forecast to operate at acceptable level of service during the AM and PM peak hours. The locations forecast to operate at an adverse LOS are follows:

<u>Key Intersection</u>	<u>AM Peak Hour</u>		<u>PM Peak Hour</u>	
	<u>Delay (s/v)</u>	<u>LOS</u>	<u>Delay (s/v)</u>	<u>LOS</u>
4. Menifee Road at Newport Road	65.9	E	80.4	F
11. Briggs Road at Holland Road	44.6	E	52.8	F

These intersections would experience a significant cumulative Project impact when compared to the LOS criteria identified in this report. The implementation of recommended mitigation measures outlined in this report would offset the impacts associated with Existing With Ambient Growth Year 2040 With Cumulative With Project traffic conditions, and restore the significantly impacted intersections to acceptable conditions.

Roadway Segment Analysis

- Under Existing traffic conditions, all fourteen (14) key existing study roadway segments currently operate at acceptable levels of service (LOS C or better) during the AM and PM peak hours.
- Under Existing With Project traffic conditions, all fourteen (14) key study roadway segments are forecast to operate at acceptable levels of service (LOS C or better) with the addition of Project traffic during the AM and PM peak hours.
- Under Existing With Ambient Growth Year 2020 With Project traffic conditions, all fourteen (14) key study roadway segments are forecast to operate at acceptable levels of service (LOS C or better) during the AM and PM peak hours.
- Under the Existing With Ambient Growth Year 2020 With Cumulative With Project traffic conditions, all fourteen (14) key study roadway segments are forecast to operate at acceptable levels of service (LOS C or better) during the AM and PM peak hours.
- Under Existing With Ambient Growth Year 2040 With Cumulative With Project traffic conditions, all fourteen (14) key study roadway segments are forecast to operate at acceptable levels of service (LOS C or better) during the AM and PM peak hours.

Recommended Improvements

- The results of the Existing With Ambient Growth Year 2040 With Cumulative With Project traffic conditions level of service analyses indicate that two (2) of the key study intersections will be cumulatively impacted. The improvements listed below have been identified to address the traffic impacts at the intersections cumulatively impacted by Existing With Ambient Growth Year 2040 With Cumulative With Project traffic conditions:
 - Intersection 4. Menifee Road at Newport Road: Modify the traffic signal and provide for a southbound right-turn overlap phase.

- Intersection 11. Briggs Road at Holland Road: Widen and/or restripe Holland Road to provide an exclusive eastbound and westbound left-turn lane.

Site Access and Internal Circulation

- All three (3) Project driveways are forecast to operate at acceptable levels of service for all the analysis scenarios.
- The overall layout does not create any unsafe vehicle-pedestrian conflict points and the driveway throating is sufficient such that access is not impacted by internal vehicle queuing/stacking.

Queuing Analysis for Project Access Locations

- Project Driveway 1 at Old Newport Road: Based on the HCM service level calculation for both Year 2020 and Year 2040 conditions, which calculates a critical (95th percentile) queue value in number of vehicles, the AM peak hour and PM peak hour queue length is not more than one (1) vehicle for the northbound (outbound) movements at the Project Driveway. One outbound lane is provided with stacking sufficient to accommodate one (1) vehicle.
- Briggs Road at Project Driveway 2: Based on the HCM service level calculation for both Year 2020 and Year 2040 conditions, which calculates a critical (95th percentile) queue value in number of vehicles, the AM peak hour and PM peak hour queue length is not more than one (1) vehicle for the eastbound (outbound) movements at the Project Driveway. One outbound lane is provided with stacking sufficient to accommodate one (1) vehicle.
- Project Driveway 3 at Tres Lagos Drive: Based on the HCM service level calculation for both Year 2020 and Year 2040 conditions, which calculates a critical (95th percentile) queue value in number of vehicles, the AM peak hour and PM peak hour queue length is not more than one (1) vehicle for the southbound (outbound) movements at the Project Driveway. One outbound lane is provided with stacking sufficient to accommodate one (1) vehicle.

Gate Stacking Evaluation

- The proposed Project Driveway 1 is expected to have a maximum queue of two (2) “visitor/guest” vehicles during the AM peak hour and three (3) “visitor/guest” vehicles during the PM peak hour without the Holland Road Overcrossing. These queues will require a storage reservoir length of approximately 66 feet from the call box to satisfy the maximum vehicle queue. The proposed Project Driveway 2 is expected to have a maximum queue of two (2) “visitor/guest” vehicles during the AM peak hour and two (2) “visitor/guest” vehicles during the PM peak hour. These queues will require a storage reservoir length of approximately 44 feet from the call box to satisfy the maximum vehicle queue. Review of the proposed Project site plan shows that the storage reservoir length from the call box can sufficiently accommodate 3 vehicles for Project Driveway 1 and 2 vehicles for Project

Driveway 2. Therefore adequate storage will be provided on site and vehicles will not queue back onto Old Newport Road or Briggs Road.

- The proposed Project Driveway 1 is expected to have a maximum queue of two (2) “visitor/guest” vehicles during the AM peak hour and three (3) “visitor/guest” vehicles during the PM peak hour with the Holland Road Overcrossing. These queues will require a storage reservoir length of approximately 66 feet from the call box to satisfy the maximum vehicle queue. The proposed Project Driveway 2 is expected to have a maximum queue of two (2) “visitor/guest” vehicles during the AM peak hour and two (2) “visitor/guest” vehicles during the PM peak hour. These queues will require a storage reservoir length of approximately 44 feet from the call box to satisfy the maximum vehicle queue. Review of the proposed Project site plan shows that the storage reservoir length from the call box can sufficiently accommodate 3 vehicles for Project Driveway 1 and 2 vehicles for Project Driveway 2. Therefore adequate storage will be provided on site and vehicles will not queue back onto Old Newport Road or Briggs Road.

Project Fair-Share Contribution

- The Project fair-share percentages (based on greatest peak hour impact) at the two (2) cumulatively impacted intersections for the Existing With Ambient Growth Year 2040 With Cumulative With Project conditions are shown below:
 - 4. Menifee Road at Newport Road 9.17%
 - 11. Briggs Road at Holland Road 2.23%

REVISED TRAFFIC IMPACT ANALYSIS REPORT

ROCKPORT RANCH

Menifee, California

January 18, 2018

(Revision of the July 16, 2017 Report)

1.0 INTRODUCTION

This traffic impact analysis report addresses the potential traffic impacts and circulation needs associated with the proposed Rockport Ranch project (hereinafter referred to as Project) in the City of Menifee, California. The proposed Project will consist of the construction of 305 single-family detached dwelling units on approximately 80 acres. 96 of the dwelling units are located within smaller cluster lots but still have their own lot lines while the remaining 209 dwelling units are conventional single-family lots. The Project site is located on the southwest quadrant of Briggs Road and Old Newport Road. Access to the Project site will be provided along Briggs Road, Tres Lagos Drive, and Old Newport Road. The proposed Project is expected to be completed and fully occupied by Year 2020.

This report documents the findings and recommendations of a traffic impact analysis conducted by Linscott, Law & Greenspan, Engineers (LLG) to determine the potential impacts the Project may have on the local network in the vicinity of the Project site. The traffic impact analysis evaluates the operating conditions at thirteen (13) key study intersections and fourteen (14) key study roadway segments within the Project vicinity, estimates the trip generation potential of the Project and forecasts near-term and long-term operating conditions with the Project.

This traffic impact analysis report satisfies the *City of Menifee Traffic Impact Analysis Guideline (August 2015)* and is consistent with the requirements and procedures outlined in the *Riverside County Congestion Management Program (CMP)*.

The Project site has been visited and an inventory of adjacent area roadways and intersections made. In support of detailed intersection capacity analyses, existing traffic count information has been compiled. The work program for this traffic impact analysis report was developed in conjunction with the City of Menifee staff.

Existing peak hours and daily traffic information has been collected at the key study intersections and roadway segments, respectively, on a “typical” weekday for use in the preparation of intersection and roadway segment level of service calculations. This traffic report analyzes existing Year 2016, Year 2020 and Year 2040 weekday Daily, AM and PM peak hour traffic conditions with the proposed Project. It should be noted that the Year 2020 traffic conditions include the proposed Holland Road Overcrossing.

1.1 Study Area

1.1.1 Intersections

The thirteen (13) key study intersections were selected for evaluation based on discussions with City of Menifee staff. The key study intersections listed below provide both local and regional access to the study area and define the extent of the boundaries for this traffic impact investigation:

1. I-215 SB Ramps at Newport Road
2. I-215 NB Ramps at Newport Road
3. Antelope Road at Newport Road
4. Menifee Road at Newport Road
5. Laguna Vista Drive at Newport Road
6. Menifee Road at Rockport Road
7. Laguna Vista Drive at Rockport Road
8. Menifee Road at Loire Valley Lane/Tres Lagos Drive
9. Laguna Vista Drive at Tres Lagos Drive
10. Menifee Road at Holland Road
11. Briggs Road at Holland Road
12. Briggs Road at Old Newport Road
13. Briggs Road at Tres Lagos Drive/Gold Crest Drive

1.1.2 Roadway Segments

The study roadway segments listed below are locations that could potentially be impacted by the Project. The fourteen (14) roadway segments listed below were selected based on the arterial network within the study area and discussions with City of Menifee staff:

1. Newport Road, west of I-215 Southbound Ramps
2. Newport Road, between I-215 Northbound Ramps and Antelope Road
3. Newport Road, between Antelope Road and Menifee Road
4. Newport Road, between Menifee Road and Laguna Vista Drive
5. Menifee Road, between Newport Road and Rockport Road
6. Rockport Road, between Menifee Road and Laguna Vista Drive
7. Old Newport Road, east of Laguna Vista Drive
8. Menifee Road, between Rockport Road and Loire Valley Lane/Tres Lagos Drive
9. Tres Lagos Drive, east of Menifee Road
10. Briggs Road, between Old Newport Road and Tres Lagos Drive/Gold Crest Drive
11. Briggs Road, between Tres Lagos Drive/Gold Crest Drive and Holland Road
12. Holland Road, between Antelope Road and Hanover Lane
13. Holland Road, between Hanover Lane and Menifee Road

14. Holland Road, between Southshore Drive and Briggs Road

1.2 Traffic Impact Analysis Components

The Highway Capacity Manual (HCM) Delay, Volume to Capacity (V/C) Ratio and corresponding Level of Service (LOS) calculations at the key study locations were used to evaluate the potential traffic-related impacts associated with area growth, cumulative traffic and the Project. When necessary, this report recommends intersection and/or roadway segment improvements that may be required to accommodate future traffic volumes and restore/maintain an acceptable Level of Service and/or addresses the impact of the Project. Included in this Traffic Impact Analysis are:

- Existing traffic counts,
- Estimated Project traffic generation/distribution/assignment,
- Daily, AM and PM peak hour LOS analyses for Existing (Year 2016) conditions,
- Daily, AM and PM peak hour LOS analyses for Existing conditions with Project traffic,
- Daily, AM and PM peak hour LOS analyses for Existing with Ambient Growth (Year 2020) with Project traffic,
- Daily, AM and PM peak hour LOS analyses for Existing with Ambient Growth (Year 2020) with cumulative traffic conditions with Project traffic,
- Daily, AM and PM peak hour LOS analyses for Existing with Ambient Growth (Year 2040) with cumulative traffic conditions with Project traffic,
- Project-Specific Traffic Improvements,
- Project Fair-Share Contribution towards improvements, if any,
- Site Access and On-Site Circulation Analysis,
- Congestion Management Program (CMP) Conformance, and
- Caltrans Facilities Analysis.

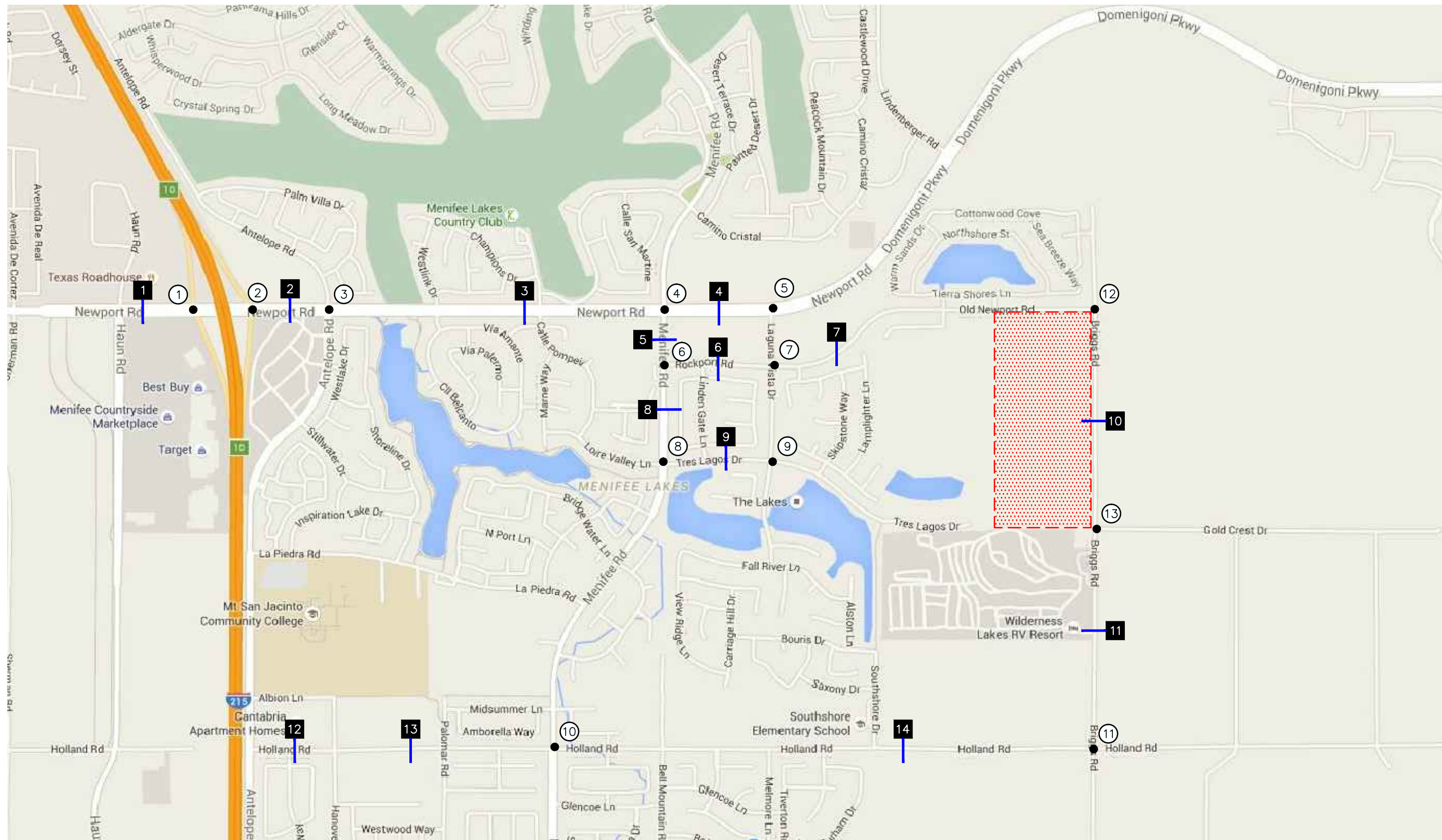
Figure 1-1 presents a Vicinity Map, which illustrates the general location of the Project and depicts the study locations and surrounding street system.

1.3 Traffic Impact Analysis Scenarios

The following scenarios are those for which Delay/V/C and corresponding LOS calculations have been performed at the key intersections and key roadway segments for existing, near-term, and long-term traffic conditions:

1. Existing (Year 2016) Traffic Conditions
2. Existing With Project Traffic Conditions,
3. Scenario (2) With Recommended Improvements, if any,
4. Existing With Ambient Growth (Year 2020) With Project Traffic Conditions,
5. Scenario (4) With Recommended Improvements, if any,
6. Existing With Ambient Growth (Year 2020) With Project With Cumulative Traffic Conditions,

7. Scenario (6) With Recommended Improvements, if any,
8. Existing With Ambient Growth (Year 2040) With Project With Cumulative Traffic Conditions, and
9. Scenario (8) With Recommended Improvements.



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SOURCE: GOOGLE

KEY

- = STUDY INTERSECTION
- = STUDY ROADWAY SEGMENT
- = PROJECT SITE

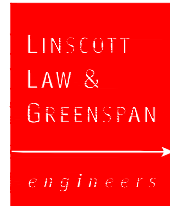


FIGURE 1-1

VICINITY MAP
ROCKPORT RANCH, MENIFEE

2.0 PROJECT DESCRIPTION AND LOCATION

The Project is located in the City of Menifee, California. The proposed Project will consist of the construction of 305 single-family detached dwelling units on approximately 80 acres. The Project site is located on the southwest quadrant of Briggs Road and Old Newport Road. Access to the Project site will be provided along Briggs Road, Tres Lagos Drive, and Old Newport Road. It should be noted that in conjunction with the Project development, the Project is required to widen and construct Old Newport Road, Briggs Road and Tres Lagos Drive to their ultimate half width cross-sections per the *City of Menifee General Plan*. The proposed Project is expected to be completed and fully occupied by 2020.

Figure 2-1 presents an aerial image of the existing site for the proposed Project. **Figure 2-2** presents the proposed site plans prepared by Excel Engineering.



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SOURCE: GOOGLE

KEY

 = PROJECT SITE

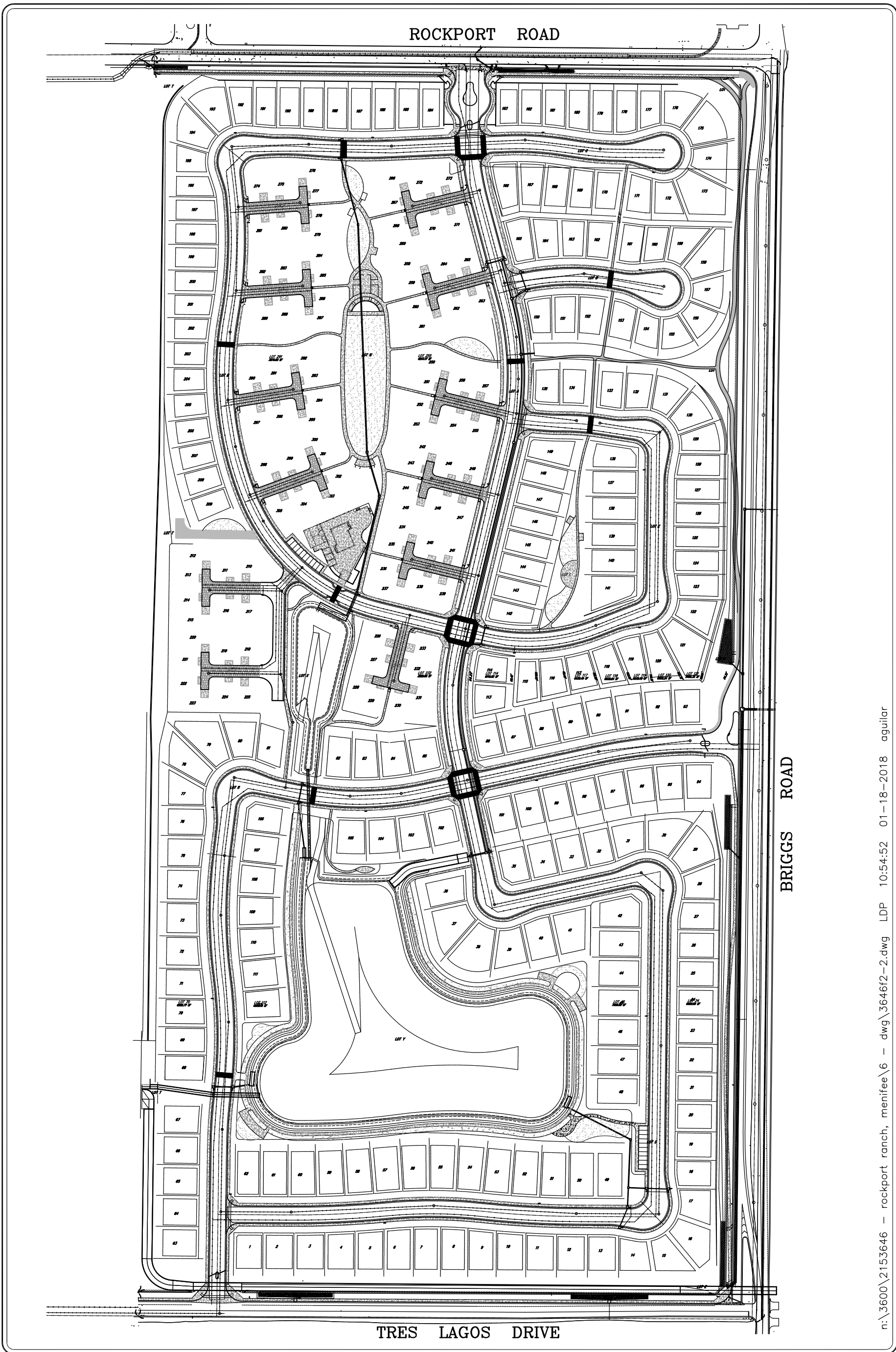
LINSCOTT
LAW &
GREENSPAN
engineers



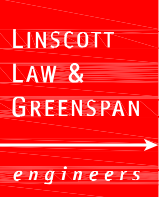
NO SCALE

FIGURE 2-1

EXISTING AERIAL SITE
ROCKPORT RANCH, MENIFEE



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SOURCE: EXCEL ENGINEERING

FIGURE 2-2

PROPOSED SITE PLAN
ROCKPORT RANCH, MENIFEE

3.0 ANALYSIS CONDITIONS AND METHODOLOGY

3.1 Existing Street Network

Escondido Freeway (I-215) provides primary regional access to the proposed Project. The I-215 Freeway runs in the north-south direction, west of the Project site. The principal local network of streets serving the Project site consists of Newport Road, Rockport Road/Old Newport Road, Laguna Vista Drive, Tres Lagos Drive, Briggs Road, Holland Road, and Menifee Road. The following discussion provides a brief synopsis of the key area streets.

Newport Road is an east-west roadway located north of the Project site. On-street parking is not permitted on either side of the roadway. Newport Road is an eight-lane divided roadway west of Antelope Road and a six-lane divided roadway east of Antelope Road. Newport Road has a posted speed limit of 45 miles per hour (mph) west of Laguna Vista Drive, and a posted speed limit of 55 mph east of Laguna Vista Drive.

Rockport Road/Old Newport Road is an east-west roadway that borders the Project site to the north. On-street parking is not permitted on either side of the roadway within the Project vicinity. Rockport Road/Old Newport Road is a two-lane divided roadway with a posted speed limit of 40 mph.

Laguna Vista Drive is a north-south roadway located west of the Project site. On-street parking is not permitted on either side of the roadway. Laguna Vista Drive is a two-lane, divided roadway with a posted speed limit of 35 mph.

Tres Lagos Drive is an east-west roadway located south of the Project site. On-street parking is not permitted on either side of the roadway. Tres Lagos Drive is a four-lane, divided roadway west of Laguna Vista Drive and a two-lane, divided roadway east of Laguna Vista Drive. It should be noted that Tres Lagos Drive will connect to Briggs Road at the intersection of Gold Crest Drive with the construction of the project.

Briggs Road is a north-south roadway that borders the Project site to the east. On-street parking is not permitted on either side of the roadway within the Project vicinity. Briggs Road is two-lane, undivided roadway. It should be noted that Briggs Road separates the City of Menifee and the County of Riverside.

Holland Road is an east-west roadway located south of the Project site. On-street parking is not permitted on either side of the roadway. West of Southshore Drive, Holland Road is a four-lane, divided roadway with a posted speed limit of 50 mph. East of Southshore Drive, Holland Road is a two-lane, undivided roadway.

Menifee Road is a north-south roadway located west of the Project site. On-street parking is not permitted on either side of the roadway within the Project vicinity. South of Tres Lagos Drive and north of Newport Road, Menifee Road is a four-lane, divided roadway and between Tres Lagos Drive and Newport Road, Menifee Road is a five-lane, divided roadway. The posted speed limit on Menifee Road is 45 mph.

Figure 3-1 presents an inventory of the existing roadway conditions within the study area evaluated in this report. The number of travel lanes and intersection controls for the key area study intersections and roadway segments are identified. It should be noted that for the purposes of this report, an undivided roadway is a roadway where the opposing travel lanes are separated by a raised or striped median or a two-way-left-turn-lane.

3.2 Existing Traffic Volumes

Existing AM and PM peak hour traffic volumes for the thirteen (13) existing key study intersections and daily two-way traffic volumes for the fourteen (14) key roadway segments evaluated in this report, were collected by *Counts Unlimited, Inc.* in February 2016 and March 2017.

Appendix A contains the existing intersection turning movement and roadway segment traffic count data.

Figures 3-2 and **3-3** present the existing AM and PM peak hour traffic volumes, respectively, for the thirteen (13) existing key study intersections. In addition, **Figure 3-3** also presents the existing daily traffic volumes for the key study roadway segments.

3.3 Level Of Service (LOS) Analysis Methodologies

AM and PM peak hour operating conditions for the key study intersections were evaluated using the methodology outlined in *Chapter 18 of the Highway Capacity Manual 2010 (HCM 2010)* for signalized intersections, the methodology outlined in *Chapter 19 of the HCM 2010* for two-way stop-controlled intersections, and the methodology outlined in *Chapter 20 of the HCM 2010* for all-way stop-controlled intersections. Daily operating conditions for the key study roadway segments were analyzed using the *Volume to Capacity (V/C) Ratio*.

3.3.1 Highway Capacity Manual (HCM) Method of Analysis (Signalized Intersections)

Based on the HCM operations method of analysis, level of service for signalized intersections and approaches is defined in terms of control delay, which is a measure of the increase in travel time due to traffic signal control, driver discomfort, and fuel consumption. Control delay includes the delay associated with vehicles slowing in advance of an intersection, the time spent stopped on an intersection approach, the time spent as vehicles move up in the queue, and the time needed for vehicles to accelerate to their desired speed. LOS criteria for traffic signals are stated in terms of the control delay in seconds per vehicle. The LOS thresholds established for the automobile mode at a signalized intersection are shown in **Table 3-1**.

3.3.2 Highway Capacity Manual (HCM) Method of Analysis (Unsignalized Intersections)

The HCM unsignalized methodology for stop-controlled intersections was utilized for the analysis of the unsignalized intersections. LOS criteria for unsignalized intersections differ from LOS criteria for signalized intersections as signalized intersections are designed for heavier traffic and therefore a greater delay. Unsignalized intersections are also associated with more uncertainty for users, as delays are less predictable, which can reduce users' delay tolerance.

3.3.2.1 Two-Way Stop-Controlled Intersections

Two-way stop-controlled intersections are comprised of a major street, which is uncontrolled, and a minor street, which is controlled by stop signs. Level of service for a two-way stop-controlled intersection is determined by the computed or measured control delay. The control delay by movement, by approach, and for the intersection as a whole is estimated by the computed capacity for each movement. LOS is determined for each minor-street movement (or shared movement) as well as major-street left turns. The worst side street approach delay is reported. LOS is not defined for the intersection as a whole or for major-street approaches, as it is assumed that major-street through vehicles experience zero delay. The HCM control delay value range for two-way stop-controlled intersections are shown in **Table 3-2**.

3.3.2.2 All-Way Stop-Controlled Intersections

All-way stop-controlled intersections require every vehicle to stop at the intersection before proceeding. Because each driver must stop, the decision to proceed into the intersection is a function of traffic conditions on the other approaches. The time between subsequent vehicle departures depends on the degree of conflict that results between the vehicles and vehicles on the other approaches. This methodology determines the control delay for each lane on the approach, computes a weighted average for the whole approach, and computes a weighted average for the intersection as a whole. Level of service (LOS) at the approach and intersection levels is based solely on control delay. The HCM control delay value range for all-way stop-controlled intersections are shown in **Table 3-2**.

3.3.3 Volume to Capacity (V/C) Ratio Method of Analysis (Roadway Segments)

In conformance with the City of Menifee requirements, daily operating conditions for the key study roadway segments have been investigated according to the Volume to Capacity (V/C) Ratio of each roadway segment. The V/C relationship is used to estimate the LOS of the roadway segment with the volume based on the 24-hour traffic volumes and the capacity based on the City's classification of each roadway. The six qualitative categories of Level of Service have been defined along with the corresponding Volume to Capacity (V/C) value range and are shown in **Table 3-3**.

The roadway segment daily capacity of each street classification according the *City of Menifee Traffic Impact Analysis Guideline (August 2015)*, is presented in **Table 3-4**.

3.3.4 Basic Freeway Segments

The basic freeway segment criteria is based on peak hour *HCM 2010* density analysis. The capacities are based on information contained in the *HCM 2010*. Existing traffic count data for the analyzed freeway segments was obtained from the Caltrans website.

Basic freeway segment levels of service are determined from segment density. **Table 3-5** presents the correlation between LOS and density in terms of passenger cars per mile per lane (pc/mi/ln) for freeway basic freeway segments.

3.4 Impact Criteria and Thresholds

According to City of Menifee criteria, LOS D is the minimum acceptable condition that should be maintained during the morning and evening peak commute hours.

Project related significant impacts are identified by comparing without Project conditions to with Project conditions based on the following criteria:

- If the LOS deteriorates from an acceptable LOS (LOS D or better) to an unacceptable LOS (LOS E or F); or
- If the intersection is already operating at an unacceptable LOS (LOS E or F) under without Project traffic conditions and the proposed Project adds 50 or more peak hour trips to the intersection.

TABLE 3-1
LEVEL OF SERVICE CRITERIA FOR SIGNALIZED INTERSECTIONS (HCM METHODOLOGY)¹

Control Delay (sec/veh)	Level of Service (LOS)	Level of Service Description
≤ 10	A	This level of service occurs when the v/c ratio is low and either progression is exceptionally favorable or the cycle length is very short.
> 10-20	B	This level generally occurs when the v/c ratio is low and either progression is highly favorable or the cycle length is short.
> 20-35	C	Average traffic delays. These higher delays may result when progression is favorable or the cycle length is moderate. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant at this level, though many still pass through the intersection without stopping.
> 35-55	D	Long traffic delays. At level D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high v/c ratios. Many vehicles stop and individual cycle failures are noticeable.
> 55-80	E	Very long traffic delays. This level is considered by many agencies (i.e. SANBAG) to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios. Individual cycle failures are frequent.
> 80	F	Severe congestion. This level, considered to be unacceptable to most drivers, often occurs with over saturation, that is, when arrival flow rates exceed the capacity of the intersection. It may also occur at high v/c ratios below 1.0 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing factors to such delay levels.

¹ Source: *Highway Capacity Manual 2010*, Chapter 18: Signalized Intersections.

TABLE 3-2
LEVEL OF SERVICE CRITERIA FOR UNSIGNALIZED INTERSECTIONS (HCM METHODOLOGY)²

Control Delay (sec/veh)	Level of Service (LOS)	Level of Service Description
0-10	A	Little or no delay
> 10-15	B	Short traffic delays
> 15-25	C	Average traffic delays
> 25-35	D	Long traffic delays
> 35-50	E	Very long traffic delays
> 50	F	Severe congestion

² Source: *Highway Capacity Manual 2010*, Chapter 19: Two-Way Stop-Controlled Intersections and Chapter 20: All-Way Stop-Controlled Intersections.

TABLE 3-3
LEVEL OF SERVICE CRITERIA FOR ROADWAY SEGMENTS (V/C METHODOLOGY)³

Level of Service (LOS)	Volume to Capacity Ratio (V/C)	Level of Service Description
A	≤ 0.600	EXCELLENT. Describes primarily free flow operations at average travel speeds, usually about 90% of the free flow speed for the arterial class. Vehicles are completely unimpeded in their ability to maneuver within the traffic stream. Stopped delay at signalized intersections is minimal.
B	0.601 – 0.700	VERY GOOD. Represents reasonably unimpeded operations at average travel speeds, usually about 70% of the free flow speed for the arterial class. The ability to maneuver within the traffic stream is only slightly restricted and stopped delays are not bothersome. Drivers are not generally subjected to appreciable tension.
C	0.701 – 0.800	GOOD. Represents stable conditions; however, ability to maneuver and change lanes in mid-block location may be more restricted than in LOS B, and longer queues and/or adverse signal coordination may contribute to lower average travel speeds of about 50% of the average free flow speed for the arterial class. Motorists will experience appreciable tension while driving.
D	0.801 – 0.900	FAIR. Borders on a range in which small increases in flow may cause substantial increases in approach delay and, hence, decreases in arterial speed. This may be due to adverse signal progression, inappropriate signal timing, high volumes, or some combination of these. Average travel speeds are about 40% of free flow speed.
E	0.901 – 1.000	POOR. Characterized by significant approach delays and average travel speeds of one-third the free flow speed or lower. Such operations are caused by some combination of adverse progression, high signal density, extensive queuing at critical intersections, and inappropriate signal timing.
F	> 1.000	FAILURE. Characterizes arterial flow at extremely low speeds below one-third to one-quarter of the free flow speed. Intersection congestion is likely at critical signalized locations, with resultant high approach delays. Adverse progression is frequently a contributor to this condition.

Note:

- LOS F applies whenever the flow rate exceeds the segment capacity.

³ Source: *Transportation Research Board 2000.*

TABLE 3-4
DAILY ROADWAY SEGMENT CAPACITIES⁴

Type of Arterial	Lane Configuration	LOS E Capacity (VPD)
Urban Arterial	8-Lanes	87,000
Urban Arterial	6-Lanes	56,300
Arterial	4-Lanes	37,000
Major	4-Lanes	34,100
Major	3-Lanes	25,575 ⁵
Secondary	4-Lanes	25,900
Collector	2-Lanes	13,000

Notes:

- VPD = Vehicles per Day

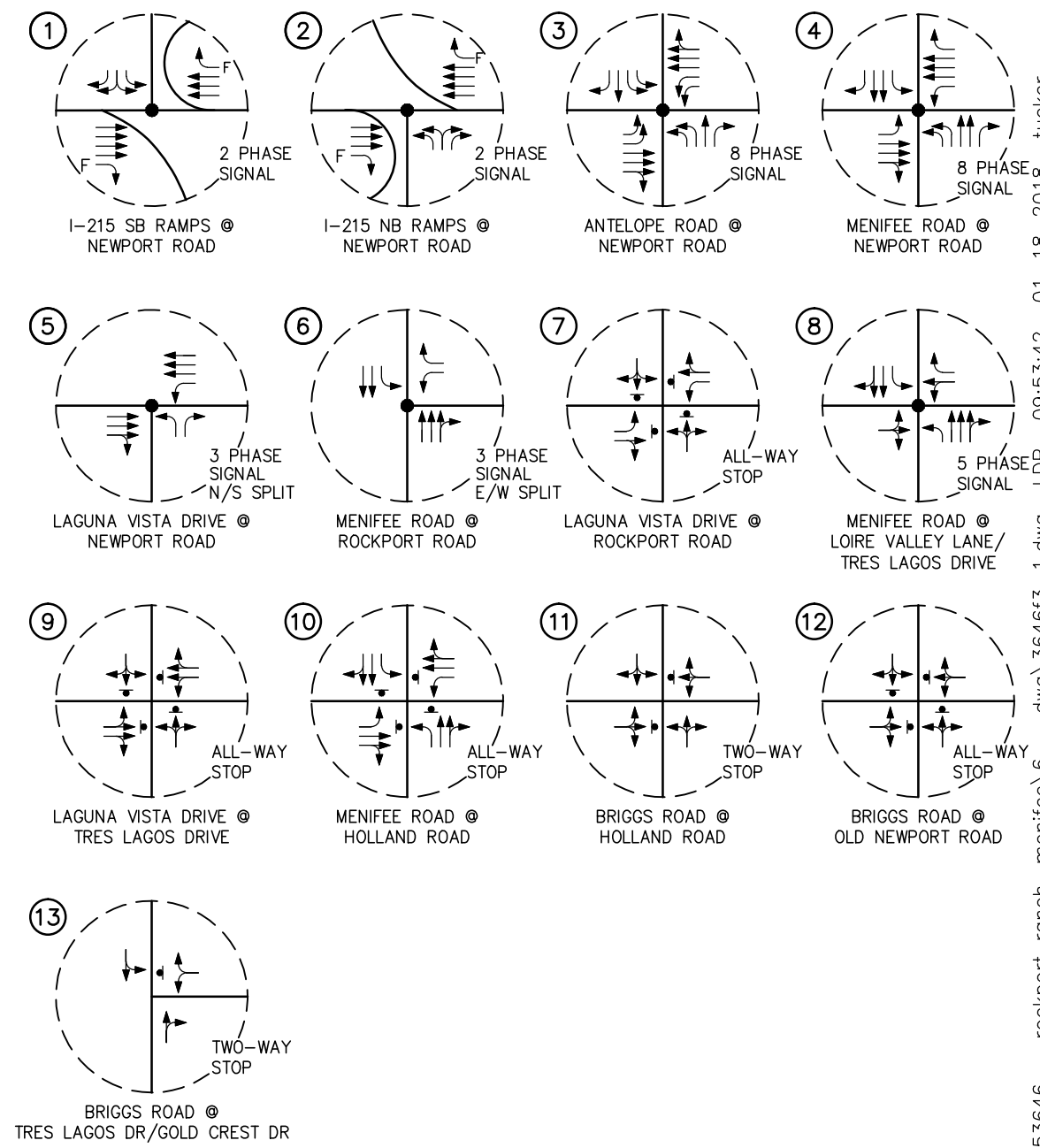
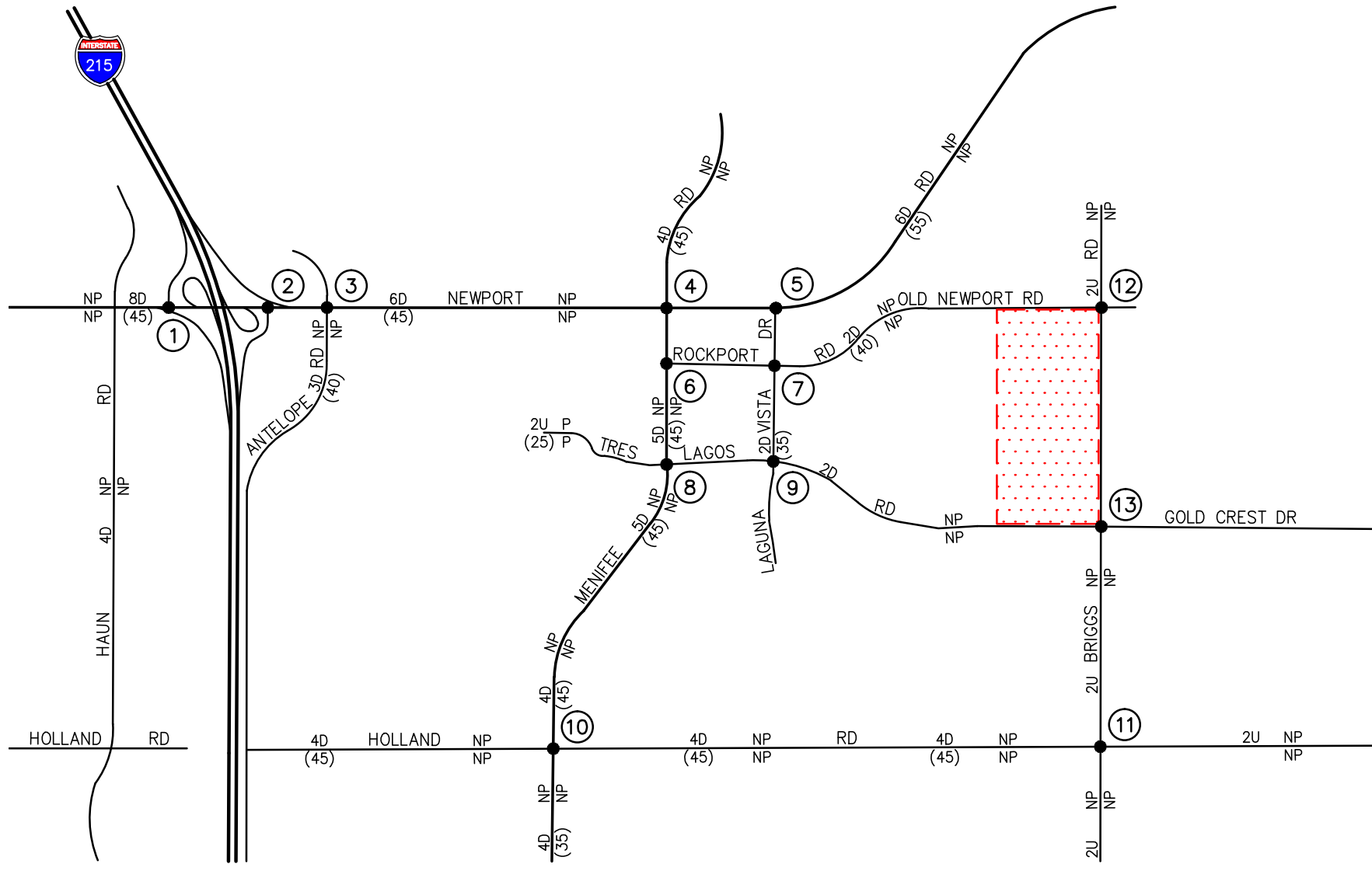
⁴ Source: *City of Menifee Traffic Impact Analysis Guideline (August 2015)*.

⁵ The capacity for a three-lane divided Major Arterial was derived by interpolating the capacity for a four-lane divided Major Arterial. The capacity for the four-lane Major Arterial was divided by 4 to determine the capacity on a per lane basis and then multiplied by 3 to derive the capacity for a three-lane divided Arterial ($[34,100 / 4] * 3 = 25,575$ VPD).

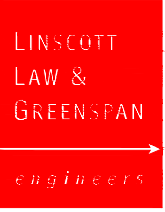
TABLE 3-5
 BASIC FREEWAY SEGMENTS LEVEL OF SERVICE CRITERIA (HCM METHODOLOGY)⁶

LOS	Basic Freeway Segment Density (pc/mi/ln)
A	≤ 11.0
B	$> 11.0 - 18.0$
C	$> 18.0 - 26.0$
D	$> 26.0 - 35.0$
E	$> 35.0 - 45.0$
F	> 45.0

⁶ Source: HCM 2010, Chapter 11 – Basic Freeway Segments, Exhibit 11-5.



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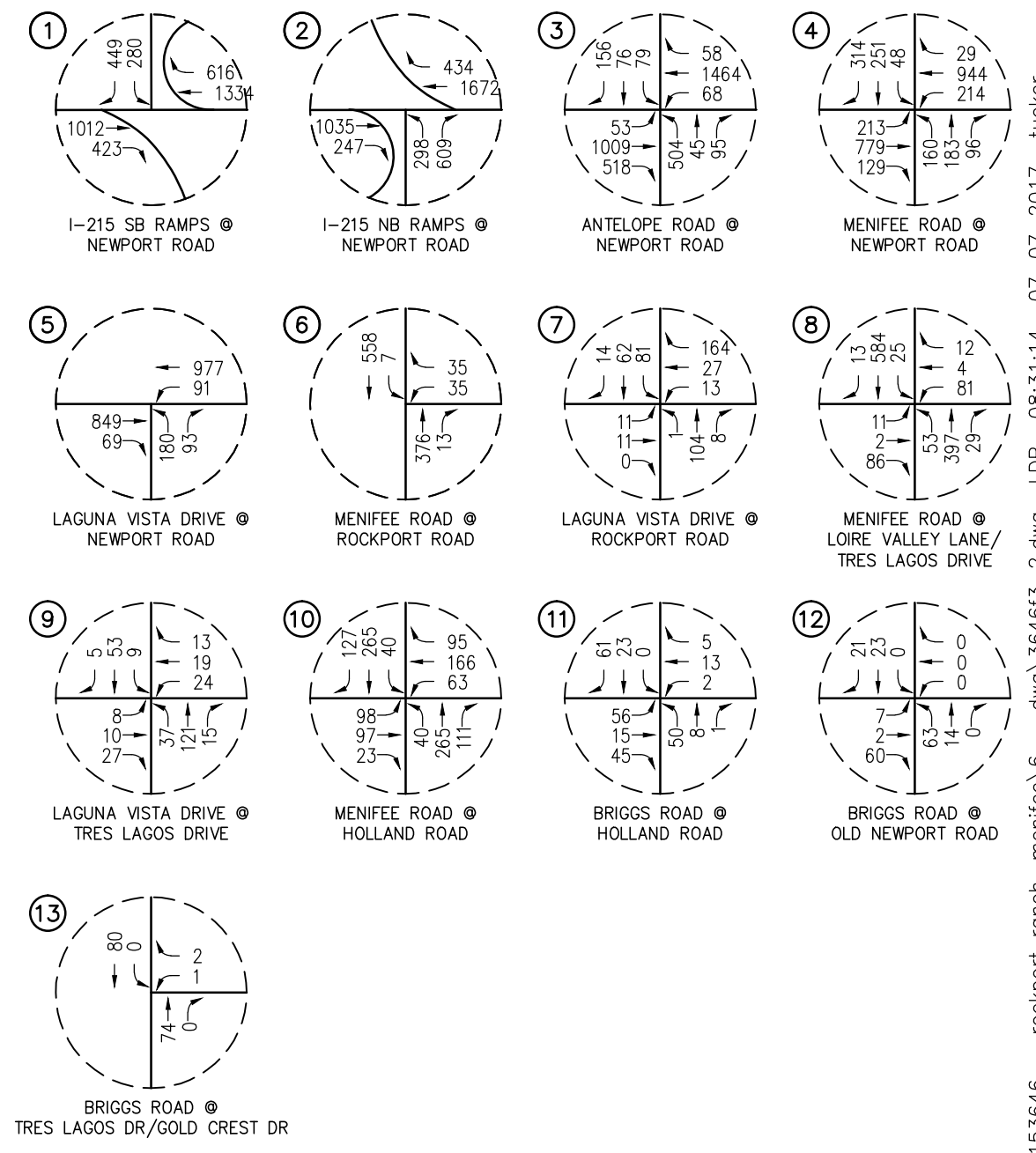
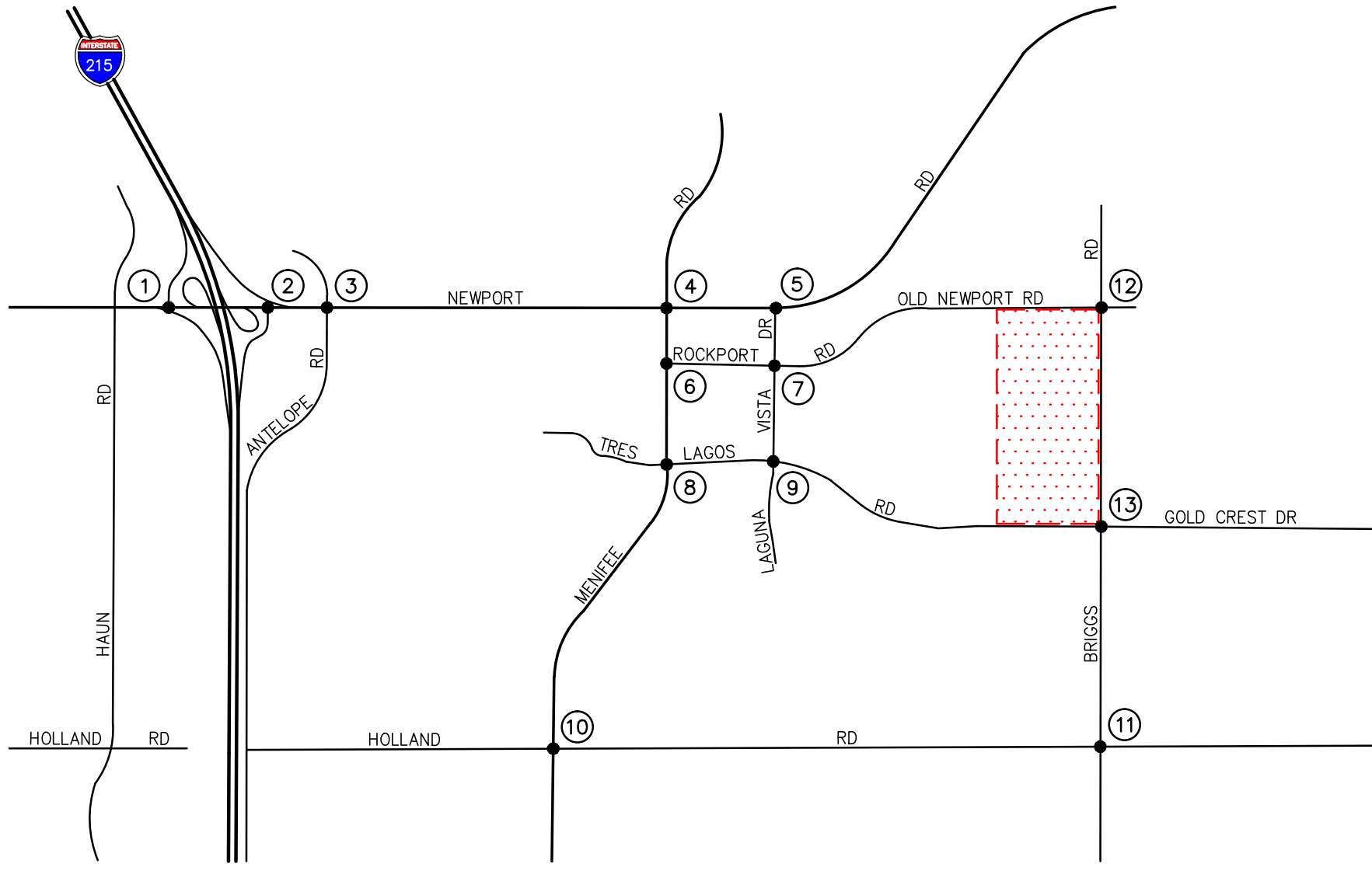


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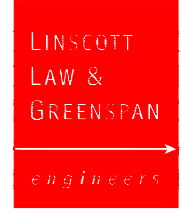
←	= APPROACH LANE ASSIGNMENT	2	= NUMBER OF TRAVEL LANES
●	= TRAFFIC SIGNAL, ▼ = STOP SIGN	(XX)	= POSTED SPEED LIMIT (MPH)
P	= PARKING, NP = NO PARKING	F	= FREE-RIGHT
U	= UNDIVIDED, D = DIVIDED	[Red Hatched Box]	= PROJECT SITE
OL	= OVERLAP		

EXISTING ROADWAY CONDITIONS AND INTERSECTION CONTROLS
ROCKPORT RANCH, MENIFEЕ

FIGURE 3-1

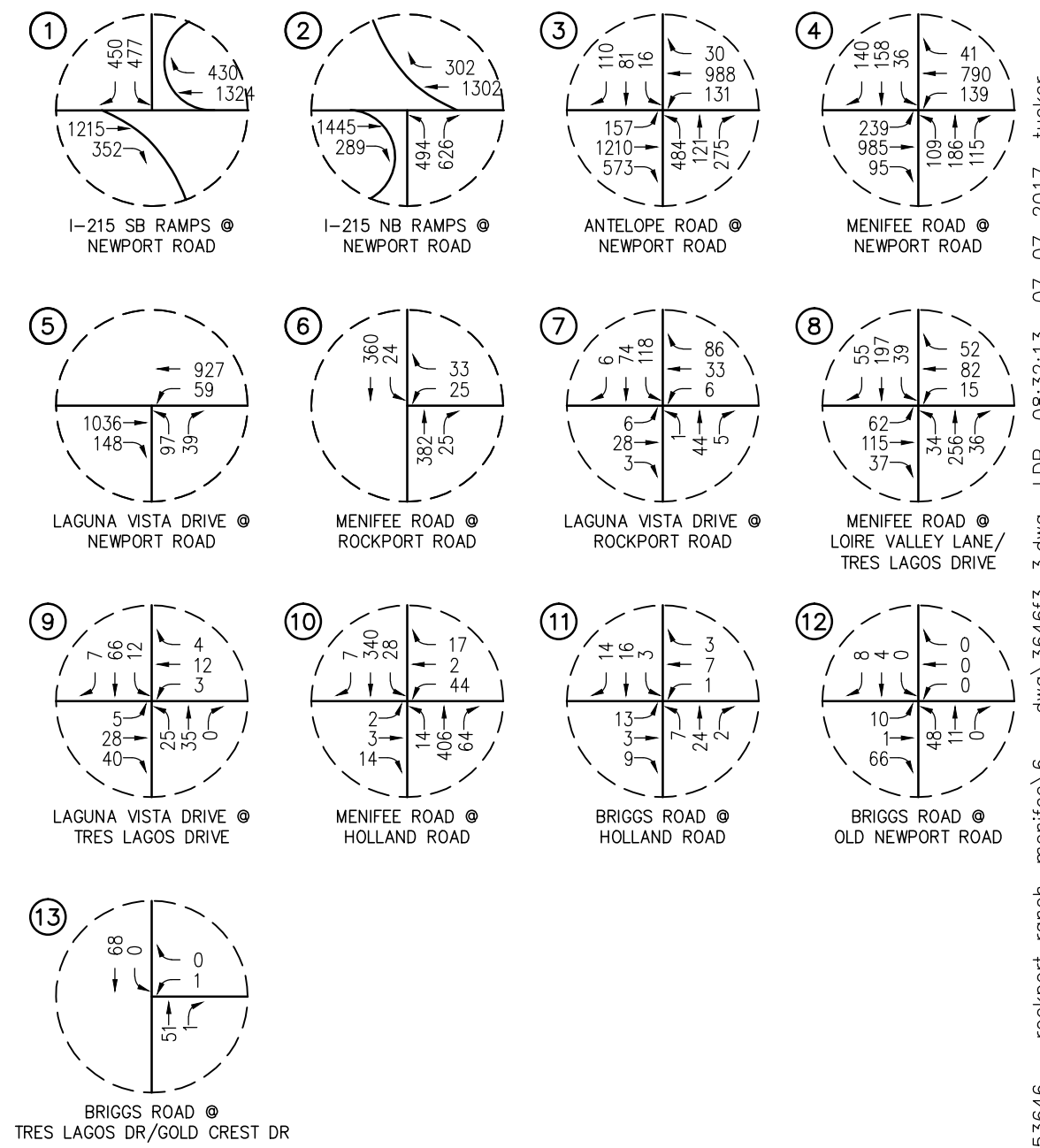
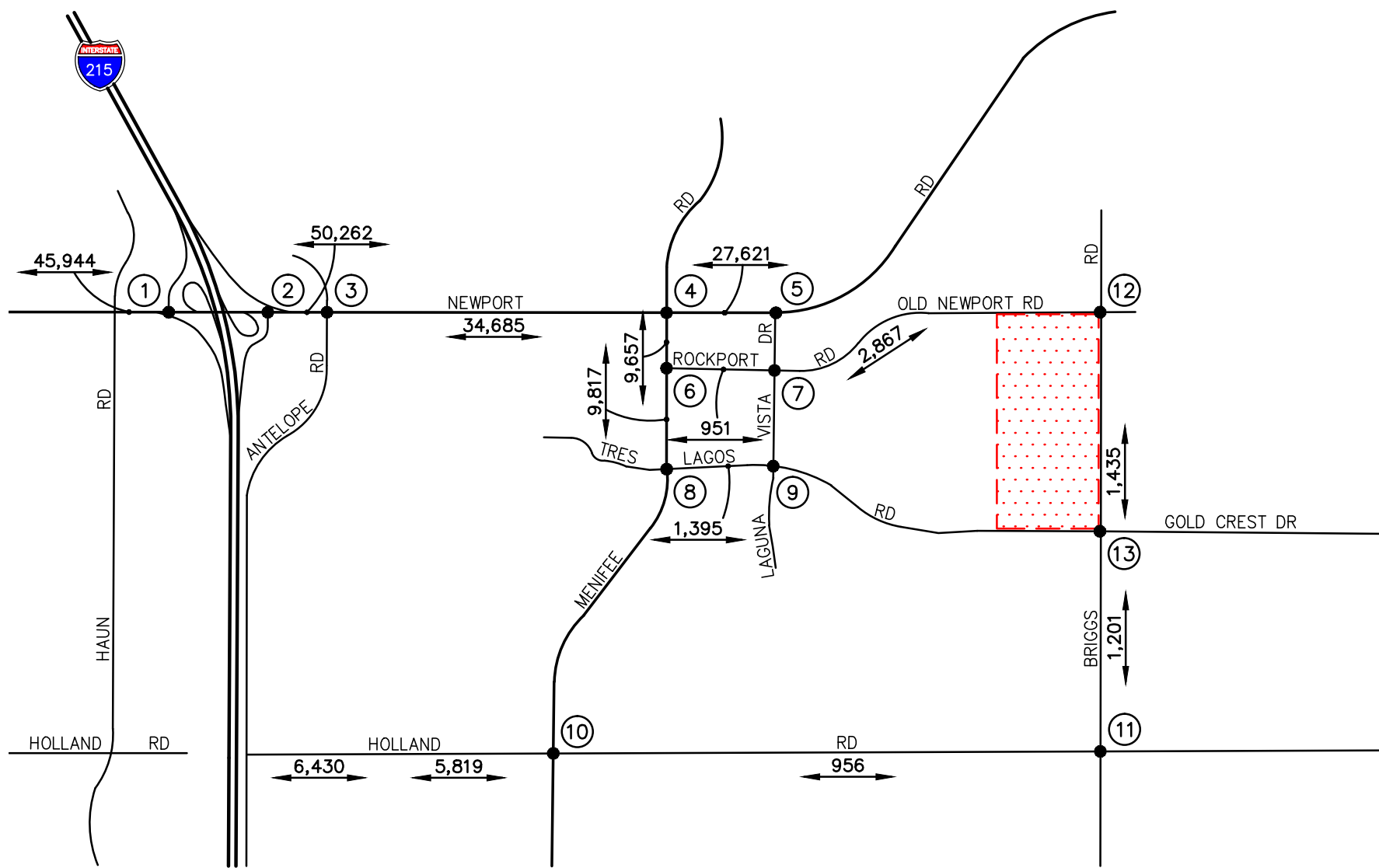


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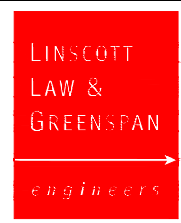


KEY
 # = STUDY INTERSECTION
 [Red Hatched Box] = PROJECT SITE

FIGURE 3-2
EXISTING AM PEAK HOUR TRAFFIC VOLUMES
 ROCKPORT RANCH, MENIFEE



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KEY

- # = STUDY INTERSECTION
- [Red Hatched Box] = PROJECT SITE
- XX,XXX = DAILY TRAFFIC VOLUMES

FIGURE 3-3
EXISTING PM PEAK HOUR
AND DAILY TRAFFIC VOLUMES
 ROCKPORT RANCH, MENIFEE

4.0 TRAFFIC FORECASTING METHODOLOGY

In order to estimate the traffic impact characteristics of the Project, a multi-step process has been utilized. The first step is traffic generation, which estimates the total arriving and departing traffic on a peak hour and daily basis. The traffic generation potential is forecast by applying the appropriate vehicle trip generation equations and/or rates to the Project development tabulation.

The second step of the forecasting process is traffic distribution, which identifies the origins and destinations of inbound and outbound Project traffic. These origins and destinations are typically based on demographics and existing/expected future travel patterns in the study area.

The third step is traffic assignment, which involves the allocation of Project traffic to study area streets and intersections. Traffic assignment is typically based on minimization of travel time, which may or may not involve the shortest route, depending on prevailing operating conditions and travel speeds.

Traffic distribution patterns are indicated by general percentage orientation, while traffic assignment allocates specific volume forecasts to individual roadway segments and intersection turning movements throughout the study area.

With the forecasting process complete and Project traffic assignments developed, the impact of the Project is isolated by comparing operational (LOS) conditions at selected key intersections using expected future traffic volumes with and without forecast Project traffic. If necessary, the need for site-specific and/or cumulative local area traffic improvements can then be evaluated.

5.0 PROJECT TRAFFIC CHARACTERISTICS

5.1 Project Trip Generation Forecast

Traffic generation is expressed in vehicle trip ends, defined as one-way vehicular movements, either entering or exiting the generating land use. Generation rates used in the traffic forecasting procedure are found in the Ninth Edition of *Trip Generation*, published by the Institute of Transportation Engineers (ITE) [Washington D.C., 2012].

Table 5-1 summarizes the trip generation rates used in forecasting the vehicular trips generated by the proposed Project and the lower part presents the forecast daily and peak hour Project traffic volumes for a "typical" weekday. The trip generation potential for the proposed Project was forecast using ITE Land Use Code 210: Single-Family Detached Housing rates.

As shown in *Table 5-1*, the Project is expected to generate 2,904 daily trips (one half arriving, one half departing), with 229 trips (57 inbound, 172 outbound) produced in the AM peak hour and 305 trips (192 inbound, 113 outbound) produced in the PM peak hour on a "typical" weekday.

5.2 Project Trip Distribution and Assignment

The directional trip distribution patterns for the Project Without Holland Road Overcrossing and With Holland Road Overcrossing (which is anticipated to be completed prior to Year 2020) conditions are presented in **Figures 5-1** and **5-2**, respectively. Project traffic volumes, both entering and exiting the site, have been distributed and assigned to the adjacent street system based on the following considerations:

- the site's proximity to major traffic carriers (i.e. I-215 Freeway etc.),
- expected localized traffic flow patterns based on adjacent street channelization and presence of traffic signals,
- ingress/egress availability at the Project site, and
- input from City of Menifee staff.

The anticipated AM and PM peak hour Project traffic volumes Without Holland Road Overcrossing at the key study intersections are presented in **Figures 5-3** and **5-4**, respectively. In addition, *Figure 5-4* also presents the daily traffic volumes for the key study roadway segments. The traffic volume assignment presented in the above mentioned figures reflect the Project trip distribution characteristics shown in *Figure 5-1* and the Project trip generation forecast presented in the *Table 5-1*. The Without Holland Road Overcrossing directional trip distribution patterns for the Project were used for the following scenario:

- Existing With Project Traffic Conditions

The anticipated AM and PM peak hour Project traffic volumes With Holland Road Overcrossing at the key study intersections are presented in **Figures 5-5** and **5-6**, respectively. In addition, *Figure 5-6* also presents the daily traffic volumes for the key study roadway segments. The traffic volume assignment presented in the above mentioned figures reflect the Project trip distribution

characteristics shown in *Figure 5-2* and the Project trip generation forecast presented in the *Table 5-1*. The With Holland Road Overcrossing directional trip distribution patterns for the Project were used for the following scenarios:

- Existing With Ambient Growth (Year 2020) With Project Traffic Conditions
- Existing With Ambient Growth (Year 2020) With Project With Cumulative Traffic Conditions
- Existing With Ambient Growth (Year 2040) With Project With Cumulative Traffic Conditions, which represents the Buildout condition.

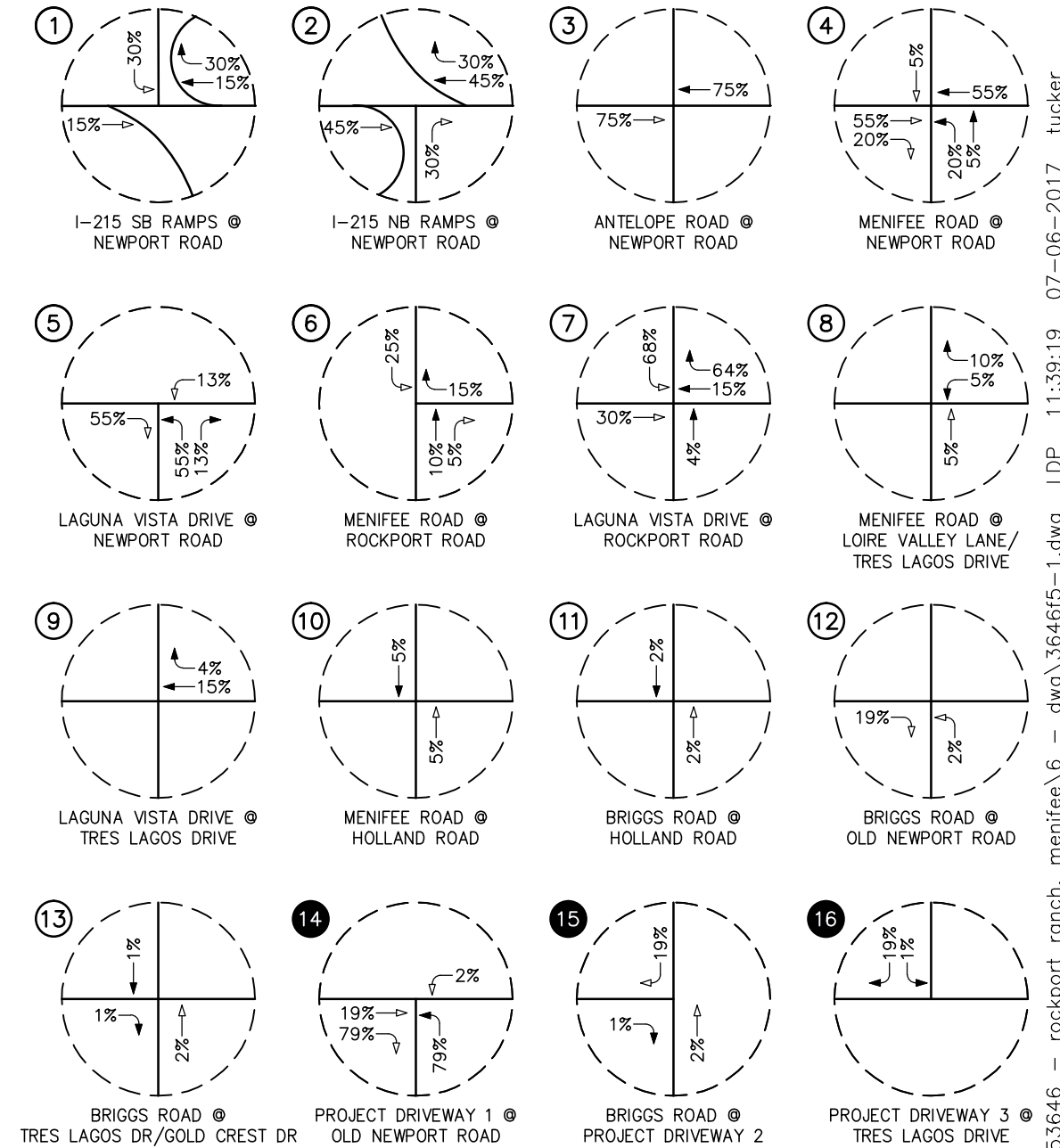
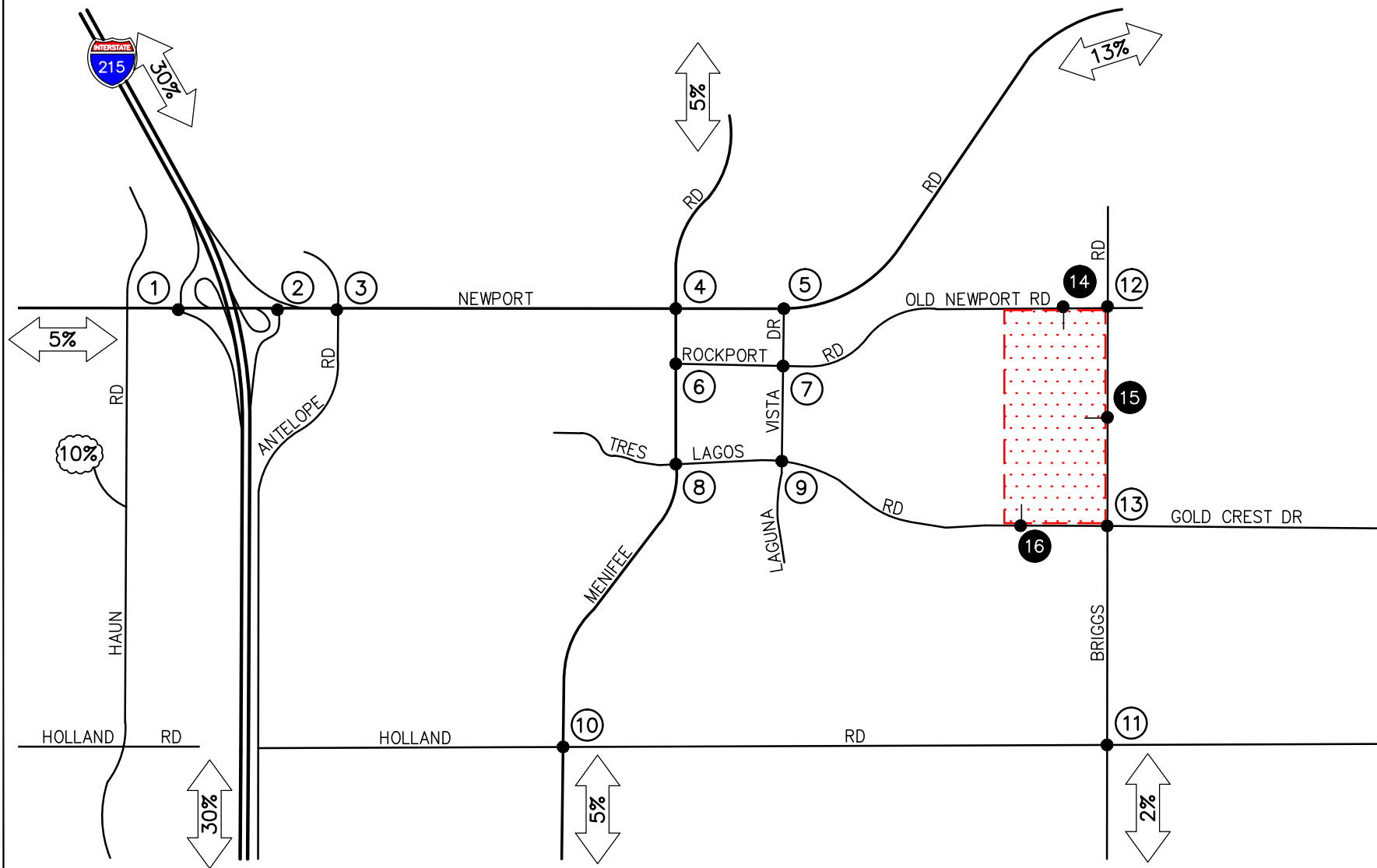
TABLE 5-1
PROJECT TRIP GENERATION RATES AND FORECAST⁷

ITE Land Use Code / Project Description	Daily 2-Way	AM Peak Hour			PM Peak Hour		
		Enter	Exit	Total	Enter	Exit	Total
Generation Rates:							
▪ 210: Single-Family Detached Housing (TE/DU)	9.52	25%	75%	0.75	63%	37%	1.00
Generation Forecasts:							
▪ 210: Single-Family Detached Housing (305 DU)	2,904	57	172	229	192	113	305

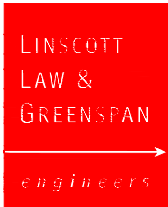
Notes:

- TE/DU = Trip end per dwelling unit

⁷ Source: *Trip Generation, 9th Edition*, Institute of Transportation Engineers, (ITE) [Washington, D.C. (2012)].

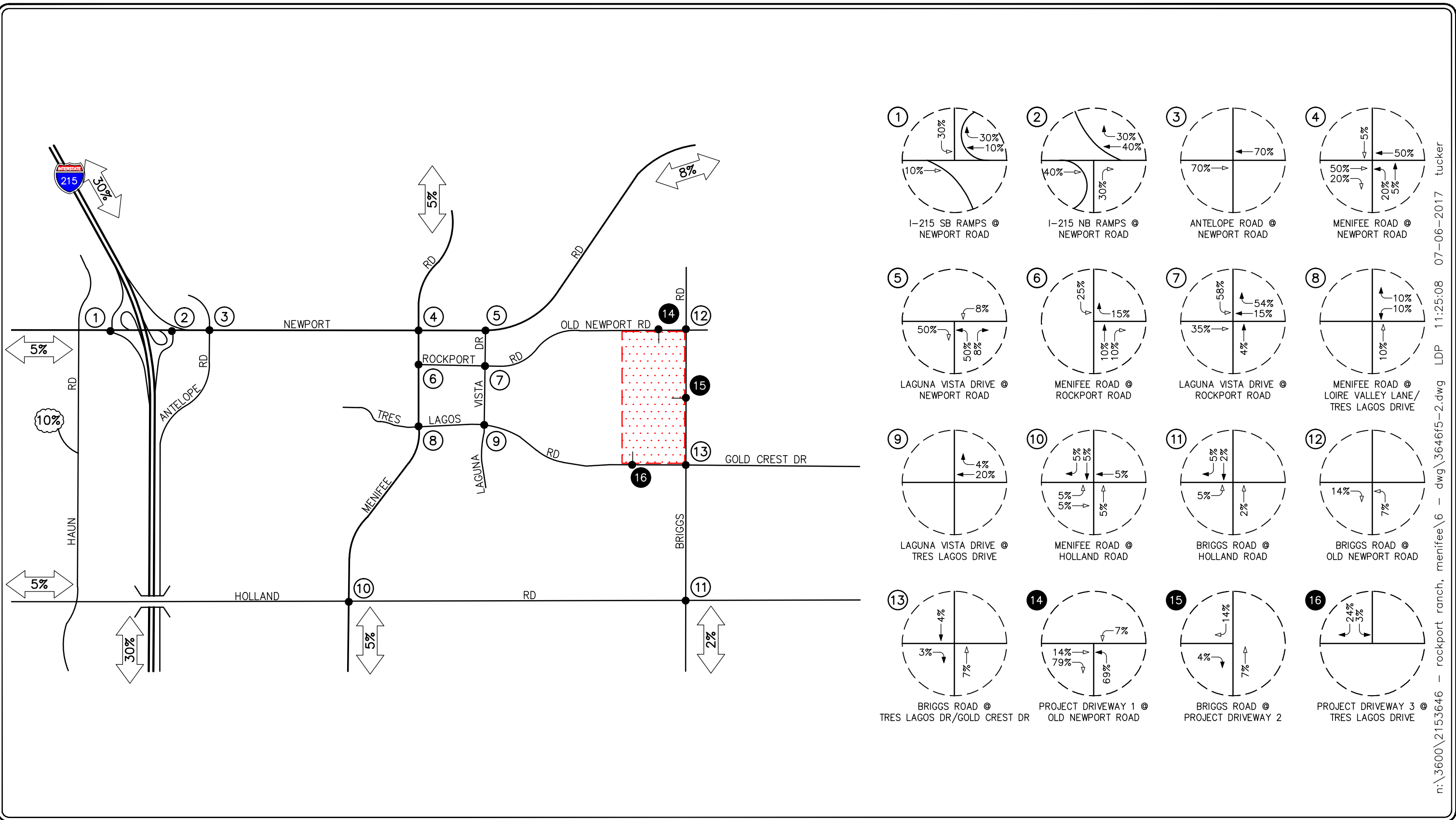


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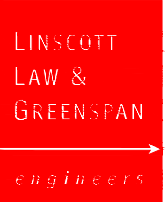


- KEY**
- ⊙ = STUDY INTERSECTION
 - = FUTURE INTERSECTION
 - ← = INBOUND PERCENTAGE
 - = OUTBOUND PERCENTAGE
 - ▨ = PROJECT SITE

FIGURE 5-1
PROJECT TRIP DISTRIBUTION PATTERN
(WITHOUT HOLLAND ROAD OVERCROSSING)
 ROCKPORT RANCH, MENIFEE

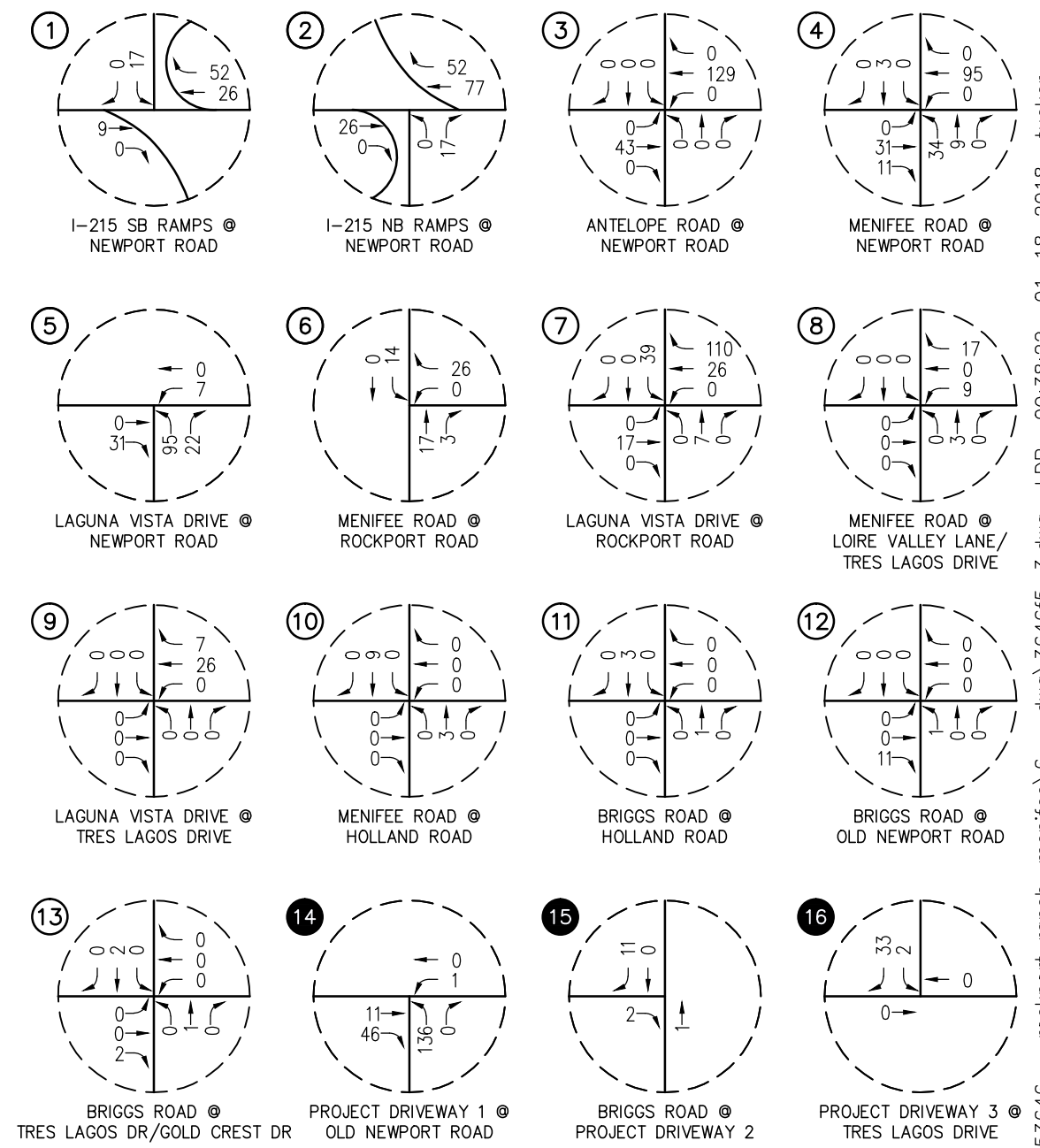
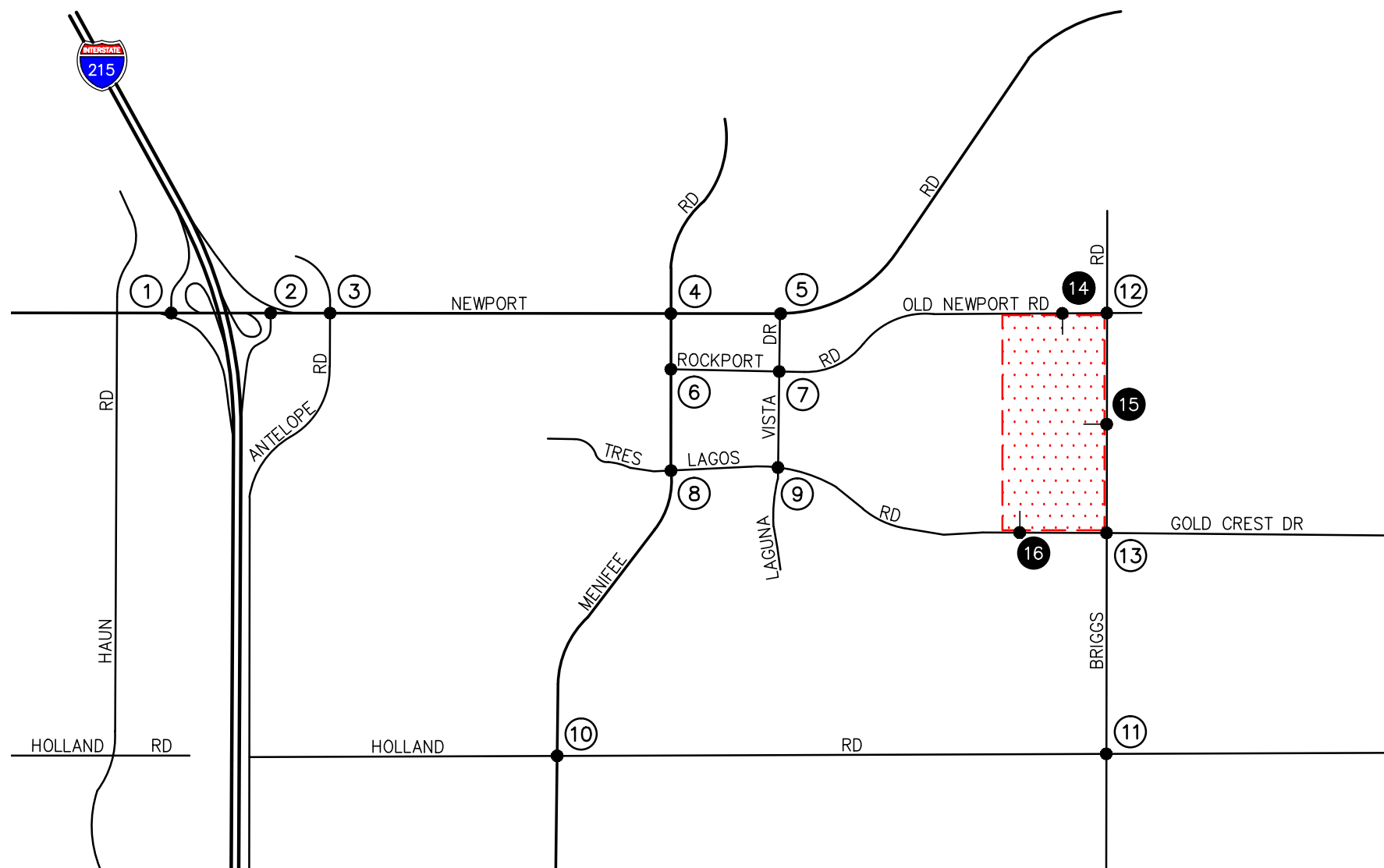


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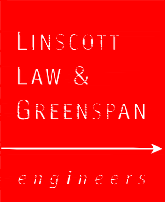


- KEY**
- ① = STUDY INTERSECTION
 - = FUTURE INTERSECTION
 - ↔ = INBOUND PERCENTAGE
 - ← = OUTBOUND PERCENTAGE
 - ▨ = PROJECT SITE

FIGURE 5-2
PROJECT TRIP DISTRIBUTION PATTERN
(WITH HOLLAND ROAD OVERCROSSING)
 ROCKPORT RANCH, MENIFEЕ

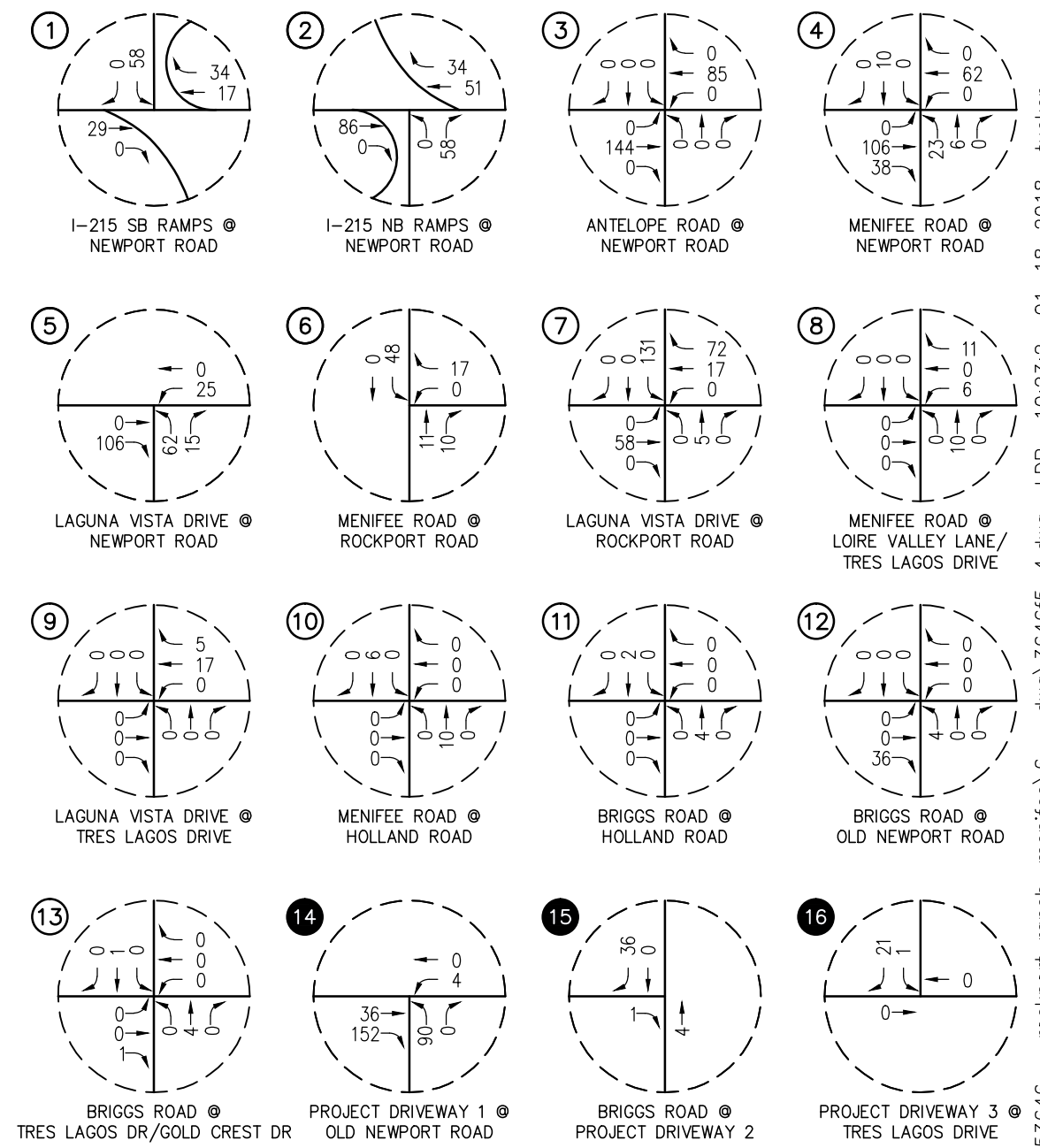
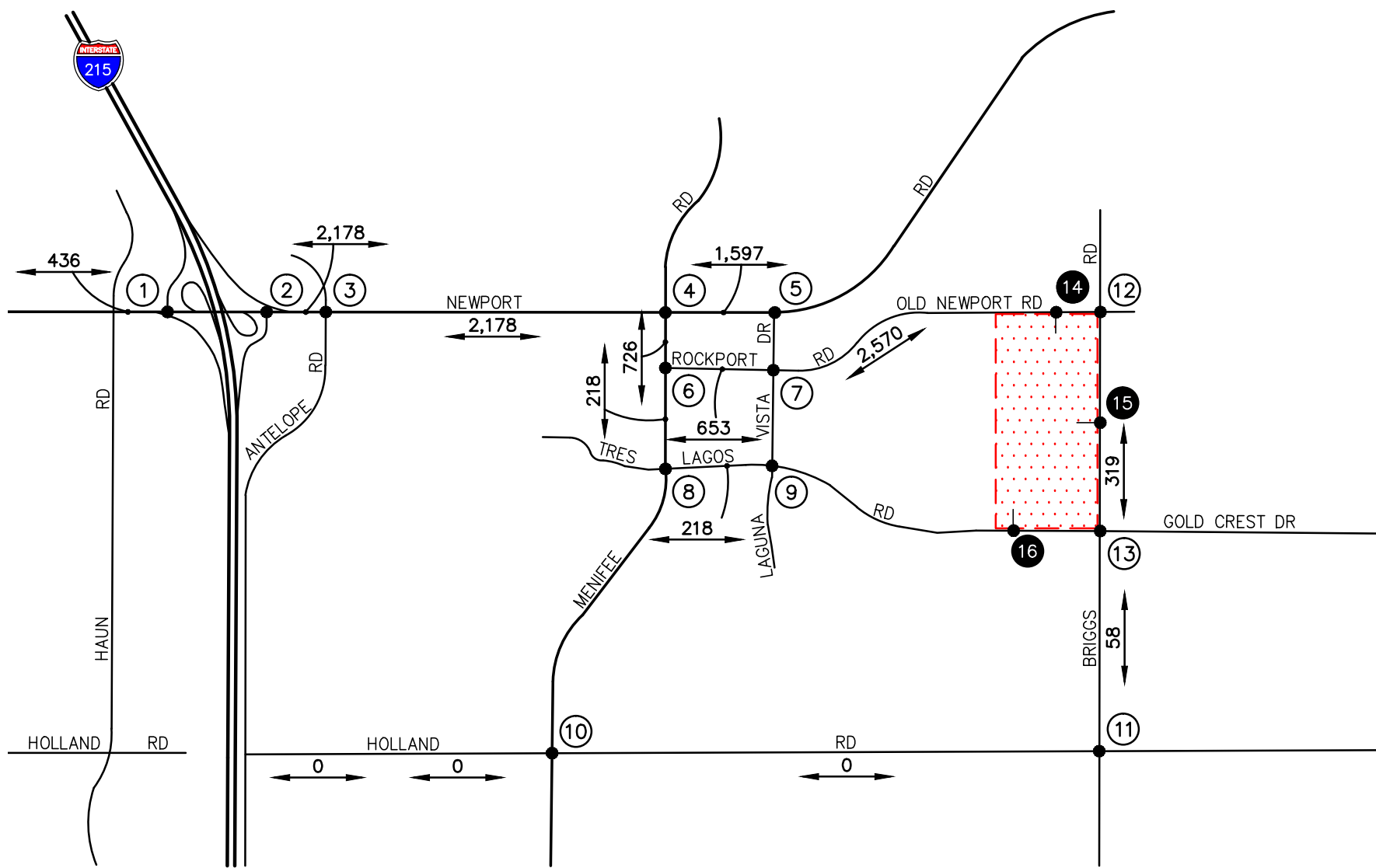


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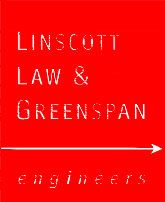


- KEY**
- ① = STUDY INTERSECTION
 - ▨ = PROJECT SITE
 - = FUTURE INTERSECTION

FIGURE 5-3
PROJECT ONLY AM PEAK HOUR TRAFFIC VOLUMES
(WITHOUT HOLLAND ROAD OVERCROSSING)
 ROCKPORT RANCH, MENIFEE



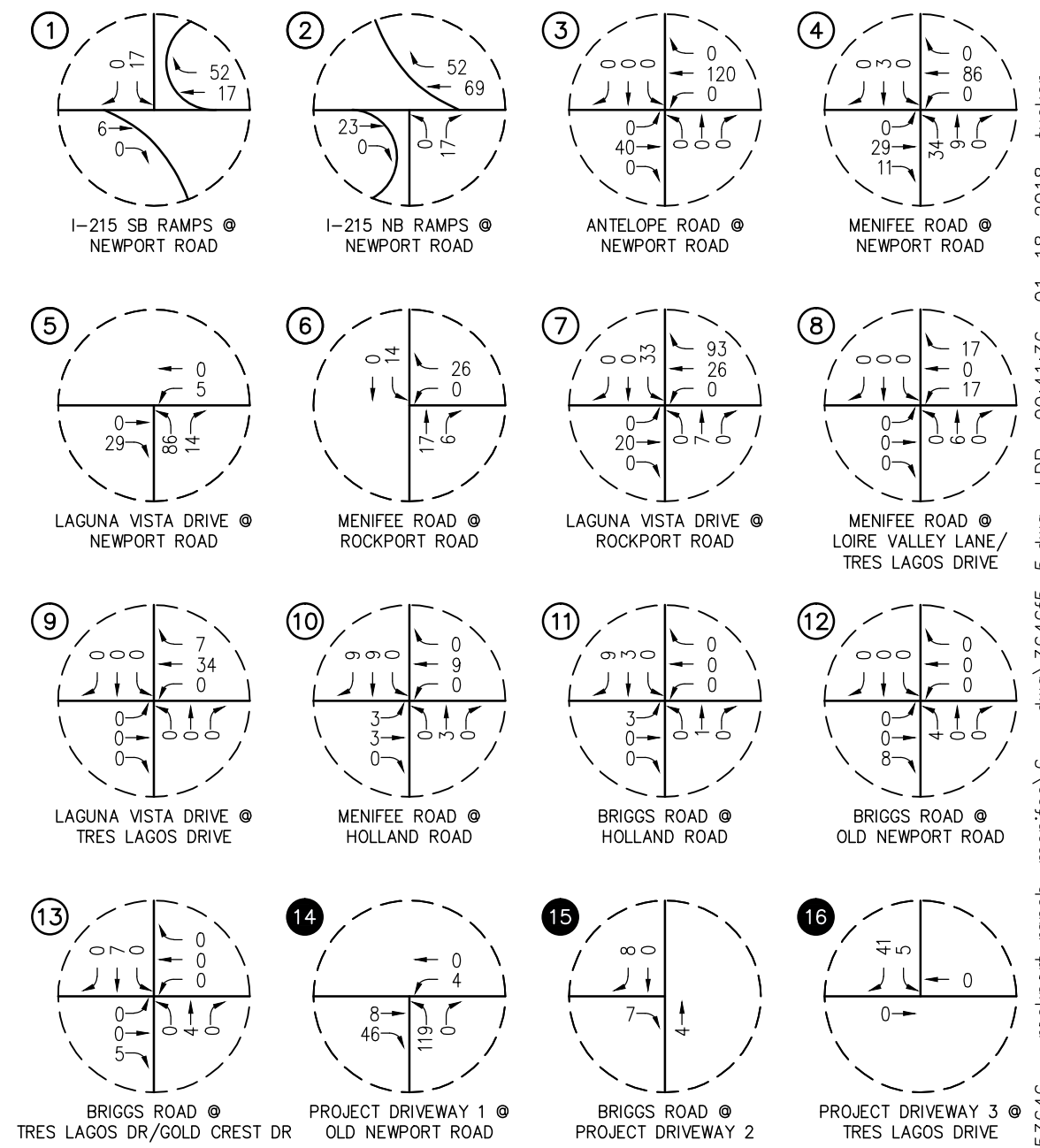
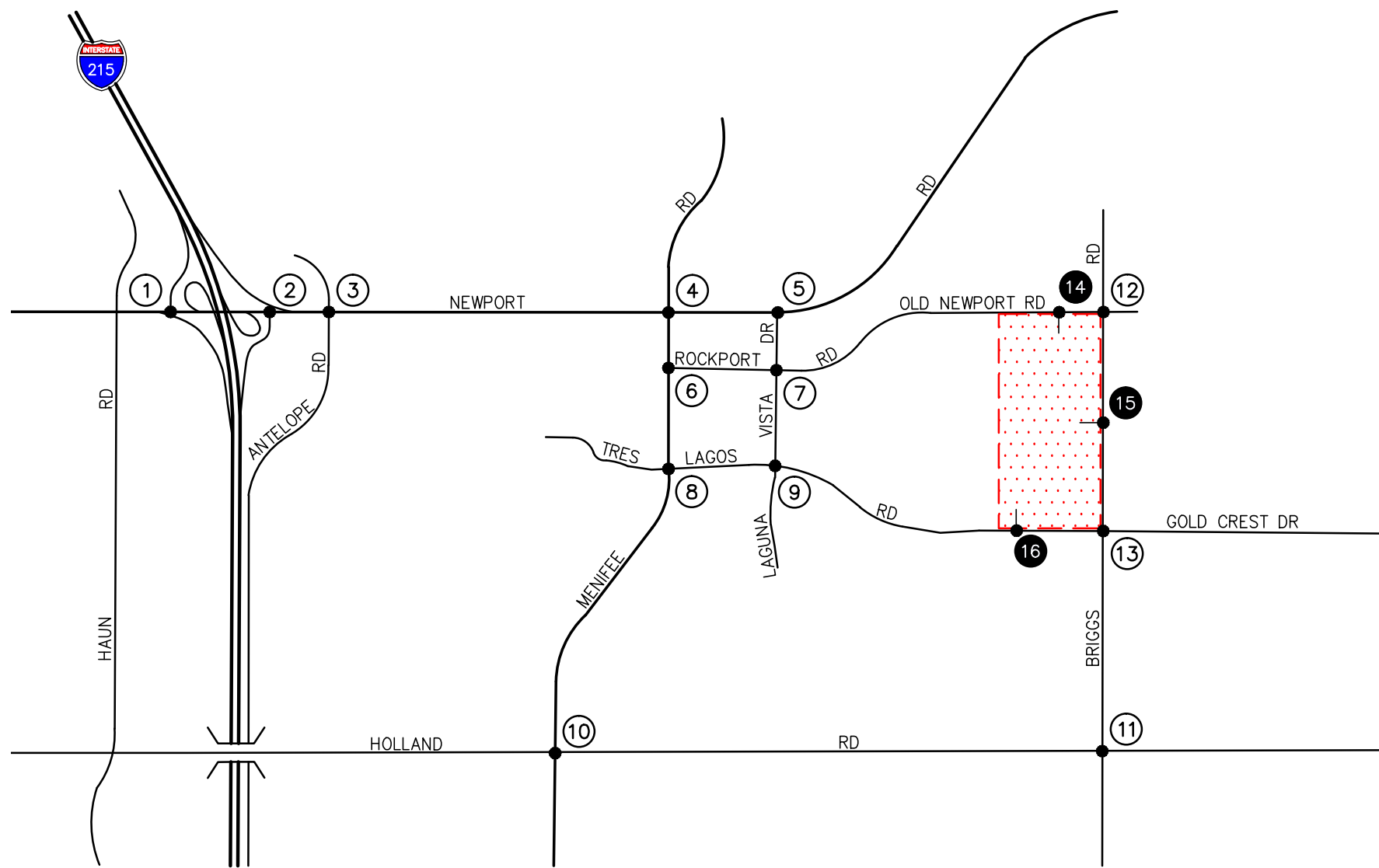
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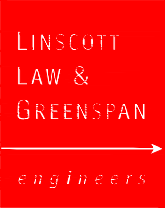
KEY

- ⊙ = STUDY INTERSECTION
- ▨ = PROJECT SITE
- ⦿ = FUTURE INTERSECTION
- XX,XXX = DAILY TRAFFIC VOLUMES

FIGURE 5-4
PROJECT ONLY PM PEAK HOUR AND DAILY TRAFFIC VOLUMES
(WITHOUT HOLLAND ROAD OVERCROSSING)
 ROCKPORT RANCH, MENIFEE

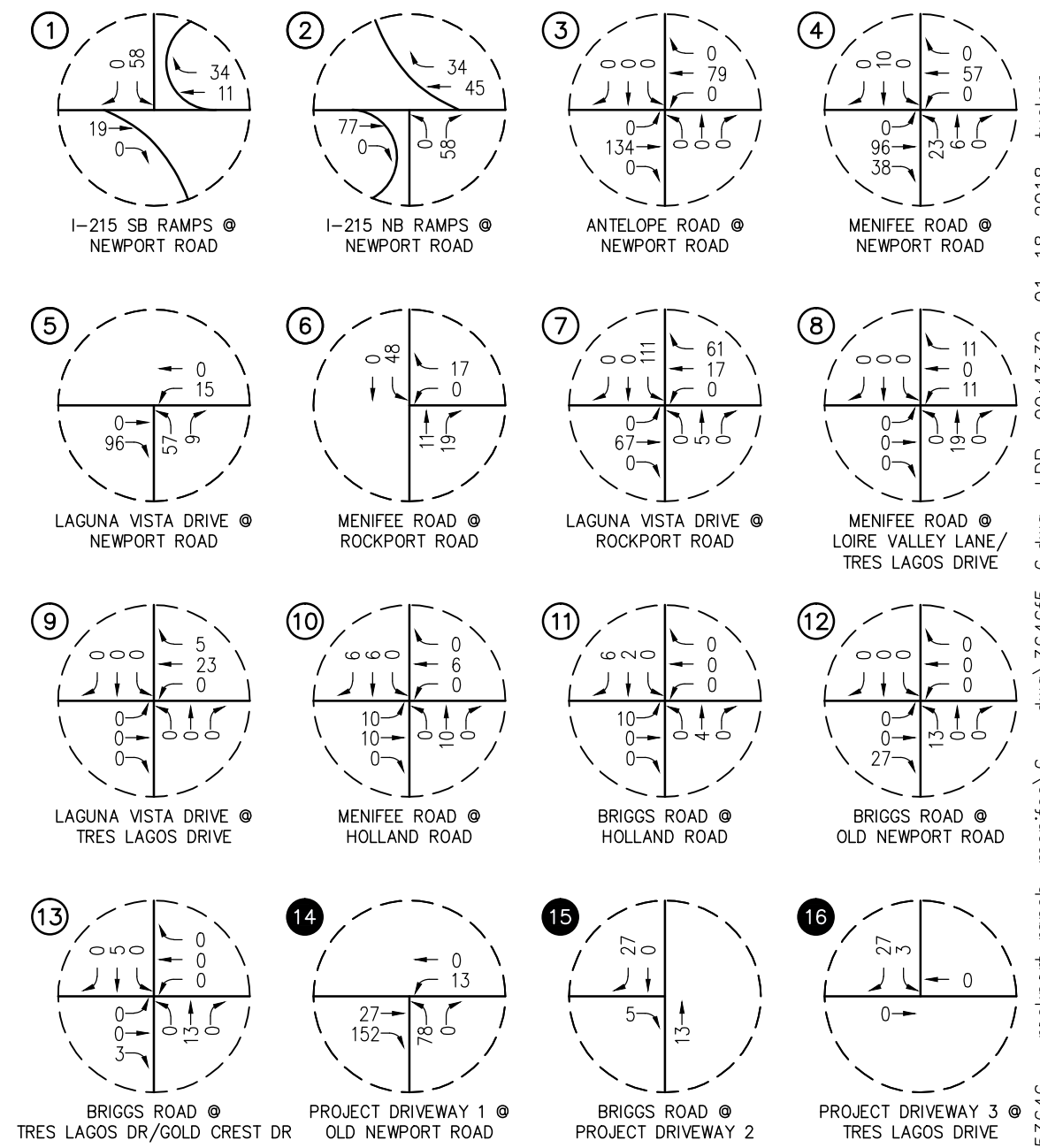
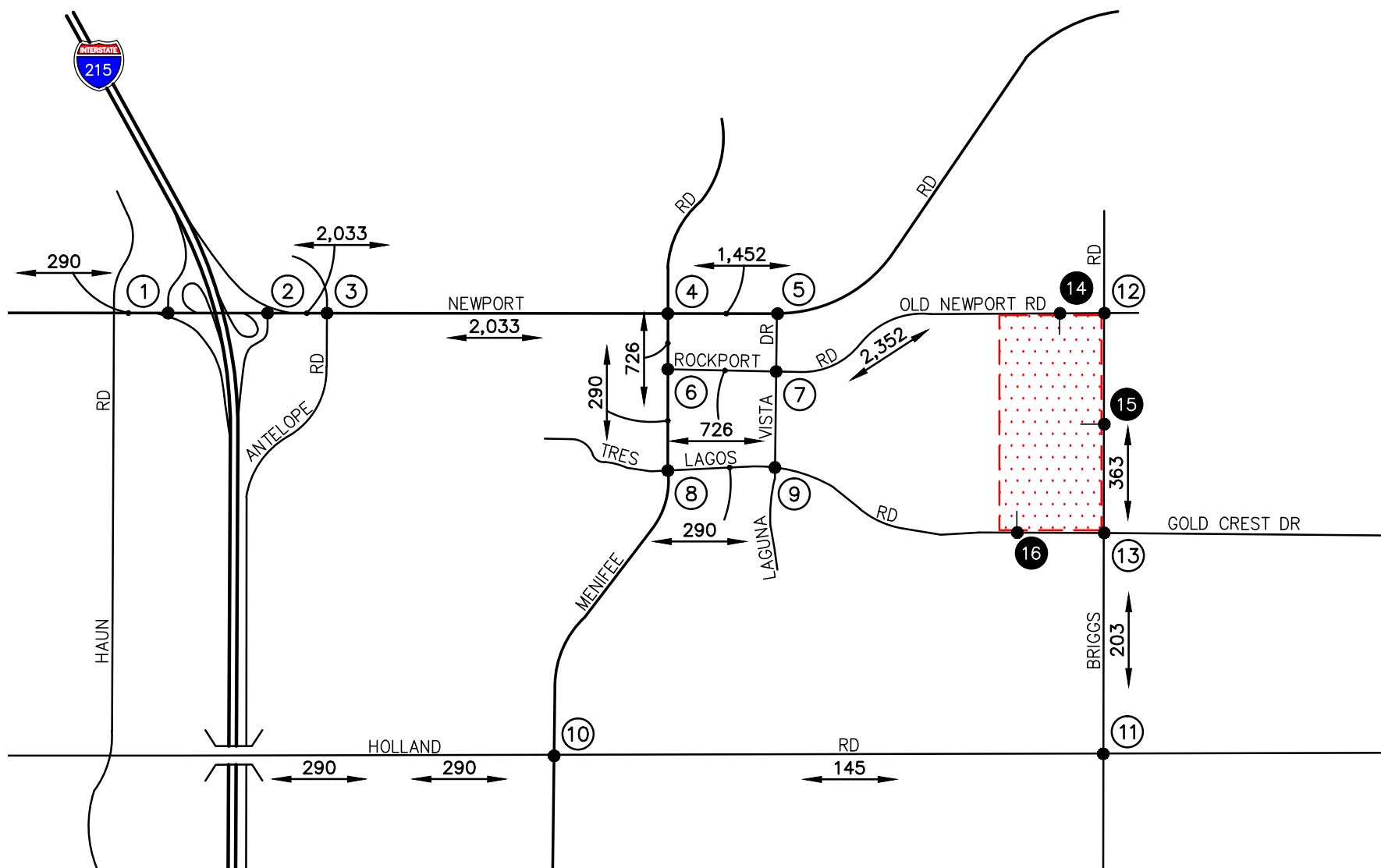


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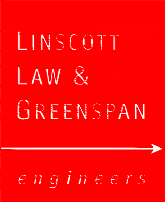


- KEY**
- # = STUDY INTERSECTION
 - # = PROJECT SITE
 - # = FUTURE INTERSECTION

FIGURE 5-5
PROJECT ONLY AM PEAK HOUR TRAFFIC VOLUMES
(WITH HOLLAND ROAD OVERCROSSING)
 ROCKPORT RANCH, MENIFEE



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- KEY**
- = STUDY INTERSECTION
 - = PROJECT SITE
 - = FUTURE INTERSECTION
 - = DAILY TRAFFIC VOLUMES

FIGURE 5-6
PROJECT ONLY PM PEAK HOUR AND DAILY TRAFFIC VOLUMES
(WITH HOLLAND ROAD OVERCROSSING)
 ROCKPORT RANCH, MENIFEE

6.0 FUTURE TRAFFIC CONDITIONS

6.1 Existing With Project Traffic Volumes

The estimates of Project generated traffic volumes were added to the Existing traffic conditions to develop traffic projections for the Existing With Project traffic conditions. *Figures 6-1* and *6-2* present the anticipated AM and PM peak hour Existing With Project traffic volumes, respectively, at the key study intersections. In addition, *Figure 6-2* also presents the daily traffic volumes for the key study roadway segments. It should be noted that the Existing With Project traffic condition is based on the Without Holland Road Overcrossing roadway network.

6.2 Existing With Ambient Growth Year 2020 With Project Traffic Volumes

Traffic growth estimates have been calculated using an ambient growth factor. The ambient growth factor is intended to include unknown and future cumulative in the study area, as well as account for regular growth in traffic volumes due to the development of projects outside the study area.

For the Project horizon Year 2020, the application of the two percent (2%) annual growth rate to baseline Year 2016 traffic volumes results in an eight percent (8%) growth in existing baseline volumes at the key study intersections and roadway segments.

The estimates of Project generated traffic volumes were added to the Existing With Ambient Growth Year 2020 traffic conditions to develop traffic projections for the Existing With Ambient Growth With Project traffic conditions. *Figures 6-3* and *6-4* present the anticipated AM and PM peak hour Existing With Ambient Growth With Project traffic volumes, respectively, at the key study intersections. In addition, *Figure 6-4* also presents the daily traffic volumes for the key study roadway segments. It should be noted that the Existing With Ambient Growth Year 2020 With Project traffic condition is based on the With Holland Road Overcrossing roadway network.

6.3 Travel Demand Model Methodology

The Year 2040 traffic volume forecasts were obtained through utilization of the travel demand model developed by Iteris, Inc. for the City of Menifee, which is consistent with the SCAG/RivTAM model. Further, because the Holland Road Overcrossing roadway network is included in the Year 2040 roadway network, but is not part of the existing roadway network, the Year 2020 traffic volume forecasts were derived using interpolation between Year 2016 and year 2040.

6.3.1 Volume Adjustment

Using the City of Menifee travel demand model, projected traffic volumes were obtained at each intersection. The first step is to obtain the approach and departure volumes from the model for each leg of the analyzed intersections. The next step is to determine the difference between the base year peak hour model volumes and the Year 2040 peak hour model volumes. This “difference” represents the projected growth in traffic on each approach from the base year to the Year 2040 using the City of Menifee Model.

6.3.2 B-turn Methodology

The base year turning movement counts for each intersection must be converted to approach and departure volumes for each leg of the intersection. Once the base counts are in this format, the difference between the Year 2040 model and base model are then added to the base year counts for each corresponding approach and departure volume. This step provides the adjusted volumes that will be used to determine the Buildout turning movement volumes. The next process in the forecasting of future turning volumes applies the B-turn methodology. The B-turn methodology is generally described in the “*National Cooperative Highway Research Program Report (NCHRP) 255: Highway Traffic Data for Urbanized Area Project Planning and Design*”, Chapter 8. The B-turn method uses the base year turning percentages (from traffic counts) and proceeds through an iterative computational technique to produce a final set of future year turning volumes. The computations involve alternatively balancing the rows (approaches) and the columns (departures) of a turning movement matrix until an acceptable convergence is obtained. Future year link volumes are fixed using this method and the turning movements are adjusted to match. The results must be checked for reasonableness, and manual adjustments are sometimes necessary.

Finally, it should be noted that all provided volumes are from a Citywide level model that was not specifically developed for analysis of individual intersection turning movements. Therefore each projected volume was reviewed carefully and adjustments were applied as warranted based on local conditions and professional judgment.

Copies of the traffic model post-processing worksheets and a detailed description of the traffic volume derivation are contained in **Appendix B**. Please note that the post-processing methodology utilized in this report is consistent with SCAG requirements.

6.4 Existing With Ambient Growth Year 2020 With Cumulative With Project Traffic Volumes

Year 2020 traffic volumes were determined by interpolating between the base year traffic volumes and Year 2040 traffic volumes through utilization of the City of Menifee Travel Demand Model. The projected volumes were reviewed carefully and adjustments were applied as warranted based on local conditions and professional judgment. Copies of the traffic model post-processing worksheets for Year 2020 and a detailed description of the traffic volume derivation are contained in **Appendix B**.

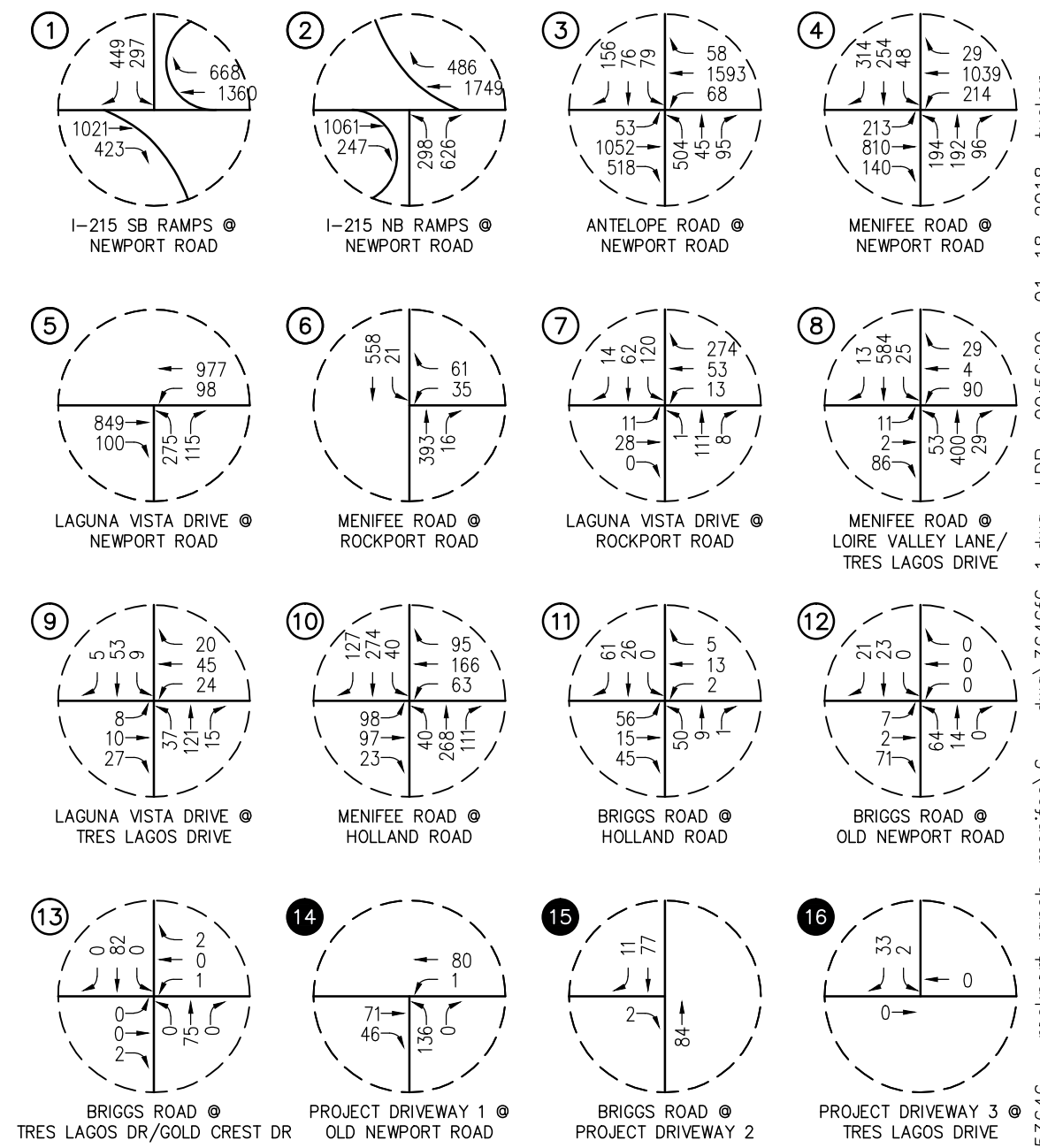
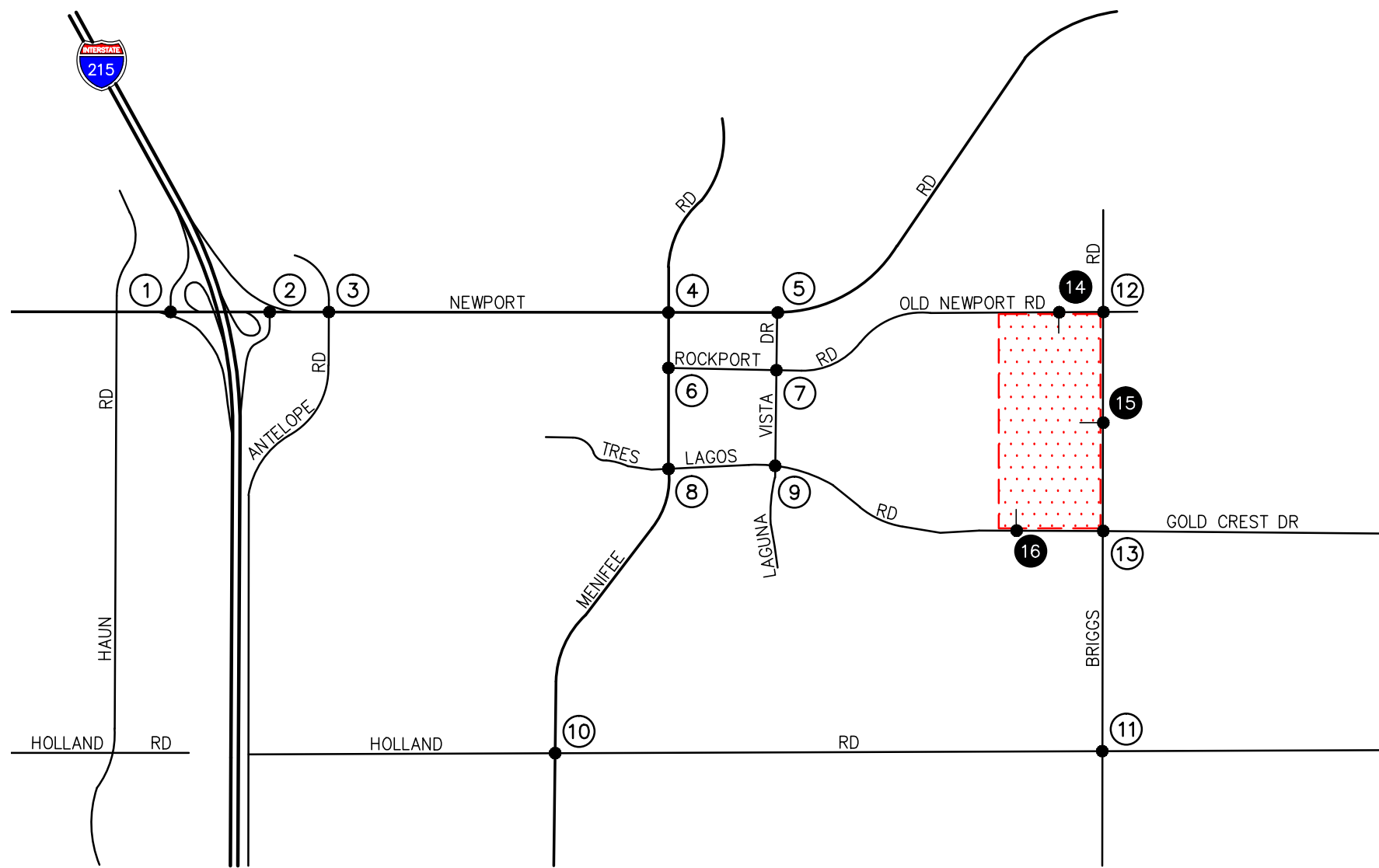
Figures 6-5 and **6-6** present Existing With Ambient Growth Year 2020 With Cumulative With Project AM and PM peak hour traffic volumes at the key study intersections, respectively. In addition, **Figure 6-6** also presents the daily traffic volumes for the key study roadway segments.

6.5 Existing With Ambient Growth Year 2040 With Cumulative With Project Traffic Volumes

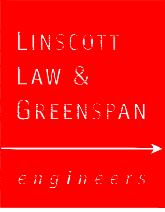
Year 2040 traffic volume forecasts were determined through utilization of the City of Menifee Travel Demand Model, which were prepared by Iteris, Inc. The future Year 2040 traffic volumes were post-processed based on the relationship of the base year validation model run output to the base year ground traffic counts. The projected volume was reviewed carefully and adjustments were applied as warranted based on local conditions and professional judgment. Copies of the traffic

model post-processing worksheets for Year 2040 and a detailed description of the traffic volume derivation are contained in *Appendix B*.

Figures 6-7 and **6-8** present Existing With Ambient Growth Year 2040 With Cumulative With Project AM and PM peak hour traffic volumes at the key study intersections, respectively *Figure 6-8* also presents the daily traffic volumes for the key study roadway segments.

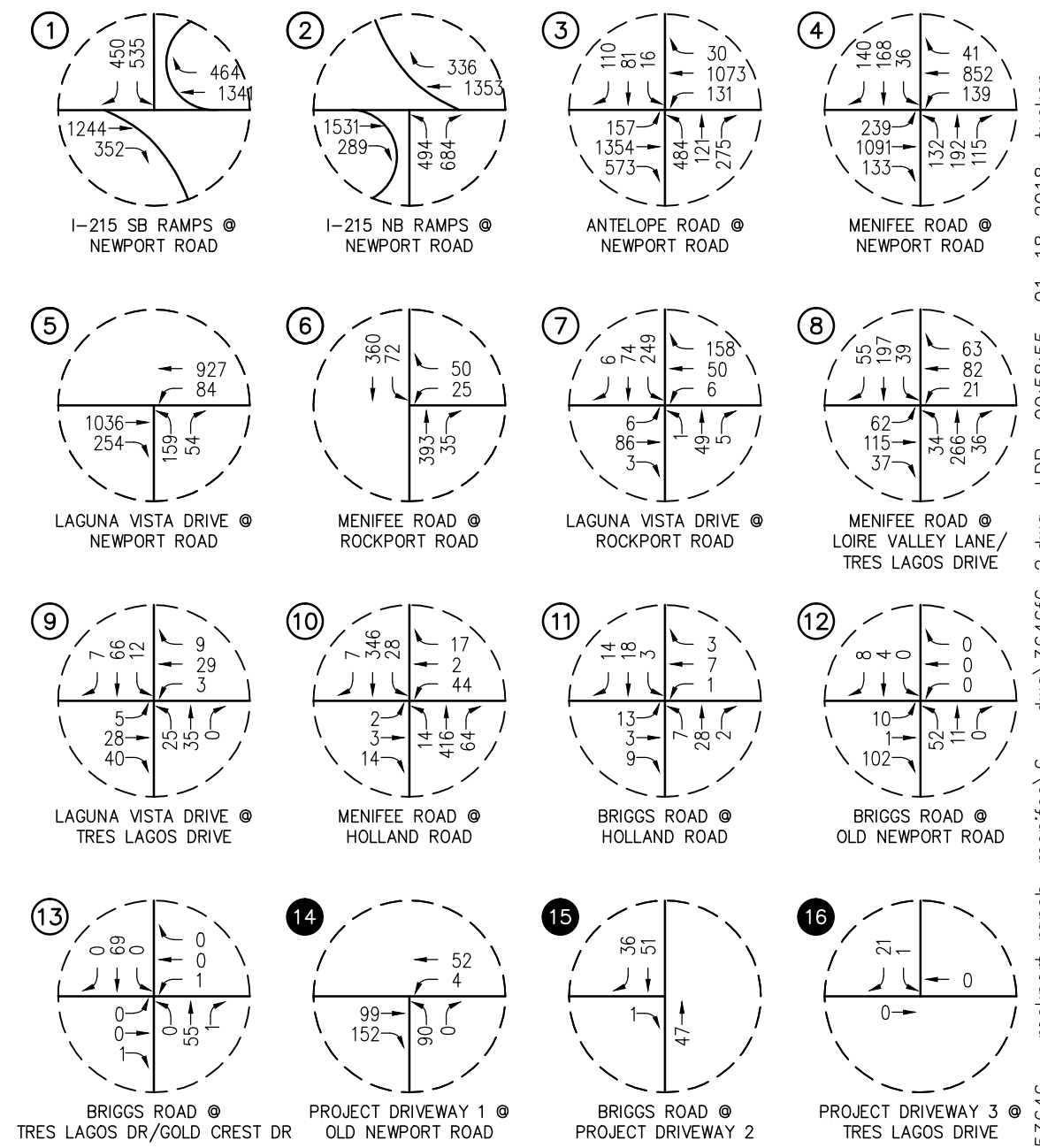
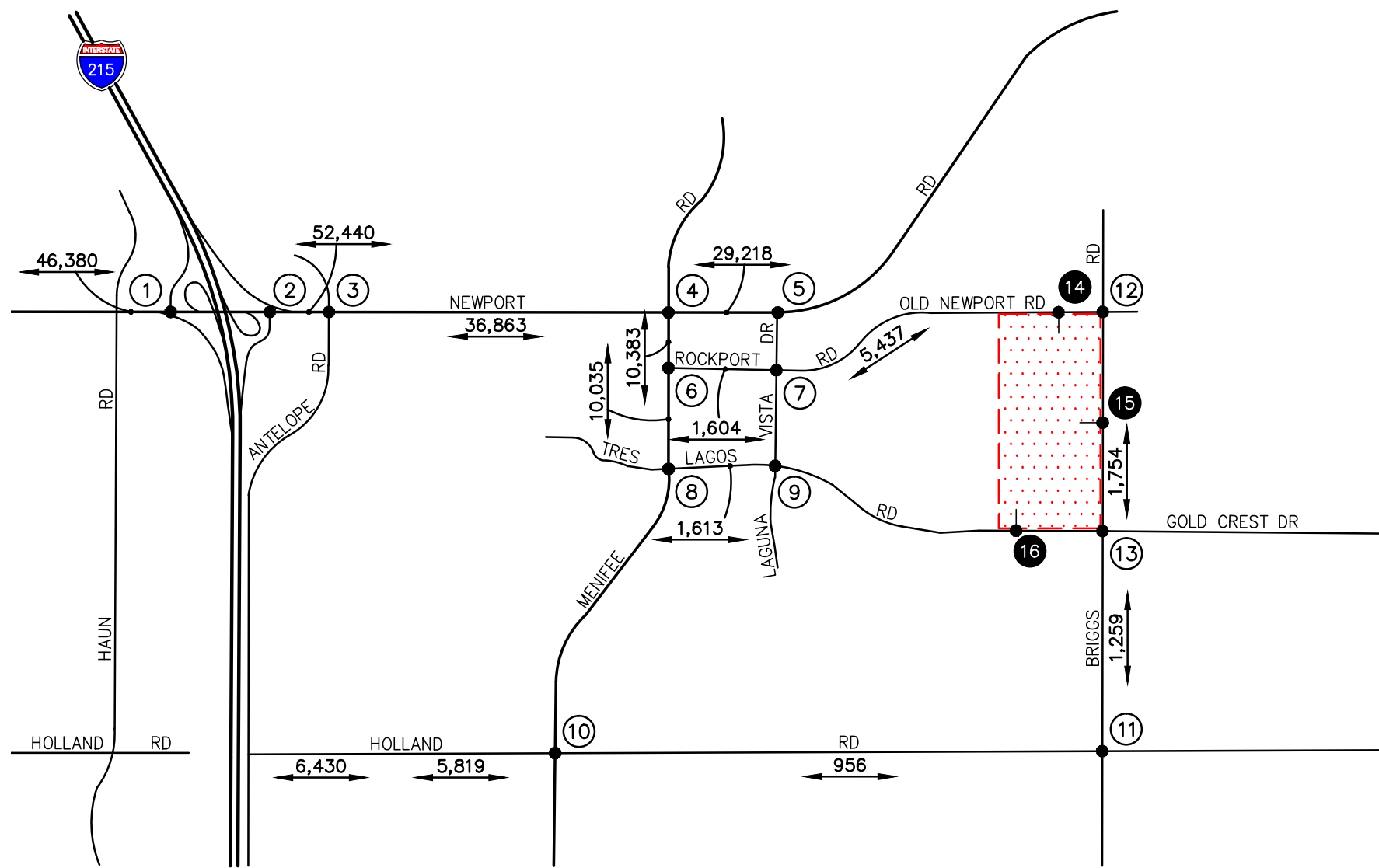


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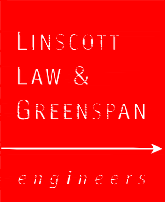


- KEY**
- ① = STUDY INTERSECTION
 - ▨ = PROJECT SITE
 - = FUTURE INTERSECTION

FIGURE 6-1
EXISTING WITH PROJECT
AM PEAK HOUR TRAFFIC VOLUMES
 ROCKPORT RANCH, MENIFEE

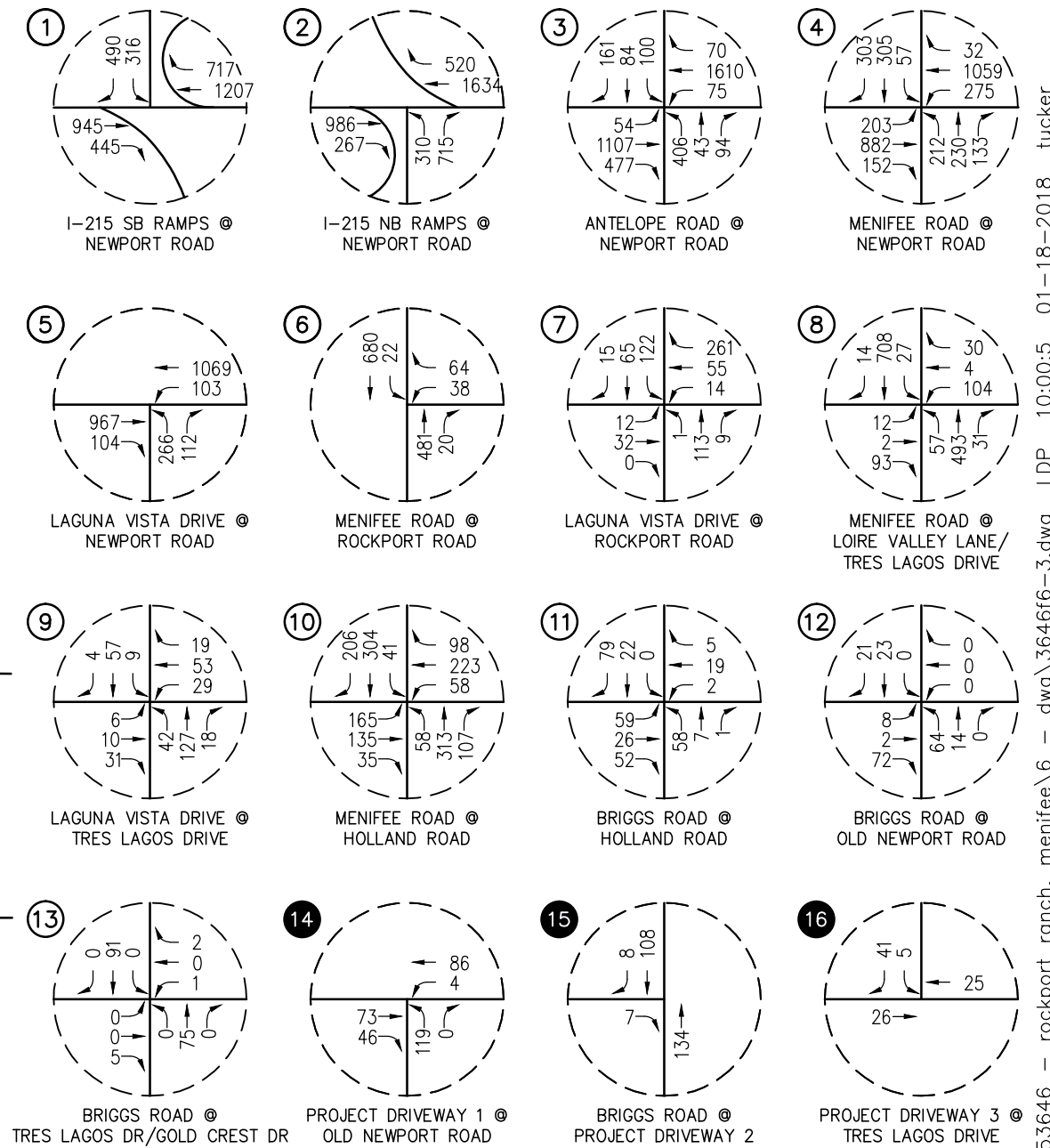
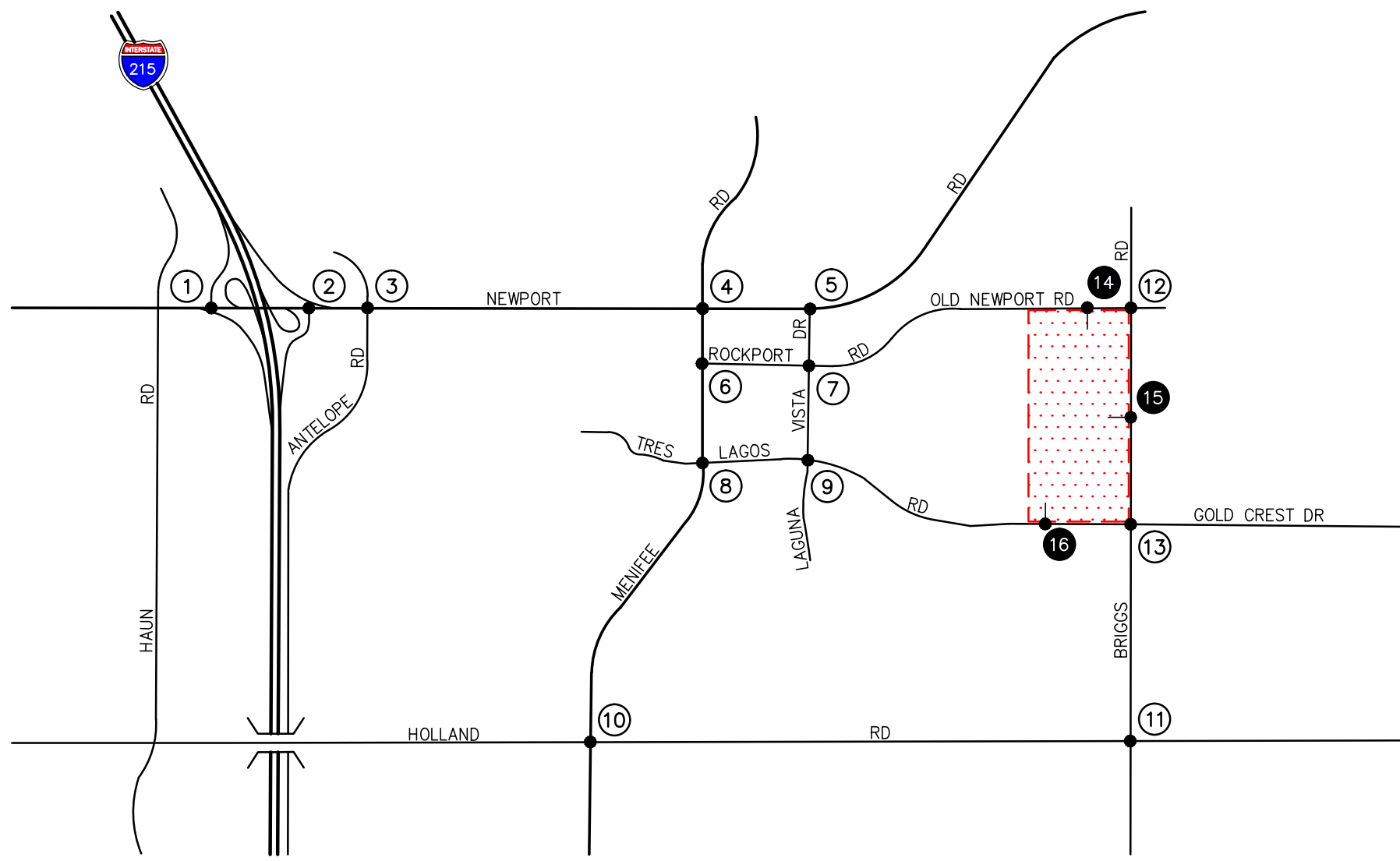


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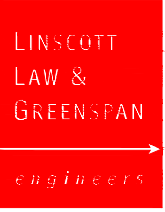


- KEY**
- ⊙ = STUDY INTERSECTION
 - ▨ = PROJECT SITE
 - ⦿ = FUTURE INTERSECTION
 - XX,XXX = DAILY TRAFFIC VOLUMES

FIGURE 6-2
EXISTING WITH PROJECT PM PEAK HOUR AND DAILY TRAFFIC VOLUMES
 ROCKPORT RANCH, MENIFEE

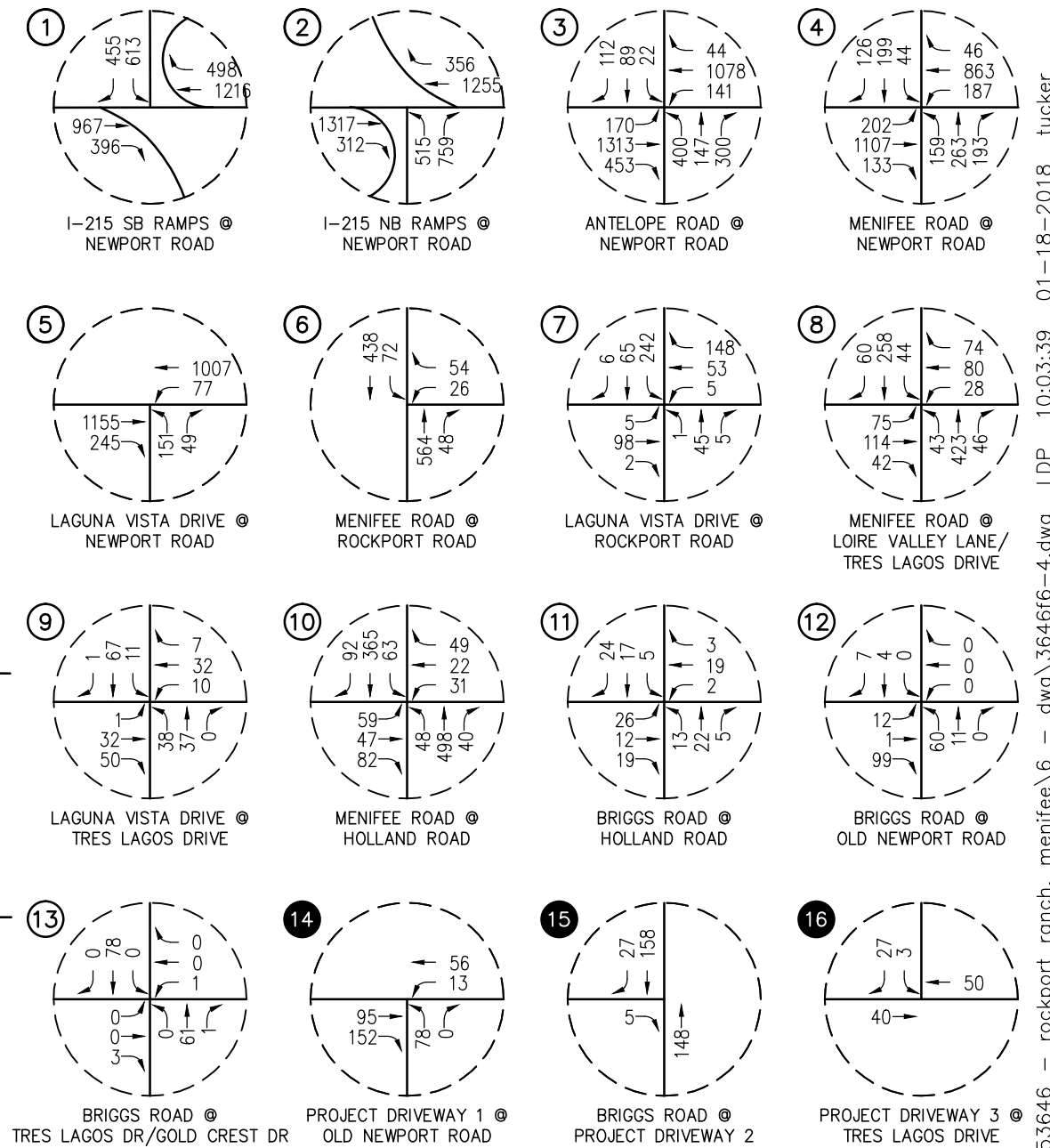
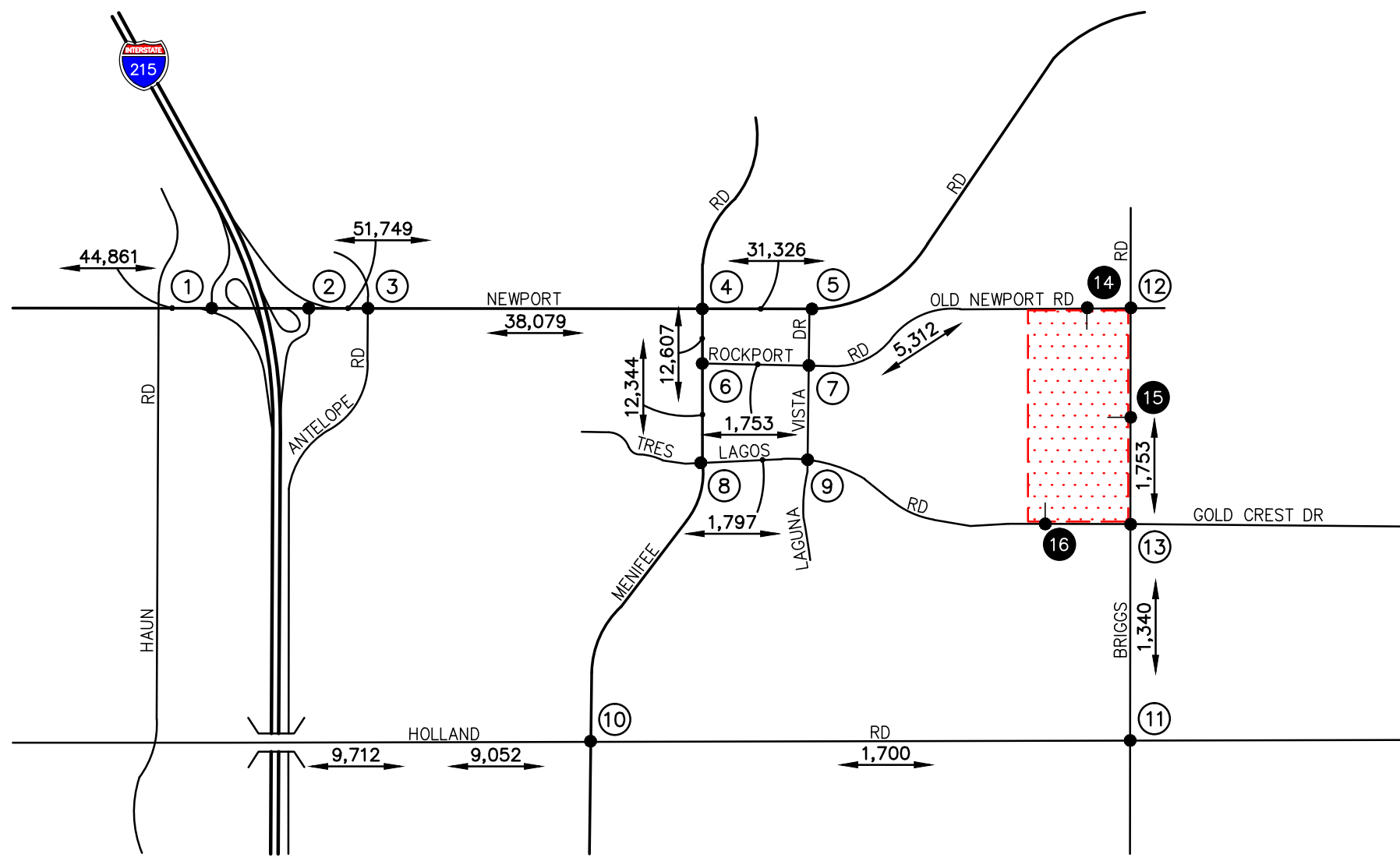


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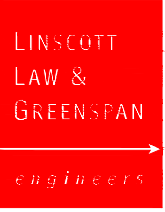


- KEY**
- ⊙ = STUDY INTERSECTION
 - ▨ = PROJECT SITE
 - = FUTURE INTERSECTION

FIGURE 6-3
YEAR 2020 EXISTING WITH AMBIENT GROWTH WITH PROJECT AM PEAK HOUR TRAFFIC VOLUMES
 ROCKPORT RANCH, MENIFEE

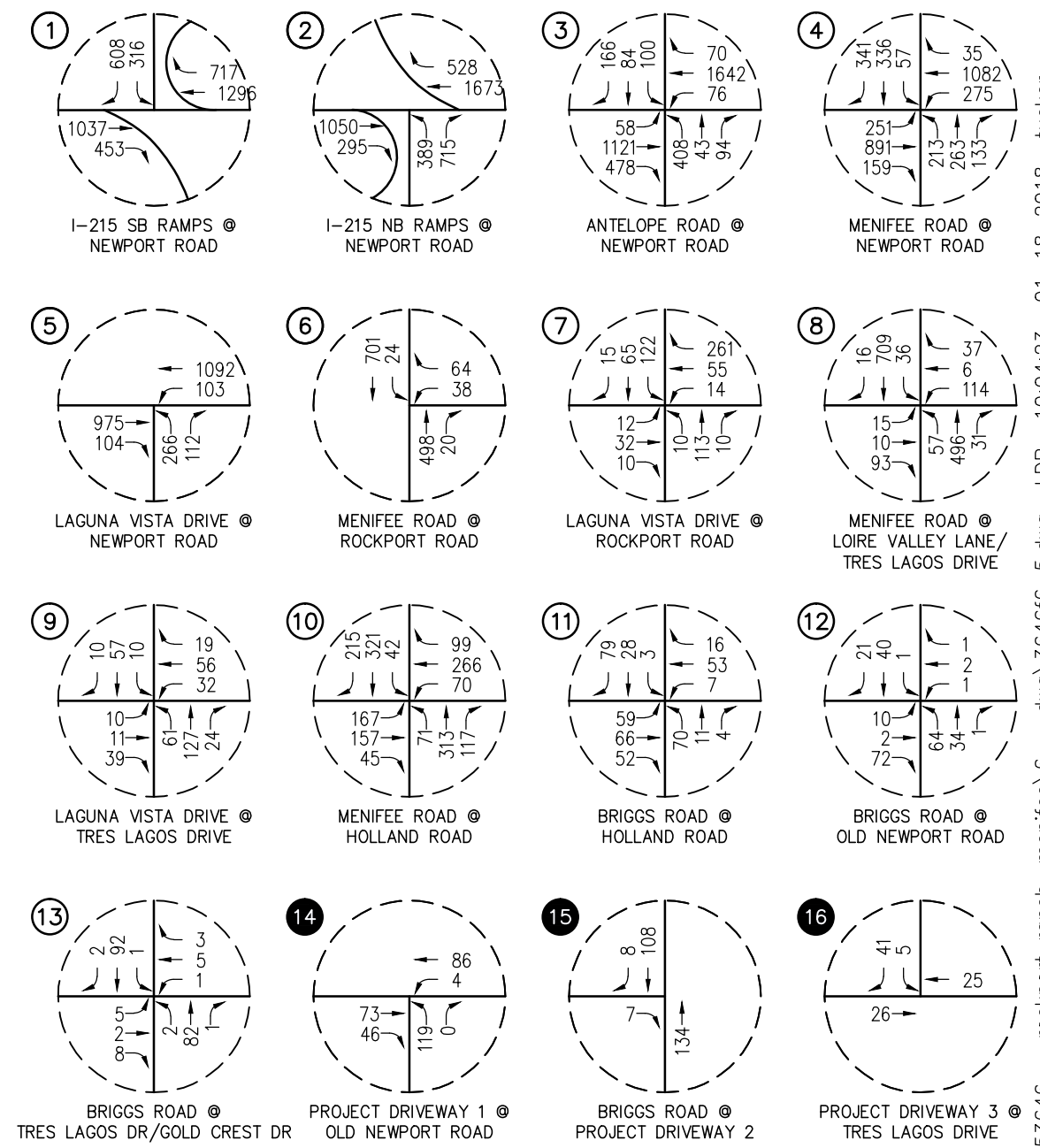
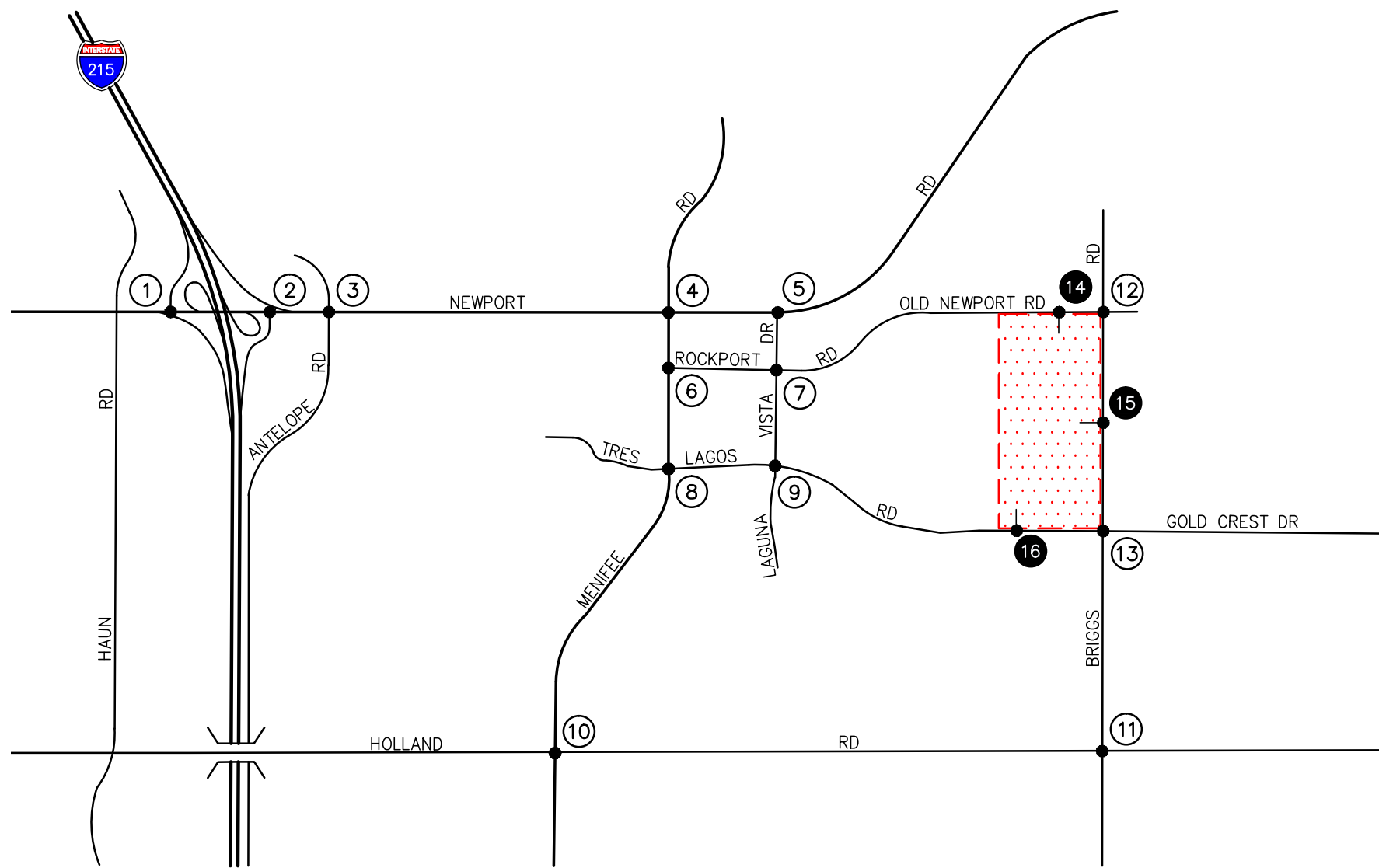


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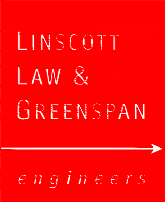


- KEY**
- ⊙ = STUDY INTERSECTION
 - ▨ = PROJECT SITE
 - ⊙ = FUTURE INTERSECTION
 - ↔_{XX,XXX} = DAILY TRAFFIC VOLUMES

FIGURE 6-4
YEAR 2020 EXISTING WITH AMBIENT GROWTH WITH PROJECT PM PEAK HOUR AND DAILY TRAFFIC VOLUMES
 ROCKPORT RANCH, MENIFEE

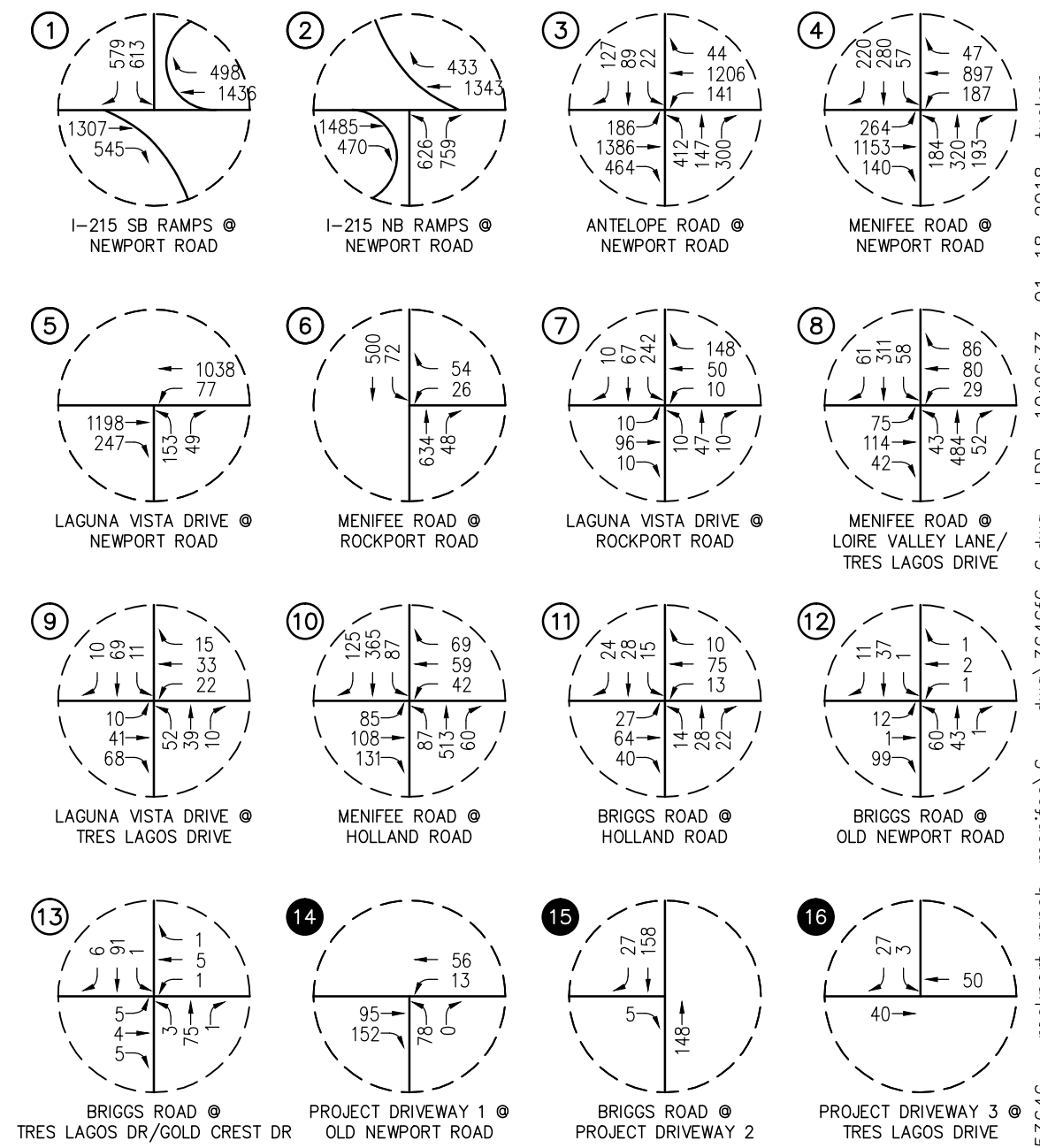
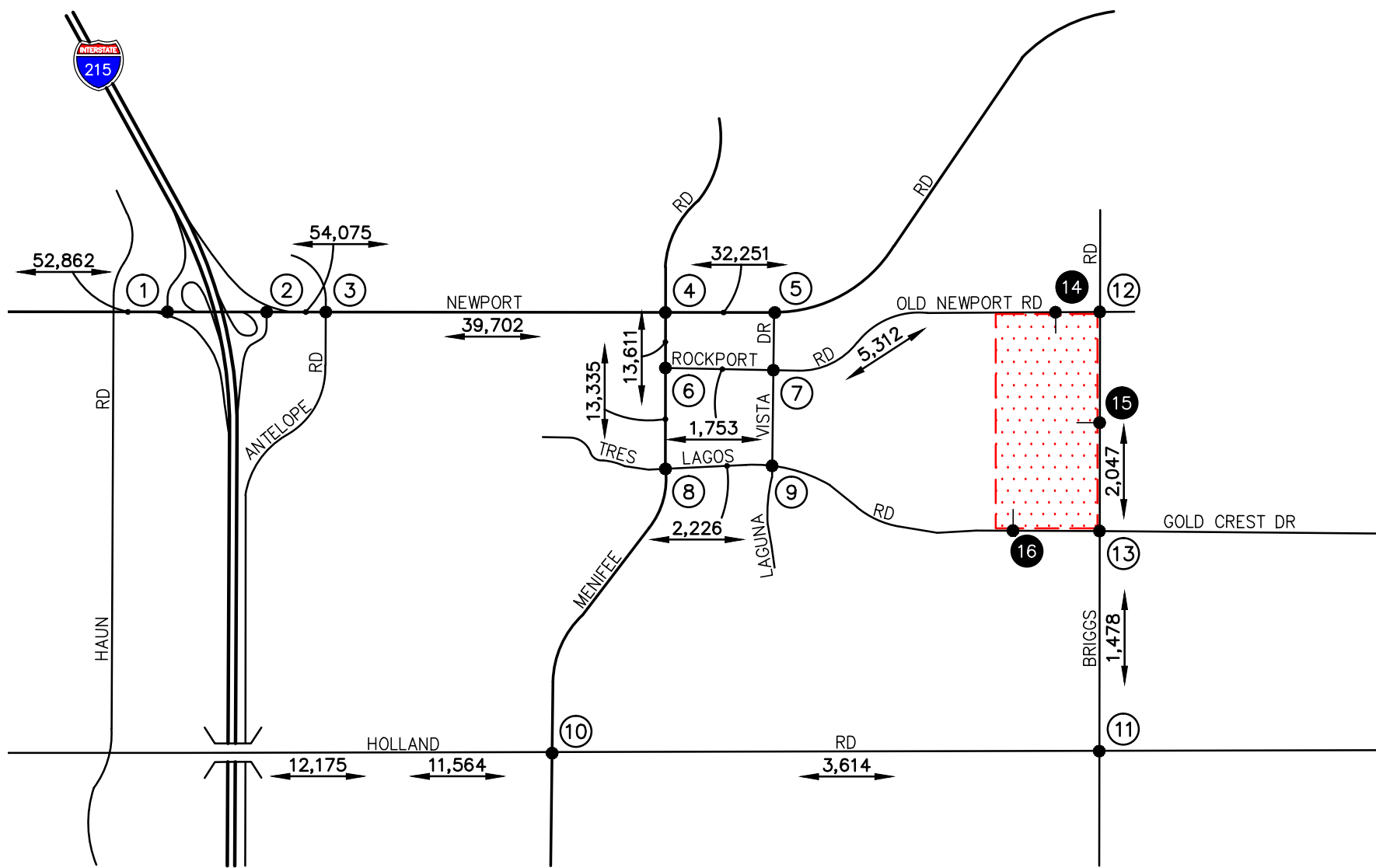


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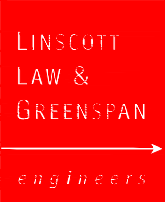


- KEY**
- # = STUDY INTERSECTION
 - # = PROJECT SITE
 - # = FUTURE INTERSECTION

FIGURE 6-5
YEAR 2020 EXISTING WITH AMBIENT GROWTH WITH CUMULATIVE WITH PROJECT AM PEAK HOUR TRAFFIC VOLUMES
 ROCKPORT RANCH, MENIFEE

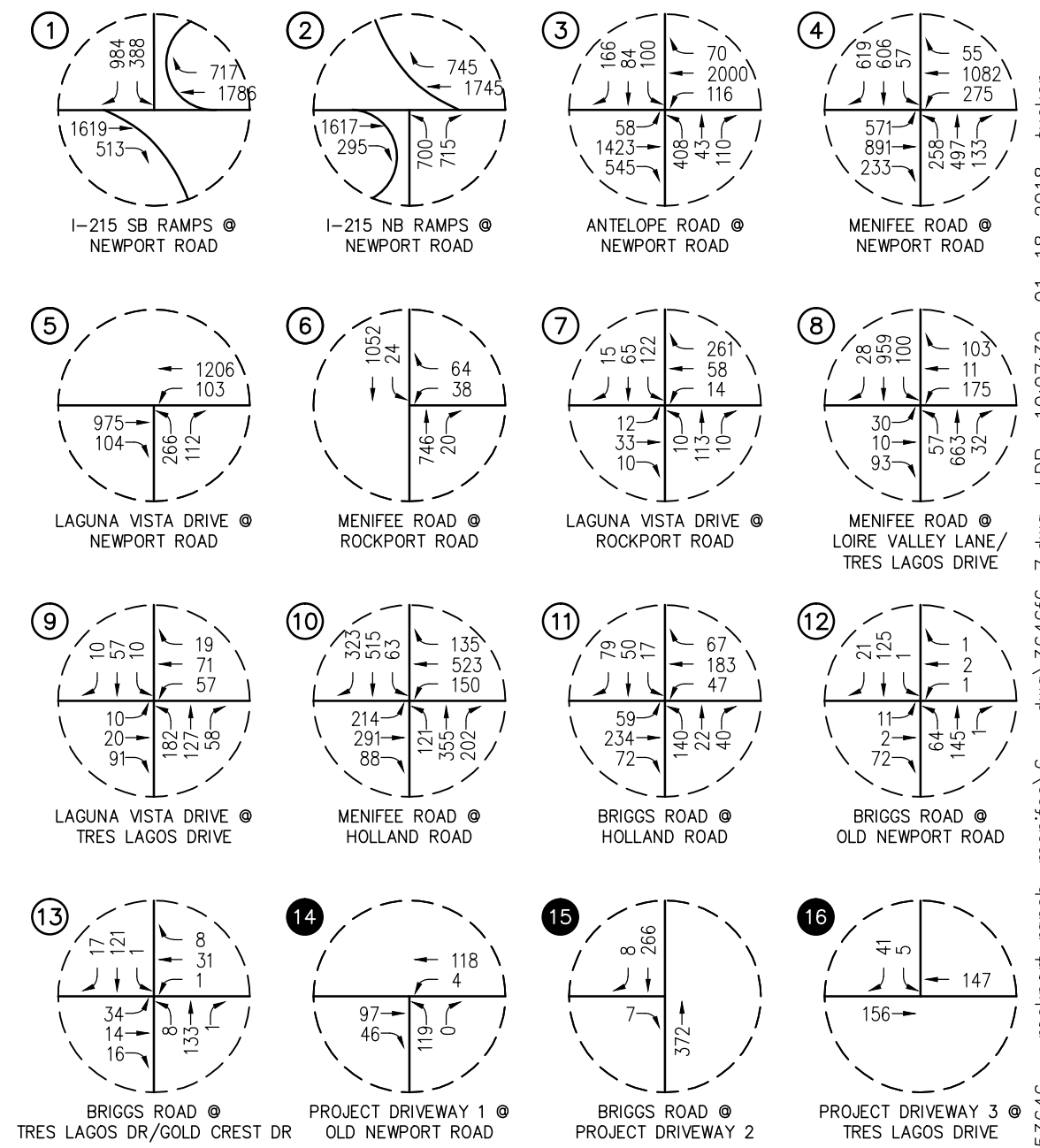
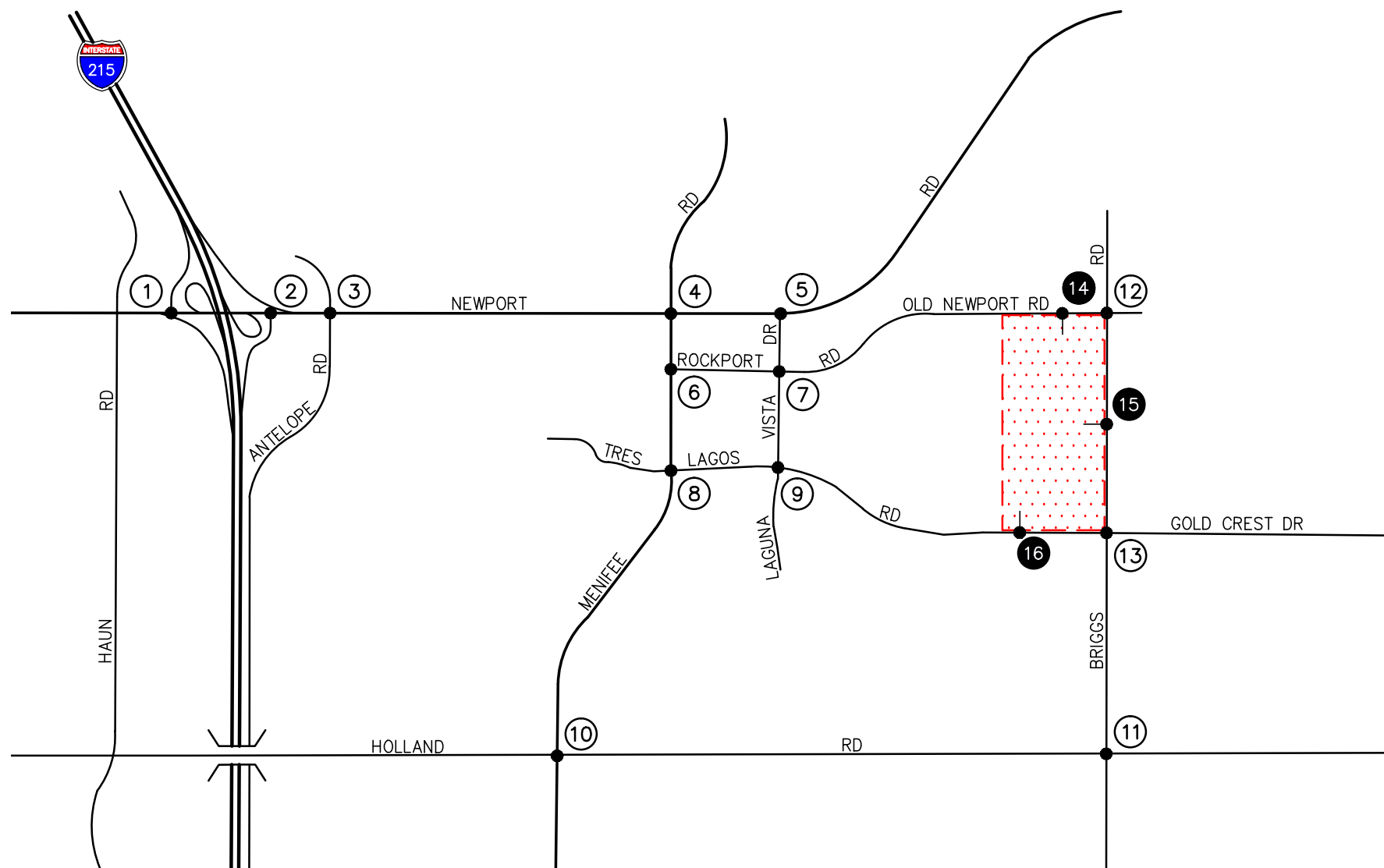


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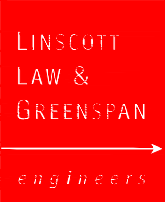


- KEY**
- = STUDY INTERSECTION
 - = PROJECT SITE
 - = FUTURE INTERSECTION
 - = DAILY TRAFFIC VOLUMES

FIGURE 6-6
YEAR 2020 EXISTING WITH AMBIENT GROWTH WITH CUMULATIVE WITH PROJECT PM PEAK HOUR AND DAILY TRAFFIC VOLUMES
 ROCKPORT RANCH, MENIFEE

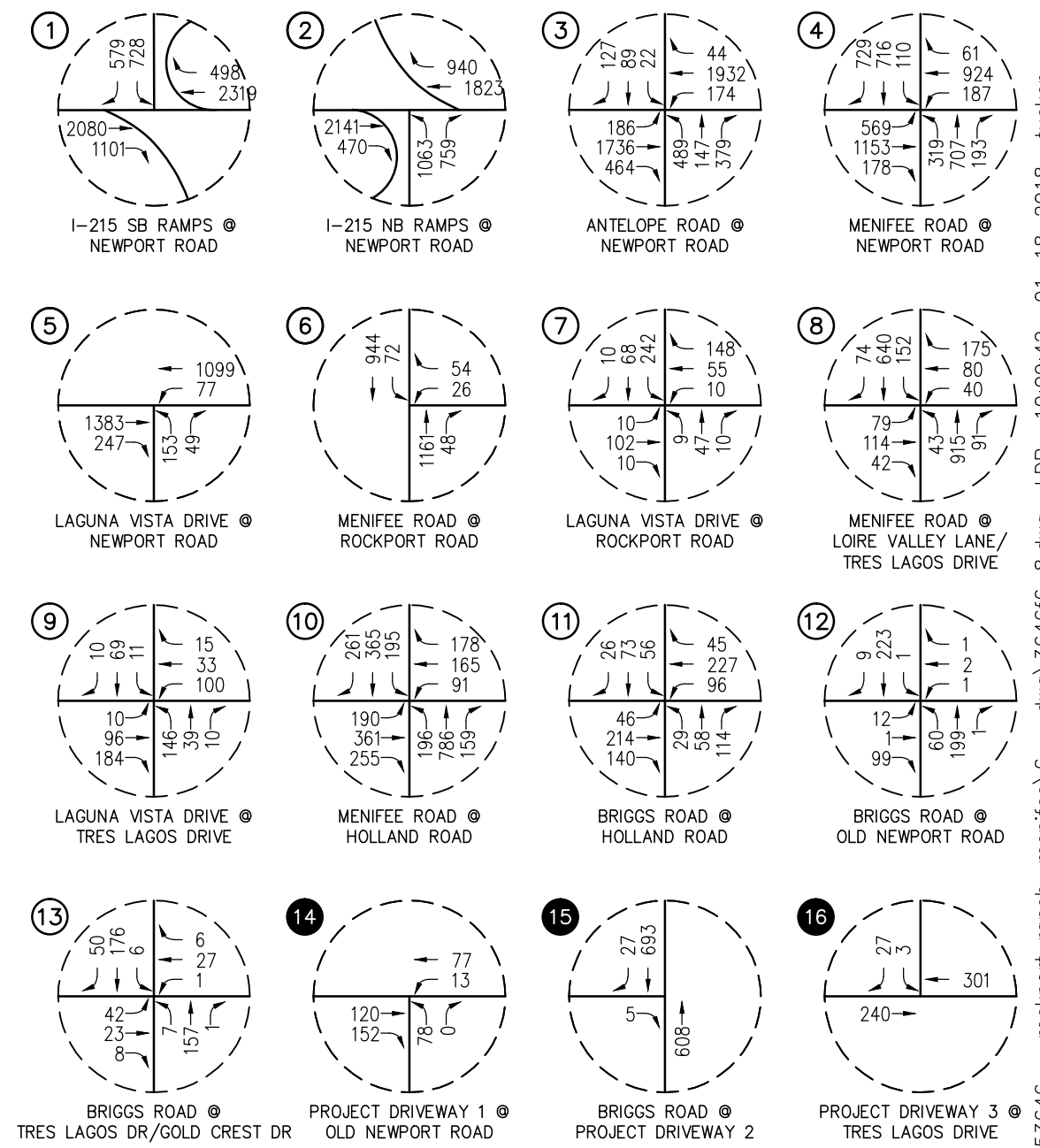
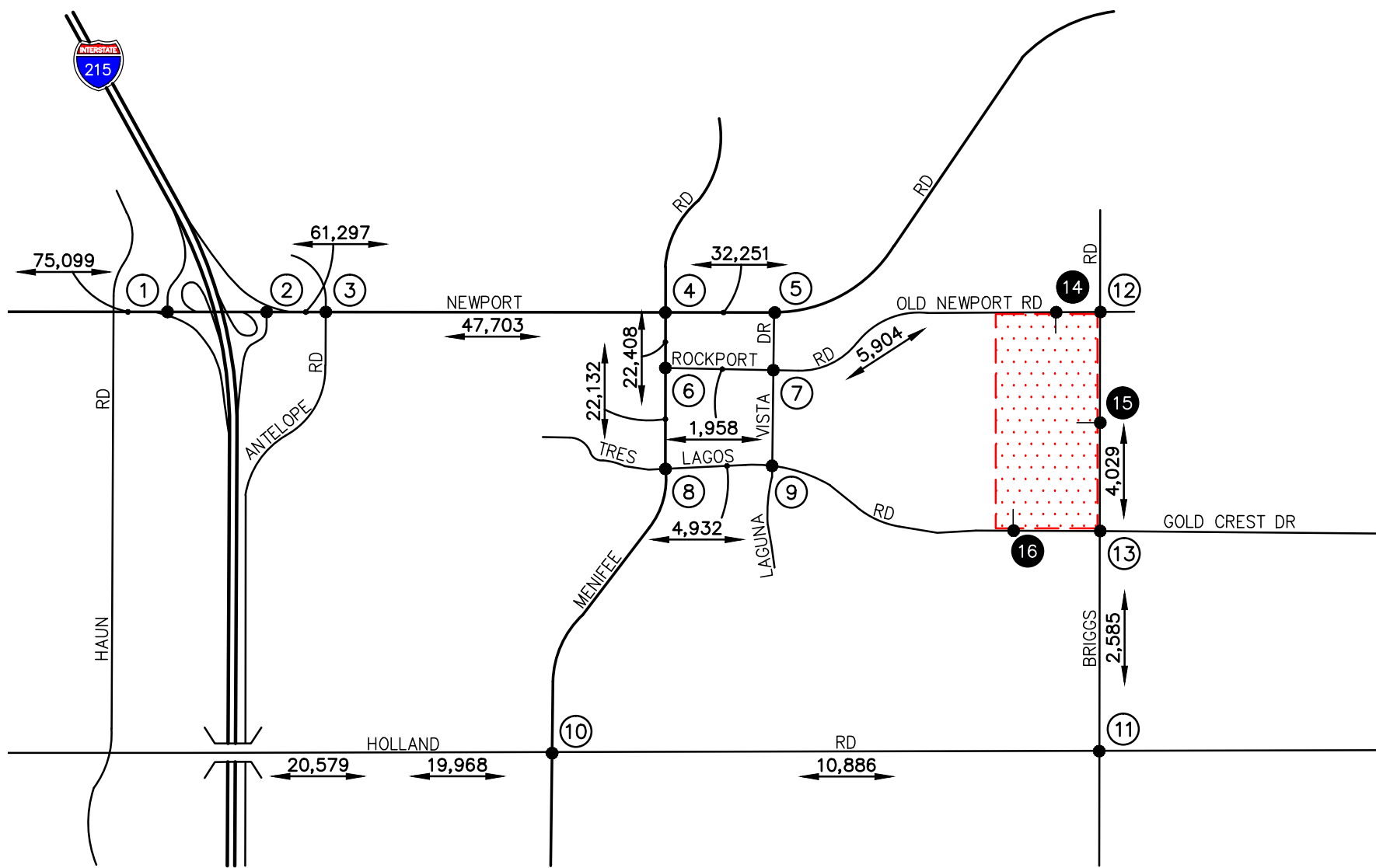


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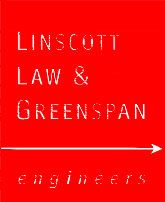


- KEY**
- = STUDY INTERSECTION
 - = PROJECT SITE
 - = FUTURE INTERSECTION

FIGURE 6-7
YEAR 2040 EXISTING WITH AMBIENT GROWTH WITH CUMULATIVE WITH PROJECT AM PEAK HOUR TRAFFIC VOLUMES
 ROCKPORT RANCH, MENIFE



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- KEY**
- = STUDY INTERSECTION
 - = PROJECT SITE
 - = FUTURE INTERSECTION
 - = DAILY TRAFFIC VOLUMES

FIGURE 6-8
YEAR 2040 EXISTING WITH AMBIENT GROWTH WITH CUMULATIVE WITH PROJECT PM PEAK HOUR AND DAILY TRAFFIC VOLUMES
 ROCKPORT RANCH, MENIFEE

7.0 EXISTING WITH PROJECT CONDITIONS TRAFFIC IMPACT ANALYSIS

The existing conditions analysis establishes the basis for the future forecasts for the Project. This analysis was based on existing intersection and roadway segment counts. The existing conditions analysis reflects these counts as well as existing lane configurations for all analyzed intersections and roadway segments.

7.1 Existing Conditions Intersection Capacity Analysis

Table 7-1 summarizes the existing peak hour service level calculations for the key study intersections based on existing traffic volumes and current street geometry. Review of **Table 7-1** indicates that based on the HCM method of analysis and the City of Menifee LOS criteria brought forward to this report, all thirteen (13) key existing study intersections currently operate at acceptable levels of service (LOS C or better) during the AM and PM peak hours.

Appendix C contains the Existing Traffic Conditions Delay/LOS calculation worksheets for the key study intersections.

7.2 Existing With Project Conditions Intersection Capacity Analysis

Review of column (2) of **Table 7-2** shows that all thirteen (13) key study intersections are forecast to operate at acceptable levels of service (LOS D or better) with the addition of Project traffic during the AM and PM peak hours for the Existing With Project traffic conditions, based on the LOS impact criteria mentioned in this report.

Appendix D contains the Existing With Project Traffic Conditions Delay/LOS calculation worksheets for the key study intersections.

TABLE 7-1
EXISTING CONDITIONS PEAK HOUR INTERSECTION CAPACITY ANALYSIS SUMMARY⁸

Key Intersection	Minimum Acceptable LOS	Time Period	Control Type	(1) Existing Traffic Conditions	
				Delay (s/v)	LOS
1. I-215 Southbound Ramps at Newport Road	D	AM	2Ø Traffic	16.8	B
		PM	Signal	18.6	B
2. I-215 Northbound Ramps at Newport Road	D	AM	2Ø Traffic	18.2	B
		PM	Signal	21.3	C
3. Antelope Road at Newport Road	D	AM	8Ø Traffic	26.6	C
		PM	Signal	26.3	C
4. Menifee Road at Newport Road	D	AM	8Ø Traffic	33.0	C
		PM	Signal	23.3	C
5. Laguna Vista Drive at Rockport Road	D	AM	3Ø Traffic	9.7	A
		PM	Signal	8.5	A
6. Menifee Road at Rockport Road	D	AM	3Ø Traffic	6.2	A
		PM	Signal	6.4	A
7. Laguna Vista Drive at Rockport Road	D	AM	All-Way	9.0	A
		PM	Stop	9.0	A
8. Menifee Road at Loire Valley Lane/Tres Lagos Drive	D	AM	5Ø Traffic	13.9	B
		PM	Signal	11.2	B
9. Laguna Vista Drive at Tres Lagos Drive	D	AM	All-Way	8.7	A
		PM	Stop	7.6	A
10. Menifee Road at Holland Road	D	AM	All-Way	12.7	B
		PM	Stop	11.1	B
11. Briggs Road at Holland Road	D	AM	Two-Way	11.7	B
		PM	Stop	9.3	A
12. Briggs Road at Old Newport Road	D	AM	All-Way	7.6	A
		PM	Stop	7.3	A
13. Briggs Road at Tres Lagos Drive/Gold Crest Drive	D	AM	Two-Way	9.0	A
		PM	Stop	9.3	A

Notes:

- s/v = seconds per vehicle (delay)
- LOS = Level of Service, please refer to *Tables 3-1* and *3-2* for the LOS definitions
- **Bold Delay/LOS values** indicate adverse service levels based on the LOS standards mentioned in this report.

⁸ Appendix C contains the Delay/LOS calculation worksheets for all study intersections.

TABLE 7-2
EXISTING WITH PROJECT CONDITIONS PEAK HOUR INTERSECTION CAPACITY ANALYSIS SUMMARY⁹

Key Intersection	Minimum Acceptable LOS	Time Period	(1) Existing Traffic Conditions		(2) Existing With Project Traffic Conditions		(3) Significant Impact	(4) Existing With Project With Improvements	
			Delay (s/v)	LOS	Delay (s/v)	LOS	Yes/No	Delay (s/v)	LOS
1. I-215 Southbound Ramps at Newport Road	D	AM	16.8	B	17.0	B	No	--	--
		PM	18.6	B	19.2	B	No	--	--
2. I-215 Northbound Ramps at Newport Road	D	AM	18.2	B	18.2	B	No	--	--
		PM	21.3	C	22.5	C	No	--	--
3. Antelope Road at Newport Road	D	AM	26.6	C	27.5	C	No	--	--
		PM	26.3	C	28.8	C	No	--	--
4. Menifee Road at Newport Road	D	AM	33.0	C	35.2	D	No	--	--
		PM	23.3	C	24.1	C	No	--	--
5. Laguna Vista Drive at Rockport Road	D	AM	9.7	A	11.4	B	No	--	--
		PM	8.5	A	9.7	A	No	--	--
6. Menifee Road at Rockport Road	D	AM	6.2	A	6.9	A	No	--	--
		PM	6.4	A	7.4	A	No	--	--
7. Laguna Vista Drive at Rockport Road	D	AM	9.0	A	11.2	B	No	--	--
		PM	9.0	A	12.8	B	No	--	--

Notes:

- s/v = seconds per vehicle (delay)
- LOS = Level of Service, please refer to *Tables 3-1* and *3-2* for the LOS definitions
- **Bold Delay/LOS values** indicate adverse service levels based on the LOS standards mentioned in this report.

⁹ *Appendices C and D* contain the Delay/LOS calculation worksheets for all study intersections.

TABLE 7-2 (CONTINUED)
EXISTING WITH PROJECT CONDITIONS PEAK HOUR INTERSECTION CAPACITY ANALYSIS SUMMARY¹⁰

Key Intersection	Minimum Acceptable LOS	Time Period	(1) Existing Traffic Conditions		(2) Existing With Project Traffic Conditions		(3) Significant Impact	(4) Existing With Project With Improvements	
			Delay (s/v)	LOS	Delay (s/v)	LOS	Yes/No	Delay (s/v)	LOS
8. Menifee Road at Loire Valley Lane/Tres Lagos Drive	D	AM	13.9	B	22.9	C	No	--	--
		PM	11.2	B	11.2	B	No	--	--
9. Laguna Vista Drive at Tres Lagos Drive	D	AM	8.7	A	8.9	A	No	--	--
		PM	7.6	A	7.7	A	No	--	--
10. Menifee Road at Holland Road	D	AM	12.7	B	12.8	B	No	--	--
		PM	11.1	B	11.2	B	No	--	--
11. Briggs Road at Holland Road	D	AM	11.7	B	11.7	B	No	--	--
		PM	9.3	A	9.3	A	No	--	--
12. Briggs Road at Old Newport Road	D	AM	7.6	A	7.6	A	No	--	--
		PM	7.3	A	7.5	A	No	--	--
13. Briggs Road at Tres Lagos Drive/Gold Crest Drive	D	AM	9.0	A	9.1	A	No	--	--
		PM	9.3	A	9.5	A	No	--	--

Notes:

- s/v = seconds per vehicle (delay)
- LOS = Level of Service, please refer to *Tables 3-1* and *3-2* for the LOS definitions
- **Bold Delay/LOS values** indicate adverse service levels based on the LOS standards mentioned in this report.

¹⁰ *Appendices C and D* contain the Delay/LOS calculation worksheets for all study intersections.

7.3 Existing Conditions Roadway Segment Analysis

Table 7-3 summarizes the daily level of service results at the fourteen (14) key study roadway segments during a “typical” weekday for the existing traffic conditions. The first column (1) lists the existing number of travel lanes and the second column (2) presents the LOS E daily roadway segment capacities from the *City of Menifee Traffic Impact Guidelines (August 2015)*. The third column (3) indicates the Existing daily traffic volumes, Volume to Capacity (V/C) ratio and LOS.

Review of column (3) of *Table 7-3* indicates that all fourteen (14) key study roadway segments currently operate at an acceptable level of service (LOS B or better).

7.4 Existing With Project Conditions Roadway Segment Analysis

Review of column (4) of **Table 7-4** indicates that all fourteen (14) key study roadway segments are forecast to operate at acceptable levels of service (LOS B or better).

TABLE 7-3
EXISTING CONDITIONS DAILY ROADWAY SEGMENT CAPACITY ANALYSIS SUMMARY

Key Roadway Segment	Roadway Classification	(1)	(2)	(3)		
		Existing Lanes	LOS E Capacity ¹¹ (VPD)	Daily Volume	V/C Ratio	LOS
1. <u>Newport Road</u> between Haun Road and I-215 SB Ramps	Urban Arterial	8D	87,000	45,944	0.528	A
2. <u>Newport Road</u> between I-215 NB Ramps and Antelope Road	Urban Arterial	8D	87,000	50,262	0.578	A
3. <u>Newport Road</u> between Antelope Road and Menifee Road	Urban Arterial	6D	56,300	34,685	0.616	B
4. <u>Newport Road</u> between Menifee Road and Laguna Vista Drive	Urban Arterial	6D	56,300	27,621	0.491	A
5. <u>Menifee Road</u> between Newport Road and Rockport Road	Arterial	4D	37,000	9,657	0.261	A
6. <u>Rockport Road</u> between Menifee Road and Laguna Vista Drive	Collector	2D	13,000	951	0.073	A
7. <u>Old Newport Rd</u> east of Laguna Vista Drive	Collector	2D	13,000	2,867	0.221	A

Notes:

- VPD = Vehicles Per Day
- V/C = Volume to Capacity Ratio
- D = Divided, U = Undivided
- LOS = Level of Service, please refer to *Table 3-3* for the LOS definitions
- **Bold "V/C"/LOS values** indicate adverse service levels based on the LOS standards mentioned in this report.

¹¹ Source: *City of Menifee Traffic Impact Analysis Guideline (August 2015)*.

TABLE 7-3 (CONTINUED)
EXISTING CONDITIONS DAILY ROADWAY SEGMENT CAPACITY ANALYSIS SUMMARY

Key Roadway Segment	Roadway Classification	(1) Existing Lanes	(2) LOS E Capacity ¹² (VPD)	(3) Existing Traffic Conditions		
				Daily Volume	V/C Ratio	LOS
8. <u>Menifee Road</u> between Rockport Road and Tres Lagos Drive	Arterial	4D	37,000	9,817	0.265	A
9. <u>Tres Lagos Drive</u> east of Menifee Road	Secondary	4D	25,900	1,395	0.054	A
10. <u>Briggs Road</u> between Old Newport Road and Tres Lagos Drive	Collector	2U	13,000	1,435	0.110	A
11. <u>Briggs Road</u> between Tres Lagos Drive and Holland Road	Collector	2U	13,000	1,201	0.092	A
12. <u>Holland Road</u> between Antelope Road and Hanover Lane	Major	4D	34,100	6,430	0.189	A
13. <u>Holland Road</u> between Hanover Lane and Menifee Road	Major	4D	34,100	5,819	0.171	A
14. <u>Holland Road</u> between Southshore Drive and Briggs Road	Collector	2U	13,000	956	0.074	A

Notes:

- VPD = Vehicles Per Day
- V/C = Volume to Capacity Ratio
- D = Divided, U = Undivided
- LOS = Level of Service, please refer to *Table 3-3* for the LOS definitions
- **Bold "V/C"/LOS values** indicate adverse service levels based on the LOS standards mentioned in this report.

¹² Source: *City of Menifee Traffic Impact Analysis Guideline (August 2015)*.

TABLE 7-4
EXISTING WITH PROJECT CONDITIONS DAILY ROADWAY SEGMENT CAPACITY ANALYSIS SUMMARY

Key Roadway Segment	Roadway Classification	(1)	(2)	(3)			(4)			(5)		
		Existing Lanes	LOS E Capacity (VPD)	Daily Volume	V/C Ratio	LOS	Daily Volume	V/C Ratio	LOS	Daily Volume	V/C Ratio	LOS
1. <u>Newport Road</u> between Haun Road and I-215 SB Ramps	Urban Arterial	8D	87,000	45,944	0.528	A	46,380	0.533	A	--	--	--
2. <u>Newport Road</u> between I-215 NB Ramps and Antelope Road	Urban Arterial	8D	87,000	50,262	0.578	A	52,440	0.603	B	--	--	--
3. <u>Newport Road</u> between Antelope Road and Menifee Road	Urban Arterial	6D	56,300	34,685	0.616	B	36,863	0.655	B	--	--	--
4. <u>Newport Road</u> between Menifee Road and Laguna Vista Drive	Urban Arterial	6D	56,300	27,621	0.491	A	29,218	0.519	A	--	--	--
5. <u>Menifee Road</u> between Newport Road and Rockport Road	Arterial	4D	37,000	9,657	0.261	A	10,383	0.281	A	--	--	--
6. <u>Rockport Road</u> between Menifee Road and Laguna Vista Drive	Collector	2D	13,000	951	0.073	A	1,604	0.123	A	--	--	--

Notes:

- VPD = Vehicles Per Day
- V/C = Volume to Capacity Ratio
- D = Divided, U = Undivided
- LOS = Level of Service, please refer to *Table 3-3* for the LOS definitions
- **Bold "V/C"/LOS values** indicate adverse service levels based on the LOS standards mentioned in this report.

TABLE 7-4 (CONTINUED)
EXISTING WITH PROJECT CONDITIONS DAILY ROADWAY SEGMENT CAPACITY ANALYSIS SUMMARY

Key Roadway Segment	Roadway Classification	(1)	(2)	(3)			(4)			(5)		
		Existing Lanes	LOS Capacity (VPD)	Daily Volume	V/C Ratio	LOS	Daily Volume	V/C Ratio	LOS	Daily Volume	V/C Ratio	LOS
7. <u>Old Newport Rd east of Laguna Vista Drive</u>	Collector	2D	13,000	2,867	0.221	A	5,437	0.418	A	--	--	--
8. <u>Menifee Road between Rockport Road and Tres Lagos Drive</u>	Arterial	4D	37,000	9,817	0.265	A	10,035	0.271	A	--	--	--
9. <u>Tres Lagos Drive east of Menifee Road</u>	Secondary	4D	25,900	1,395	0.054	A	1,613	0.062	A	--	--	--
10. <u>Briggs Road between Old Newport Road and Tres Lagos Drive</u>	Collector	2U	13,000	1,435	0.110	A	1,754	0.069 ¹³	A	--	--	--
11. <u>Briggs Road between Tres Lagos Drive and Holland Road</u>	Collector	2U	13,000	1,201	0.092	A	1,259	0.097	A	--	--	--
12. <u>Holland Road between Antelope Road and Hanover Lane</u>	Major	4D	34,100	6,430	0.189	A	6,430	0.189	A	--	--	--

Notes:

- VPD = Vehicles Per Day
- V/C = Volume to Capacity Ratio
- D = Divided, U = Undivided
- LOS = Level of Service, please refer to *Table 3-3* for the LOS definitions
- **Bold "V/C"/LOS values** indicate adverse service levels based on the LOS standards mentioned in this report.

¹³ The V/C ratio is based on the capacity for a three-lane divided major arterial (25,575 VPD). The Project will widen the southbound side of Briggs road along the project frontage to two lanes.

TABLE 7-4 (CONTINUED)
EXISTING WITH PROJECT CONDITIONS DAILY ROADWAY SEGMENT CAPACITY ANALYSIS SUMMARY

Key Roadway Segment	Roadway Classification	(1)	(2)	(3)			(4)			(5)		
		Existing Lanes	LOS Capacity (VPD)	Daily Volume	V/C Ratio	LOS	Daily Volume	V/C Ratio	LOS	Daily Volume	V/C Ratio	LOS
13. <u>Holland Road</u> between Hanover Lane and Menifee Road	Major	4D	34,100	5,819	0.171	A	5,819	0.171	A	--	--	--
14. <u>Holland Road</u> between Southshore Drive and Briggs Road	Collector	2U	13,000	956	0.074	A	956	0.074	A	--	--	--

Notes:

- VPD = Vehicles Per Day
- V/C = Volume to Capacity Ratio
- D = Divided, U = Undivided
- LOS = Level of Service, please refer to *Table 3-3* for the LOS definitions
- **Bold "V/C"/LOS values** indicate adverse service levels based on the LOS standards mentioned in this report.

8.0 EXISTING WITH AMBIENT GROWTH WITH PROJECT CONDITIONS TRAFFIC IMPACT ANALYSIS

The relative impacts of the added Project traffic volumes generated by proposed Project during the AM and PM peak hours, was evaluated based on analysis of future ambient growth operating conditions at the key study intersections and roadway segments with the proposed Project. The previously discussed capacity analysis procedures were utilized to investigate the future Delay/ V/C relationships and service level characteristics at each study intersection and roadway segment. The significance of the potential impacts of the Project at each key intersection and roadway segment was then evaluated using the traffic impact criteria mentioned in this report.

8.1 Existing With Ambient Growth Year 2020 With Project Conditions Intersection Capacity Analysis

Review of *Table 8-1* indicates that for the Existing With Ambient Growth Year 2020 With Project traffic conditions, all thirteen (13) key intersections are forecast to operate at acceptable levels of service during the AM and PM peak hours when compared to the LOS standards defined in this report.

Appendix E contains the Delay/LOS calculation worksheets for the Existing With Ambient Growth Year 2020 With Project Traffic Conditions.

TABLE 8-1

EXISTING WITH AMBIENT GROWTH YEAR 2020 WITH PROJECT CONDITIONS PEAK HOUR INTERSECTION CAPACITY ANALYSIS SUMMARY¹⁴

Key Intersection	Minimum Acceptable LOS	Time Period	(1) Existing Traffic Conditions		(2) Existing With Ambient With Project Traffic Conditions		(3) Significant Impact	(4) Existing With Ambient With Project With Improvements	
			Delay (s/v)	LOS	Delay (s/v)	LOS	Yes/No	Delay (s/v)	LOS
1. I-215 Southbound Ramps at Newport Road	D	AM	16.8	B	14.8	B	No	--	--
		PM	18.6	B	16.8	B	No	--	--
2. I-215 Northbound Ramps at Newport Road	D	AM	18.2	B	16.3	B	No	--	--
		PM	21.3	C	19.2	B	No	--	--
3. Antelope Road at Newport Road	D	AM	26.6	C	25.2	C	No	--	--
		PM	26.3	C	24.4	C	No	--	--
4. Menifee Road at Newport Road	D	AM	33.0	C	37.8	D	No	--	--
		PM	23.3	C	26.1	C	No	--	--
5. Laguna Vista Drive at Rockport Road	D	AM	9.7	A	11.5	B	No	--	--
		PM	8.5	A	9.5	A	No	--	--
6. Menifee Road at Rockport Road	D	AM	6.2	A	7.2	A	No	--	--
		PM	6.4	A	7.7	A	No	--	--
7. Laguna Vista Drive at Rockport Road	D	AM	9.0	A	11.1	B	No	--	--
		PM	9.0	A	12.4	B	No	--	--

Notes:

- s/v = seconds per vehicle (delay)
- LOS = Level of Service, please refer to *Tables 3-1* and *3-2* for the LOS definitions
- **Bold Delay/LOS values** indicate adverse service levels based on the LOS standards mentioned in this report.

¹⁴ *Appendices C and E* contain the Delay/LOS calculation worksheets for all study intersections.

TABLE 8-1 (CONTINUED)
EXISTING WITH AMBIENT GROWTH YEAR 2020 WITH PROJECT CONDITIONS PEAK HOUR INTERSECTION CAPACITY ANALYSIS SUMMARY¹⁵

Key Intersection	Minimum Acceptable LOS	Time Period	(1) Existing Traffic Conditions		(2) Existing With Ambient With Project Traffic Conditions		(3) Significant Impact	(4) Existing With Ambient With Project With Improvements	
			Delay (s/v)	LOS	Delay (s/v)	LOS	Yes/No	Delay (s/v)	LOS
8. Menifee Road at Loire Valley Lane/Tres Lagos Drive	D	AM	13.9	B	27.5	C	No	--	--
		PM	11.2	B	12.0	B	No	--	--
9. Laguna Vista Drive at Tres Lagos Drive	D	AM	8.7	A	9.1	A	No	--	--
		PM	7.6	A	7.8	A	No	--	--
10. Menifee Road at Holland Road	D	AM	12.7	B	14.5	B	No	--	--
		PM	11.1	B	13.4	B	No	--	--
11. Briggs Road at Holland Road	D	AM	11.7	B	12.8	B	No	--	--
		PM	9.3	A	9.7	A	No	--	--
12. Briggs Road at Old Newport Road	D	AM	7.6	A	7.6	A	No	--	--
		PM	7.3	A	7.6	A	No	--	--
13. Briggs Road at Tres Lagos Drive/Gold Crest Drive	D	AM	9.0	A	9.1	A	No	--	--
		PM	9.3	A	9.7	A	No	--	--

Notes:

- s/v = seconds per vehicle (delay)
- LOS = Level of Service, please refer to *Tables 3-1* and *3-2* for the LOS definitions
- **Delay/LOS values** indicate adverse service levels based on the LOS standards mentioned in this report.

¹⁵ *Appendices C and E* contain the Delay/LOS calculation worksheets for all study intersections.

8.2 Existing With Ambient Growth Year 2020 With Project Conditions Roadway Segment Analysis

Table 8-2 summarizes the daily level of service results at the fourteen (14) key study roadway segments during a “typical” weekday for the Existing With Ambient Growth Year 2020 With Project traffic conditions. The first column (1) lists the existing number of travel lanes and the second column (2) presents the LOS E daily roadway segment capacities from the *City of Menifee Traffic Impact Guidelines (August 2015)*. The third column (3) lists the Existing daily traffic volumes, Volume to Capacity (V/C) ratio and LOS, and the fourth column (4) indicates the Existing With Ambient Growth with Project daily traffic volumes, Volume to Capacity (V/C) ratio and LOS.

Review of column (4) of *Table 8-2* indicates that all fourteen (14) key study roadway segments are forecast to operate at an acceptable level of service (LOS B or better) for the Existing With Ambient Growth Year 2020 With Project conditions.

TABLE 8-2

EXISTING WITH AMBIENT GROWTH YEAR 2020 WITH PROJECT CONDITIONS DAILY ROADWAY SEGMENT CAPACITY ANALYSIS SUMMARY

Key Roadway Segment	Roadway Classification	(1)	(2)	(3)			(4)			(5)		
		Existing Lanes	LOS E Capacity (VPD)	Existing Traffic Conditions			Existing With Ambient Growth With Project Traffic Conditions			Existing With Ambient Growth With Project With Improvements		
				Daily Volume	V/C Ratio	LOS	Daily Volume	V/C Ratio	LOS	Daily Volume	V/C Ratio	LOS
1. <u>Newport Road</u> between Haun Road and I-215 SB Ramps	Urban Arterial	8D	87,000	45,944	0.528	A	44,861	0.516	A	--	--	--
2. <u>Newport Road</u> between I-215 NB Ramps and Antelope Road	Urban Arterial	8D	87,000	50,262	0.578	A	51,749	0.595	A	--	--	--
3. <u>Newport Road</u> between Antelope Road and Menifee Road	Urban Arterial	6D	56,300	34,685	0.616	B	38,079	0.676	B	--	--	--
4. <u>Newport Road</u> between Menifee Road and Laguna Vista Drive	Urban Arterial	6D	56,300	27,621	0.491	A	31,326	0.556	A	--	--	--
5. <u>Menifee Road</u> between Newport Road and Rockport Road	Arterial	4D	37,000	9,657	0.261	A	12,607	0.341	A	--	--	--
6. <u>Rockport Road</u> between Menifee Road and Laguna Vista Drive	Collector	2D	13,000	951	0.073	A	1,753	0.135	A	--	--	--

Notes:

- VPD = Vehicles Per Day
- LOS = Level of Service, please refer to *Table 3-3* for the LOS definitions
- V/C = Volume to Capacity Ratio
- **Bold "V/C"/LOS values** indicate adverse service levels based on the LOS standards mentioned in this report
- D = Divided, U = Undivided

TABLE 8-2 (CONTINUED)

EXISTING WITH AMBIENT GROWTH YEAR 2020 WITH PROJECT CONDITIONS DAILY ROADWAY SEGMENT CAPACITY ANALYSIS SUMMARY

Key Roadway Segment	Roadway Classification	(1) Existing Lanes	(2) LOS E Capacity (VPD)	(3) Existing Traffic Conditions			(4) Existing With Ambient Growth With Project Traffic Conditions			(5) Existing With Ambient Growth With Project With Improvements		
				Daily Volume	V/C Ratio	LOS	Daily Volume	V/C Ratio	LOS	Daily Volume	V/C Ratio	LOS
				7. <u>Old Newport Rd east of Laguna Vista Drive</u>	Collector	2D	13,000	2,867	0.221	A	5,312	0.409
8. <u>Menifee Road between Rockport Road and Tres Lagos Drive</u>	Arterial	4D	37,000	9,817	0.265	A	12,344	0.334	A	--	--	--
9. <u>Tres Lagos Drive east of Menifee Road</u>	Secondary	4D	25,900	1,395	0.054	A	1,797	0.069	A	--	--	--
10. <u>Briggs Road between Old Newport Road and Tres Lagos Drive</u>	Collector	2U	13,000	1,435	0.110	A	1,753	0.069 ¹⁶	A	--	--	--
11. <u>Briggs Road between Tres Lagos Drive and Holland Road</u>	Collector	2U	13,000	1,201	0.092	A	1,340	0.103	A	--	--	--
12. <u>Holland Road between Antelope Road and Hanover Lane</u>	Major	4D	34,100	6,430	0.189	A	9,712	0.285	A	--	--	--

Notes:

- VPD = Vehicles Per Day
- LOS = Level of Service, please refer to *Table 3-3* for the LOS definitions
- V/C = Volume to Capacity Ratio
- **Bold "V/C"/LOS values** indicate adverse service levels based on the LOS standards mentioned in this report
- D = Divided, U = Undivided

¹⁶ The V/C ratio is based on the capacity for a three-lane divided major arterial (25,575 VPD). The Project will widen the southbound side of Briggs road along the project frontage to two lanes.

TABLE 8-2 (CONTINUED)

EXISTING WITH AMBIENT GROWTH YEAR 2020 WITH PROJECT CONDITIONS DAILY ROADWAY SEGMENT CAPACITY ANALYSIS SUMMARY

Key Roadway Segment	Roadway Classification	(1)	(2)	(3)			(4)			(5)		
		Existing Lanes	LOS E Capacity (VPD)	Existing Traffic Conditions			Existing With Ambient Growth With Project Traffic Conditions			Existing With Ambient Growth With Project With Improvements		
				Daily Volume	V/C Ratio	LOS	Daily Volume	V/C Ratio	LOS	Daily Volume	V/C Ratio	LOS
13. <u>Holland Road</u> between Hanover Lane and Menifee Road	Major	4D	34,100	5,819	0.171	A	9,052	0.265	A	--	--	--
14. <u>Holland Road</u> between Southshore Drive and Briggs Road	Collector	2U	13,000	956	0.074	A	1,700	0.131	A	--	--	--

Notes:

- VPD = Vehicles Per Day
- V/C = Volume to Capacity Ratio
- D = Divided, U = Undivided
- LOS = Level of Service, please refer to *Table 3-3* for the LOS definitions
- **Bold “V/C”/LOS values** indicate adverse service levels based on the LOS standards mentioned in this report

9.0 EXISTING WITH AMBIENT GROWTH WITH CUMULATIVE WITH PROJECT CONDITIONS TRAFFIC IMPACT ANALYSIS

The relative impacts of the added Project traffic volumes generated by proposed Project during the AM and PM peak hours, was evaluated based on analysis of future ambient growth with cumulative operating conditions at the key study intersections and roadway segments with the proposed Project. The previously discussed capacity analysis procedures were utilized to investigate the future Delay/V/C relationships and service level characteristics at each study intersection and roadway segment. The significance of the potential impacts of the Project at each key intersection and roadway segment was then evaluated using the traffic impact criteria mentioned in this report.

9.1 Existing With Ambient Growth Year 2020 With Cumulative With Project Conditions Intersection Capacity Analysis

Review of **Table 9-1** indicates that for the Existing With Ambient Growth Year 2020 With Cumulative With Project traffic conditions, all thirteen (13) key intersections are forecast to operate at acceptable levels of service during the AM and PM peak hours when compared to the LOS standards defined in this report.

Appendix F contains the Delay/LOS calculation worksheets for the Existing With Ambient Growth Year 2020 With Cumulative With Project Traffic Conditions.

9.2 Existing With Ambient Growth Year 2040 With Cumulative With Project Conditions Intersection Capacity Analysis

Review of **Table 9-2** indicates that for the Existing With Ambient Growth Year 2040 With Cumulative With Project traffic conditions, two (2) of the key intersections are forecast to operate at unacceptable levels of service during the AM and PM peak hours when compared to the LOS standards defined in this report. The remaining eleven (11) key study intersections currently operate at an acceptable level of service during the AM and PM peak hours. The locations operating at an adverse LOS are as follows:

<u>Key Intersection</u>	<u>AM Peak Hour</u>		<u>PM Peak Hour</u>	
	<u>Delay (s/v)</u>	<u>LOS</u>	<u>Delay (s/v)</u>	<u>LOS</u>
4. Menifee Road at Newport Road	65.9	E	80.4	F
11. Briggs Road at Holland Road	44.6	E	52.8	F

Review of column (3) of **Table 9-2** indicates that these two (2) key study intersections will have a significant cumulative impact under the Existing With Ambient Growth Year 2040 With Cumulative With Project traffic conditions when compared to the LOS criteria defined in this report. However, as shown in column (4) of **Table 9-2**, the implementation of recommended mitigation measures at the impacted intersections, mitigates the impacts of the proposed Project. After implementation of the recommended mitigation measures, all the impacted intersections are forecast to operate at an acceptable LOS based on the LOS standards outlined in this report.

Appendix F contains the Delay/LOS calculation worksheets for the Existing With Ambient Growth Year 2040 With Cumulative With Project Traffic Conditions.

TABLE 9-1

EXISTING WITH AMBIENT GROWTH YEAR 2020 WITH CUMULATIVE WITH PROJECT CONDITIONS PEAK HOUR INTERSECTION CAPACITY ANALYSIS SUMMARY¹⁷

Key Intersection	Minimum Acceptable LOS	Time Period	(1) Existing Traffic Conditions		(2) Existing With Ambient With Cumulative With Project Traffic Conditions		(3) Significant Impact	(4) Existing With Ambient With Cumulative With Project With Improvements	
			Delay (s/v)	LOS	Delay (s/v)	LOS	Yes/No	Delay (s/v)	LOS
1. I-215 Southbound Ramps at Newport Road	D	AM	16.8	B	15.6	B	No	--	--
		PM	18.6	B	18.2	B	No	--	--
2. I-215 Northbound Ramps at Newport Road	D	AM	18.2	B	16.9	B	No	--	--
		PM	21.3	C	20.6	C	No	--	--
3. Antelope Road at Newport Road	D	AM	26.6	C	26.0	C	No	--	--
		PM	26.3	C	28.7	C	No	--	--
4. Menifee Road at Newport Road	D	AM	33.0	C	40.3	D	No	--	--
		PM	23.3	C	30.8	C	No	--	--
5. Laguna Vista Drive at Rockport Road	D	AM	9.7	A	11.5	B	No	--	--
		PM	8.5	A	9.5	A	No	--	--
6. Menifee Road at Rockport Road	D	AM	6.2	A	6.9	A	No	--	--
		PM	6.4	A	7.7	A	No	--	--
7. Laguna Vista Drive at Rockport Road	D	AM	9.0	A	10.9	B	No	--	--
		PM	9.0	A	11.1	B	No	--	--

Notes:

- s/v = seconds per vehicle (delay)
- LOS = Level of Service, please refer to *Tables 3-1* and *3-2* for the LOS definitions
- **Bold Delay/LOS values** indicate adverse service levels based on the LOS standards mentioned in this report.

¹⁷ *Appendices C and F* contain the Delay/LOS calculation worksheets for all study intersections.

TABLE 9-1 (CONTINUED)

EXISTING WITH AMBIENT GROWTH YEAR 2020 WITH CUMULATIVE WITH PROJECT CONDITIONS PEAK HOUR INTERSECTION CAPACITY ANALYSIS SUMMARY¹⁸

Key Intersection	Minimum Acceptable LOS	Time Period	(1) Existing Traffic Conditions		(2) Existing With Ambient With Cumulative With Project Traffic Conditions		(3) Significant Impact	(4) Existing With Ambient With Cumulative With Project With Improvements	
			Delay (s/v)	LOS	Delay (s/v)	LOS	Yes/No	Delay (s/v)	LOS
8. Menifee Road at Loire Valley Lane/Tres Lagos Drive	D	AM	13.9	B	15.3	B	No	--	--
		PM	11.2	B	12.2	B	No	--	--
9. Laguna Vista Drive at Tres Lagos Drive	D	AM	8.7	A	8.7	A	No	--	--
		PM	7.6	A	8.1	A	No	--	--
10. Menifee Road at Holland Road	D	AM	12.7	B	13.3	B	No	--	--
		PM	11.1	B	14.1	B	No	--	--
11. Briggs Road at Holland Road	D	AM	11.7	B	12.2	B	No	--	--
		PM	9.3	A	10.7	B	No	--	--
12. Briggs Road at Old Newport Road	D	AM	7.6	A	7.5	A	No	--	--
		PM	7.3	A	7.6	A	No	--	--
13. Briggs Road at Tres Lagos Drive/Gold Crest Drive	D	AM	9.0	A	9.7	A	No	--	--
		PM	9.3	A	9.9	A	No	--	--

Notes:

- s/v = seconds per vehicle (delay)
- LOS = Level of Service, please refer to *Tables 3-1* and *3-2* for the LOS definitions
- **Bold Delay/LOS values** indicate adverse service levels based on the LOS standards mentioned in this report.

¹⁸ *Appendices C and F* contain the Delay/LOS calculation worksheets for all study intersections.

TABLE 9-2

EXISTING WITH AMBIENT GROWTH YEAR 2040 WITH CUMULATIVE WITH PROJECT CONDITIONS PEAK HOUR INTERSECTION CAPACITY ANALYSIS SUMMARY¹⁹

Key Intersection	Minimum Acceptable LOS	Time Period	(1) Existing Traffic Conditions		(2) Existing With Ambient With Cumulative With Project Traffic Conditions		(3) Significant Impact	(4) Existing With Ambient With Cumulative With Project With Improvements	
			Delay (s/v)	LOS	Delay (s/v)	LOS	Yes/No	Delay (s/v)	LOS
1. I-215 Southbound Ramps at Newport Road	D	AM	16.8	B	21.2	C	No	--	--
		PM	18.6	B	20.7	C	No	--	--
2. I-215 Northbound Ramps at Newport Road	D	AM	18.2	B	20.0	C	No	--	--
		PM	21.3	C	27.7	C	No	--	--
3. Antelope Road at Newport Road	D	AM	26.6	C	25.7	C	No	--	--
		PM	26.3	C	31.1	C	No	--	--
4. Menifee Road at Newport Road	D	AM	33.0	C	65.9	E	Yes	38.1	D
		PM	23.3	C	80.4	F	Yes	40.7	D
5. Laguna Vista Drive at Rockport Road	D	AM	9.7	A	11.0	B	No	--	--
		PM	8.5	A	9.5	A	No	--	--
6. Menifee Road at Rockport Road	D	AM	6.2	A	7.1	A	No	--	--
		PM	6.4	A	7.5	A	No	--	--
7. Laguna Vista Drive at Rockport Road	D	AM	9.0	A	10.5	B	No	--	--
		PM	9.0	A	10.8	B	No	--	--

Notes:

- s/v = seconds per vehicle (delay)
- LOS = Level of Service, please refer to *Tables 3-1* and *3-2* for the LOS definitions
- **Bold Delay/LOS values** indicate adverse service levels based on the LOS standards mentioned in this report.

¹⁹ *Appendices C and F* contain the Delay/LOS calculation worksheets for all study intersections.

TABLE 9-2 (CONTINUED)

EXISTING WITH AMBIENT GROWTH YEAR 2040 WITH CUMULATIVE WITH PROJECT CONDITIONS PEAK HOUR INTERSECTION CAPACITY ANALYSIS SUMMARY²⁰

Key Intersection	Minimum Acceptable LOS	Time Period	(1)		(2)		(3)	(4)		
			Existing Traffic Conditions		Existing With Ambient With Cumulative With Project Traffic Conditions			Significant Impact	Existing With Ambient With Cumulative With Project With Improvements	
			Delay (s/v)	LOS	Delay (s/v)	LOS			Yes/No	Delay (s/v)
8. Menifee Road at Loire Valley Lane/Tres Lagos Drive	D	AM	13.9	B	26.6	C	No	--	--	
		PM	11.2	B	14.5	B	No	--	--	
9. Laguna Vista Drive at Tres Lagos Drive	D	AM	8.7	A	10.6	B	No	--	--	
		PM	7.6	A	9.5	A	No	--	--	
10. Menifee Road at Holland Road	D	AM	12.7	B	19.5	B	No	--	--	
		PM	11.1	B	20.4	C	No	--	--	
11. Briggs Road at Holland Road	D	AM	11.7	B	44.6	E	Yes	22.8	C	
		PM	9.3	A	52.8	F	Yes	20.7	C	
12. Briggs Road at Old Newport Road	D	AM	7.6	A	8.4	A	No	--	--	
		PM	7.3	A	9.3	A	No	--	--	
13. Briggs Road at Tres Lagos Drive/Gold Crest Drive	D	AM	9.0	A	10.8	B	No	--	--	
		PM	9.3	A	12.1	B	No	--	--	

Notes:

- s/v = seconds per vehicle (delay)
- LOS = Level of Service, please refer to *Tables 3-1* and *3-2* for the LOS definitions
- **Bold Delay/LOS values** indicate adverse service levels based on the LOS standards mentioned in this report.

²⁰ *Appendices C and F* contain the Delay/LOS calculation worksheets for all study intersections.

9.3 Existing With Ambient Growth Year 2020 With Cumulative With Project Conditions Roadway Segment Analysis

Table 9-3 summarizes the daily level of service results at the fourteen (14) key study roadway segments during a “typical” weekday for the Existing With Ambient Growth Year 2020 With Cumulative With Project traffic conditions. The first column (1) lists the existing number of travel lanes and the second column (2) presents the LOS E daily roadway segment capacities from the *City of Menifee Traffic Impact Guidelines (August 2015)*. The third column (3) lists the Existing daily traffic volumes, Volume to Capacity (V/C) ratio and LOS, and the fourth column (4) indicates the Existing With Ambient Growth with Cumulative with Project daily traffic volumes, Volume to Capacity (V/C) ratio and LOS.

Review of column (4) of *Table 9-3* indicates that all fourteen (14) key study roadway segments operate at acceptable level of service (LOS C or better) for the Existing With Ambient Growth Year 2020 With Cumulative With Project conditions.

9.4 Existing With Ambient Growth Year 2040 With Cumulative With Project Conditions Roadway Segment Analysis

Review of column (4) of *Table 9-4* indicates that all fourteen (14) key study roadway segments operate at acceptable level of service (LOS D or better) for the Existing With Ambient Growth Year 2040 With Cumulative With Project conditions.

TABLE 9-3

EXISTING WITH AMBIENT GROWTH YEAR 2020 WITH CUMULATIVE WITH PROJECT CONDITIONS DAILY ROADWAY SEGMENT CAPACITY ANALYSIS SUMMARY

Key Roadway Segment	Roadway Classification	(1)	(2)	(3)			(4)			(5)		
		Existing Lanes	LOS E Capacity (VPD)	Existing Traffic Conditions			Existing With Ambient Growth With Cumulative With Project Traffic Conditions			Existing With Ambient Growth With Cumulative With Project With Improvements		
				Daily Volume	V/C Ratio	LOS	Daily Volume	V/C Ratio	LOS	Daily Volume	V/C Ratio	LOS
1. <u>Newport Road</u> between Haun Road and I-215 SB Ramps	Urban Arterial	8D	87,000	45,944	0.528	A	52,862	0.608	B	--	--	--
2. <u>Newport Road</u> between I-215 NB Ramps and Antelope Road	Urban Arterial	8D	87,000	50,262	0.578	A	54,075	0.622	B	--	--	--
3. <u>Newport Road</u> between Antelope Road and Menifee Road	Urban Arterial	6D	56,300	34,685	0.616	B	39,702	0.705	C	--	--	--
4. <u>Newport Road</u> between Menifee Road and Laguna Vista Drive	Urban Arterial	6D	56,300	27,621	0.491	A	32,251	0.573	A	--	--	--
5. <u>Menifee Road</u> between Newport Road and Rockport Road	Arterial	4D	37,000	9,657	0.261	A	13,611	0.368	A	--	--	--
6. <u>Rockport Road</u> between Menifee Road and Laguna Vista Drive	Collector	2D	13,000	951	0.073	A	1,753	0.135	A	--	--	--

Notes:

- VPD = Vehicles Per Day
- V/C = Volume to Capacity Ratio
- D = Divided, U = Undivided
- LOS = Level of Service, please refer to Table 3-4 for the LOS definitions
- **Bold "V/C"/LOS values** indicate adverse service levels based on the LOS standards mentioned in this report

TABLE 9-3 (CONTINUED)

EXISTING WITH AMBIENT GROWTH YEAR 2020 WITH CUMULATIVE WITH PROJECT CONDITIONS DAILY ROADWAY SEGMENT CAPACITY ANALYSIS SUMMARY

Key Roadway Segment	Roadway Classification Arterial	(1) Existing Lanes	(2) LOS E Capacity (VPD)	(3) Existing Traffic Conditions			(4) Existing With Ambient Growth With Cumulative With Project Traffic Conditions			(5) Existing With Ambient Growth With Cumulative With Project With Improvements		
				Daily Volume	V/C Ratio	LOS	Daily Volume	V/C Ratio	LOS	Daily Volume	V/C Ratio	LOS
				7. <u>Old Newport Rd east of Laguna Vista Drive</u>	Collector	2D	13,000	2,867	0.221	A	5,312	0.409
8. <u>Menifee Road between Rockport Road and Tres Lagos Drive</u>	Arterial	4D	37,000	9,817	0.265	A	13,335	0.360	A	--	--	--
9. <u>Tres Lagos Drive east of Menifee Road</u>	Secondary	4D	25,900	1,395	0.054	A	2,226	0.086	A	--	--	--
10. <u>Briggs Road between Old Newport Road and Tres Lagos Drive</u>	Collector	2U	13,000	1,435	0.110	A	2,047	0.080 ²¹	A	--	--	--
11. <u>Briggs Road between Tres Lagos Drive and Holland Road</u>	Collector	2U	13,000	1,201	0.092	A	1,478	0.114	A	--	--	--
12. <u>Holland Road between Antelope Road and Hanover Lane</u>	Major	4D	34,100	6,430	0.189	A	12,175	0.357	A	--	--	--

Notes:

- VPD = Vehicles Per Day
- V/C = Volume to Capacity Ratio
- D = Divided, U = Undivided
- LOS = Level of Service, please refer to Table 3-4 for the LOS definitions
- **Bold "V/C"/LOS values** indicate adverse service levels based on the LOS standards mentioned in this report

²¹ The V/C ratio is based on the capacity for a three-lane divided major arterial (25,575 VPD). The Project will widen the southbound side of Briggs road along the project frontage to two lanes.

TABLE 9-3 (CONTINUED)

EXISTING WITH AMBIENT GROWTH YEAR 2020 WITH CUMULATIVE WITH PROJECT CONDITIONS DAILY ROADWAY SEGMENT CAPACITY ANALYSIS SUMMARY

Key Roadway Segment	Roadway Classification Arterial	(1)	(2)	(3)			(4)			(5)		
		Existing Lanes	LOS E Capacity (VPD)	Existing Traffic Conditions			Existing With Ambient Growth With Cumulative With Project Traffic Conditions			Existing With Ambient Growth With Cumulative With Project With Improvements		
				Daily Volume	V/C Ratio	LOS	Daily Volume	V/C Ratio	LOS	Daily Volume	V/C Ratio	LOS
13. <u>Holland Road</u> between Hanover Lane and Menifee Road	Major	4D	34,100	5,819	0.171	A	11,564	0.339	A	--	--	--
14. <u>Holland Road</u> between Southshore Drive and Briggs Road	Collector	2U	13,000	956	0.074	A	3,614	0.278	A	--	--	--

Notes:

- VPD = Vehicles Per Day
- V/C = Volume to Capacity Ratio
- D = Divided, U = Undivided
- LOS = Level of Service, please refer to Table 3-4 for the LOS definitions
- **Bold "V/C"/LOS values** indicate adverse service levels based on the LOS standards mentioned in this report

TABLE 9-4

EXISTING WITH AMBIENT GROWTH YEAR 2040 WITH CUMULATIVE WITH PROJECT CONDITIONS DAILY ROADWAY SEGMENT CAPACITY ANALYSIS SUMMARY

Key Roadway Segment	Roadway Classification	(1) Existing Lanes	(2) LOS E Capacity (VPD)	(3) Existing Traffic Conditions			(4) Existing With Ambient Growth With Cumulative With Project Traffic Conditions			(5) Existing With Ambient Growth With Cumulative With Project With Improvements		
				Daily Volume	V/C Ratio	LOS	Daily Volume	V/C Ratio	LOS	Daily Volume	V/C Ratio	LOS
1. <u>Newport Road</u> between Haun Road and I-215 SB Ramps	Urban Arterial	8D	87,000	45,944	0.528	A	75,099	0.863	D	--	--	--
2. <u>Newport Road</u> between I-215 NB Ramps and Antelope Road	Urban Arterial	8D	87,000	50,262	0.578	A	61,297	0.705	C	--	--	--
3. <u>Newport Road</u> between Antelope Road and Menifee Road	Urban Arterial	6D	56,300	34,685	0.616	B	47,703	0.847	D	--	--	--
4. <u>Newport Road</u> between Menifee Road and Laguna Vista Drive	Urban Arterial	6D	56,300	27,621	0.491	A	32,251	0.573	A	--	--	--
5. <u>Menifee Road</u> between Newport Road and Rockport Road	Arterial	4D	37,000	9,657	0.261	A	22,408	0.606	B	--	--	--
6. <u>Rockport Road</u> between Menifee Road and Laguna Vista Drive	Collector	2D	13,000	951	0.073	A	1,958	0.151	A	--	--	--

Notes:

- VPD = Vehicles Per Day
- LOS = Level of Service, please refer to Table 3-4 for the LOS definitions
- V/C = Volume to Capacity Ratio
- **Bold "V/C"/LOS values** indicate adverse service levels based on the LOS standards mentioned in this report
- D = Divided, U = Undivided

TABLE 9-4 (CONTINUED)

EXISTING WITH AMBIENT GROWTH YEAR 2040 WITH CUMULATIVE WITH PROJECT CONDITIONS DAILY ROADWAY SEGMENT CAPACITY ANALYSIS SUMMARY

Key Roadway Segment	Roadway Classification Arterial	(1) Existing Lanes	(2) LOS E Capacity (VPD)	(3) Existing Traffic Conditions			(4) Existing With Ambient Growth With Cumulative With Project Traffic Conditions			(5) Existing With Ambient Growth With Cumulative With Project With Improvements		
				Daily Volume	V/C Ratio	LOS	Daily Volume	V/C Ratio	LOS	Daily Volume	V/C Ratio	LOS
				7. <u>Old Newport Rd east of Laguna Vista Drive</u>	Collector	2D	13,000	2,867	0.221	A	5,904	0.454
8. <u>Meniffee Road between Rockport Road and Tres Lagos Drive</u>	Arterial	4D	37,000	9,817	0.265	A	22,132	0.598	A	--	--	--
9. <u>Tres Lagos Drive east of Meniffee Road</u>	Secondary	4U	25,900	1,395	0.054	A	4,932	0.190	A	--	--	--
10. <u>Briggs Road between Old Newport Road and Tres Lagos Drive</u>	Collector	2U	13,000	1,435	0.110	A	4,029	0.158 ²²	A	--	--	--
11. <u>Briggs Road between Tres Lagos Drive and Holland Road</u>	Collector	2U	13,000	1,201	0.092	A	2,585	0.199	A	--	--	--
12. <u>Holland Road between Antelope Road and Hanover Lane</u>	Major	4D	34,100	6,430	0.189	A	20,579	0.603	B	--	--	--

Notes:

- VPD = Vehicles Per Day
- LOS = Level of Service, please refer to Table 3-4 for the LOS definitions
- V/C = Volume to Capacity Ratio
- **Bold "V/C"/LOS values** indicate adverse service levels based on the LOS standards mentioned in this report
- D = Divided, U = Undivided

²² The V/C ratio is based on the capacity for a three-lane divided collector (25,575 VPD). The Project will widen the southbound side of Briggs road along the project frontage to two lanes.

TABLE 9-4 (CONTINUED)

EXISTING WITH AMBIENT GROWTH YEAR 2040 WITH CUMULATIVE WITH PROJECT CONDITIONS DAILY ROADWAY SEGMENT CAPACITY ANALYSIS SUMMARY

Key Roadway Segment	Roadway Classification Arterial	(1)	(2)	(3)			(4)			(5)		
		Existing Lanes	LOS E Capacity (VPD)	Existing Traffic Conditions			Existing With Ambient Growth With Cumulative With Project Traffic Conditions			Existing With Ambient Growth With Cumulative With Project With Improvements		
				Daily Volume	V/C Ratio	LOS	Daily Volume	V/C Ratio	LOS	Daily Volume	V/C Ratio	LOS
13. <u>Holland Road</u> between Hanover Lane and Menifee Road	Major	4D	34,100	5,819	0.171	A	19,968	0.586	A	--	--	--
14. <u>Holland Road</u> between Southshore Drive and Briggs Road	Major	4D	34,100	956	0.074	A	10,886	0.837	D	--	--	--

Notes:

- VPD = Vehicles Per Day
- V/C = Volume to Capacity Ratio
- D = Divided, U = Undivided
- LOS = Level of Service, please refer to Table 3-4 for the LOS definitions
- **Bold "V/C"/LOS values** indicate adverse service levels based on the LOS standards mentioned in this report

10.0 PLANNED IMPROVEMENTS

10.1 Year 2020 Planned Improvements

The planned improvement listed below is anticipated to be completed by Year 2020.

- Holland Road Overcrossing: The Holland Road/I-215 Overcrossing proposed project will construct a new four-lane overcrossing at Holland Road that will span over the Interstate 215 freeway and Antelope Road within the limits of the City of Menifee.

10.2 Year 2040 Planned Improvements

The planned improvements listed below are anticipated to be completed by Year 2040. The construction of Tres Lagos Drive south of the Project site to Briggs Road is expected to be completed in conjunction with Project development and has been assumed in the “With” Project scenarios:

- Intersection 3. Antelope Road at Newport Road: Widen and/or re-stripe Antelope Road to provide a second northbound and southbound through lane. Widen and/or re-stripe Newport Road to provide exclusive eastbound and westbound right-turn lanes.
- Intersection 4. Menifee Road at Newport Road: Widen and/or re-stripe Menifee Road to provide a second exclusive southbound left-turn lane. Widen and/or restripe Newport Road to provide a second exclusive eastbound and westbound left-turn lane as well as an exclusive eastbound right-turn lane.
- Intersection 10. Menifee Road at Holland Road: Install a traffic signal and design for eight-phase operation with protective left-turn phasing for all approaches. Widen and/or restripe all legs to provide second exclusive left-turn lanes as well as exclusive right-turn lanes.

In addition to the planned improvements listed above, *Figure 11-1* presents the proposed lane geometry for the thirteen (13) key study intersections. These lane geometries were utilized in the Existing with Ambient Growth Year 2040 with Cumulative with Project traffic conditions.

11.0 RECOMMENDED IMPROVEMENTS

For those intersections and roadway segments where projected traffic volumes are expected to result in significant cumulative impacts, this report recommends traffic improvements that change the intersection and/or roadway segments geometry to increase capacity. These capacity improvements involve roadway widening and/or re-striping to reconfigure (add lanes) roadways to specific approaches of a key intersection and/or roadway segments. The identified improvements are expected to:

- Address the impact of existing traffic, Project traffic and future non-project (ambient traffic growth and Cumulative) traffic, and
- Improve Levels of Service to an acceptable range and/or to pre-project conditions.

11.1 Existing With Project Traffic Conditions Recommended Improvements

11.1.1 *Intersections*

The results of the intersection analyses for Existing With Project traffic conditions indicate that the proposed Project is not forecast to have a significant impact at any of the thirteen (13) key intersections. As there are no significant impacts, no traffic mitigation measures are required or recommended for the roadway segments.

11.1.2 *Roadway Segments*

The results of the roadway segment analyses for Existing With Project traffic conditions indicate that the proposed Project is not forecast to have a significant impact at any of the fourteen (14) key roadway segments. As there are no significant impacts, no traffic mitigation measures are required or recommended for the roadway segments.

11.2 Existing With Ambient Growth Year 2020 With Project Traffic Conditions Recommended Improvements

11.2.1 *Intersections*

The results of the intersection analyses for Existing With Ambient Growth Year 2020 With Project traffic conditions indicate that the proposed Project is not forecast to have a significant impact at any of the thirteen (13) key intersections. As there are no significant impacts, no traffic mitigation measures are required or recommended for the roadway segments.

11.2.2 *Roadway Segments*

The results of the roadway segment analyses for Existing With Ambient Growth Year 2020 With Project traffic conditions indicate that the proposed Project is not forecast to have a significant impact at any of the fourteen (14) key roadway segments. As there are no significant impacts, no traffic mitigation measures are required or recommended for the roadway segments.

11.3 Existing With Ambient Growth Year 2020 With Cumulative With Project Traffic Conditions Recommended Improvements

11.3.1 *Intersections*

The results of the intersection analyses for Existing With Ambient Growth Year 2020 With Cumulative With Project traffic conditions indicate that the proposed Project is not forecast to have a significant impact at any of the thirteen (13) key intersections. As there are no significant impacts, no traffic mitigation measures are required or recommended for the roadway segments.

11.3.2 *Roadway Segments*

The results of the roadway segment analyses for Existing With Ambient Growth Year 2020 With Cumulative With Project traffic conditions indicate that the proposed Project is not forecast to have a significant impact at any of the fourteen (14) key roadway segments. As there are no significant impacts, no traffic mitigation measures are required or recommended for the roadway segments.

11.4 Existing With Ambient Growth Year 2040 With Cumulative With Project Traffic Conditions Recommended Improvements

11.4.1 *Intersections*

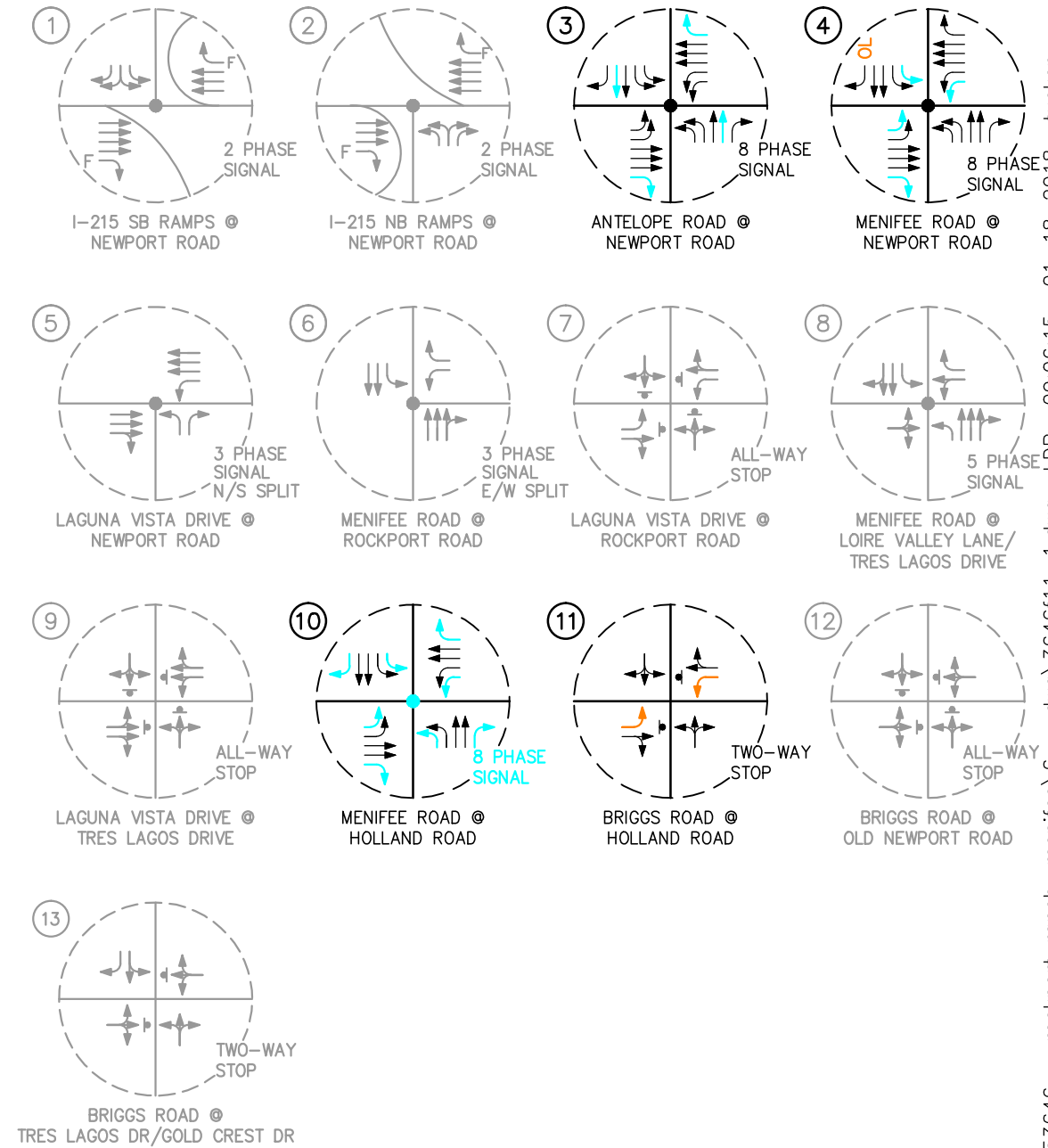
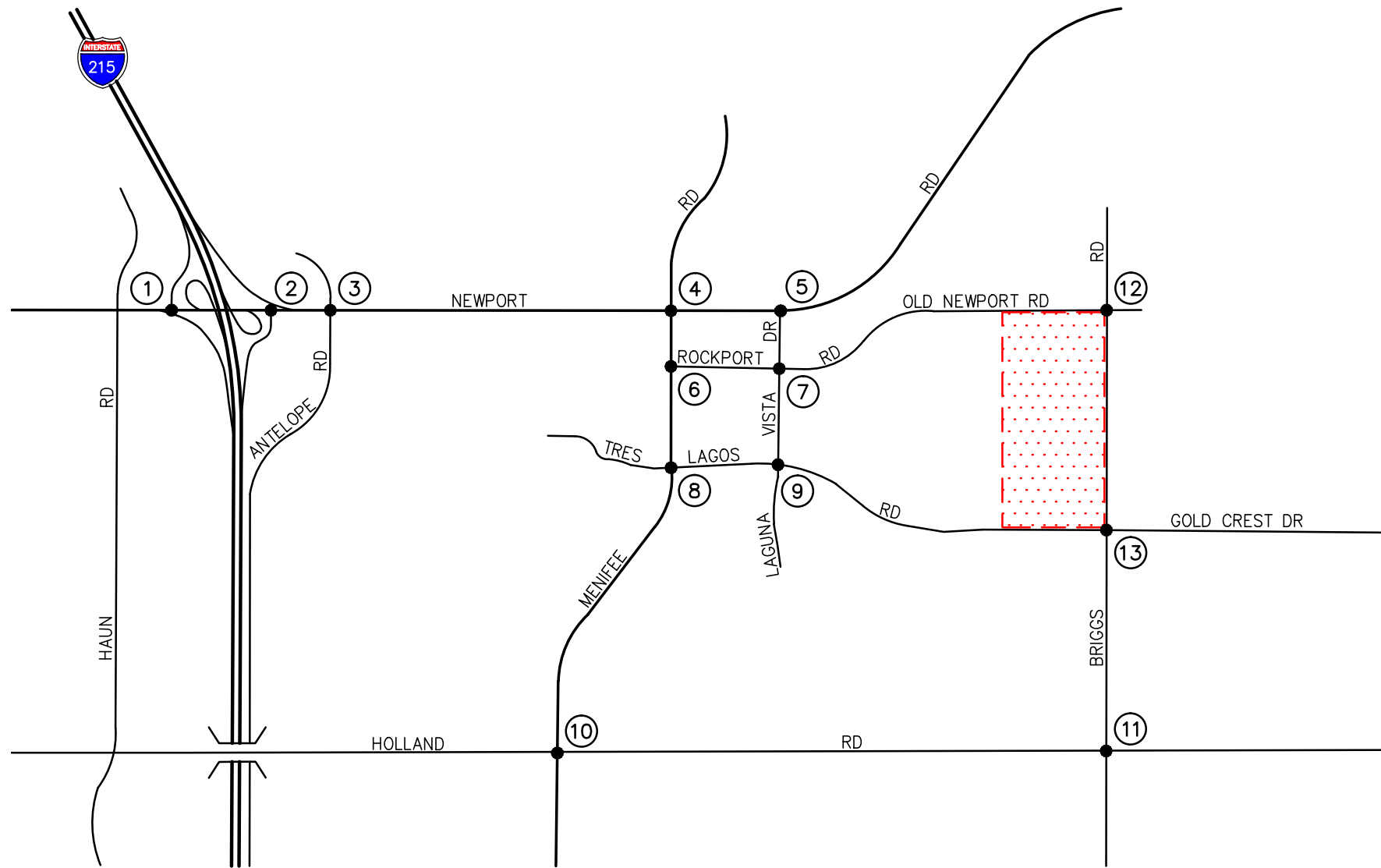
The following improvements listed below have been identified to mitigate the traffic impacts of the Project in the Existing With Ambient Growth Year 2040 With Cumulative With Project traffic conditions at the following two (2) cumulatively impacted intersections:

- Intersection 4. Menifee Road at Newport Road: Modify the traffic signal and provide for a southbound right-turn overlap phase.
- Intersection 11. Briggs Road at Holland Road: Widen and/or restripe Holland Road to provide an exclusive eastbound and westbound left-turn lane.

11.4.2 *Roadway Segments*

The results of the roadway segment analyses for Existing With Ambient Growth Year 2040 With Cumulative With Project traffic conditions indicate that the proposed Project is not forecast to have a significant impact at any of the fourteen (14) key roadway segments. As there are no significant impacts, no traffic mitigation measures are required or recommended for the roadway segments.

Figure 11-1 graphically illustrates the planned and recommended improvements for the Existing With Ambient Growth Year 2040 With Cumulative With Project traffic conditions.



KEY

- ← = APPROACH LANE ASSIGNMENT
- = YEAR 2040 PLANNED IMPROVEMENTS
- = YEAR 2040 RECOMMENDED IMPROVEMENTS
- = TRAFFIC SIGNAL, ▼ = STOP SIGN
- OL = OVERLAP, F = FREE-RIGHT
- ▨ = PROJECT SITE

LINSCOTT
LAW &
GREENSPAN
engineers



FIGURE 11-1
YEAR 2040 EXISTING WITH AMBIENT GROWTH
WITH CUMULATIVE WITH PROJECT
PLANNED AND RECOMMENDED IMPROVEMENTS
ROCKPORT RANCH, MENIFEE

n:\3600\2153646 - rockport ranch, menifee\6 - dwg\3646f11-1.dwg LDP 09:06:15 01-18-2018 tucker

12.0 SITE ACCESS AND INTERNAL CIRCULATION

12.1 Site Access

As previously presented in *Figure 2-2*, access to the Project site will be provided via three (3) proposed driveways located along Old Newport Road, Briggs Road, and Tres Lagos Drive, respectively. Driveway 1 will be located along Old Newport Road, Driveway 2 will be located along Briggs Road, and Driveway 3 will be located along Tres Lagos Drive. It should be noted that Project Driveway 3 located along Tres Lagos Drive will provide full-egress but will only provide emergency ingress.

12.1.1 Existing With Project Traffic Conditions

Table 12-1 summarizes the intersection operations at the three (3) Project driveways for Existing With Project traffic conditions at completion and full occupancy of the proposed Project. The operations analysis for the Project driveways is based on the *Highway Capacity Manual 2010* (HCM 2010) methodology for unsignalized intersections. **Appendix G** presents the Existing With Project level of service calculation worksheets for the three (3) Project driveways.

Review of *Table 12-1* shows that all the Project driveways are forecast to operate at an acceptable service level of LOS B or better during the AM and PM peak hours for Existing With Project traffic conditions. As such, Project access will be adequate. Motorists entering and exiting the Project site will be able to do so comfortably, safely and without undue congestion.

12.1.2 Existing With Ambient Growth Year 2020 With Project Traffic Conditions

Table 12-1 summarizes the intersection operations at the three (3) Project driveways for Existing With Ambient Growth Year 2020 With Project traffic conditions at completion and full occupancy of the proposed Project. The operations analysis for the Project driveways is based on the *Highway Capacity Manual 2010* (HCM 2010) methodology for unsignalized intersections. **Appendix G** presents the Existing With Ambient Growth Year 2020 With Project level of service calculation worksheets for the three (3) Project driveways.

Review of *Table 12-1* shows that all the Project driveways are forecast to operate at an acceptable service level of LOS B or better during the AM and PM peak hours for Existing With Ambient Growth Year 2020 With Project traffic conditions. As such, Project access will be adequate. Motorists entering and exiting the Project site will be able to do so comfortably, safely and without undue congestion.

12.1.3 Existing With Ambient Growth Year 2020 With Cumulative With Project Traffic Conditions

Table 12-1 summarizes the intersection operations at the three (3) Project driveways for Existing With Ambient Growth Year 2020 With Cumulative With Project traffic conditions at completion and full occupancy of the proposed Project. The operations analysis for the Project driveways is based on the *Highway Capacity Manual 2010* (HCM 2010) methodology for unsignalized intersections. **Appendix G** presents the Existing With Ambient Growth Year 2020 With Cumulative With Project level of service calculation worksheets for the three (3) Project driveways.

Review of *Table 12-1* shows that all the Project driveways are forecast to operate at an acceptable service level of LOS B or better during the AM and PM peak hours for Existing With Ambient Growth Year 2020 With Cumulative With Project traffic conditions. As such, Project access will be adequate. Motorists entering and exiting the Project site will be able to do so comfortably, safely and without undue congestion.

12.1.4 *Existing With Ambient Growth Year 2040 With Cumulative With Project Traffic Conditions*

Table 12-1 summarizes the intersection operations at the three (3) Project driveways for Existing With Ambient Growth Year 2040 With Cumulative With Project traffic conditions at completion and full occupancy of the proposed Project. The operations analysis for the Project driveways is based on the *Highway Capacity Manual 2010* (HCM 2010) methodology for unsignalized intersections. **Appendix G** presents the Existing With Ambient Growth Year 2040 With Cumulative With Project level of service calculation worksheets for the three (3) Project driveways.

Review of *Table 12-1* shows that all the Project driveways are forecast to operate at an acceptable service level of LOS B or better during the AM and PM peak hours for Existing With Ambient Growth Year 2040 With Cumulative With Project traffic conditions. As such, Project access will be adequate. Motorists entering and exiting the Project site will be able to do so comfortably, safely and without undue congestion.

12.2 Queuing Analysis For Project Access Locations

In response to City of Menifee staff concerns, stacking/storage requirements at the three proposed Project driveways were evaluated. The queuing evaluation was conducted based on Year 2020 Cumulative With Project and Year 2040 Buildout With Project peak hour driveway traffic volumes and the Highway Capacity Manual 2010 (HCM 2010) unsignalized methodology.

12.2.1 *Existing With Ambient Growth Year 2020 With Cumulative With Project Conditions Intersection Capacity Analysis*

Project Driveway 1 at Old Newport Road: Based on the HCM service level calculation, which calculates a critical (95th percentile) queue value in number of vehicles, the AM peak hour and PM peak hour queue length is not more than one (1) vehicle for the northbound (outbound) movements at the Project Driveway. Review of *Figure 2-2* indicates that one outbound lane is provided with stacking sufficient to accommodate one (1) vehicle.

Briggs Road at Project Driveway 2: Based on the HCM service level calculation, which calculates a critical (95th percentile) queue value in number of vehicles, the AM peak hour and PM peak hour queue length is not more than one (1) vehicle for the eastbound (outbound) movements at the Project Driveway. Review of *Figure 2-2* indicates that one outbound lane is provided with stacking sufficient to accommodate one (1) vehicle.

Project Driveway 3 at Tres Lagos Drive: Based on the HCM service level calculation, which calculates a critical (95th percentile) queue value in number of vehicles, the AM peak hour and PM peak hour queue length is not more than one (1) vehicle for the southbound (outbound) movements

at the Project Driveway. Review of *Figure 2-2* indicates that one outbound lane is provided with stacking sufficient to accommodate one (1) vehicle.

12.2.2 *Existing With Ambient Growth Year 2040 With Cumulative With Project Conditions Intersection Capacity Analysis*

Project Driveway 1 at Old Newport Road: Based on the HCM service level calculation, which calculates a critical (95th percentile) queue value in number of vehicles, the AM peak hour and PM peak hour queue length is not more than one (1) vehicle for the northbound (outbound) movements at the Project Driveway. Review of *Figure 2-2* indicates that one outbound lane is provided with stacking sufficient to accommodate one (1) vehicle.

Briggs Road at Project Driveway 2: Based on the HCM service level calculation, which calculates a critical (95th percentile) queue value in number of vehicles, the AM peak hour and PM peak hour queue length is not more than one (1) vehicle for the eastbound (outbound) movements at the Project Driveway. Review of *Figure 2-2* indicates that one outbound lane is provided with stacking sufficient to accommodate one (1) vehicle.

Project Driveway 3 at Tres Lagos Drive: Based on the HCM service level calculation, which calculates a critical (95th percentile) queue value in number of vehicles, the AM peak hour and PM peak hour queue length is not more than one (1) vehicle for the southbound (outbound) movements at the Project Driveway. Review of *Figure 2-2* indicates that one outbound lane is provided with stacking sufficient to accommodate one (1) vehicle.

12.3 Gate Stacking Evaluation

The following section summarizes the required storage reservoir for the Project's gated entries (Project Driveway 1 and Project Driveway 2) using the Crommelin Methodology. Please note that Project Driveway 3 is not evaluated using the Crommelin Methodology because only emergency ingress will be provided at this location.

12.3.1 *Crommelin Methodology*

The Crommelin Methodology determines the minimum storage reservoir required to provide adequate access and control at gated entries. Experience has proven that poorly designed gated entries with inadequate storage capacities often times create an adverse effect on the operating characteristics of the street network. The Crommelin Methodology virtually eliminates this scenario as it ensures the design of an efficient, well-working access system with minimum impacts upon the surrounding street system.

The methodology is based on a Poisson distribution, peak hour traffic volumes, gate control strategies, processing rates at a control point, and the number of travel lanes. These characteristics are used to calculate a traffic intensity factor value (IF), which is derived by dividing the peak hour traffic volumes by the design processing rate. The IF value is then plotted on the 99% confidence level curve (where storage capacity will not be exceeded 99 times of 100) per the Crommelin Reservoir Needs nomograph (See *Appendix G*). This process ultimately estimates the maximum

number of queuing vehicles that will store behind the service position vehicle at the control point. This number is rounded up to the nearest vehicle and added to the single service position vehicle, resulting in the total number of vehicles stored behind the control point. The required storage capacity, in vehicles, is converted into a length (feet) by multiplying the number of expected vehicles by a vehicle length of 22 feet.

12.3.2 Vehicular Stacking Analysis

Table 12-2 presents a summary of the vehicular stacking analysis for inbound visitor/guest traffic at the proposed Project's gated entries at Project Driveway 1 and Project Driveway 2 without the Holland Road Overcrossing. Please note that this queuing analysis conservatively assumes that 15% of inbound project traffic during the AM and PM peak hours will be visitors/guests. In addition, a conservative design service/processing rate of 60 vehicles per hour was assumed (which is equivalent to a processing rate of one vehicle every 60 seconds) for visitors/guests to the site.

As shown in column five (5) of *Table 12-2*, the proposed Project Driveway 1 is expected to have a maximum queue of two (2) "visitor/guest" vehicles during the AM peak hour and three (3) "visitor/guest" vehicles during the PM peak hour. As shown in column six (6), these queues will require a storage reservoir length of approximately 66 feet from the call box to satisfy the maximum vehicle queue. Also shown in column five (5) of *Table 12-2*, the proposed Project Driveway 2 is expected to have a maximum queue of two (2) "visitor/guest" vehicles during the AM peak hour and two (2) "visitor/guest" vehicles during the PM peak hour. As shown in column six (6), these queues will require a storage reservoir length of approximately 44 feet from the call box to satisfy the maximum vehicle queue. Review of the proposed Project site plan shows that the storage reservoir length from the call box can sufficiently accommodate 3 vehicles for Project Driveway 1 and 2 vehicles for Project Driveway 2. Therefore adequate storage will be provided on site and vehicles will not queue back onto Old Newport Road or Briggs Road.

Table 12-3 presents a summary of the vehicular stacking analysis for inbound visitor/guest traffic at the proposed Project's gated entries at Project Driveway 1 and Project Driveway 2 with the Holland Road Overcrossing. Please note that this queuing analysis conservatively assumes that 15% of inbound project traffic during the AM and PM peak hours will be visitors/guests. In addition, a conservative design service/processing rate of 60 vehicles per hour was assumed (which is equivalent to a processing rate of one vehicle every 60 seconds) for visitors/guests to the site.

As shown in column five (5) of *Table 12-3*, the proposed Project Driveway 1 is expected to have a maximum queue of two (2) "visitor/guest" vehicles during the AM peak hour and three (3) "visitor/guest" vehicles during the PM peak hour. As shown in column six (6), these queues will require a storage reservoir length of approximately 66 feet from the call box to satisfy the maximum vehicle queue. Also shown in column five (5) of *Table 12-2*, the proposed Project Driveway 2 is expected to have a maximum queue of two (2) "visitor/guest" vehicles during the AM peak hour and two (2) "visitor/guest" vehicles during the PM peak hour. As shown in column six (6), these queues will require a storage reservoir length of approximately 44 feet from the call box to satisfy the maximum vehicle queue. Review of the proposed Project site plan shows that the storage reservoir

length from the call box can sufficiently accommodate 3 vehicles for Project Driveway 1 and 2 vehicles for Project Driveway 2. Therefore adequate storage will be provided on site and vehicles will not queue back onto Old Newport Road or Briggs Road.

12.4 Internal Circulation

The on-site circulation was evaluated in terms of vehicle-vehicle and vehicle-pedestrian conflicts. Based on our review of the preliminary site plan, the overall layout does not create any unsafe vehicle-pedestrian conflict points and the driveway throating is sufficient such that internal vehicle queuing/stacking will not block the adjacent intersections. Curb return radii have been confirmed and are adequate for passenger cars, emergency vehicles, and trash/delivery trucks. Project traffic is not anticipated to cause significant queuing/stacking at the Project access locations. The on-site circulation is very good based on our review of the proposed site plan, whereas the alignment, spacing and throating of the Project driveways is adequate.

TABLE 12-1
PROJECT DRIVEWAY PEAK HOUR LEVELS OF SERVICE SUMMARY²³

Project Driveway	Time Period	Existing With Project		Existing With Ambient Growth Year 2020 With Project		Existing With Ambient Growth Year 2020 With Cumulative With Project		Existing With Ambient Growth Year 2040 With Cumulative With Project	
		Delay (s/v)	LOS	Delay (s/v)	LOS	Delay (s/v)	LOS	Delay (s/v)	LOS
14. Project Driveway 1 at Old Newport Road	AM	11.8	B	11.8	B	10.4	B	10.8	B
	PM	11.3	B	11.4	B	10.7	B	10.9	B
15. Briggs Road at Project Driveway 2	AM	8.9	A	9.2	B	8.9	A	9.7	B
	PM	8.7	A	9.4	A	9.2	A	13.4	B
16. Project Driveway 3 at Tres Lagos Drive	AM	8.5	A	8.6	A	8.6	A	9.4	A
	PM	8.4	A	8.7	A	8.7	A	10.3	B

Notes:

- s/v = seconds per vehicle (delay)
- V/C = Volume to Capacity ratio
- LOS = Level of Service, please refer to *Tables 3-1 and 3-2* for the LOS definitions.
- **Bold LOS values** indicate adverse service levels based on City of Menifee LOS standards.

²³ Appendix G contains Delay/LOS calculation worksheets for all Project Driveways.

TABLE 12-2
VEHICULAR QUEUING ANALYSIS SUMMARY WITHOUT HOLLAND ROAD OVERCROSSING

Project Driveway	Time Period	(1) Entering Traffic Volumes (veh/hr)²⁴	(2) Service Rate (veh/hr)	(3) Traffic Intensity Factor (IF)	(4) Required Reservoir Behind Service Position	(5) Add Vehicle Waiting at Call Box (4) + 1 vehicle	(6) Required Storage Capacity (5) * 22 feet
14. Project Driveway 1 at Old Newport Road	AM	8	60	0.133	1 vehicle	2 vehicles	44 ft
	PM	24	60	0.400	2 vehicles	3 vehicles	66 ft
15. Briggs Road at Project Driveway 2	AM	2	60	0.033	1 vehicle	2 vehicles	44 ft
	PM	6	60	0.100	1 vehicle	2 vehicles	44 ft

²⁴ Conservatively assumes that 15% of the inbound AM and PM peak hour traffic volume at the proposed parking garage is associated with visitors/guests.

TABLE 12-3
VEHICULAR QUEUING ANALYSIS SUMMARY WITH HOLLAND ROAD OVERCROSSING

Project Driveway	Time Period	(1) Entering Traffic Volumes (veh/hr)²⁵	(2) Service Rate (veh/hr)	(3) Traffic Intensity Factor (IF)	(4) Required Reservoir Behind Service Position	(5) Add Vehicle Waiting at Call Box (4) + 1 vehicle	(6) Required Storage Capacity (5) * 22 feet
14. Project Driveway 1 at Old Newport Road	AM	8	60	0.133	1 vehicle	2 vehicles	44 ft
	PM	25	60	0.417	2 vehicles	3 vehicles	66 ft
15. Briggs Road at Project Driveway 2	AM	2	60	0.033	1 vehicle	2 vehicles	44 ft
	PM	5	60	0.083	1 vehicle	2 vehicles	44 ft

²⁵ Conservatively assumes that 15% of the inbound AM and PM peak hour traffic volume at the proposed parking garage is associated with visitors/guests.

13.0 PROJECT FAIR SHARE ANALYSIS

The transportation impacts associated with the development of the proposed Project were determined based on the future conditions analysis with the proposed Project. The key study locations forecast to operate at adverse levels of service are discussed below. As such, the proposed Project's "fair share" of the recommended improvements has been calculated for the key study locations that are forecast to operate at adverse levels of service.

13.1 Existing With Ambient Growth Year 2040 With Cumulative With Project Traffic Conditions

13.1.1 Intersections

Table 13-1 presents the AM and PM peak hours Project fair share percentages at the key study intersections that are forecast to operate at adverse levels of service in the Existing With Ambient Growth Year 2040 With Cumulative With Project traffic conditions. As presented in *Table 13-1*, the first column (1) presents the Project only traffic volume. The second column (2) presents the existing traffic volume at the intersection. The third column (3) presents the Existing With Ambient Growth Year 2040 With Cumulative With Project traffic volume. The fourth column (4) represents the Project fair share based on the following formula:

- Project Fair Share (4) = Column (1)/[Column (3) – Column (2)]*100

The Project fair share percentages (worse time period impacted) for the two (2) cumulatively impacted intersections for the Existing With Ambient Growth Year 2040 With Cumulative With Project traffic conditions are shown below:

- Menifee Road at Newport Road 9.17%
- Briggs Road at Holland Road 2.23%

13.1.2 Roadway Segments

The results of the roadway segment analyses indicate that the proposed Project is not forecast to have a significant impact at any of the key roadway segments. As there are no significant impacts, no Project fair share calculation is needed.

TABLE 13-1
EXISTING WITH AMBIENT GROWTH YEAR 2040 WITH CUMULATIVE WITH PROJECT TRAFFIC CONDITIONS INTERSECTION
FAIR SHARE CONTRIBUTION

Key Intersection		Impacted Time Period	(1)	(2)	(3)	(4)
			Project Only Volume	Existing Volume	Existing With Ambient With Cumulative With Project Volume	Project Fair Share Responsibility
4.	Menifee Road at	AM	172	3,402	5,277	9.17%
	Newport Road	PM	230	3,049	5,846	8.22%
11.	Briggs Road at	AM	16	293	1,010	2.23%
	Holland Road	PM	22	137	1,124	2.22%

Notes:

- Net Project Percent Increase (4) = Column (1) / [Column (3) – Column (2)]
- **Project Fair Share Responsibility** is based on worse case

14.0 CONGESTION MANAGEMENT PROGRAM (CMP) ASSESSMENT

The Riverside County Transportation Commission (RCTC) is designated as the Congestion Management Agency (CMA) to oversee the Congestion Management Program (CMP). Recently, the RCTC has approved modification of the CMP Land Use Coordination Element, which includes the elimination of the Traffic Impact Assessment (TIA) report process and replaced it with an Enhanced Traffic Monitoring System. Therefore, a TIA report is no longer required, but local jurisdictions are required to report deficient facilities (locations that cannot be mitigated to LOS E or better) along the CMP network, which are identified in traffic impact studies prepared for local agencies. After the implementation of the recommended improvements, the traffic study does not have any significant impacts at any of the analyzed locations and therefore the proposed Project does not conflict with the Riverside County Congestion Management Program.

15.0 CALTRANS FACILITIES ANALYSIS

Caltrans requires the use of analysis methods provided in the Highway Capacity Manual (*HCM*) for the analysis of ramp intersections and basic freeway segments. Caltrans “endeavors to maintain a target LOS at the transition between LOS “C” and LOS “D” on State highway facilities”; it does not require that LOS “D” (shall) be maintained. However, Caltrans acknowledges that this may not always be feasible and recommends that the lead agency consult with Caltrans to determine the appropriate target LOS. For this analysis, LOS D is the target level of service standard and will be utilized to assess the Project impacts at the state-controlled study intersections.

Ramp Intersection Capacity Analyses were conducted for the following two (2) key ramp study intersections:

1. I-215 Southbound Ramps at Newport Road
2. I-215 Northbound Ramps at Newport Road

Additionally, Basic Freeway Segment Analysis for freeway segments was conducted for the following four (4) Caltrans freeway segments in the vicinity of the proposed Project for Existing traffic conditions:

1. I-215 Northbound *from* Scott Road to Newport Road
2. I-215 Northbound *from* Newport Road to McCall Boulevard
3. I-215 Southbound *from* McCall Boulevard to Newport Road
4. I-215 Southbound *from* Newport Road to Scott Road

15.1 Ramp Intersection Capacity Analysis

Tables 7-1, 7-2, 8-1, 9-1, and 9-2 presented previously summarized the peak hour LOS results for the two (2) ramp intersections for Existing, Existing Plus Project Traffic Conditions, Existing Plus Ambient Growth (Year 2020) Plus Project Traffic Conditions, Year 2020 Cumulative Plus Project Traffic Conditions, and Year 2040 Cumulative Plus Project Traffic Conditions, respectively.

15.2 Basic Freeway Segment Capacity Analysis

15.2.1 Existing Traffic Conditions

Table 15-1 summarizes the peak hour level of service results at the aforementioned four (4) key freeway segments for Existing traffic conditions. Review of *Table 15-1* indicates that the four (4) key freeway segments currently operate at LOS C or better during the AM and/or PM peak hours.

Per Caltrans guidelines, the following is stated in the *Caltrans Guide for the Preparation of Traffic Impact Studies, December 2002*:

“The following criterion is a starting point in determining when a TIS is needed. When a project:

1. *Generates over 100 peak hour trips assigned to a State highway facility.....*

2. *Generates 50 to 100 peak hour trips assigned to a State highway facility and noticeable delay approaching LOS C or D.....*
3. *Generates 1 to 49 peak hour trips assigned to a State highway facility and noticeable delay approaching LOS E or F.....”*

Based on the Caltrans criteria above, the results of the basic freeway segments analysis for Existing traffic conditions as presented in *Table 15-1*, and given that the maximum Level of Service is a low LOS C, it is determined that no additional analysis is needed for the Caltrans Facilities since the Project generates between 17 and 58 peak hour trips assigned to a state highway facility and all freeway segments are forecast to operate at an acceptable LOS C or better during the AM and PM peak hours under Existing traffic conditions.

Appendix H contains the Basic Freeway Segment Analysis Calculation worksheets for all freeway segments for Existing traffic conditions.

TABLE 15-1
EXISTING PEAK HOUR FREEWAY MAINLINE CAPACITY ANALYSIS SUMMARY

Key Basic Freeway Segment	Time Period	Lanes	Project Trips	(1) Existing Traffic Conditions		
				Peak Hour Volume (pc/h/ln)	Density (pc/mi/ln)	LOS
1. I-15 Northbound <i>south of</i> Newport Road	AM	3	18	950	14.6	B
	PM		60	1,227	18.9	C
2. I-15 Northbound <i>north of</i> Newport Road	AM	3	54	870	13.4	B
	PM		35	1,039	16.0	B
3. I-15 Southbound <i>north of</i> Newport Road	AM	3	18	1,085	16.7	B
	PM		60	1,086	16.7	B
4. I-15 Southbound <i>south of</i> Newport Road	AM	3	54	1,195	18.4	C
	PM		35	1,034	15.9	B

Notes:

- pc/mi/ln = Passenger cars per mile per lane (density)
- LOS = Level of Service, please refer to *Table 3-5* for the LOS definitions
- **Volume/Density/LOS values** indicate adverse service levels based on the Caltrans LOS Criteria

APPENDIX A

EXISTING TRAFFIC COUNT DATA

APPENDIX A-1

INTERSECTION COUNTS

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

City of Menifee
 N/S: I-215 Southbound Ramps
 E/W: Newport Road
 Weather: Clear

File Name : MEN215SNEAM
 Site Code : 05716093
 Start Date : 2/25/2016
 Page No : 1

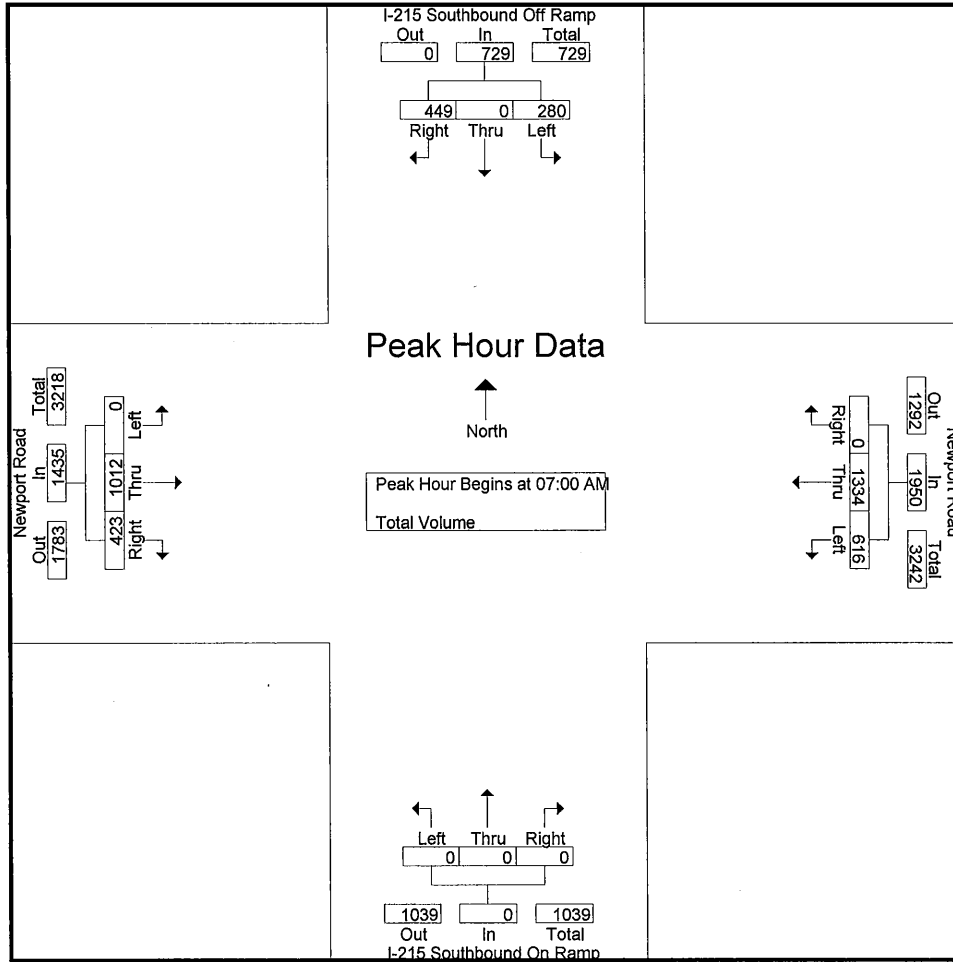
Groups Printed- Total Volume

Start Time	I-215 Southbound Off Ramp Southbound				Newport Road Westbound				I-215 Southbound On Ramp Northbound				Newport 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	51	0	116	167	140	333	0	473	0	0	0	0	0	240	110	350	990
07:15 AM	51	0	127	178	157	386	0	543	0	0	0	0	0	273	106	379	1100
07:30 AM	83	0	96	179	148	301	0	449	0	0	0	0	0	282	112	394	1022
07:45 AM	95	0	110	205	171	314	0	485	0	0	0	0	0	217	95	312	1002
Total	280	0	449	729	616	1334	0	1950	0	0	0	0	0	1012	423	1435	4114
08:00 AM	67	0	100	167	160	255	0	415	0	0	0	0	0	229	84	313	895
08:15 AM	66	0	81	147	162	280	0	442	0	0	0	0	0	242	93	335	924
08:30 AM	60	0	105	165	146	275	0	421	0	0	0	0	0	237	104	341	927
08:45 AM	68	0	103	171	161	329	0	490	0	0	0	0	0	201	99	300	961
Total	261	0	389	650	629	1139	0	1768	0	0	0	0	0	909	380	1289	3707
Grand Total	541	0	838	1379	1245	2473	0	3718	0	0	0	0	0	1921	803	2724	7821
Apprch %	39.2	0	60.8		33.5	66.5	0		0	0	0	0	0	70.5	29.5		
Total %	6.9	0	10.7	17.6	15.9	31.6	0	47.5	0	0	0	0	0	24.6	10.3	34.8	

Start Time	I-215 Southbound Off Ramp Southbound				Newport Road Westbound				I-215 Southbound On Ramp Northbound				Newport Road 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	51	0	116	167	140	333	0	473	0	0	0	0	0	240	110	350	990
07:15 AM	51	0	127	178	157	386	0	543	0	0	0	0	0	273	106	379	1100
07:30 AM	83	0	96	179	148	301	0	449	0	0	0	0	0	282	112	394	1022
07:45 AM	95	0	110	205	171	314	0	485	0	0	0	0	0	217	95	312	1002
Total Volume	280	0	449	729	616	1334	0	1950	0	0	0	0	0	1012	423	1435	4114
% App. Total	38.4	0	61.6		31.6	68.4	0		0	0	0	0	0	70.5	29.5		
PHF	.737	.000	.884	.889	.901	.864	.000	.898	.000	.000	.000	.000	.000	.897	.944	.911	.935

City of Menifee
 N/S: I-215 Southbound Ramps
 E/W: Newport Road
 Weather: Clear

File Name : MEN215SNEAM
 Site Code : 05716093
 Start Date : 2/25/2016
 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				07:00 AM			
+0 mins.	51	0	116	167	140	333	0	473	0	0	0	0	0	240	110	350
+15 mins.	51	0	127	178	157	386	0	543	0	0	0	0	0	273	106	379
+30 mins.	83	0	96	179	148	301	0	449	0	0	0	0	0	282	112	394
+45 mins.	95	0	110	205	171	314	0	485	0	0	0	0	0	217	95	312
Total Volume	280	0	449	729	616	1334	0	1950	0	0	0	0	0	1012	423	1435
% App. Total	38.4	0	61.6		31.6	68.4	0		0	0	0		0	70.5	29.5	
PHF	.737	.000	.884	.889	.901	.864	.000	.898	.000	.000	.000	.000	.000	.897	.944	.911

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

City of Menifee
 N/S: I-215 Southbound Ramps
 E/W: Newport Road
 Weather: Clear

File Name : MEN215SNEPM
 Site Code : 05716093
 Start Date : 2/25/2016
 Page No : 1

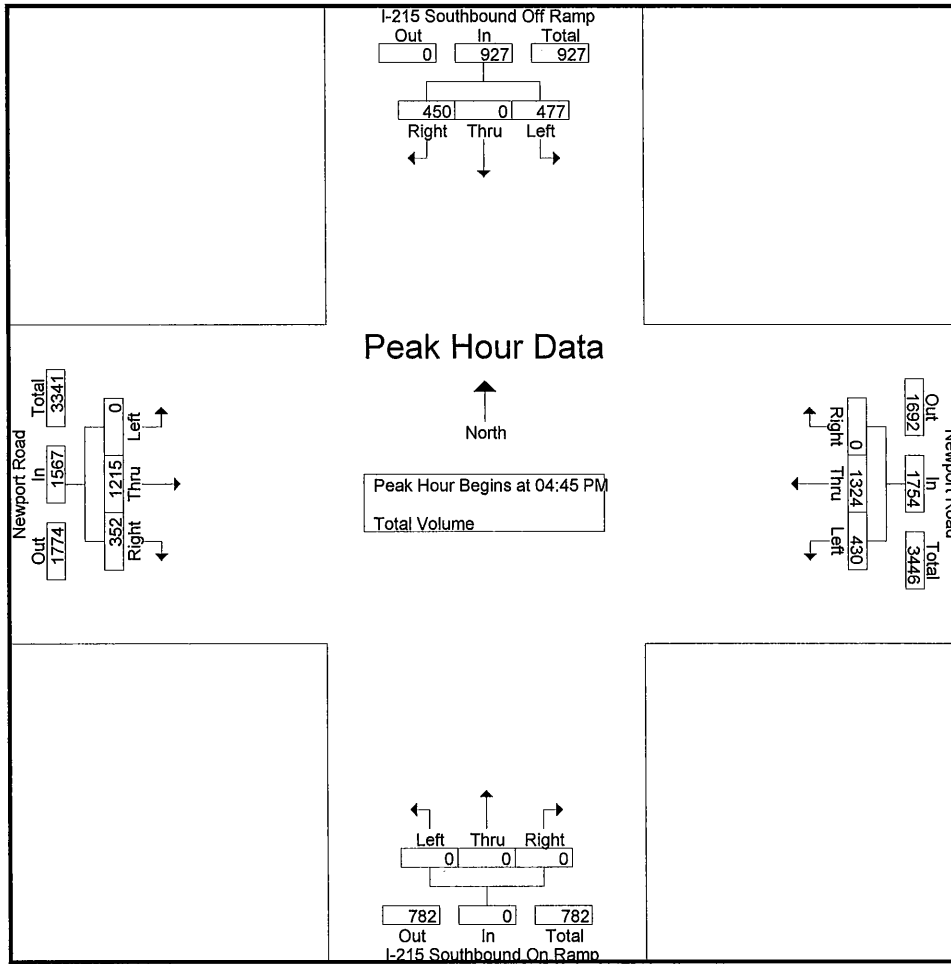
Groups Printed- Total Volume

Start Time	I-215 Southbound Off Ramp Southbound				Newport Road Westbound				I-215 Southbound On Ramp Northbound				Newport 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	113	0	85	198	104	348	0	452	0	0	0	0	0	327	87	414	1064
04:15 PM	105	0	113	218	125	328	0	453	0	0	0	0	0	284	90	374	1045
04:30 PM	100	0	111	211	113	308	0	421	0	0	0	0	0	302	87	389	1021
04:45 PM	119	0	112	231	116	390	0	506	0	0	0	0	0	278	75	353	1090
Total	437	0	421	858	458	1374	0	1832	0	0	0	0	0	1191	339	1530	4220
05:00 PM	117	0	126	243	101	315	0	416	0	0	0	0	0	312	96	408	1067
05:15 PM	114	0	120	234	110	312	0	422	0	0	0	0	0	296	83	379	1035
05:30 PM	127	0	92	219	103	307	0	410	0	0	0	0	0	329	98	427	1056
05:45 PM	105	0	124	229	116	343	0	459	0	0	0	0	0	308	88	396	1084
Total	463	0	462	925	430	1277	0	1707	0	0	0	0	0	1245	365	1610	4242
Grand Total	900	0	883	1783	888	2651	0	3539	0	0	0	0	0	2436	704	3140	8462
Apprch %	50.5	0	49.5		25.1	74.9	0		0	0	0	0	0	77.6	22.4		
Total %	10.6	0	10.4	21.1	10.5	31.3	0	41.8	0	0	0	0	0	28.8	8.3	37.1	

Start Time	I-215 Southbound Off Ramp Southbound				Newport Road Westbound				I-215 Southbound On Ramp Northbound				Newport Road 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 04:45 PM																	
04:45 PM	119	0	112	231	116	390	0	506	0	0	0	0	0	278	75	353	1090
05:00 PM	117	0	126	243	101	315	0	416	0	0	0	0	0	312	96	408	1067
05:15 PM	114	0	120	234	110	312	0	422	0	0	0	0	0	296	83	379	1035
05:30 PM	127	0	92	219	103	307	0	410	0	0	0	0	0	329	98	427	1056
Total Volume	477	0	450	927	430	1324	0	1754	0	0	0	0	0	1215	352	1567	4248
% App. Total	51.5	0	48.5		24.5	75.5	0		0	0	0	0	0	77.5	22.5		
PHF	.939	.000	.893	.954	.927	.849	.000	.867	.000	.000	.000	.000	.000	.923	.898	.917	.974

City of Menifee
 N/S: I-215 Southbound Ramps
 E/W: Newport Road
 Weather: Clear

File Name : MEN215SNEPM
 Site Code : 05716093
 Start Date : 2/25/2016
 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				05:00 PM			
+0 mins.	119	0	112	231	104	348	0	452	0	0	0	0	0	312	96	408
+15 mins.	117	0	126	243	125	328	0	453	0	0	0	0	0	296	83	379
+30 mins.	114	0	120	234	113	308	0	421	0	0	0	0	0	329	98	427
+45 mins.	127	0	92	219	116	390	0	506	0	0	0	0	0	308	88	396
Total Volume	477	0	450	927	458	1374	0	1832	0	0	0	0	0	1245	365	1610
% App. Total	51.5	0	48.5		25	75	0		0	0	0		0	77.3	22.7	
PHF	.939	.000	.893	.954	.916	.881	.000	.905	.000	.000	.000	.000	.000	.946	.931	.943

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

City of Menifee
 N/S: I-215 Northbound Ramps
 E/W: Newport Road
 Weather: Clear

File Name : MEN215NNEAM
 Site Code : 05716093
 Start Date : 2/25/2016
 Page No : 1

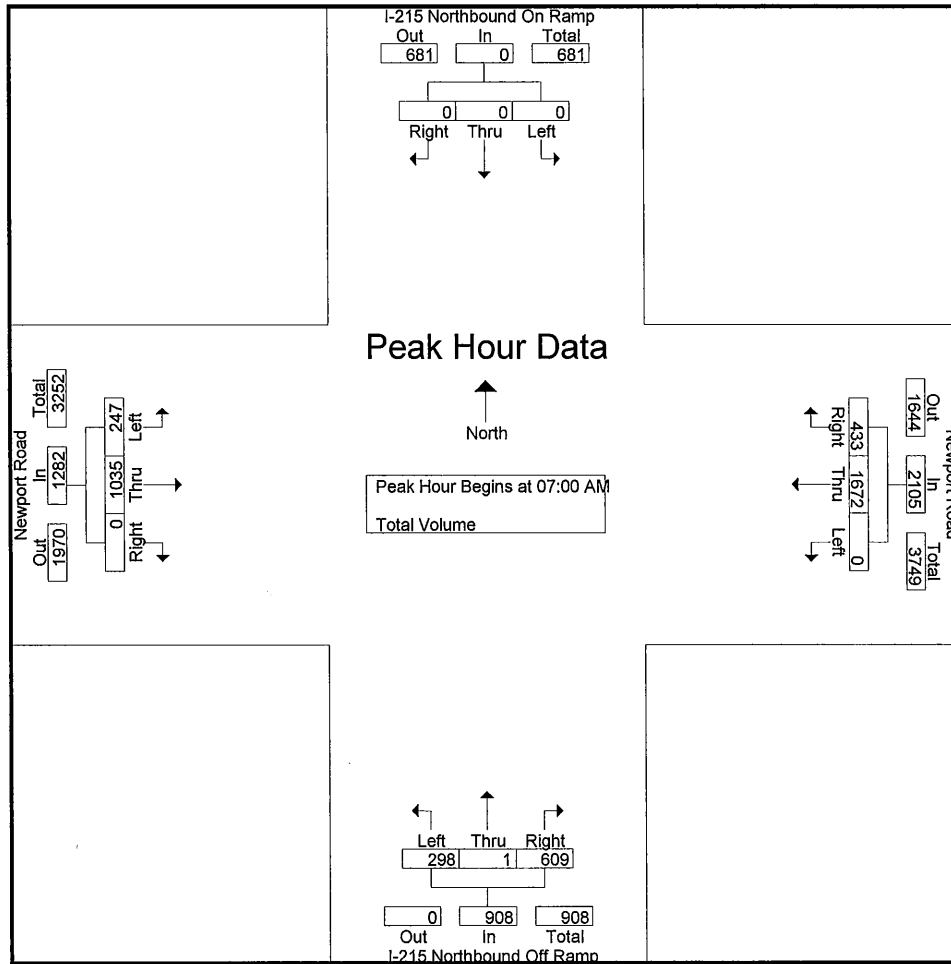
Groups Printed- Total Volume

Start Time	I-215 Northbound On Ramp Southbound				Newport Road Westbound				I-215 Northbound Off Ramp Northbound				Newport 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	0	0	0	0	435	119	554	64	0	139	203	63	194	0	257	1014
07:15 AM	0	0	0	0	0	430	103	533	80	0	154	234	66	285	0	351	1118
07:30 AM	0	0	0	0	0	418	107	525	74	0	144	218	61	273	0	334	1077
07:45 AM	0	0	0	0	0	389	104	493	80	1	172	253	57	283	0	340	1086
Total	0	0	0	0	0	1672	433	2105	298	1	609	908	247	1035	0	1282	4295
08:00 AM	0	0	0	0	0	371	114	485	65	0	116	181	42	230	0	272	938
08:15 AM	0	0	0	0	0	333	86	419	75	0	110	185	65	274	0	339	943
08:30 AM	0	0	0	0	0	375	99	474	76	1	129	206	57	221	0	278	958
08:45 AM	0	0	0	0	0	363	89	452	106	0	99	205	62	231	0	293	950
Total	0	0	0	0	0	1442	388	1830	322	1	454	777	226	956	0	1182	3789
Grand Total	0	0	0	0	0	3114	821	3935	620	2	1063	1685	473	1991	0	2464	8084
Apprch %	0	0	0	0	0	79.1	20.9		36.8	0.1	63.1		19.2	80.8	0		
Total %	0	0	0	0	0	38.5	10.2	48.7	7.7	0	13.1	20.8	5.9	24.6	0	30.5	

Start Time	I-215 Northbound On Ramp Southbound				Newport Road Westbound				I-215 Northbound Off Ramp Northbound				Newport Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	435	119	554	64	0	139	203	63	194	0	257	1014
07:15 AM	0	0	0	0	0	430	103	533	80	0	154	234	66	285	0	351	1118
07:30 AM	0	0	0	0	0	418	107	525	74	0	144	218	61	273	0	334	1077
07:45 AM	0	0	0	0	0	389	104	493	80	1	172	253	57	283	0	340	1086
Total Volume	0	0	0	0	0	1672	433	2105	298	1	609	908	247	1035	0	1282	4295
% App. Total	0	0	0	0	0	79.4	20.6		32.8	0.1	67.1		19.3	80.7	0		
PHF	.000	.000	.000	.000	.000	.961	.910	.950	.931	.250	.885	.897	.936	.908	.000	.913	.960

City of Menifee
 N/S: I-215 Northbound Ramps
 E/W: Newport Road
 Weather: Clear

File Name : MEN215NNEAM
 Site Code : 05716093
 Start Date : 2/25/2016
 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				07:15 AM			
+0 mins.	0	0	0	0	0	435	119	554	64	0	139	203	66	285	0	351
+15 mins.	0	0	0	0	0	430	103	533	80	0	154	234	61	273	0	334
+30 mins.	0	0	0	0	0	418	107	525	74	0	144	218	57	283	0	340
+45 mins.	0	0	0	0	0	389	104	493	80	1	172	253	42	230	0	272
Total Volume	0	0	0	0	0	1672	433	2105	298	1	609	908	226	1071	0	1297
% App. Total	0	0	0	0	0	79.4	20.6		32.8	0.1	67.1		17.4	82.6	0	
PHF	.000	.000	.000	.000	.000	.961	.910	.950	.931	.250	.885	.897	.856	.939	.000	.924

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City of Menifee
 N/S: I-215 Northbound Ramps
 E/W: Newport Road
 Weather: Clear

File Name : MEN215NNEPM
 Site Code : 05716093
 Start Date : 2/25/2016
 Page No : 1

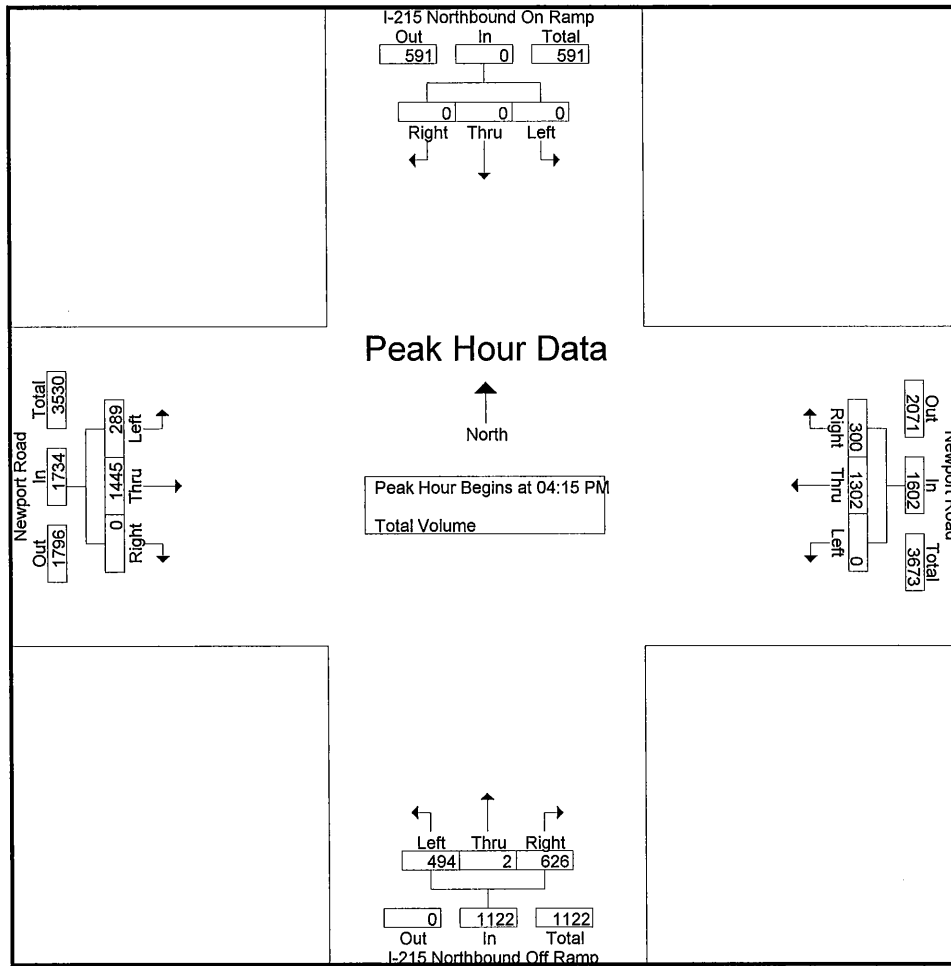
Groups Printed- Total Volume

Start Time	I-215 Northbound On Ramp Southbound				Newport Road Westbound				I-215 Northbound Off Ramp Northbound				Newport 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	0	0	0	0	312	81	393	139	0	163	302	58	309	0	367	1062
04:15 PM	0	0	0	0	0	338	76	414	108	0	152	260	65	351	0	416	1090
04:30 PM	0	0	0	0	0	299	78	377	120	0	177	297	81	353	0	434	1108
04:45 PM	0	0	0	0	0	349	72	421	158	2	154	314	72	362	0	434	1169
Total	0	0	0	0	0	1298	307	1605	525	2	646	1173	276	1375	0	1651	4429
05:00 PM	0	0	0	0	0	316	74	390	108	0	143	251	71	379	0	450	1091
05:15 PM	0	0	0	0	0	319	69	388	111	0	138	249	81	372	0	453	1090
05:30 PM	0	0	0	0	0	310	75	385	102	0	118	220	72	364	0	436	1041
05:45 PM	0	0	0	0	0	329	71	400	122	2	172	296	52	346	0	398	1094
Total	0	0	0	0	0	1274	289	1563	443	2	571	1016	276	1461	0	1737	4316
Grand Total	0	0	0	0	0	2572	596	3168	968	4	1217	2189	552	2836	0	3388	8745
Apprch %	0	0	0	0	0	81.2	18.8		44.2	0.2	55.6		16.3	83.7	0		
Total %	0	0	0	0	0	29.4	6.8	36.2	11.1	0	13.9	25	6.3	32.4	0	38.7	

Start Time	I-215 Northbound On Ramp Southbound				Newport Road Westbound				I-215 Northbound Off Ramp Northbound				Newport Road 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	338	76	414	108	0	152	260	65	351	0	416	1090
04:30 PM	0	0	0	0	0	299	78	377	120	0	177	297	81	353	0	434	1108
04:45 PM	0	0	0	0	0	349	72	421	158	2	154	314	72	362	0	434	1169
05:00 PM	0	0	0	0	0	316	74	390	108	0	143	251	71	379	0	450	1091
Total Volume	0	0	0	0	0	1302	300	1602	494	2	626	1122	289	1445	0	1734	4458
% App. Total	0	0	0	0	0	81.3	18.7		44	0.2	55.8		16.7	83.3	0		
PHF	.000	.000	.000	.000	.000	.933	.962	.951	.782	.250	.884	.893	.892	.953	.000	.963	.953

City of Menifee
 N/S: I-215 Northbound Ramps
 E/W: Newport Road
 Weather: Clear

File Name : MEN215NNEPM
 Site Code : 05716093
 Start Date : 2/25/2016
 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				04:45 PM			
+0 mins.	0	0	0	0	0	312	81	393	139	0	163	302	72	362	0	434
+15 mins.	0	0	0	0	0	338	76	414	108	0	152	260	71	379	0	450
+30 mins.	0	0	0	0	0	299	78	377	120	0	177	297	81	372	0	453
+45 mins.	0	0	0	0	0	349	72	421	158	2	154	314	72	364	0	436
Total Volume	0	0	0	0	0	1298	307	1605	525	2	646	1173	296	1477	0	1773
% App. Total	0	0	0	0	0	80.9	19.1		44.8	0.2	55.1		16.7	83.3	0	
PHF	.000	.000	.000	.000	.000	.930	.948	.953	.831	.250	.912	.934	.914	.974	.000	.978

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City of Menifee
 N/S: Antelope Road
 E/W: Newport Road
 Weather: Clear

File Name : MENANNEAM
 Site Code : 05716093
 Start Date : 2/25/2016
 Page No : 1

Groups Printed- Total Volume

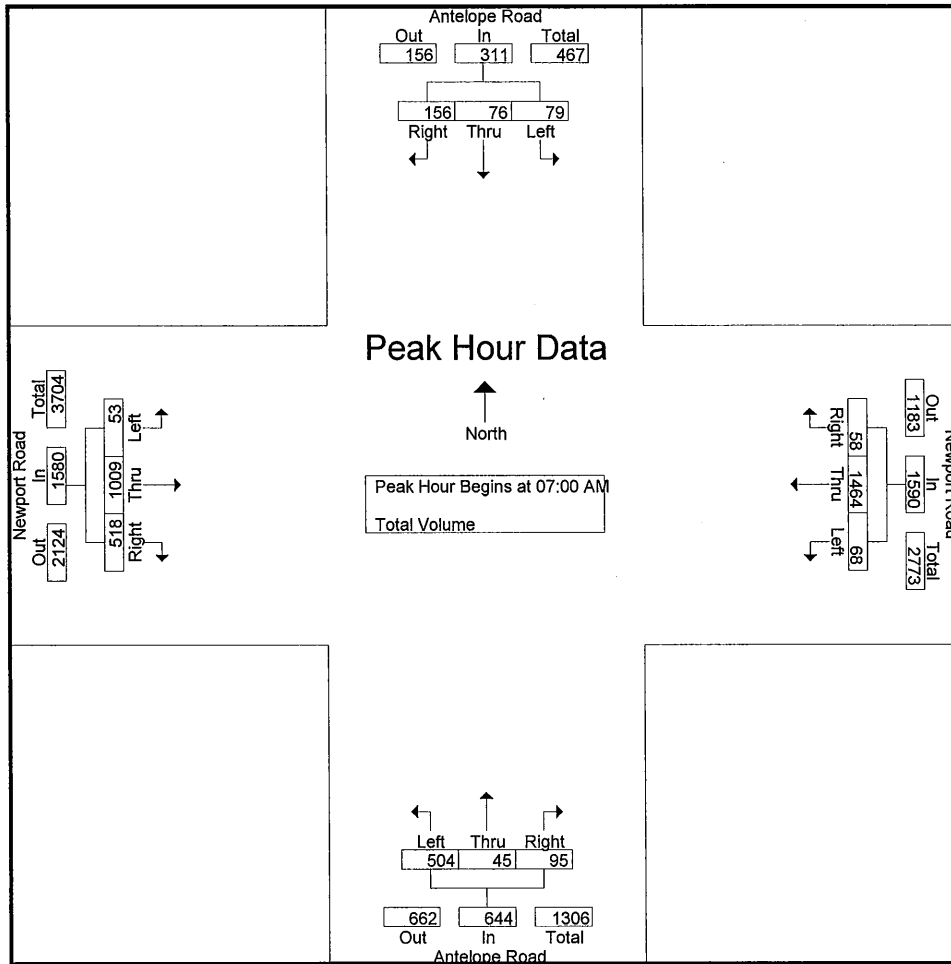
Start Time	Antelope Road Southbound				Newport Road Westbound				Antelope Road Northbound				Newport Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	17	13	31	61	9	413	1	423	131	6	23	160	14	267	57	338	982
07:15 AM	41	7	36	84	12	367	15	394	154	8	25	187	9	276	116	401	1066
07:30 AM	18	24	46	88	25	368	27	420	107	13	26	146	17	265	149	431	1085
07:45 AM	3	32	43	78	22	316	15	353	112	18	21	151	13	201	196	410	992
Total	79	76	156	311	68	1464	58	1590	504	45	95	644	53	1009	518	1580	4125
08:00 AM	4	12	34	50	28	357	13	398	79	12	17	108	16	230	85	331	887
08:15 AM	8	16	42	66	24	289	3	316	111	11	21	143	27	215	93	335	860
08:30 AM	10	16	47	73	37	328	7	372	104	10	22	136	18	231	84	333	914
08:45 AM	9	27	56	92	34	271	15	320	119	14	22	155	18	177	78	273	840
Total	31	71	179	281	123	1245	38	1406	413	47	82	542	79	853	340	1272	3501
Grand Total	110	147	335	592	191	2709	96	2996	917	92	177	1186	132	1862	858	2852	7626
Apprch %	18.6	24.8	56.6		6.4	90.4	3.2		77.3	7.8	14.9		4.6	65.3	30.1		
Total %	1.4	1.9	4.4	7.8	2.5	35.5	1.3	39.3	12	1.2	2.3	15.6	1.7	24.4	11.3	37.4	

Start Time	Antelope Road Southbound				Newport Road Westbound				Antelope Road Northbound				Newport 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	17	13	31	61	9	413	1	423	131	6	23	160	14	267	57	338	982
07:15 AM	41	7	36	84	12	367	15	394	154	8	25	187	9	276	116	401	1066
07:30 AM	18	24	46	88	25	368	27	420	107	13	26	146	17	265	149	431	1085
07:45 AM	3	32	43	78	22	316	15	353	112	18	21	151	13	201	196	410	992
Total Volume	79	76	156	311	68	1464	58	1590	504	45	95	644	53	1009	518	1580	4125
% App. Total	25.4	24.4	50.2		4.3	92.1	3.6		78.3	7	14.8		3.4	63.9	32.8		
PHF	.482	.594	.848	.884	.680	.886	.537	.940	.818	.625	.913	.861	.779	.914	.661	.916	.950

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

City of Menifee
 N/S: Antelope Road
 E/W: Newport Road
 Weather: Clear

File Name : MENANNEAM
 Site Code : 05716093
 Start Date : 2/25/2016
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Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	17	13	31	61	9	413	1	423	131	6	23	160	14	267	57	338
+15 mins.	41	7	36	84	12	367	15	394	154	8	25	187	9	276	116	401
+30 mins.	18	24	46	88	25	368	27	420	107	13	26	146	17	265	149	431
+45 mins.	3	32	43	78	22	316	15	353	112	18	21	151	13	201	196	410
Total Volume	79	76	156	311	68	1464	58	1590	504	45	95	644	53	1009	518	1580
% App. Total	25.4	24.4	50.2		4.3	92.1	3.6		78.3	7	14.8		3.4	63.9	32.8	
PHF	.482	.594	.848	.884	.680	.886	.537	.940	.818	.625	.913	.861	.779	.914	.661	.916

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City of Menifee
 N/S: Antelope Road
 E/W: Newport Road
 Weather: Clear

File Name : MENANNEPM
 Site Code : 05716093
 Start Date : 2/25/2016
 Page No : 1

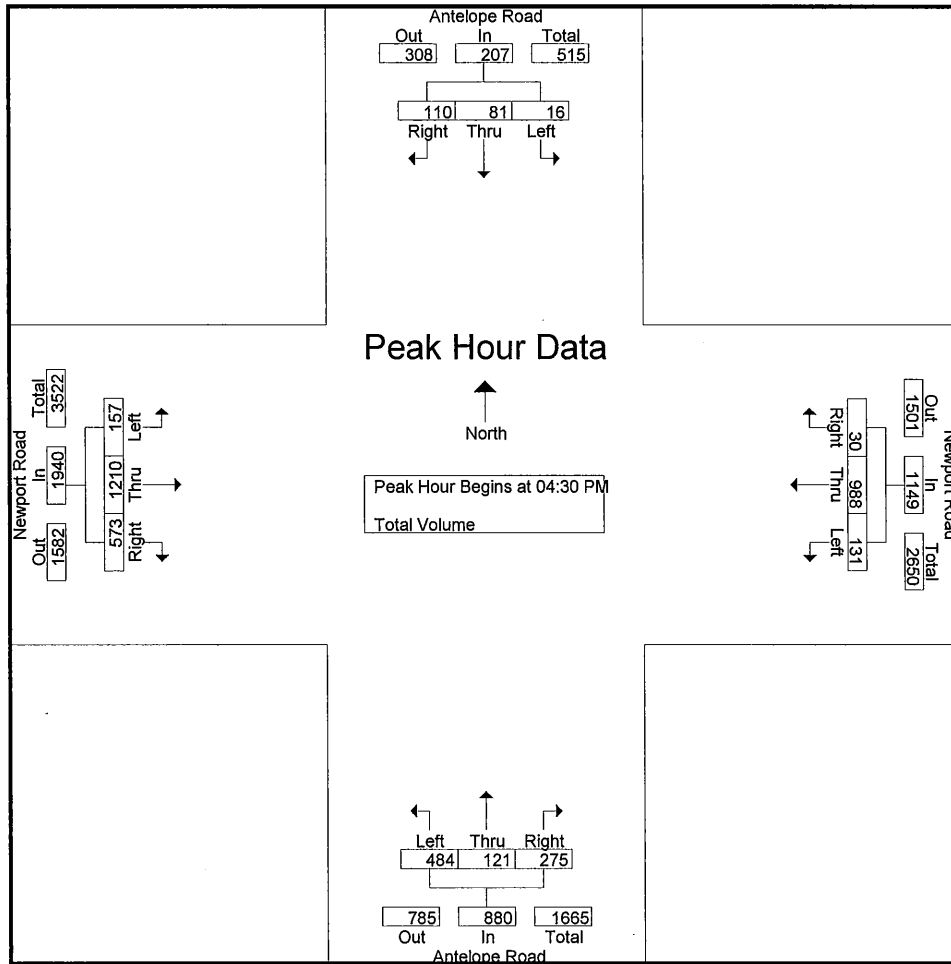
Groups Printed- Total Volume

Start Time	Antelope Road Southbound				Newport Road Westbound				Antelope Road Northbound				Newport 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	4	17	24	45	34	246	5	285	141	34	48	223	46	292	114	452	1005
04:15 PM	4	15	22	41	35	226	6	267	116	29	56	201	47	317	119	483	992
04:30 PM	5	25	26	56	33	244	10	287	120	35	59	214	43	287	152	482	1039
04:45 PM	4	14	24	42	31	232	3	266	135	28	61	224	41	308	135	484	1016
Total	17	71	96	184	133	948	24	1105	512	126	224	862	177	1204	520	1901	4052
05:00 PM	5	19	37	61	28	266	10	304	109	28	76	213	39	306	138	483	1061
05:15 PM	2	23	23	48	39	246	7	292	120	30	79	229	34	309	148	491	1060
05:30 PM	8	21	26	55	33	234	9	276	113	28	58	199	35	296	108	439	969
05:45 PM	7	25	26	58	27	249	7	283	160	28	65	253	42	306	128	476	1070
Total	22	88	112	222	127	995	33	1155	502	114	278	894	150	1217	522	1889	4160
Grand Total	39	159	208	406	260	1943	57	2260	1014	240	502	1756	327	2421	1042	3790	8212
Apprch %	9.6	39.2	51.2		11.5	86	2.5		57.7	13.7	28.6		8.6	63.9	27.5		
Total %	0.5	1.9	2.5	4.9	3.2	23.7	0.7	27.5	12.3	2.9	6.1	21.4	4	29.5	12.7	46.2	

Start Time	Antelope Road Southbound				Newport Road Westbound				Antelope Road Northbound				Newport Road 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 04:30 PM																	
04:30 PM	5	25	26	56	33	244	10	287	120	35	59	214	43	287	152	482	1039
04:45 PM	4	14	24	42	31	232	3	266	135	28	61	224	41	308	135	484	1016
05:00 PM	5	19	37	61	28	266	10	304	109	28	76	213	39	306	138	483	1061
05:15 PM	2	23	23	48	39	246	7	292	120	30	79	229	34	309	148	491	1060
Total Volume	16	81	110	207	131	988	30	1149	484	121	275	880	157	1210	573	1940	4176
% App. Total	7.7	39.1	53.1		11.4	86	2.6		55	13.8	31.2		8.1	62.4	29.5		
PHF	.800	.810	.743	.848	.840	.929	.750	.945	.896	.864	.870	.961	.913	.979	.942	.988	.984

City of Menifee
 N/S: Antelope Road
 E/W: Newport Road
 Weather: Clear

File Name : MENANNEPM
 Site Code : 05716093
 Start Date : 2/25/2016
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Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				04:30 PM			
+0 mins.	5	19	37	61	28	266	10	304	109	28	76	213	43	287	152	482
+15 mins.	2	23	23	48	39	246	7	292	120	30	79	229	41	308	135	484
+30 mins.	8	21	26	55	33	234	9	276	113	28	58	199	39	306	138	483
+45 mins.	7	25	26	58	27	249	7	283	160	28	65	253	34	309	148	491
Total Volume	22	88	112	222	127	995	33	1155	502	114	278	894	157	1210	573	1940
% App. Total	9.9	39.6	50.5		11	86.1	2.9		56.2	12.8	31.1		8.1	62.4	29.5	
PHF	.688	.880	.757	.910	.814	.935	.825	.950	.784	.950	.880	.883	.913	.979	.942	.988

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City of Menifee
 N/S: Menifee Road
 E/W: Newport Road
 Weather: Clear

File Name : MENMENEAM
 Site Code : 05716093
 Start Date : 2/25/2016
 Page No : 1

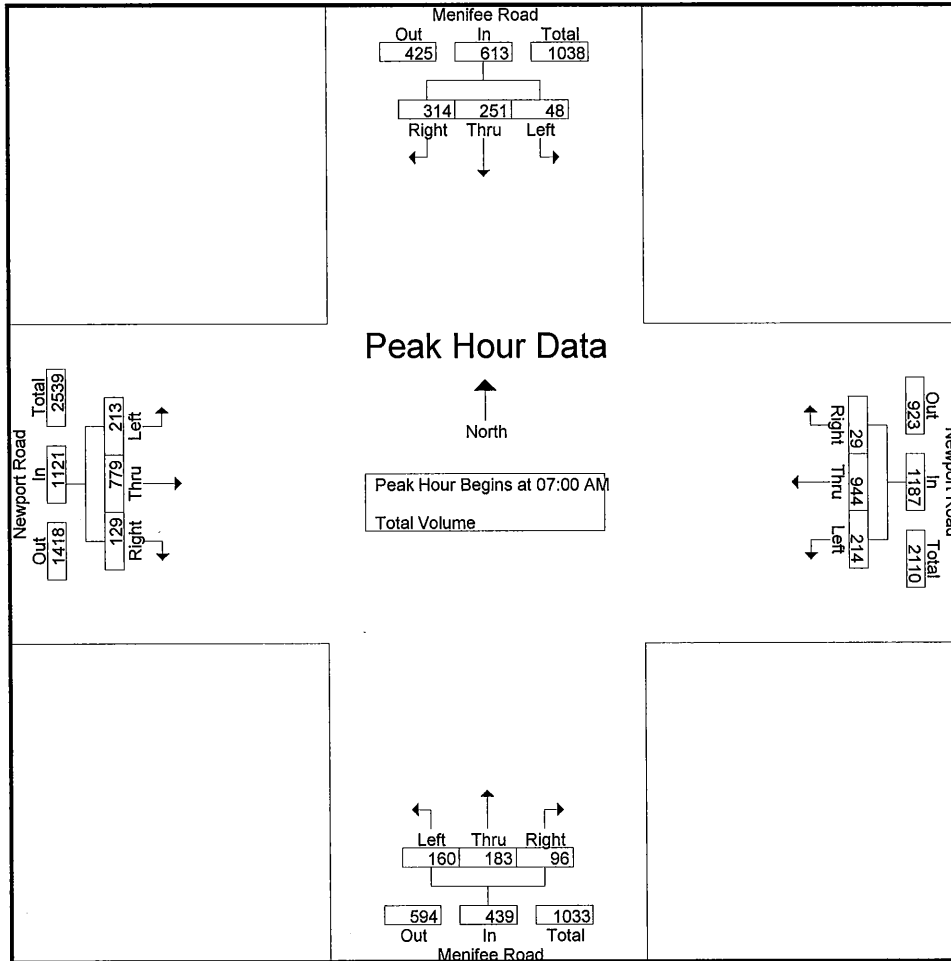
Groups Printed- Total Volume

Start Time	Menifee Road Southbound				Newport Road Westbound				Menifee Road Northbound				Newport 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	12	39	84	135	21	277	0	298	50	48	25	123	55	195	18	268	824
07:15 AM	15	58	75	148	53	226	9	288	54	59	33	146	67	204	54	325	907
07:30 AM	8	78	79	165	73	210	13	296	28	54	23	105	56	203	39	298	864
07:45 AM	13	76	76	165	67	231	7	305	28	22	15	65	35	177	18	230	765
Total	48	251	314	613	214	944	29	1187	160	183	96	439	213	779	129	1121	3360
08:00 AM	11	42	75	128	31	226	11	268	22	40	20	82	29	183	16	228	706
08:15 AM	20	53	45	118	40	236	17	293	32	36	26	94	38	207	15	260	765
08:30 AM	7	38	62	107	24	218	4	246	38	29	19	86	27	191	9	227	666
08:45 AM	12	26	53	91	29	246	8	283	24	20	14	58	25	157	12	194	626
Total	50	159	235	444	124	926	40	1090	116	125	79	320	119	738	52	909	2763
Grand Total	98	410	549	1057	338	1870	69	2277	276	308	175	759	332	1517	181	2030	6123
Apprch %	9.3	38.8	51.9		14.8	82.1	3		36.4	40.6	23.1		16.4	74.7	8.9		
Total %	1.6	6.7	9	17.3	5.5	30.5	1.1	37.2	4.5	5	2.9	12.4	5.4	24.8	3	33.2	

Start Time	Menifee Road Southbound				Newport Road Westbound				Menifee Road Northbound				Newport Road 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	12	39	84	135	21	277	0	298	50	48	25	123	55	195	18	268	824
07:15 AM	15	58	75	148	53	226	9	288	54	59	33	146	67	204	54	325	907
07:30 AM	8	78	79	165	73	210	13	296	28	54	23	105	56	203	39	298	864
07:45 AM	13	76	76	165	67	231	7	305	28	22	15	65	35	177	18	230	765
Total Volume	48	251	314	613	214	944	29	1187	160	183	96	439	213	779	129	1121	3360
% App. Total	7.8	40.9	51.2		18	79.5	2.4		36.4	41.7	21.9		19	69.5	11.5		
PHF	.800	.804	.935	.929	.733	.852	.558	.973	.741	.775	.727	.752	.795	.955	.597	.862	.926

City of Menifee
 N/S: Menifee Road
 EW: Newport Road
 Weather: Clear

File Name : MENMENEAM
 Site Code : 05716093
 Start Date : 2/25/2016
 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				07:00 AM			
+0 mins.	12	39	84	135	21	277	0	298	50	48	25	123	55	195	18	268
+15 mins.	15	58	75	148	53	226	9	288	54	59	33	146	67	204	54	325
+30 mins.	8	78	79	165	73	210	13	296	28	54	23	105	56	203	39	298
+45 mins.	13	76	76	165	67	231	7	305	28	22	15	65	35	177	18	230
Total Volume	48	251	314	613	214	944	29	1187	160	183	96	439	213	779	129	1121
% App. Total	7.8	40.9	51.2		18	79.5	2.4		36.4	41.7	21.9		19	69.5	11.5	
PHF	.800	.804	.935	.929	.733	.852	.558	.973	.741	.775	.727	.752	.795	.955	.597	.862

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City of Menifee
 N/S: Menifee Road
 E/W: Newport Road
 Weather: Clear

File Name : MENMENEPM
 Site Code : 05716093
 Start Date : 2/25/2016
 Page No : 1

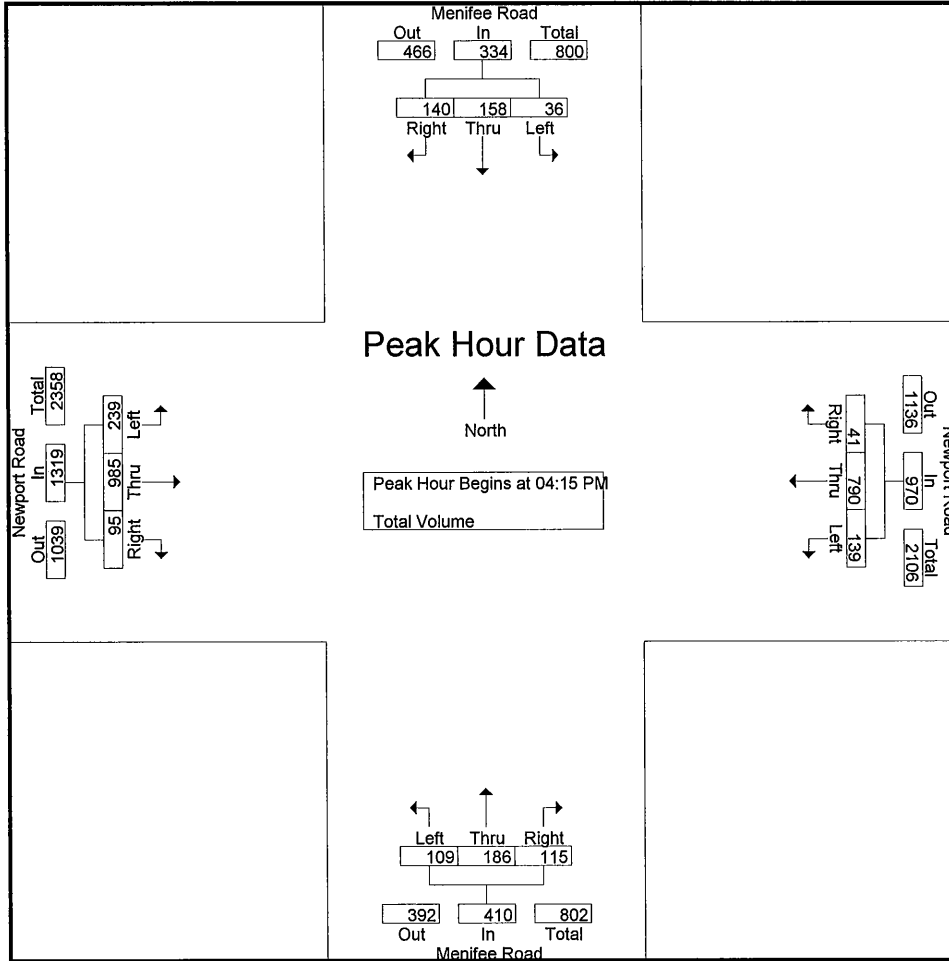
Groups Printed- Total Volume

Start Time	Menifee Road Southbound				Newport Road Westbound				Menifee Road Northbound				Newport 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	7	36	43	86	30	180	11	221	30	45	37	112	48	246	29	323	742
04:15 PM	10	52	37	99	33	187	11	231	21	56	34	111	56	251	17	324	765
04:30 PM	12	36	40	88	33	190	9	232	31	34	24	89	71	238	20	329	738
04:45 PM	3	41	26	70	34	193	16	243	26	49	18	93	60	232	30	322	728
Total	32	165	146	343	130	750	47	927	108	184	113	405	235	967	96	1298	2973
05:00 PM	11	29	37	77	39	220	5	264	31	47	39	117	52	264	28	344	802
05:15 PM	3	40	38	81	33	187	7	227	29	41	31	101	64	264	17	345	754
05:30 PM	10	46	46	102	29	178	4	211	35	52	35	122	61	224	21	306	741
05:45 PM	6	34	38	78	35	200	14	249	37	30	41	108	66	214	19	299	734
Total	30	149	159	338	136	785	30	951	132	170	146	448	243	966	85	1294	3031
Grand Total	62	314	305	681	266	1535	77	1878	240	354	259	853	478	1933	181	2592	6004
Apprch %	9.1	46.1	44.8		14.2	81.7	4.1		28.1	41.5	30.4		18.4	74.6	7		
Total %	1	5.2	5.1	11.3	4.4	25.6	1.3	31.3	4	5.9	4.3	14.2	8	32.2	3	43.2	

Start Time	Menifee Road Southbound				Newport Road Westbound				Menifee Road Northbound				Newport Road 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	10	52	37	99	33	187	11	231	21	56	34	111	56	251	17	324	765
04:30 PM	12	36	40	88	33	190	9	232	31	34	24	89	71	238	20	329	738
04:45 PM	3	41	26	70	34	193	16	243	26	49	18	93	60	232	30	322	728
05:00 PM	11	29	37	77	39	220	5	264	31	47	39	117	52	264	28	344	802
Total Volume	36	158	140	334	139	790	41	970	109	186	115	410	239	985	95	1319	3033
% App. Total	10.8	47.3	41.9		14.3	81.4	4.2		26.6	45.4	28		18.1	74.7	7.2		
PHF	.750	.760	.875	.843	.891	.898	.641	.919	.879	.830	.737	.876	.842	.933	.792	.959	.945

City of Menifee
 N/S: Menifee Road
 E/W: Newport Road
 Weather: Clear

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

	04:00 PM				04:15 PM				05:00 PM				04:30 PM			
+0 mins.	7	36	43	86	33	187	11	231	31	47	39	117	71	238	20	329
+15 mins.	10	52	37	99	33	190	9	232	29	41	31	101	60	232	30	322
+30 mins.	12	36	40	88	34	193	16	243	35	52	35	122	52	264	28	344
+45 mins.	3	41	26	70	39	220	5	264	37	30	41	108	64	264	17	345
Total Volume	32	165	146	343	139	790	41	970	132	170	146	448	247	998	95	1340
% App. Total	9.3	48.1	42.6		14.3	81.4	4.2		29.5	37.9	32.6		18.4	74.5	7.1	
PHF	.667	.793	.849	.866	.891	.898	.641	.919	.892	.817	.890	.918	.870	.945	.792	.971

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City of Menifee
 N/S: Laguna Vista Drive
 E/W: Newport Road
 Weather: Clear

File Name : MENLANEAM
 Site Code : 05716093
 Start Date : 2/25/2016
 Page No : 1

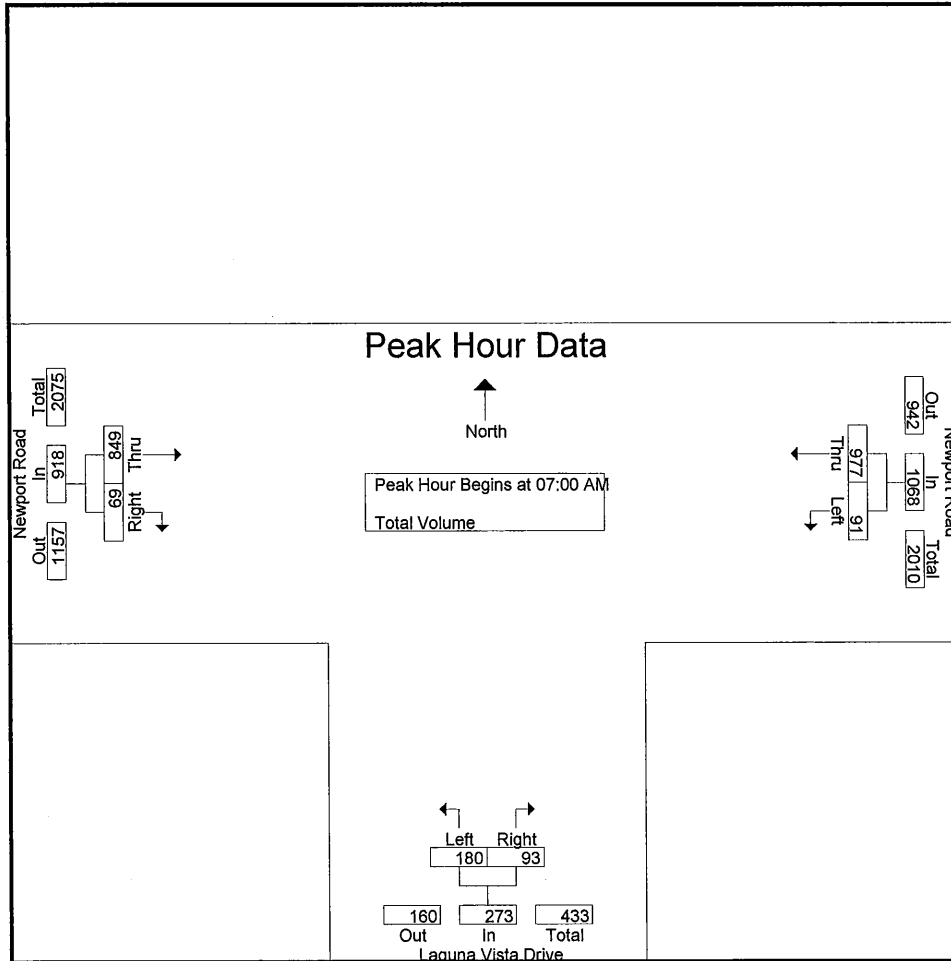
Groups Printed- Total Volume

Start Time	Newport Road Westbound			Laguna Vista Drive Northbound			Newport Road Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	20	229	249	50	18	68	186	25	211	528
07:15 AM	26	234	260	39	39	78	250	11	261	599
07:30 AM	21	262	283	39	29	68	225	19	244	595
07:45 AM	24	252	276	52	7	59	188	14	202	537
Total	91	977	1068	180	93	273	849	69	918	2259
08:00 AM	12	217	229	32	20	52	185	21	206	487
08:15 AM	8	216	224	52	2	54	209	29	238	516
08:30 AM	12	230	242	43	9	52	199	21	220	514
08:45 AM	6	211	217	46	11	57	163	23	186	460
Total	38	874	912	173	42	215	756	94	850	1977
Grand Total	129	1851	1980	353	135	488	1605	163	1768	4236
Apprch %	6.5	93.5		72.3	27.7		90.8	9.2		
Total %	3	43.7	46.7	8.3	3.2	11.5	37.9	3.8	41.7	

Start Time	Newport Road Westbound			Laguna Vista Drive Northbound			Newport Road Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	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	20	229	249	50	18	68	186	25	211	528
07:15 AM	26	234	260	39	39	78	250	11	261	599
07:30 AM	21	262	283	39	29	68	225	19	244	595
07:45 AM	24	252	276	52	7	59	188	14	202	537
Total Volume	91	977	1068	180	93	273	849	69	918	2259
% App. Total	8.5	91.5		65.9	34.1		92.5	7.5		
PHF	.875	.932	.943	.865	.596	.875	.849	.690	.879	.943

City of Menifee
 N/S: Laguna Vista Drive
 E/W: Newport Road
 Weather: Clear

File Name : MENLANEAM
 Site Code : 05716093
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Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	20	229	249	50	18	68	186	25	211
+15 mins.	26	234	260	39	39	78	250	11	261
+30 mins.	21	262	283	39	29	68	225	19	244
+45 mins.	24	252	276	52	7	59	188	14	202
Total Volume	91	977	1068	180	93	273	849	69	918
% App. Total	8.5	91.5		65.9	34.1		92.5	7.5	
PHF	.875	.932	.943	.865	.596	.875	.849	.690	.879

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City of Menifee
 N/S: Laguna Vista Drive
 E/W: Newport Road
 Weather: Clear

File Name : MENLANEPM
 Site Code : 05716093
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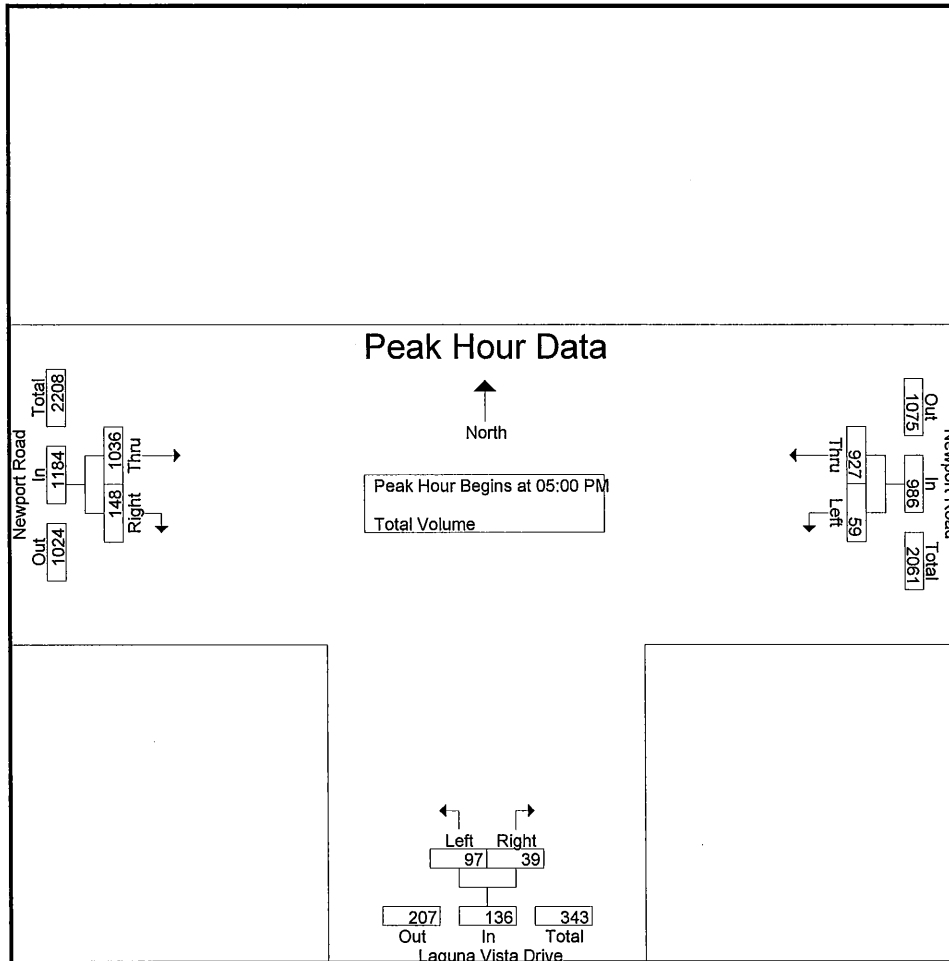
Groups Printed- Total Volume

Start Time	Newport Road Westbound			Laguna Vista Drive Northbound			Newport Road Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	11	201	212	29	16	45	216	35	251	508
04:15 PM	10	230	240	33	10	43	260	28	288	571
04:30 PM	10	235	245	31	2	33	243	26	269	547
04:45 PM	11	235	246	24	11	35	233	34	267	548
Total	42	901	943	117	39	156	952	123	1075	2174
05:00 PM	13	231	244	23	13	36	249	41	290	570
05:15 PM	15	244	259	20	10	30	281	36	317	606
05:30 PM	15	233	248	24	12	36	248	32	280	564
05:45 PM	16	219	235	30	4	34	258	39	297	566
Total	59	927	986	97	39	136	1036	148	1184	2306
Grand Total	101	1828	1929	214	78	292	1988	271	2259	4480
Apprch %	5.2	94.8		73.3	26.7		88	12		
Total %	2.3	40.8	43.1	4.8	1.7	6.5	44.4	6	50.4	

Start Time	Newport Road Westbound			Laguna Vista Drive Northbound			Newport Road Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	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 05:00 PM										
05:00 PM	13	231	244	23	13	36	249	41	290	570
05:15 PM	15	244	259	20	10	30	281	36	317	606
05:30 PM	15	233	248	24	12	36	248	32	280	564
05:45 PM	16	219	235	30	4	34	258	39	297	566
Total Volume	59	927	986	97	39	136	1036	148	1184	2306
% App. Total	6	94		71.3	28.7		87.5	12.5		
PHF	.922	.950	.952	.808	.750	.944	.922	.902	.934	.951

City of Menifee
 N/S: Laguna Vista Drive
 E/W: Newport Road
 Weather: Clear

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

	04:45 PM			04:00 PM			05:00 PM		
+0 mins.	11	235	246	29	16	45	249	41	290
+15 mins.	13	231	244	33	10	43	281	36	317
+30 mins.	15	244	259	31	2	33	248	32	280
+45 mins.	15	233	248	24	11	35	258	39	297
Total Volume	54	943	997	117	39	156	1036	148	1184
% App. Total	5.4	94.6		75	25		87.5	12.5	
PHF	.900	.966	.962	.886	.609	.867	.922	.902	.934

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City of Menifee
 N/S: Menifee Road
 E/W: Rockport Road
 Weather: Clear

File Name : MENMEROAM
 Site Code : 05716093
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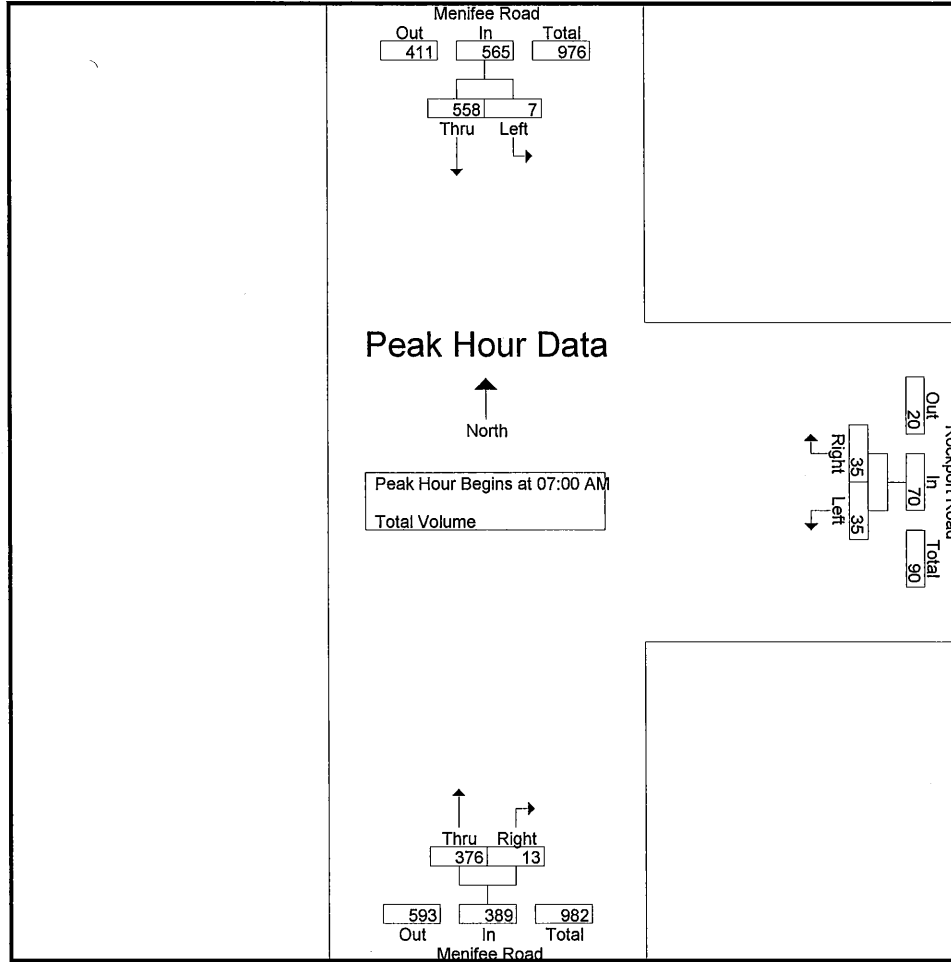
Groups Printed- Total Volume

Start Time	Menifee Road Southbound			Rockport Road Westbound			Menifee Road Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	2	71	73	5	12	17	99	3	102	192
07:15 AM	0	151	151	11	13	24	123	3	126	301
07:30 AM	3	179	182	13	6	19	93	5	98	299
07:45 AM	2	157	159	6	4	10	61	2	63	232
Total	7	558	565	35	35	70	376	13	389	1024
08:00 AM	0	86	86	7	3	10	68	6	74	170
08:15 AM	7	85	92	7	11	18	69	4	73	183
08:30 AM	4	66	70	13	10	23	73	3	76	169
08:45 AM	3	65	68	4	7	11	51	3	54	133
Total	14	302	316	31	31	62	261	16	277	655
Grand Total	21	860	881	66	66	132	637	29	666	1679
Apprch %	2.4	97.6		50	50		95.6	4.4		
Total %	1.3	51.2	52.5	3.9	3.9	7.9	37.9	1.7	39.7	

Start Time	Menifee Road Southbound			Rockport Road Westbound			Menifee Road Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	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	2	71	73	5	12	17	99	3	102	192
07:15 AM	0	151	151	11	13	24	123	3	126	301
07:30 AM	3	179	182	13	6	19	93	5	98	299
07:45 AM	2	157	159	6	4	10	61	2	63	232
Total Volume	7	558	565	35	35	70	376	13	389	1024
% App. Total	1.2	98.8		50	50		96.7	3.3		
PHF	.583	.779	.776	.673	.673	.729	.764	.650	.772	.850

City of Menifee
 N/S: Menifee Road
 E/W: Rockport Road
 Weather: Clear

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

	07:15 AM			07:00 AM			07:00 AM		
+0 mins.	0	151	151	5	12	17	99	3	102
+15 mins.	3	179	182	11	13	24	123	3	126
+30 mins.	2	157	159	13	6	19	93	5	98
+45 mins.	0	86	86	6	4	10	61	2	63
Total Volume	5	573	578	35	35	70	376	13	389
% App. Total	0.9	99.1		50	50		96.7	3.3	
PHF	.417	.800	.794	.673	.673	.729	.764	.650	.772

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City of Menifee
 N/S: Menifee Road
 E/W: Rockport Road
 Weather: Clear

File Name : MENMEROPM
 Site Code : 05716093
 Start Date : 2/25/2016
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Groups Printed- Total Volume

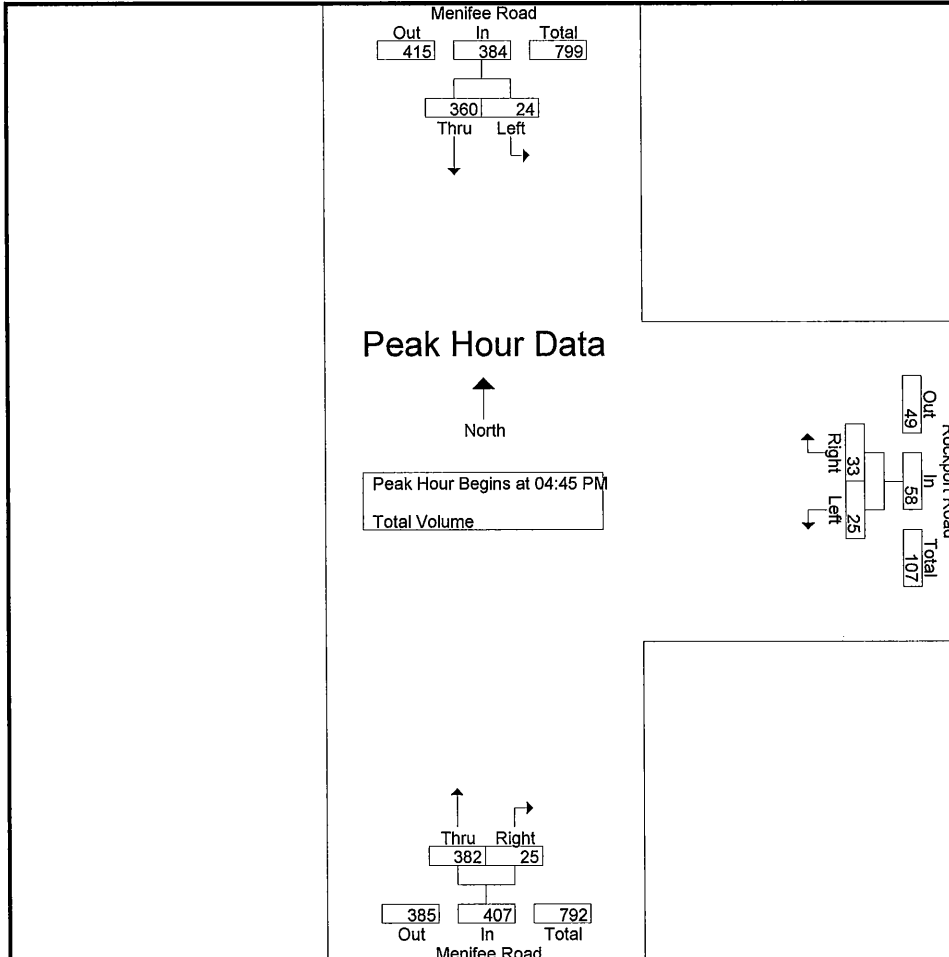
Start Time	Menifee Road Southbound			Rockport Road Westbound			Menifee Road Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	13	87	100	6	2	8	110	1	111	219
04:15 PM	6	91	97	5	9	14	95	4	99	210
04:30 PM	5	79	84	3	8	11	86	1	87	182
04:45 PM	6	97	103	4	10	14	84	9	93	210
Total	30	354	384	18	29	47	375	15	390	821
05:00 PM	4	87	91	12	7	19	92	3	95	205
05:15 PM	7	86	93	4	9	13	100	6	106	212
05:30 PM	7	90	97	5	7	12	106	7	113	222
05:45 PM	4	82	86	4	8	12	90	7	97	195
Total	22	345	367	25	31	56	388	23	411	834
Grand Total	52	699	751	43	60	103	763	38	801	1655
Apprch %	6.9	93.1		41.7	58.3		95.3	4.7		
Total %	3.1	42.2	45.4	2.6	3.6	6.2	46.1	2.3	48.4	

Start Time	Menifee Road Southbound			Rockport Road Westbound			Menifee Road Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	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 04:45 PM										
04:45 PM	6	97	103	4	10	14	84	9	93	210
05:00 PM	4	87	91	12	7	19	92	3	95	205
05:15 PM	7	86	93	4	9	13	100	6	106	212
05:30 PM	7	90	97	5	7	12	106	7	113	222
Total Volume	24	360	384	25	33	58	382	25	407	849
% App. Total	6.2	93.8		43.1	56.9		93.9	6.1		
PHF	.857	.928	.932	.521	.825	.763	.901	.694	.900	.956

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City of Menifee
 N/S: Menifee Road
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File Name : MENMEROPM
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Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:00 PM			04:15 PM			05:00 PM		
+0 mins.	13	87	100	5	9	14	92	3	95
+15 mins.	6	91	97	3	8	11	100	6	106
+30 mins.	5	79	84	4	10	14	106	7	113
+45 mins.	6	97	103	12	7	19	90	7	97
Total Volume	30	354	384	24	34	58	388	23	411
% App. Total	7.8	92.2		41.4	58.6		94.4	5.6	
PHF	.577	.912	.932	.500	.850	.763	.915	.821	.909

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City of Menifee
 N/S: Laguna Vista Drive
 E/W: Rockport Road
 Weather: Clear

File Name : MENLAROAM
 Site Code : 05716093
 Start Date : 2/25/2016
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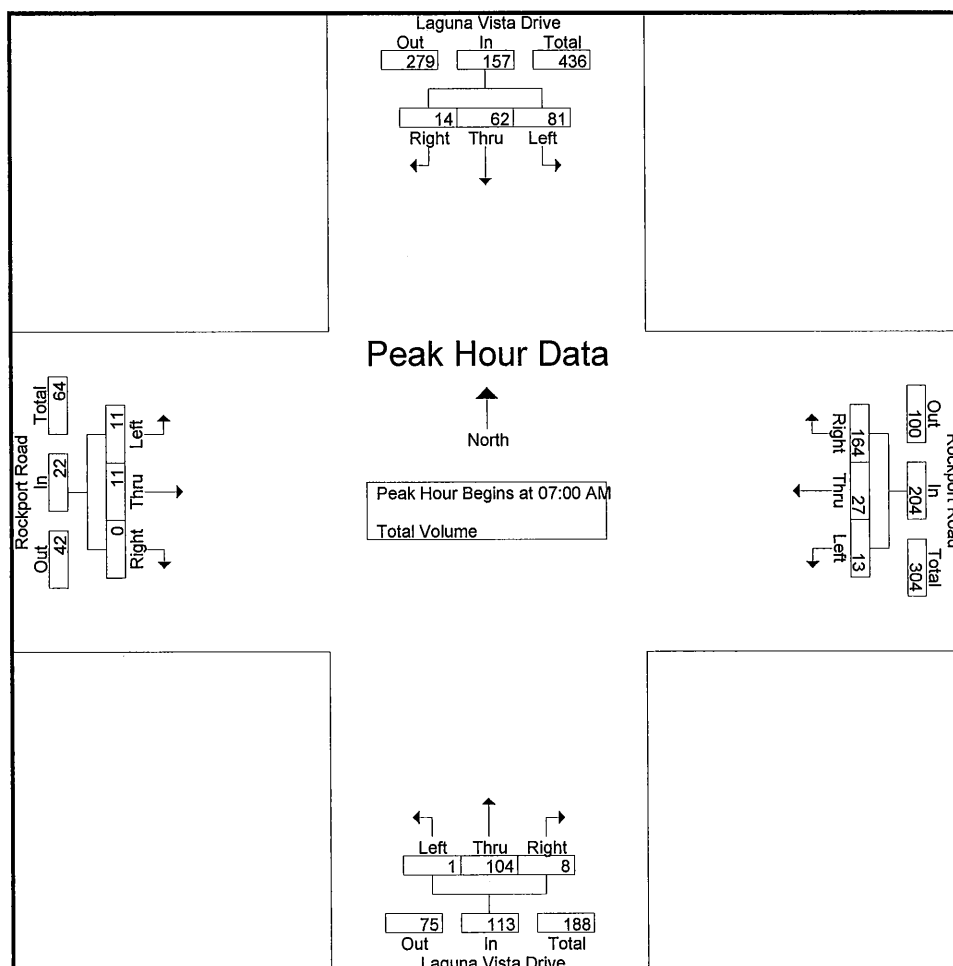
Groups Printed- Total Volume

Start Time	Laguna Vista Drive Southbound				Rockport Road Westbound				Laguna Vista Drive Northbound				Rockport 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	17	15	3	35	1	5	52	58	0	26	0	26	3	3	0	6	125
07:15 AM	16	19	4	39	7	10	37	54	1	35	3	39	2	2	0	4	136
07:30 AM	24	15	5	44	5	8	39	52	0	27	4	31	5	3	0	8	135
07:45 AM	24	13	2	39	0	4	36	40	0	16	1	17	1	3	0	4	100
Total	81	62	14	157	13	27	164	204	1	104	8	113	11	11	0	22	496
08:00 AM	15	15	3	33	1	7	31	39	0	12	0	12	6	2	0	8	92
08:15 AM	29	7	2	38	1	11	37	49	1	18	1	20	0	8	2	10	117
08:30 AM	21	10	5	36	3	11	34	48	0	12	3	15	3	6	0	9	108
08:45 AM	28	4	0	32	0	9	36	45	1	15	1	17	1	6	1	8	102
Total	93	36	10	139	5	38	138	181	2	57	5	64	10	22	3	35	419
Grand Total	174	98	24	296	18	65	302	385	3	161	13	177	21	33	3	57	915
Apprch %	58.8	33.1	8.1		4.7	16.9	78.4		1.7	91	7.3		36.8	57.9	5.3		
Total %	19	10.7	2.6	32.3	2	7.1	33	42.1	0.3	17.6	1.4	19.3	2.3	3.6	0.3	6.2	

Start Time	Laguna Vista Drive Southbound				Rockport Road Westbound				Laguna Vista Drive Northbound				Rockport Road 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	17	15	3	35	1	5	52	58	0	26	0	26	3	3	0	6	125
07:15 AM	16	19	4	39	7	10	37	54	1	35	3	39	2	2	0	4	136
07:30 AM	24	15	5	44	5	8	39	52	0	27	4	31	5	3	0	8	135
07:45 AM	24	13	2	39	0	4	36	40	0	16	1	17	1	3	0	4	100
Total Volume	81	62	14	157	13	27	164	204	1	104	8	113	11	11	0	22	496
% App. Total	51.6	39.5	8.9		6.4	13.2	80.4		0.9	92	7.1		50	50	0		
PHF	.844	.816	.700	.892	.464	.675	.788	.879	.250	.743	.500	.724	.550	.917	.000	.688	.912

City of Menifee
 N/S: Laguna Vista Drive
 EW: Rockport Road
 Weather: Clear

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

	07:00 AM				07:00 AM				07:00 AM				08:00 AM			
+0 mins.	17	15	3	35	1	5	52	58	0	26	0	26	6	2	0	8
+15 mins.	16	19	4	39	7	10	37	54	1	35	3	39	0	8	2	10
+30 mins.	24	15	5	44	5	8	39	52	0	27	4	31	3	6	0	9
+45 mins.	24	13	2	39	0	4	36	40	0	16	1	17	1	6	1	8
Total Volume	81	62	14	157	13	27	164	204	1	104	8	113	10	22	3	35
% App. Total	51.6	39.5	8.9		6.4	13.2	80.4		0.9	92	7.1		28.6	62.9	8.6	
PHF	.844	.816	.700	.892	.464	.675	.788	.879	.250	.743	.500	.724	.417	.688	.375	.875

City of Menifee
 N/S: Laguna Vista Drive
 E/W: Rockport Road
 Weather: Clear

File Name : MENLAROPM
 Site Code : 05716093
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Groups Printed- Total Volume

Start Time	Laguna Vista Drive Southbound				Rockport Road Westbound				Laguna Vista Drive Northbound				Rockport 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	31	20	0	51	0	7	31	38	0	9	0	9	0	5	0	5	103
04:15 PM	27	13	1	41	0	6	25	31	0	11	0	11	1	7	1	9	92
04:30 PM	33	12	2	47	0	6	20	26	0	14	1	15	0	3	0	3	91
04:45 PM	18	13	2	33	1	4	13	18	0	13	2	15	2	10	0	12	78
Total	109	58	5	172	1	23	89	113	0	47	3	50	3	25	1	29	364
05:00 PM	36	21	2	59	0	15	28	43	0	13	2	15	1	5	1	7	124
05:15 PM	32	21	3	56	0	5	17	22	0	7	2	9	3	9	0	12	99
05:30 PM	28	17	0	45	2	7	21	30	1	14	1	16	1	7	1	9	100
05:45 PM	22	15	1	38	4	6	20	30	0	10	0	10	1	7	1	9	87
Total	118	74	6	198	6	33	86	125	1	44	5	50	6	28	3	37	410
Grand Total	227	132	11	370	7	56	175	238	1	91	8	100	9	53	4	66	774
Apprch %	61.4	35.7	3		2.9	23.5	73.5		1	91	8		13.6	80.3	6.1		
Total %	29.3	17.1	1.4	47.8	0.9	7.2	22.6	30.7	0.1	11.8	1	12.9	1.2	6.8	0.5	8.5	

Start Time	Laguna Vista Drive Southbound				Rockport Road Westbound				Laguna Vista Drive Northbound				Rockport Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
05:00 PM	36	21	2	59	0	15	28	43	0	13	2	15	1	5	1	7	124
05:15 PM	32	21	3	56	0	5	17	22	0	7	2	9	3	9	0	12	99
05:30 PM	28	17	0	45	2	7	21	30	1	14	1	16	1	7	1	9	100
05:45 PM	22	15	1	38	4	6	20	30	0	10	0	10	1	7	1	9	87
Total Volume	118	74	6	198	6	33	86	125	1	44	5	50	6	28	3	37	410
% App. Total	59.6	37.4	3		4.8	26.4	68.8		2	88	10		16.2	75.7	8.1		
PHF	.819	.881	.500	.839	.375	.550	.768	.727	.250	.786	.625	.781	.500	.778	.750	.771	.827

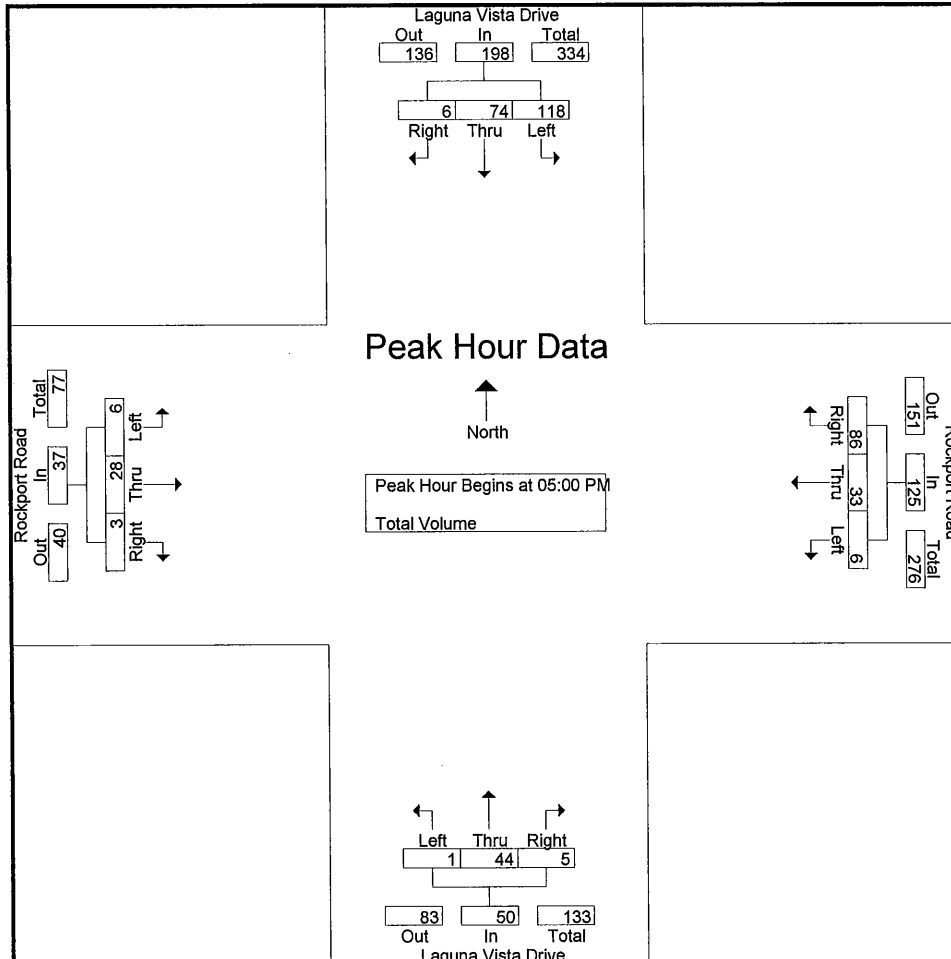
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 05:00 PM

Counts Unlimited
 PO Box 1178
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City of Menifee
 N/S: Laguna Vista Drive
 E/W: Rockport Road
 Weather: Clear

File Name : MENLAROPM
 Site Code : 05716093
 Start Date : 2/25/2016
 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:

	05:00 PM				05:00 PM				04:15 PM				04:45 PM			
+0 mins.	36	21	2	59	0	15	28	43	0	11	0	11	2	10	0	12
+15 mins.	32	21	3	56	0	5	17	22	0	14	1	15	1	5	1	7
+30 mins.	28	17	0	45	2	7	21	30	0	13	2	15	3	9	0	12
+45 mins.	22	15	1	38	4	6	20	30	0	13	2	15	1	7	1	9
Total Volume	118	74	6	198	6	33	86	125	0	51	5	56	7	31	2	40
% App. Total	59.6	37.4	3		4.8	26.4	68.8		0	91.1	8.9		17.5	77.5	5	
PHF	.819	.881	.500	.839	.375	.550	.768	.727	.000	.911	.625	.933	.583	.775	.500	.833

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

City of Menifee
 N/S: Menifee Road
 E/W: Loire Valley Lane/Tres Lagos Drive
 Weather: Clear

File Name : MENMELOAM
 Site Code : 05716093
 Start Date : 2/25/2016
 Page No : 1

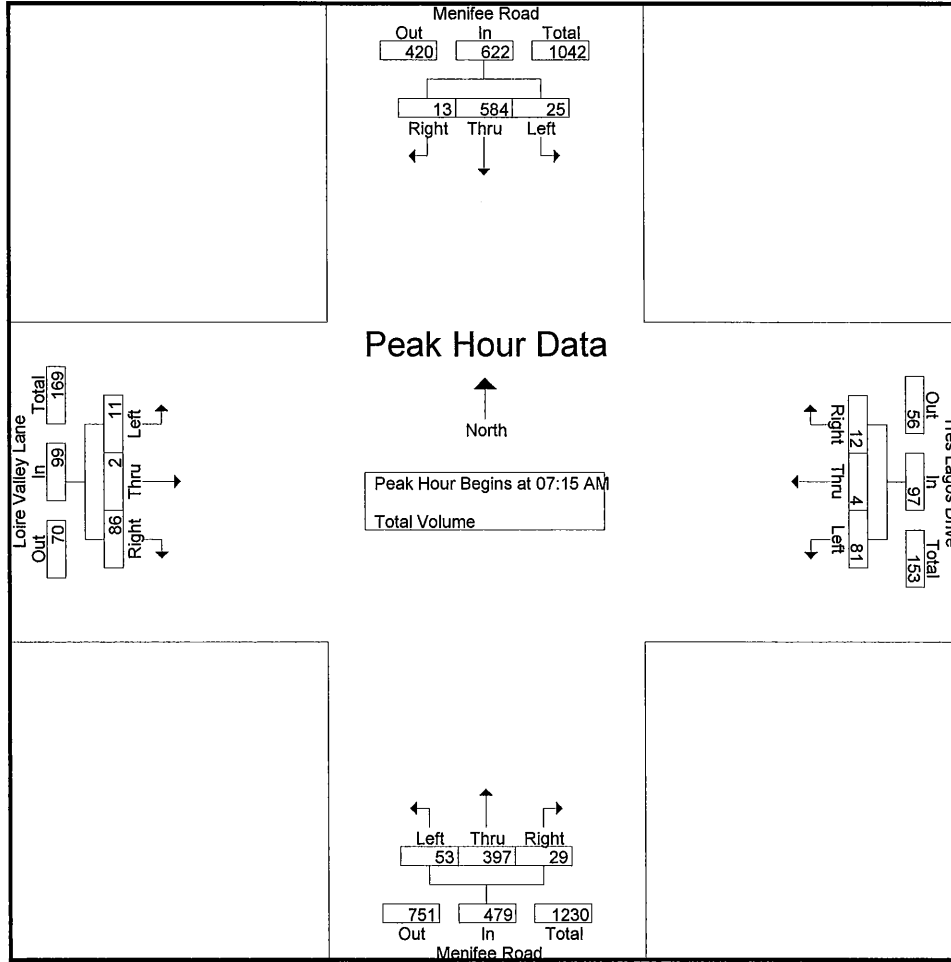
Groups Printed- Total Volume

Start Time	Menifee Road Southbound				Tres Lagos Drive Westbound				Menifee Road Northbound				Loire Valley Lane 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	4	68	0	72	5	0	5	10	1	113	2	116	2	1	7	10	208
07:15 AM	5	129	4	138	22	2	6	30	28	135	6	169	3	0	24	27	364
07:30 AM	10	200	8	218	26	1	3	30	19	121	9	149	7	2	51	60	457
07:45 AM	2	164	1	167	13	0	0	13	4	68	5	77	0	0	4	4	261
Total	21	561	13	595	66	3	14	83	52	437	22	511	12	3	86	101	1290
08:00 AM	8	91	0	99	20	1	3	24	2	73	9	84	1	0	7	8	215
08:15 AM	4	91	0	95	22	0	3	25	3	61	12	76	2	0	11	13	209
08:30 AM	4	79	0	83	22	0	4	26	10	85	27	122	0	0	9	9	240
08:45 AM	3	69	0	72	9	2	1	12	4	57	9	70	0	0	2	2	156
Total	19	330	0	349	73	3	11	87	19	276	57	352	3	0	29	32	820
Grand Total	40	891	13	944	139	6	25	170	71	713	79	863	15	3	115	133	2110
Apprch %	4.2	94.4	1.4		81.8	3.5	14.7		8.2	82.6	9.2		11.3	2.3	86.5		
Total %	1.9	42.2	0.6	44.7	6.6	0.3	1.2	8.1	3.4	33.8	3.7	40.9	0.7	0.1	5.5	6.3	

Start Time	Menifee Road Southbound				Tres Lagos Drive Westbound				Menifee Road Northbound				Loire Valley Lane 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	5	129	4	138	22	2	6	30	28	135	6	169	3	0	24	27	364
07:30 AM	10	200	8	218	26	1	3	30	19	121	9	149	7	2	51	60	457
07:45 AM	2	164	1	167	13	0	0	13	4	68	5	77	0	0	4	4	261
08:00 AM	8	91	0	99	20	1	3	24	2	73	9	84	1	0	7	8	215
Total Volume	25	584	13	622	81	4	12	97	53	397	29	479	11	2	86	99	1297
% App. Total	4	93.9	2.1		83.5	4.1	12.4		11.1	82.9	6.1		11.1	2	86.9		
PHF	.625	.730	.406	.713	.779	.500	.500	.808	.473	.735	.806	.709	.393	.250	.422	.413	.710

City of Menifee
 N/S: Menifee Road
 E/W: Loire Valley Lane/Tres Lagos Drive
 Weather: Clear

File Name : MENMELOAM
 Site Code : 05716093
 Start Date : 2/25/2016
 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				07:15 AM				07:00 AM				07:00 AM			
+0 mins.	5	129	4	138	22	2	6	30	1	113	2	116	2	1	7	10
+15 mins.	10	200	8	218	26	1	3	30	28	135	6	169	3	0	24	27
+30 mins.	2	164	1	167	13	0	0	13	19	121	9	149	7	2	51	60
+45 mins.	8	91	0	99	20	1	3	24	4	68	5	77	0	0	4	4
Total Volume	25	584	13	622	81	4	12	97	52	437	22	511	12	3	86	101
% App. Total	4	93.9	2.1		83.5	4.1	12.4		10.2	85.5	4.3		11.9	3	85.1	
PHF	.625	.730	.406	.713	.779	.500	.500	.808	.464	.809	.611	.756	.429	.375	.422	.421

Counts Unlimited
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City of Menifee
 N/S: Menifee Road
 E/W: Loire Valley Lane/Tres Lagos Drive
 Weather: Clear

File Name : MENMELOPM
 Site Code : 05716093
 Start Date : 2/25/2016
 Page No : 1

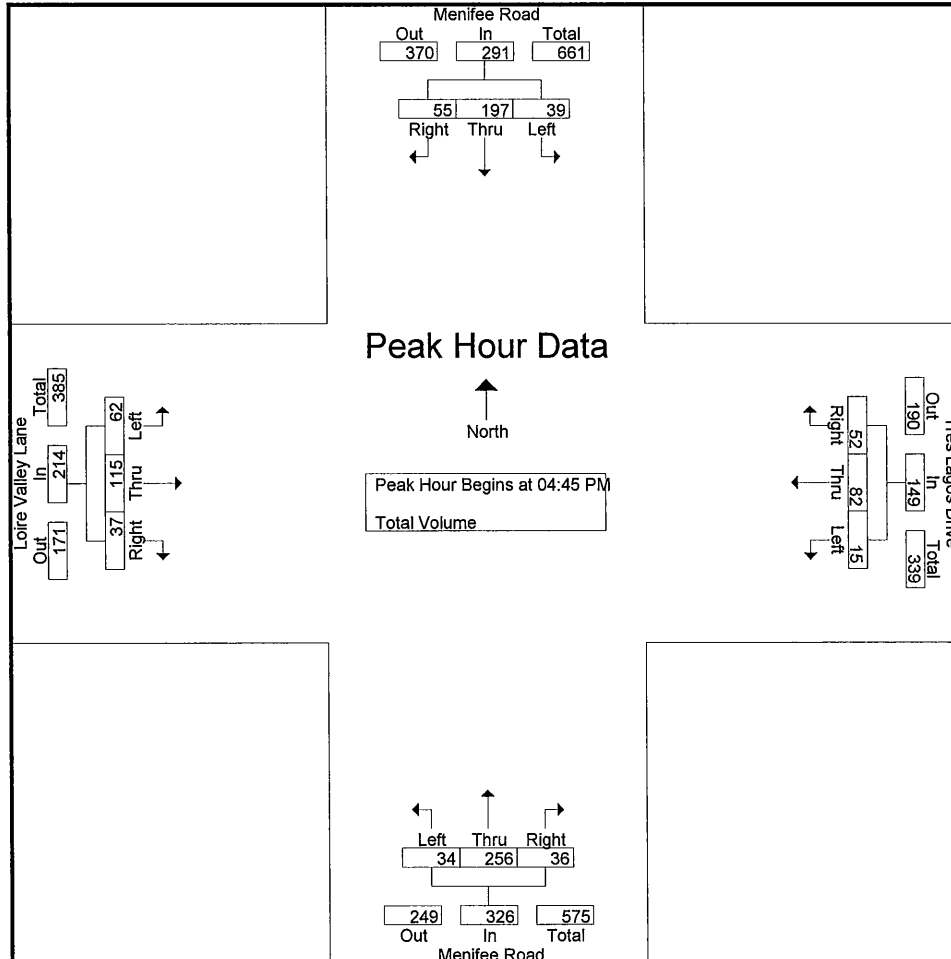
Groups Printed- Total Volume

Start Time	Menifee Road Southbound				Tres Lagos Drive Westbound				Menifee Road Northbound				Loire Valley Lane 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	10	50	12	72	3	17	16	36	3	70	10	83	15	18	7	40	231
04:15 PM	11	42	23	76	3	13	11	27	3	54	6	63	15	16	13	44	210
04:30 PM	9	42	10	61	2	13	9	24	4	56	7	67	15	22	15	52	204
04:45 PM	5	57	15	77	5	20	16	41	14	55	8	77	16	25	10	51	246
Total	35	191	60	286	13	63	52	128	24	235	31	290	61	81	45	187	891
05:00 PM	12	43	11	66	2	19	11	32	6	57	7	70	19	23	11	53	221
05:15 PM	6	51	15	72	3	16	11	30	4	73	11	88	15	29	11	55	245
05:30 PM	16	46	14	76	5	27	14	46	10	71	10	91	12	38	5	55	268
05:45 PM	11	41	20	72	8	14	9	31	7	64	7	78	10	31	9	50	231
Total	45	181	60	286	18	76	45	139	27	265	35	327	56	121	36	213	965
Grand Total	80	372	120	572	31	139	97	267	51	500	66	617	117	202	81	400	1856
Apprch %	14	65	21		11.6	52.1	36.3		8.3	81	10.7		29.2	50.5	20.2		
Total %	4.3	20	6.5	30.8	1.7	7.5	5.2	14.4	2.7	26.9	3.6	33.2	6.3	10.9	4.4	21.6	

Start Time	Menifee Road Southbound				Tres Lagos Drive Westbound				Menifee Road Northbound				Loire Valley Lane 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 04:45 PM																	
04:45 PM	5	57	15	77	5	20	16	41	14	55	8	77	16	25	10	51	246
05:00 PM	12	43	11	66	2	19	11	32	6	57	7	70	19	23	11	53	221
05:15 PM	6	51	15	72	3	16	11	30	4	73	11	88	15	29	11	55	245
05:30 PM	16	46	14	76	5	27	14	46	10	71	10	91	12	38	5	55	268
Total Volume	39	197	55	291	15	82	52	149	34	256	36	326	62	115	37	214	980
% App. Total	13.4	67.7	18.9		10.1	55	34.9		10.4	78.5	11		29	53.7	17.3		
PHF	.609	.864	.917	.945	.750	.759	.813	.810	.607	.877	.818	.896	.816	.757	.841	.973	.914

City of Menifee
 N/S: Menifee Road
 EW: Loire Valley Lane/Tres Lagos Drive
 Weather: Clear

File Name : MENMELOPM
 Site Code : 05716093
 Start Date : 2/25/2016
 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				04:45 PM				05:00 PM				04:45 PM			
+0 mins.	5	57	15	77	5	20	16	41	6	57	7	70	16	25	10	51
+15 mins.	12	43	11	66	2	19	11	32	4	73	11	88	19	23	11	53
+30 mins.	6	51	15	72	3	16	11	30	10	71	10	91	15	29	11	55
+45 mins.	16	46	14	76	5	27	14	46	7	64	7	78	12	38	5	55
Total Volume	39	197	55	291	15	82	52	149	27	265	35	327	62	115	37	214
% App. Total	13.4	67.7	18.9		10.1	55	34.9		8.3	81	10.7		29	53.7	17.3	
PHF	.609	.864	.917	.945	.750	.759	.813	.810	.675	.908	.795	.898	.816	.757	.841	.973

Counts Unlimited
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 Corona, CA 92878
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City of Menifee
 N/S: Laguna Vista Drive
 E/W: Tres Lago Road
 Weather: Clear

File Name : MENLVTLAM
 Site Code : 05716093
 Start Date : 3/3/2016
 Page No : 1

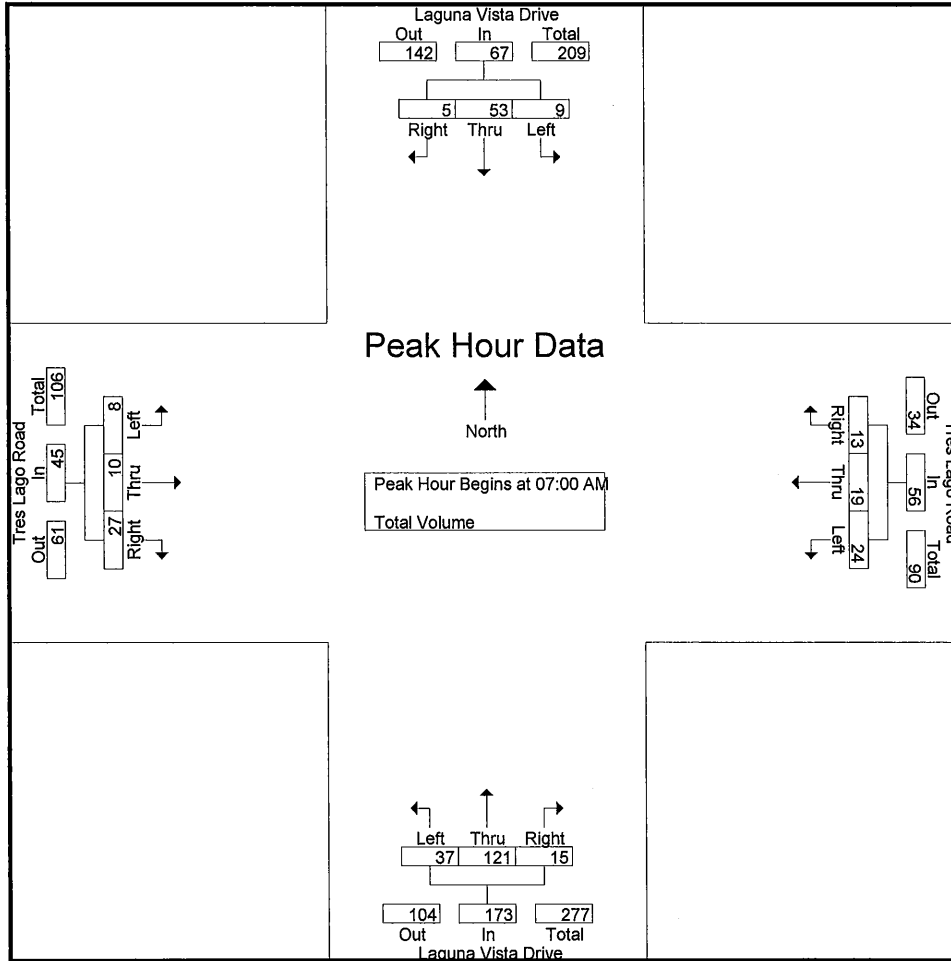
Groups Printed- Total Volume

Start Time	Laguna Vista Drive Southbound				Tres Lago Road Westbound				Laguna Vista Drive Northbound				Tres Lago 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	1	9	0	10	5	6	9	20	4	29	1	34	0	2	5	7	71
07:15 AM	5	18	3	26	14	6	2	22	11	37	6	54	5	3	8	16	118
07:30 AM	1	17	1	19	5	1	1	7	14	35	7	56	3	3	12	18	100
07:45 AM	2	9	1	12	0	6	1	7	8	20	1	29	0	2	2	4	52
Total	9	53	5	67	24	19	13	56	37	121	15	173	8	10	27	45	341
08:00 AM	4	5	1	10	2	3	2	7	14	14	0	28	0	3	6	9	54
08:15 AM	4	7	1	12	1	6	2	9	18	13	0	31	0	2	10	12	64
08:30 AM	1	4	1	6	0	3	3	6	11	10	1	22	3	5	12	20	54
08:45 AM	2	5	1	8	0	4	0	4	2	4	0	6	0	4	3	7	25
Total	11	21	4	36	3	16	7	26	45	41	1	87	3	14	31	48	197
Grand Total	20	74	9	103	27	35	20	82	82	162	16	260	11	24	58	93	538
Apprch %	19.4	71.8	8.7		32.9	42.7	24.4		31.5	62.3	6.2		11.8	25.8	62.4		
Total %	3.7	13.8	1.7	19.1	5	6.5	3.7	15.2	15.2	30.1	3	48.3	2	4.5	10.8	17.3	

Start Time	Laguna Vista Drive Southbound				Tres Lago Road Westbound				Laguna Vista Drive Northbound				Tres Lago Road 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	9	0	10	5	6	9	20	4	29	1	34	0	2	5	7	71
07:15 AM	5	18	3	26	14	6	2	22	11	37	6	54	5	3	8	16	118
07:30 AM	1	17	1	19	5	1	1	7	14	35	7	56	3	3	12	18	100
07:45 AM	2	9	1	12	0	6	1	7	8	20	1	29	0	2	2	4	52
Total Volume	9	53	5	67	24	19	13	56	37	121	15	173	8	10	27	45	341
% App. Total	13.4	79.1	7.5		42.9	33.9	23.2		21.4	69.9	8.7		17.8	22.2	60		
PHF	.450	.736	.417	.644	.429	.792	.361	.636	.661	.818	.536	.772	.400	.833	.563	.625	.722

City of Menifee
 N/S: Laguna Vista Drive
 EW: Tres Lago Road
 Weather: Clear

File Name : MENLVTLAM
 Site Code : 05716093
 Start Date : 3/3/2016
 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				08:00 AM			
+0 mins.	1	9	0	10	5	6	9	20	4	29	1	34	0	3	6	9
+15 mins.	5	18	3	26	14	6	2	22	11	37	6	54	0	2	10	12
+30 mins.	1	17	1	19	5	1	1	7	14	35	7	56	3	5	12	20
+45 mins.	2	9	1	12	0	6	1	7	8	20	1	29	0	4	3	7
Total Volume	9	53	5	67	24	19	13	56	37	121	15	173	3	14	31	48
% App. Total	13.4	79.1	7.5		42.9	33.9	23.2		21.4	69.9	8.7		6.2	29.2	64.6	
PHF	.450	.736	.417	.644	.429	.792	.361	.636	.661	.818	.536	.772	.250	.700	.646	.600

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City of Menifee
 N/S: Laguna Vista Drive
 E/W: Tres Lago Road
 Weather: Clear

File Name : MENLVTLP
 Site Code : 05716093
 Start Date : 3/3/2016
 Page No : 1

Groups Printed- Total Volume

Start Time	Laguna Vista Drive Southbound				Tres Lago Road Westbound				Laguna Vista Drive Northbound				Tres Lago 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	3	12	5	20	1	0	1	2	5	10	0	15	0	5	4	9	46
04:15 PM	4	21	0	25	0	2	0	2	3	11	0	14	1	4	8	13	54
04:30 PM	2	9	0	11	0	4	1	5	8	15	0	23	0	7	6	13	52
04:45 PM	5	13	0	18	0	5	2	7	2	9	0	11	0	6	15	21	57
Total	14	55	5	74	1	11	4	16	18	45	0	63	1	22	33	56	209
05:00 PM	5	11	2	18	1	3	0	4	3	10	0	13	0	7	6	13	48
05:15 PM	2	21	1	24	0	2	1	3	11	10	0	21	0	5	11	16	64
05:30 PM	3	9	2	14	0	3	2	5	6	10	0	16	5	7	14	26	61
05:45 PM	2	25	2	29	2	4	1	7	5	5	0	10	0	9	9	18	64
Total	12	66	7	85	3	12	4	19	25	35	0	60	5	28	40	73	237
Grand Total	26	121	12	159	4	23	8	35	43	80	0	123	6	50	73	129	446
Apprch %	16.4	76.1	7.5		11.4	65.7	22.9		35	65	0		4.7	38.8	56.6		
Total %	5.8	27.1	2.7	35.7	0.9	5.2	1.8	7.8	9.6	17.9	0	27.6	1.3	11.2	16.4	28.9	

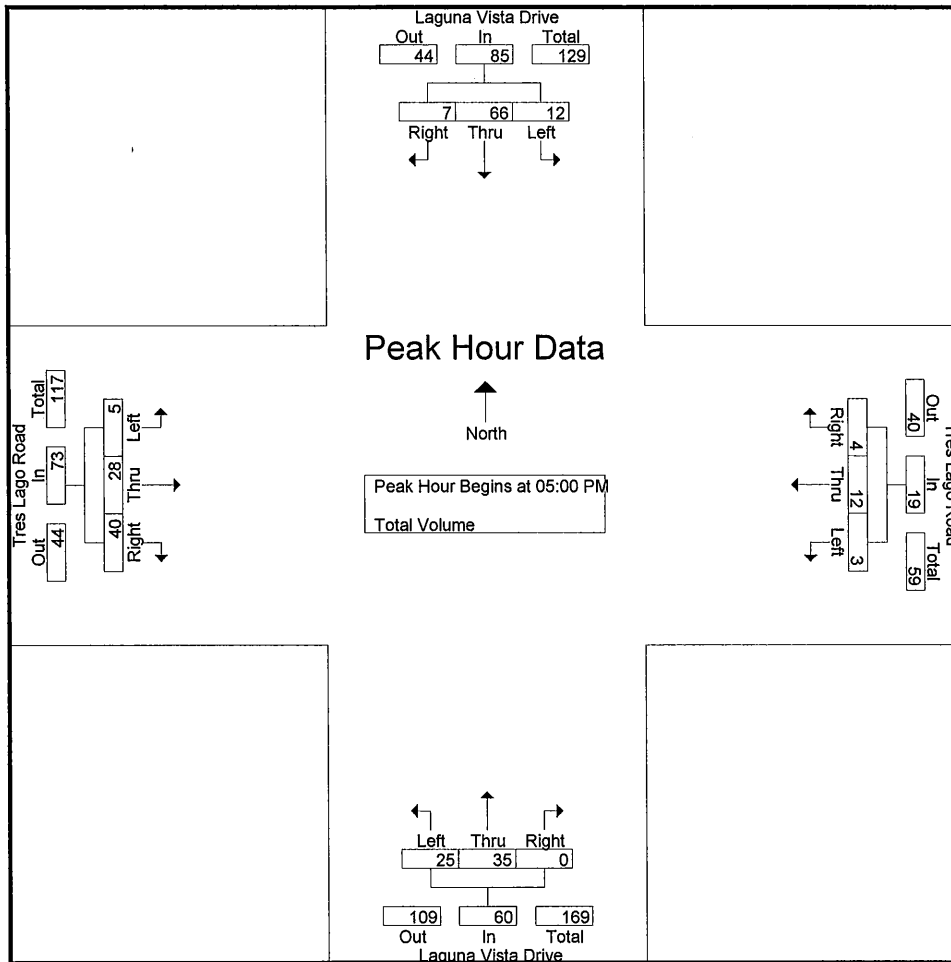
Start Time	Laguna Vista Drive Southbound				Tres Lago Road Westbound				Laguna Vista Drive Northbound				Tres Lago Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
05:00 PM	5	11	2	18	1	3	0	4	3	10	0	13	0	7	6	13	48
05:15 PM	2	21	1	24	0	2	1	3	11	10	0	21	0	5	11	16	64
05:30 PM	3	9	2	14	0	3	2	5	6	10	0	16	5	7	14	26	61
05:45 PM	2	25	2	29	2	4	1	7	5	5	0	10	0	9	9	18	64
Total Volume	12	66	7	85	3	12	4	19	25	35	0	60	5	28	40	73	237
% App. Total	14.1	77.6	8.2		15.8	63.2	21.1		41.7	58.3	0		6.8	38.4	54.8		
PHF	.600	.660	.875	.733	.375	.750	.500	.679	.568	.875	.000	.714	.250	.778	.714	.702	.926

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

Peak Hour for Entire Intersection Begins at 05:00 PM

City of Menifee
 N/S: Laguna Vista Drive
 E/W: Tres Lago Road
 Weather: Clear

File Name : MENLVTLP
 Site Code : 05716093
 Start Date : 3/3/2016
 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:

	05:00 PM				04:30 PM				04:30 PM				04:45 PM			
+0 mins.	5	11	2	18	0	4	1	5	8	15	0	23	0	6	15	21
+15 mins.	2	21	1	24	0	5	2	7	2	9	0	11	0	7	6	13
+30 mins.	3	9	2	14	1	3	0	4	3	10	0	13	0	5	11	16
+45 mins.	2	25	2	29	0	2	1	3	11	10	0	21	5	7	14	26
Total Volume	12	66	7	85	1	14	4	19	24	44	0	68	5	25	46	76
% App. Total	14.1	77.6	8.2		5.3	73.7	21.1		35.3	64.7	0		6.6	32.9	60.5	
PHF	.600	.660	.875	.733	.250	.700	.500	.679	.545	.733	.000	.739	.250	.893	.767	.731

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

City of Menifee
 N/S: Menifee Road
 E/W: Holland Road
 Weather: Clear

File Name : MENMEHOAM
 Site Code : 05716093
 Start Date : 2/25/2016
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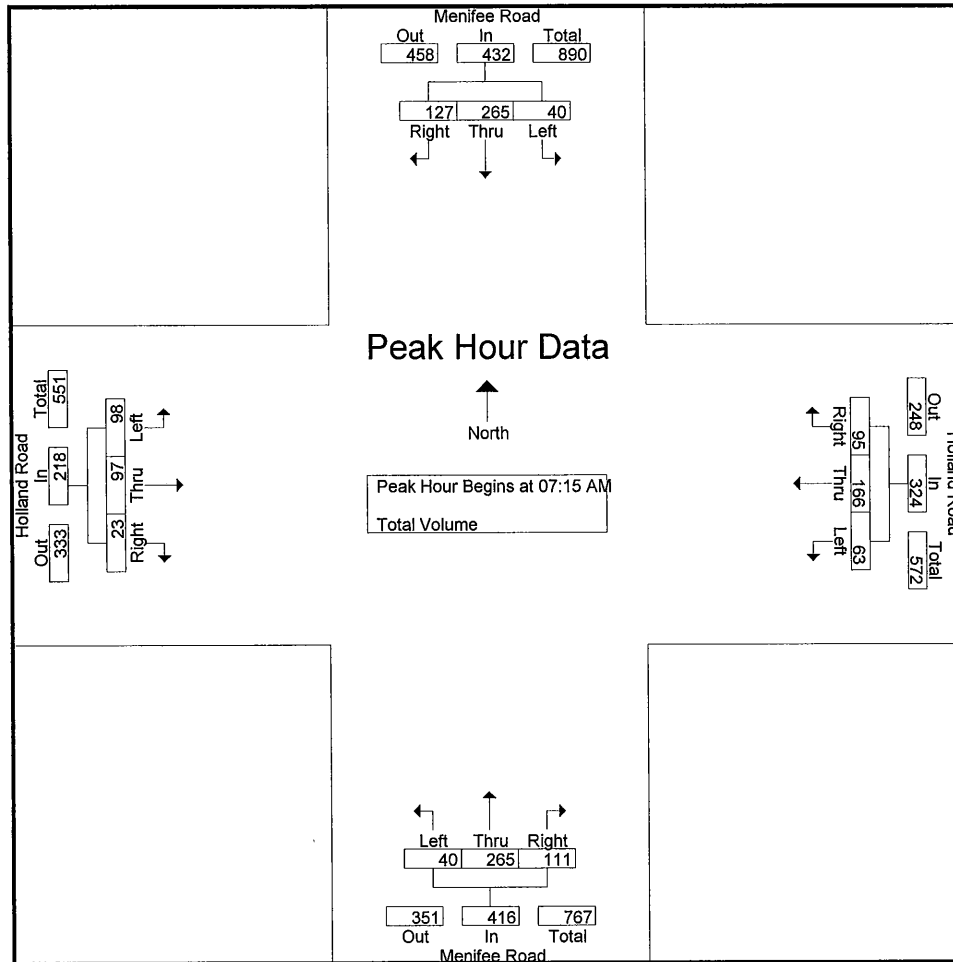
Groups Printed- Total Volume

Start Time	Menifee Road Southbound				Holland Road Westbound				Menifee Road Northbound				Holland 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	11	37	8	56	7	37	20	64	11	52	19	82	12	25	6	43	245
07:15 AM	12	44	26	82	19	52	34	105	8	71	56	135	44	38	4	86	408
07:30 AM	9	80	47	136	21	55	29	105	16	60	39	115	36	28	5	69	425
07:45 AM	8	80	37	125	13	34	18	65	9	64	10	83	6	13	11	30	303
Total	40	241	118	399	60	178	101	339	44	247	124	415	98	104	26	228	1381
08:00 AM	11	61	17	89	10	25	14	49	7	70	6	83	12	18	3	33	254
08:15 AM	12	77	26	115	3	29	27	59	14	98	1	113	17	16	6	39	326
08:30 AM	9	99	22	130	5	19	25	49	8	85	1	94	10	17	1	28	301
08:45 AM	7	61	7	75	1	17	6	24	7	32	2	41	9	17	2	28	168
Total	39	298	72	409	19	90	72	181	36	285	10	331	48	68	12	128	1049
Grand Total	79	539	190	808	79	268	173	520	80	532	134	746	146	172	38	356	2430
Apprch %	9.8	66.7	23.5		15.2	51.5	33.3		10.7	71.3	18		41	48.3	10.7		
Total %	3.3	22.2	7.8	33.3	3.3	11	7.1	21.4	3.3	21.9	5.5	30.7	6	7.1	1.6	14.7	

Start Time	Menifee Road Southbound				Holland Road Westbound				Menifee Road Northbound				Holland Road 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	12	44	26	82	19	52	34	105	8	71	56	135	44	38	4	86	408
07:30 AM	9	80	47	136	21	55	29	105	16	60	39	115	36	28	5	69	425
07:45 AM	8	80	37	125	13	34	18	65	9	64	10	83	6	13	11	30	303
08:00 AM	11	61	17	89	10	25	14	49	7	70	6	83	12	18	3	33	254
Total Volume	40	265	127	432	63	166	95	324	40	265	111	416	98	97	23	218	1390
% App. Total	9.3	61.3	29.4		19.4	51.2	29.3		9.6	63.7	26.7		45	44.5	10.6		
PHF	.833	.828	.676	.794	.750	.755	.699	.771	.625	.933	.496	.770	.557	.638	.523	.634	.818

City of Menifee
 N/S: Menifee Road
 E/W: Holland Road
 Weather: Clear

File Name : MENMEHOAM
 Site Code : 05716093
 Start Date : 2/25/2016
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Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:30 AM				07:00 AM				07:15 AM				07:00 AM			
+0 mins.	9	80	47	136	7	37	20	64	8	71	56	135	12	25	6	43
+15 mins.	8	80	37	125	19	52	34	105	16	60	39	115	44	38	4	86
+30 mins.	11	61	17	89	21	55	29	105	9	64	10	83	36	28	5	69
+45 mins.	12	77	26	115	13	34	18	65	7	70	6	83	6	13	11	30
Total Volume	40	298	127	465	60	178	101	339	40	265	111	416	98	104	26	228
% App. Total	8.6	64.1	27.3		17.7	52.5	29.8		9.6	63.7	26.7		43	45.6	11.4	
PHF	.833	.931	.676	.855	.714	.809	.743	.807	.625	.933	.496	.770	.557	.684	.591	.663

Counts Unlimited
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City of Menifee
 N/S: Menifee Road
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File Name : MENMEHOPM
 Site Code : 05716093
 Start Date : 2/25/2016
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Groups Printed- Total Volume

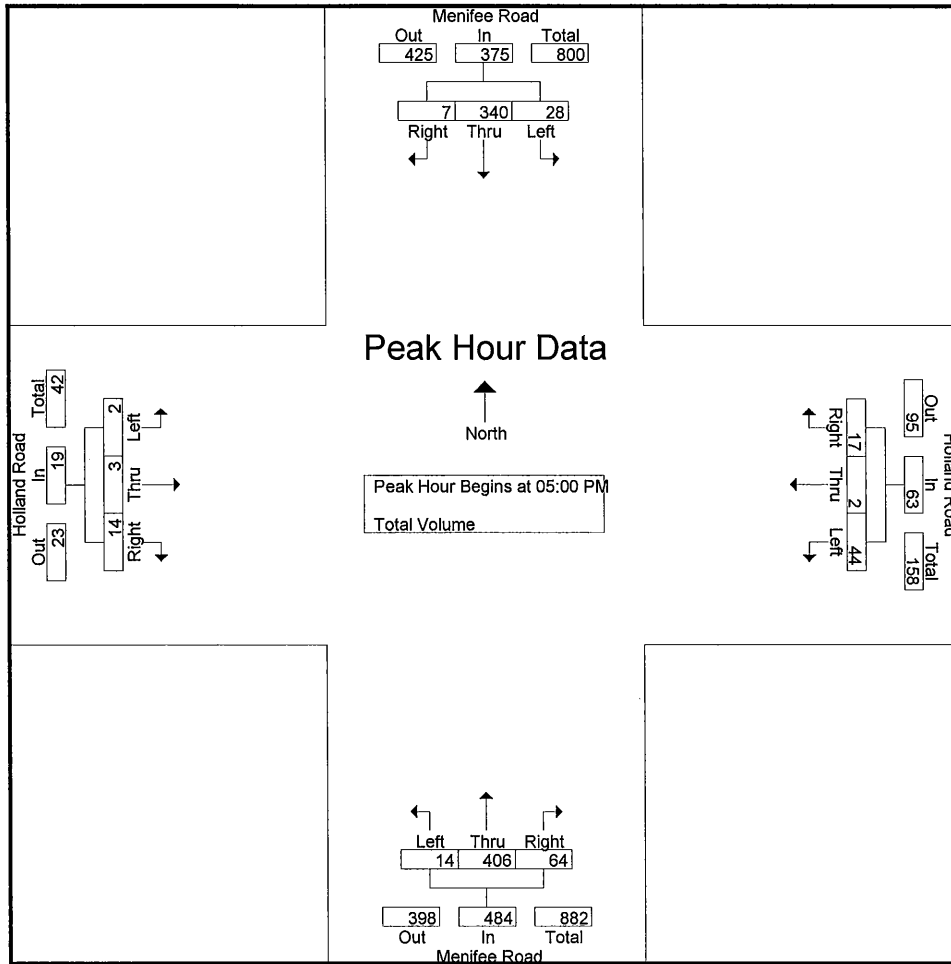
Start Time	Menifee Road Southbound				Holland Road Westbound				Menifee Road Northbound				Holland Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	6	82	2	90	10	0	0	10	4	111	16	131	0	1	5	6	237
04:15 PM	5	91	0	96	11	0	3	14	1	79	18	98	1	0	1	2	210
04:30 PM	7	87	1	95	7	0	4	11	4	93	11	108	0	0	2	2	216
04:45 PM	8	95	0	103	7	0	2	9	2	89	16	107	2	0	2	4	223
Total	26	355	3	384	35	0	9	44	11	372	61	444	3	1	10	14	886
05:00 PM	6	94	3	103	16	0	1	17	2	91	16	109	1	0	4	5	234
05:15 PM	7	83	0	90	8	0	4	12	5	104	11	120	1	0	3	4	226
05:30 PM	10	91	2	103	6	0	7	13	4	99	16	119	0	0	1	1	236
05:45 PM	5	72	2	79	14	2	5	21	3	112	21	136	0	3	6	9	245
Total	28	340	7	375	44	2	17	63	14	406	64	484	2	3	14	19	941
Grand Total	54	695	10	759	79	2	26	107	25	778	125	928	5	4	24	33	1827
Apprch %	7.1	91.6	1.3		73.8	1.9	24.3		2.7	83.8	13.5		15.2	12.1	72.7		
Total %	3	38	0.5	41.5	4.3	0.1	1.4	5.9	1.4	42.6	6.8	50.8	0.3	0.2	1.3	1.8	

Start Time	Menifee Road Southbound				Holland Road Westbound				Menifee Road Northbound				Holland Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
05:00 PM	6	94	3	103	16	0	1	17	2	91	16	109	1	0	4	5	234
05:15 PM	7	83	0	90	8	0	4	12	5	104	11	120	1	0	3	4	226
05:30 PM	10	91	2	103	6	0	7	13	4	99	16	119	0	0	1	1	236
05:45 PM	5	72	2	79	14	2	5	21	3	112	21	136	0	3	6	9	245
Total Volume	28	340	7	375	44	2	17	63	14	406	64	484	2	3	14	19	941
% App. Total	7.5	90.7	1.9		69.8	3.2	27		2.9	83.9	13.2		10.5	15.8	73.7		
PHF	.700	.904	.583	.910	.688	.250	.607	.750	.700	.906	.762	.890	.500	.250	.583	.528	.960

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

City of Menifee
 N/S: Menifee Road
 E/W: Holland Road
 Weather: Clear

File Name : MENMEHOPM
 Site Code : 05716093
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Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:45 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	8	95	0	103	16	0	1	17	2	91	16	109	1	0	4	5
+15 mins.	6	94	3	103	8	0	4	12	5	104	11	120	1	0	3	4
+30 mins.	7	83	0	90	6	0	7	13	4	99	16	119	0	0	1	1
+45 mins.	10	91	2	103	14	2	5	21	3	112	21	136	0	3	6	9
Total Volume	31	363	5	399	44	2	17	63	14	406	64	484	2	3	14	19
% App. Total	7.8	91	1.3		69.8	3.2	27		2.9	83.9	13.2		10.5	15.8	73.7	
PHF	.775	.955	.417	.968	.688	.250	.607	.750	.700	.906	.762	.890	.500	.250	.583	.528

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City of Menifee
 N/S: Briggs Road
 E/W: Holland Road
 Weather: Clear

File Name : MENBRHOAM
 Site Code : 05716093
 Start Date : 2/25/2016
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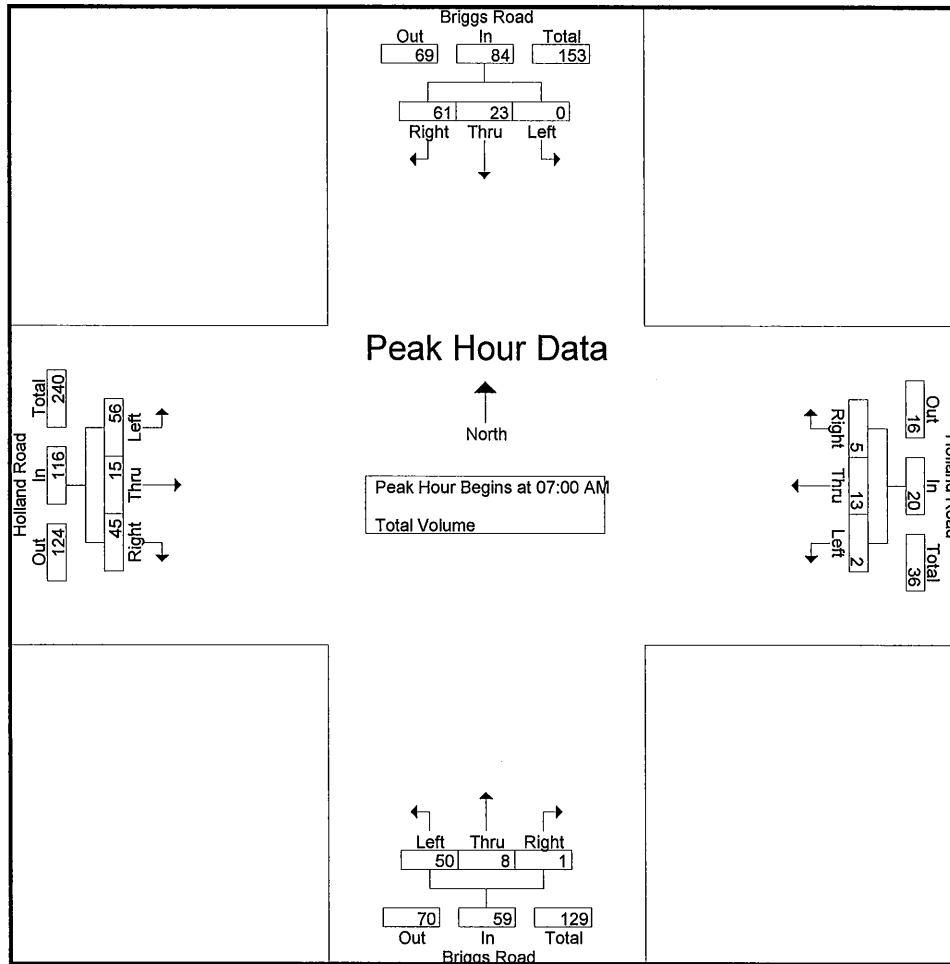
Groups Printed- Total Volume

Start Time	Briggs Road Southbound				Holland Road Westbound				Briggs Road Northbound				Holland 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	5	14	19	1	5	1	7	9	1	0	10	6	5	2	13	49
07:15 AM	0	7	25	32	0	6	2	8	25	3	1	29	18	5	19	42	111
07:30 AM	0	7	18	25	0	2	1	3	11	2	0	13	25	3	23	51	92
07:45 AM	0	4	4	8	1	0	1	2	5	2	0	7	7	2	1	10	27
Total	0	23	61	84	2	13	5	20	50	8	1	59	56	15	45	116	279
08:00 AM	0	4	8	12	0	2	1	3	1	4	0	5	2	2	2	6	26
08:15 AM	1	5	1	7	0	3	0	3	2	4	0	6	2	0	2	4	20
08:30 AM	0	9	1	10	0	1	0	1	1	3	0	4	1	0	2	3	18
08:45 AM	2	7	1	10	1	1	1	3	1	4	0	5	1	0	2	3	21
Total	3	25	11	39	1	7	2	10	5	15	0	20	6	2	8	16	85
Grand Total	3	48	72	123	3	20	7	30	55	23	1	79	62	17	53	132	364
Apprch %	2.4	39	58.5		10	66.7	23.3		69.6	29.1	1.3		47	12.9	40.2		
Total %	0.8	13.2	19.8	33.8	0.8	5.5	1.9	8.2	15.1	6.3	0.3	21.7	17	4.7	14.6	36.3	

Start Time	Briggs Road Southbound				Holland Road Westbound				Briggs Road Northbound				Holland Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	5	14	19	1	5	1	7	9	1	0	10	6	5	2	13	49
07:15 AM	0	7	25	32	0	6	2	8	25	3	1	29	18	5	19	42	111
07:30 AM	0	7	18	25	0	2	1	3	11	2	0	13	25	3	23	51	92
07:45 AM	0	4	4	8	1	0	1	2	5	2	0	7	7	2	1	10	27
Total Volume	0	23	61	84	2	13	5	20	50	8	1	59	56	15	45	116	279
% App. Total	0	27.4	72.6		10	65	25		84.7	13.6	1.7		48.3	12.9	38.8		
PHF	.000	.821	.610	.656	.500	.542	.625	.625	.500	.667	.250	.509	.560	.750	.489	.569	.628

City of Menifee
 N/S: Briggs Road
 E/W: Holland Road
 Weather: Clear

File Name : MENBRHOAM
 Site Code : 05716093
 Start Date : 2/25/2016
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Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	5	14	19	1	5	1	7	9	1	0	10	6	5	2	13
+15 mins.	0	7	25	32	0	6	2	8	25	3	1	29	18	5	19	42
+30 mins.	0	7	18	25	0	2	1	3	11	2	0	13	25	3	23	51
+45 mins.	0	4	4	8	1	0	1	2	5	2	0	7	7	2	1	10
Total Volume	0	23	61	84	2	13	5	20	50	8	1	59	56	15	45	116
% App. Total	0	27.4	72.6		10	65	25		84.7	13.6	1.7		48.3	12.9	38.8	
PHF	.000	.821	.610	.656	.500	.542	.625	.625	.500	.667	.250	.509	.560	.750	.489	.569

Counts Unlimited
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City of Menifee
 N/S: Briggs Road
 E/W: Holland Road
 Weather: Clear

File Name : MENBRHOPM
 Site Code : 05716093
 Start Date : 2/25/2016
 Page No : 1

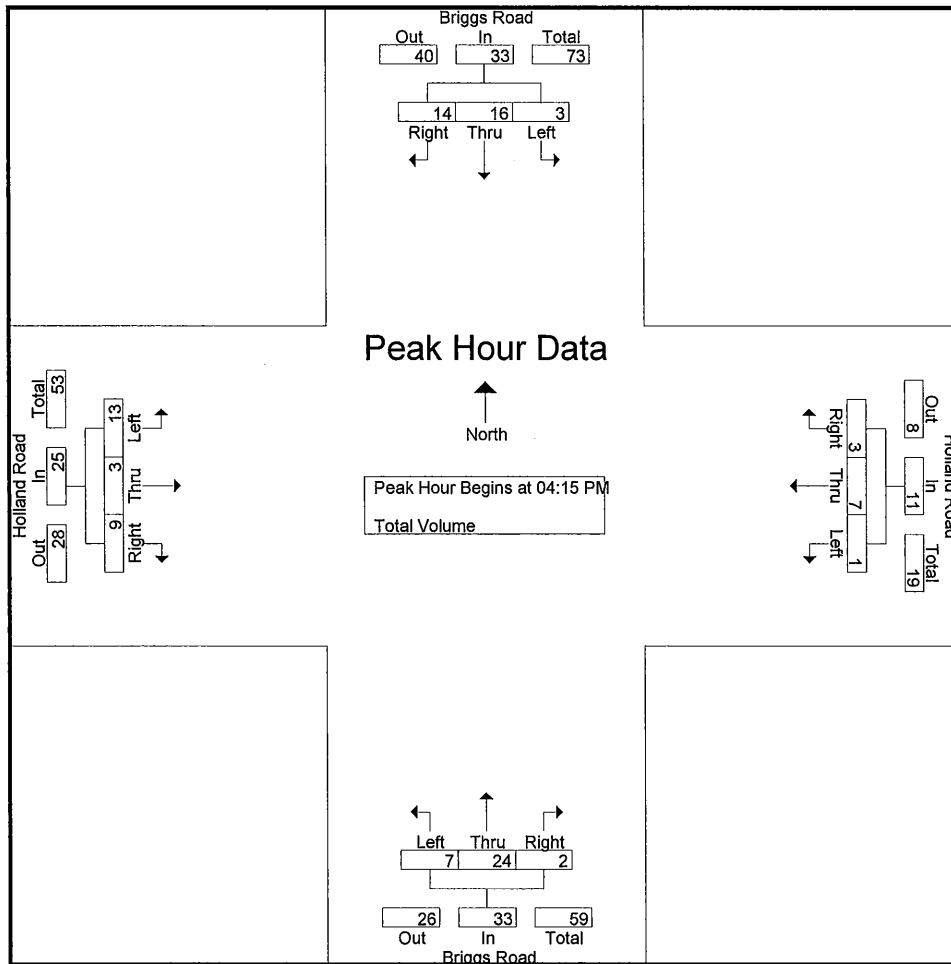
Groups Printed- Total Volume

Start Time	Briggs Road Southbound				Holland Road Westbound				Briggs Road Northbound				Holland 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	1	3	1	5	0	0	2	2	1	6	0	7	3	0	1	4	18
04:15 PM	2	6	0	8	0	1	0	1	1	7	1	9	3	3	0	6	24
04:30 PM	1	2	2	5	0	3	1	4	0	9	1	10	2	0	3	5	24
04:45 PM	0	2	6	8	0	2	1	3	3	3	0	6	4	0	4	8	25
Total	4	13	9	26	0	6	4	10	5	25	2	32	12	3	8	23	91
05:00 PM	0	6	6	12	1	1	1	3	3	5	0	8	4	0	2	6	29
05:15 PM	1	6	2	9	0	0	2	2	1	7	0	8	2	0	0	2	21
05:30 PM	0	2	2	4	0	1	1	2	1	11	0	12	4	0	1	5	23
05:45 PM	1	3	2	6	0	0	0	0	2	7	0	9	7	2	0	9	24
Total	2	17	12	31	1	2	4	7	7	30	0	37	17	2	3	22	97
Grand Total	6	30	21	57	1	8	8	17	12	55	2	69	29	5	11	45	188
Apprch %	10.5	52.6	36.8		5.9	47.1	47.1		17.4	79.7	2.9		64.4	11.1	24.4		
Total %	3.2	16	11.2	30.3	0.5	4.3	4.3	9	6.4	29.3	1.1	36.7	15.4	2.7	5.9	23.9	

Start Time	Briggs Road Southbound				Holland Road Westbound				Briggs Road Northbound				Holland Road 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	2	6	0	8	0	1	0	1	1	7	1	9	3	3	0	6	24
04:30 PM	1	2	2	5	0	3	1	4	0	9	1	10	2	0	3	5	24
04:45 PM	0	2	6	8	0	2	1	3	3	3	0	6	4	0	4	8	25
05:00 PM	0	6	6	12	1	1	1	3	3	5	0	8	4	0	2	6	29
Total Volume	3	16	14	33	1	7	3	11	7	24	2	33	13	3	9	25	102
% App. Total	9.1	48.5	42.4		9.1	63.6	27.3		21.2	72.7	6.1		52	12	36		
PHF	.375	.667	.583	.688	.250	.583	.750	.688	.583	.667	.500	.825	.813	.250	.563	.781	.879

City of Menifee
 N/S: Briggs Road
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 Weather: Clear

File Name : MENBRHOPM
 Site Code : 05716093
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Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				05:00 PM				04:15 PM			
+0 mins.	1	2	2	5	0	3	1	4	3	5	0	8	3	3	0	6
+15 mins.	0	2	6	8	0	2	1	3	1	7	0	8	2	0	3	5
+30 mins.	0	6	6	12	1	1	1	3	1	11	0	12	4	0	4	8
+45 mins.	1	6	2	9	0	0	2	2	2	7	0	9	4	0	2	6
Total Volume	2	16	16	34	1	6	5	12	7	30	0	37	13	3	9	25
% App. Total	5.9	47.1	47.1		8.3	50	41.7		18.9	81.1	0		52	12	36	
PHF	.500	.667	.667	.708	.250	.500	.625	.750	.583	.682	.000	.771	.813	.250	.563	.781

City of Menifee
 N/S: Briggs Road
 E/W: Old Newport Road
 Weather: Clear

File Name : MENBRONAM
 Site Code : 05717194
 Start Date : 3/30/2017
 Page No : 1

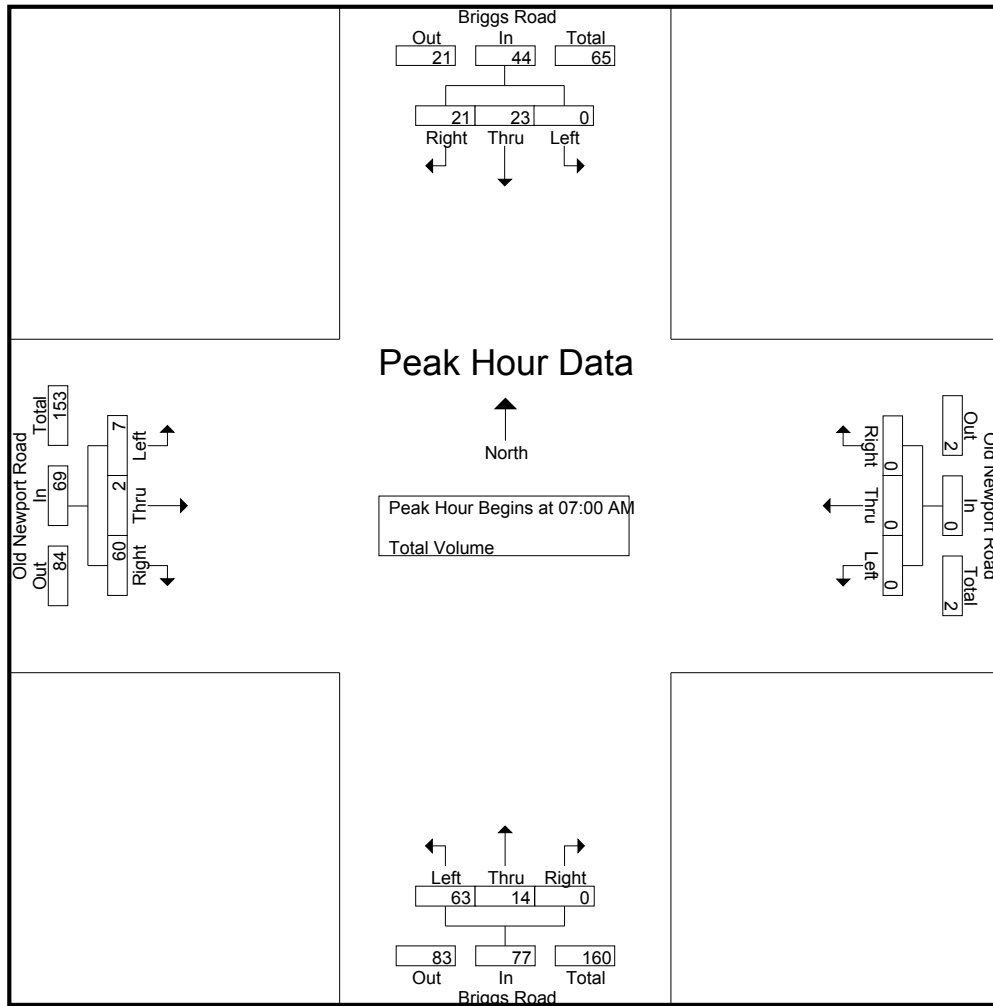
Groups Printed- Total Volume

Start Time	Briggs Road Southbound				Old Newport Road Westbound				Briggs Road Northbound				Old Newport 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	5	7	12	0	0	0	0	21	1	0	22	1	0	10	11	45
07:15 AM	0	12	5	17	0	0	0	0	15	8	0	23	2	0	25	27	67
07:30 AM	0	4	5	9	0	0	0	0	19	5	0	24	1	1	15	17	50
07:45 AM	0	2	4	6	0	0	0	0	8	0	0	8	3	1	10	14	28
Total	0	23	21	44	0	0	0	0	63	14	0	77	7	2	60	69	190
08:00 AM	0	0	4	4	0	0	0	0	8	3	0	11	2	0	11	13	28
08:15 AM	0	1	2	3	0	0	0	0	8	1	0	9	4	1	10	15	27
08:30 AM	0	2	2	4	0	0	0	0	15	2	0	17	5	0	10	15	36
08:45 AM	0	1	3	4	0	1	0	1	6	0	0	6	1	0	9	10	21
Total	0	4	11	15	0	1	0	1	37	6	0	43	12	1	40	53	112
Grand Total	0	27	32	59	0	1	0	1	100	20	0	120	19	3	100	122	302
Apprch %	0	45.8	54.2		0	100	0		83.3	16.7	0		15.6	2.5	82		
Total %	0	8.9	10.6	19.5	0	0.3	0	0.3	33.1	6.6	0	39.7	6.3	1	33.1	40.4	

Start Time	Briggs Road Southbound				Old Newport Road Westbound				Briggs Road Northbound				Old Newport Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	5	7	12	0	0	0	0	21	1	0	22	1	0	10	11	45
07:15 AM	0	12	5	17	0	0	0	0	15	8	0	23	2	0	25	27	67
07:30 AM	0	4	5	9	0	0	0	0	19	5	0	24	1	1	15	17	50
07:45 AM	0	2	4	6	0	0	0	0	8	0	0	8	3	1	10	14	28
Total Volume	0	23	21	44	0	0	0	0	63	14	0	77	7	2	60	69	190
% App. Total	0	52.3	47.7		0	0	0		81.8	18.2	0		10.1	2.9	87		
PHF	.000	.479	.750	.647	.000	.000	.000	.000	.750	.438	.000	.802	.583	.500	.600	.639	.709

City of Menifee
 N/S: Briggs Road
 E/W: Old Newport Road
 Weather: Clear

File Name : MENBRONAM
 Site Code : 05717194
 Start Date : 3/30/2017
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Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:00 AM				08:00 AM				07:15 AM				07:30 AM			
+0 mins.	0	5	7	12	0	0	0	0	21	1	0	22	2	0	25	27
+15 mins.	0	12	5	17	0	0	0	0	15	8	0	23	1	1	15	17
+30 mins.	0	4	5	9	0	0	0	0	19	5	0	24	3	1	10	14
+45 mins.	0	2	4	6	0	1	0	1	8	0	0	8	2	0	11	13
Total Volume	0	23	21	44	0	1	0	1	63	14	0	77	8	2	61	71
% App. Total	0	52.3	47.7		0	100	0		81.8	18.2	0		11.3	2.8	85.9	
PHF	.000	.479	.750	.647	.000	.250	.000	.250	.750	.438	.000	.802	.667	.500	.610	.657

City of Menifee
 N/S: Briggs Road
 E/W: Old Newport Road
 Weather: Clear

File Name : MENBRONPM
 Site Code : 05717194
 Start Date : 3/30/2017
 Page No : 1

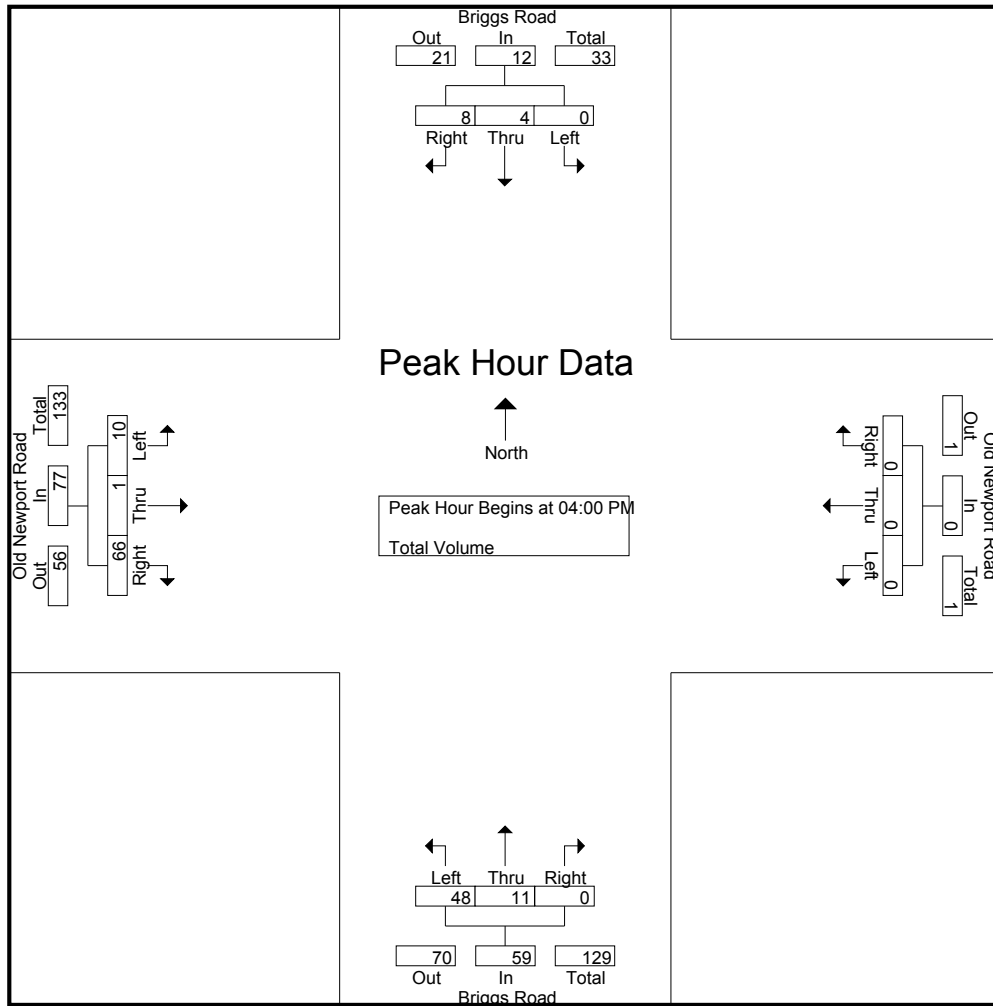
Groups Printed- Total Volume

Start Time	Briggs Road Southbound				Old Newport Road Westbound				Briggs Road Northbound				Old Newport 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	1	5	6	0	0	0	0	14	5	0	19	4	1	20	25	50
04:15 PM	0	3	0	3	0	0	0	0	11	3	0	14	2	0	13	15	32
04:30 PM	0	0	1	1	0	0	0	0	10	2	0	12	1	0	21	22	35
04:45 PM	0	0	2	2	0	0	0	0	13	1	0	14	3	0	12	15	31
Total	0	4	8	12	0	0	0	0	48	11	0	59	10	1	66	77	148
05:00 PM	0	3	5	8	0	0	0	0	13	5	0	18	3	0	12	15	41
05:15 PM	0	1	1	2	0	0	0	0	8	0	0	8	2	1	15	18	28
05:30 PM	0	1	2	3	0	1	0	1	7	3	0	10	2	0	9	11	25
05:45 PM	0	3	2	5	0	0	0	0	11	2	0	13	2	0	11	13	31
Total	0	8	10	18	0	1	0	1	39	10	0	49	9	1	47	57	125
Grand Total	0	12	18	30	0	1	0	1	87	21	0	108	19	2	113	134	273
Apprch %	0	40	60		0	100	0		80.6	19.4	0		14.2	1.5	84.3		
Total %	0	4.4	6.6	11	0	0.4	0	0.4	31.9	7.7	0	39.6	7	0.7	41.4	49.1	

Start Time	Briggs Road Southbound				Old Newport Road Westbound				Briggs Road Northbound				Old Newport Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	1	5	6	0	0	0	0	14	5	0	19	4	1	20	25	50
04:15 PM	0	3	0	3	0	0	0	0	11	3	0	14	2	0	13	15	32
04:30 PM	0	0	1	1	0	0	0	0	10	2	0	12	1	0	21	22	35
04:45 PM	0	0	2	2	0	0	0	0	13	1	0	14	3	0	12	15	31
Total Volume	0	4	8	12	0	0	0	0	48	11	0	59	10	1	66	77	148
% App. Total	0	33.3	66.7		0	0	0		81.4	18.6	0		13	1.3	85.7		
PHF	.000	.333	.400	.500	.000	.000	.000	.000	.857	.550	.000	.776	.625	.250	.786	.770	.740

City of Menifee
 N/S: Briggs Road
 E/W: Old Newport Road
 Weather: Clear

File Name : MENBRONPM
 Site Code : 05717194
 Start Date : 3/30/2017
 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:

	05:00 PM				04:45 PM				04:00 PM				04:00 PM			
+0 mins.	0	3	5	8	0	0	0	0	14	5	0	19	4	1	20	25
+15 mins.	0	1	1	2	0	0	0	0	11	3	0	14	2	0	13	15
+30 mins.	0	1	2	3	0	0	0	0	10	2	0	12	1	0	21	22
+45 mins.	0	3	2	5	0	1	0	1	13	1	0	14	3	0	12	15
Total Volume	0	8	10	18	0	1	0	1	48	11	0	59	10	1	66	77
% App. Total	0	44.4	55.6		0	100	0		81.4	18.6	0		13	1.3	85.7	
PHF	.000	.667	.500	.563	.000	.250	.000	.250	.857	.550	.000	.776	.625	.250	.786	.770

City of Menifee
 N/S: Briggs Road
 E/W: Gold Crest
 Weather: Clear

File Name : MENBRGCAM
 Site Code : 05717194
 Start Date : 3/30/2017
 Page No : 1

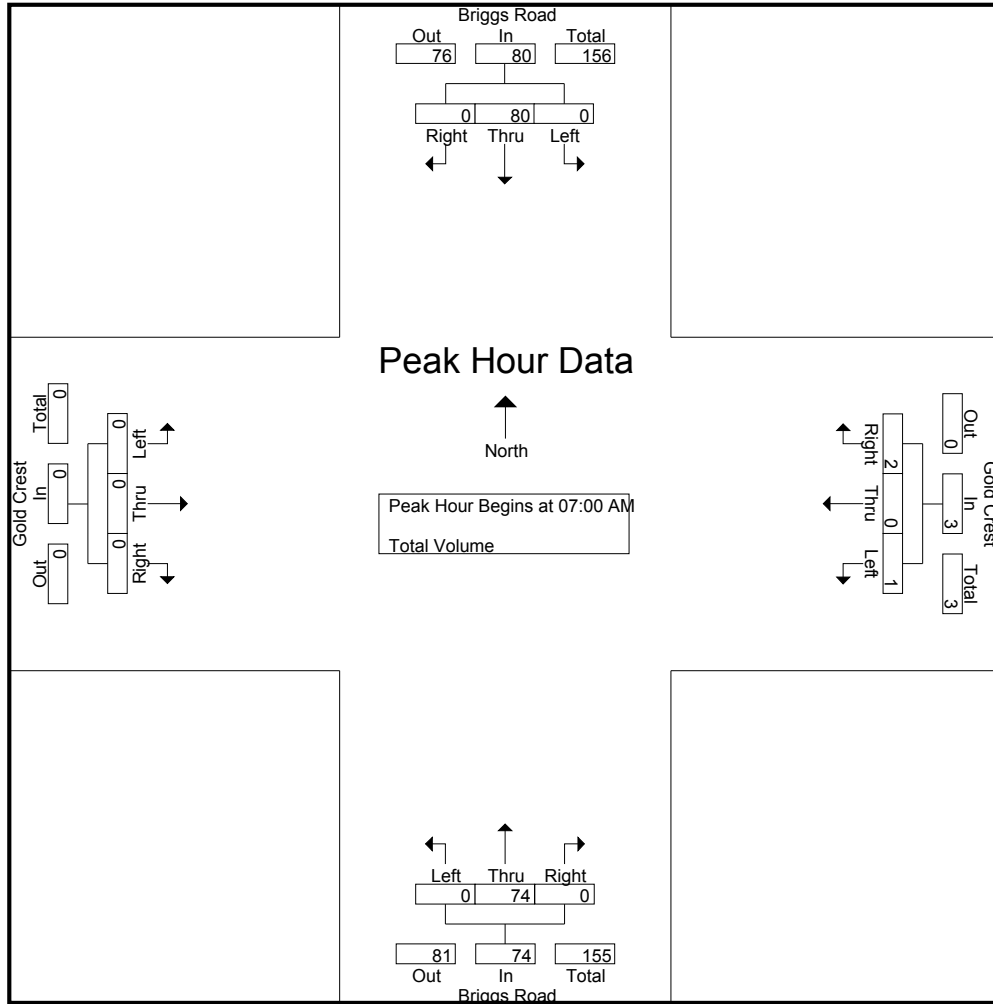
Groups Printed- Total Volume

Start Time	Briggs Road Southbound				Gold Crest Westbound				Briggs Road Northbound				Gold Crest 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	14	0	14	0	0	1	1	0	19	0	19	0	0	0	0	34
07:15 AM	0	35	0	35	0	0	0	0	0	21	0	21	0	0	0	0	56
07:30 AM	0	21	0	21	0	0	0	0	0	26	0	26	0	0	0	0	47
07:45 AM	0	10	0	10	1	0	1	2	0	8	0	8	0	0	0	0	20
Total	0	80	0	80	1	0	2	3	0	74	0	74	0	0	0	0	157
08:00 AM	0	12	0	12	0	0	0	0	0	10	0	10	0	0	0	0	22
08:15 AM	1	10	0	11	0	0	0	0	0	6	0	6	0	0	0	0	17
08:30 AM	0	11	0	11	0	0	0	0	0	15	0	15	0	0	0	0	26
08:45 AM	0	11	0	11	0	0	0	0	0	7	0	7	0	0	0	0	18
Total	1	44	0	45	0	0	0	0	0	38	0	38	0	0	0	0	83
Grand Total	1	124	0	125	1	0	2	3	0	112	0	112	0	0	0	0	240
Apprch %	0.8	99.2	0		33.3	0	66.7		0	100	0		0	0	0		
Total %	0.4	51.7	0	52.1	0.4	0	0.8	1.2	0	46.7	0	46.7	0	0	0	0	

Start Time	Briggs Road Southbound				Gold Crest Westbound				Briggs Road Northbound				Gold Crest Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	14	0	14	0	0	1	1	0	19	0	19	0	0	0	0	34
07:15 AM	0	35	0	35	0	0	0	0	0	21	0	21	0	0	0	0	56
07:30 AM	0	21	0	21	0	0	0	0	0	26	0	26	0	0	0	0	47
07:45 AM	0	10	0	10	1	0	1	2	0	8	0	8	0	0	0	0	20
Total Volume	0	80	0	80	1	0	2	3	0	74	0	74	0	0	0	0	157
% App. Total	0	100	0		33.3	0	66.7		0	100	0		0	0	0		
PHF	.000	.571	.000	.571	.250	.000	.500	.375	.000	.712	.000	.712	.000	.000	.000	.000	.701

City of Menifee
 N/S: Briggs Road
 E/W: Gold Crest
 Weather: Clear

File Name : MENBRGCAM
 Site Code : 05717194
 Start Date : 3/30/2017
 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				07:00 AM			
+0 mins.	0	14	0	14	0	0	1	1	0	19	0	19	0	0	0	0
+15 mins.	0	35	0	35	0	0	0	0	0	21	0	21	0	0	0	0
+30 mins.	0	21	0	21	0	0	0	0	0	26	0	26	0	0	0	0
+45 mins.	0	10	0	10	1	0	1	2	0	8	0	8	0	0	0	0
Total Volume	0	80	0	80	1	0	2	3	0	74	0	74	0	0	0	0
% App. Total	0	100	0		33.3	0	66.7		0	100	0		0	0	0	
PHF	.000	.571	.000	.571	.250	.000	.500	.375	.000	.712	.000	.712	.000	.000	.000	.000

City of Menifee
 N/S: Briggs Road
 E/W: Gold Crest
 Weather: Clear

File Name : MENBRGCPM
 Site Code : 05717194
 Start Date : 3/30/2017
 Page No : 1

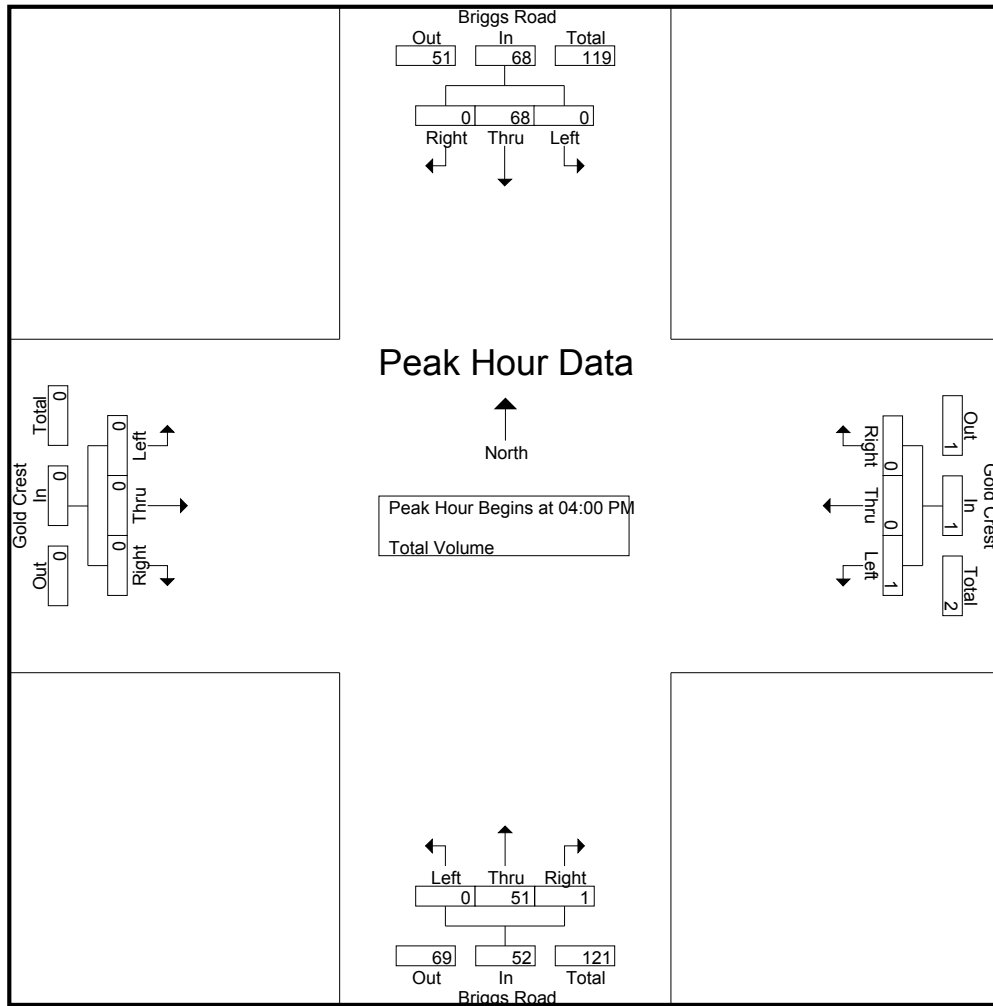
Groups Printed- Total Volume

Start Time	Briggs Road Southbound				Gold Crest Westbound				Briggs Road Northbound				Gold Crest 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	21	0	21	1	0	0	1	0	16	1	17	0	0	0	0	39
04:15 PM	0	13	0	13	0	0	0	0	0	9	0	9	0	0	0	0	22
04:30 PM	0	21	0	21	0	0	0	0	0	13	0	13	0	0	0	0	34
04:45 PM	0	13	0	13	0	0	0	0	0	13	0	13	0	0	0	0	26
Total	0	68	0	68	1	0	0	1	0	51	1	52	0	0	0	0	121
05:00 PM	0	15	0	15	0	0	0	0	0	18	0	18	0	0	0	0	33
05:15 PM	0	15	0	15	0	0	0	0	0	6	0	6	0	0	0	0	21
05:30 PM	0	8	0	8	0	0	1	1	0	9	0	9	0	0	0	0	18
05:45 PM	3	11	0	14	0	0	0	0	0	15	0	15	0	0	0	0	29
Total	3	49	0	52	0	0	1	1	0	48	0	48	0	0	0	0	101
Grand Total	3	117	0	120	1	0	1	2	0	99	1	100	0	0	0	0	222
Apprch %	2.5	97.5	0		50	0	50		0	99	1		0	0	0		
Total %	1.4	52.7	0	54.1	0.5	0	0.5	0.9	0	44.6	0.5	45	0	0	0	0	

Start Time	Briggs Road Southbound				Gold Crest Westbound				Briggs Road Northbound				Gold Crest Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	21	0	21	1	0	0	1	0	16	1	17	0	0	0	0	39
04:15 PM	0	13	0	13	0	0	0	0	0	9	0	9	0	0	0	0	22
04:30 PM	0	21	0	21	0	0	0	0	0	13	0	13	0	0	0	0	34
04:45 PM	0	13	0	13	0	0	0	0	0	13	0	13	0	0	0	0	26
Total Volume	0	68	0	68	1	0	0	1	0	51	1	52	0	0	0	0	121
% App. Total	0	100	0		100	0	0		0	98.1	1.9		0	0	0		
PHF	.000	.810	.000	.810	.250	.000	.000	.250	.000	.797	.250	.765	.000	.000	.000	.000	.776

City of Menifee
 N/S: Briggs Road
 E/W: Gold Crest
 Weather: Clear

File Name : MENBRGCPM
 Site Code : 05717194
 Start Date : 3/30/2017
 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				04:00 PM			
+0 mins.	0	21	0	21	1	0	0	1	0	9	0	9	0	0	0	0
+15 mins.	0	13	0	13	0	0	0	0	0	13	0	13	0	0	0	0
+30 mins.	0	21	0	21	0	0	0	0	0	13	0	13	0	0	0	0
+45 mins.	0	13	0	13	0	0	0	0	0	18	0	18	0	0	0	0
Total Volume	0	68	0	68	1	0	0	1	0	53	0	53	0	0	0	0
% App. Total	0	100	0	100	100	0	0	100	0	100	0	100	0	0	0	0
PHF	.000	.810	.000	.810	.250	.000	.000	.250	.000	.736	.000	.736	.000	.000	.000	.000

APPENDIX A-II

ROADWAY SEGMENT COUNTS

Counts Unlimited, Inc.

City of Menifee
Newport Road
W/ Interstate 215 Southbound Ramps
24 Hour Directional Volume Counts

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

MEN001
Site Code: 057-16093

Start Time	25-Feb-16 Thu	Eastbound		Hour Totals		Westbound		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		35	392			30	440				
12:15		26	317			30	402				
12:30		32	329			18	457				
12:45		22	325	115	1363	31	444	109	1743	224	3106
01:00		27	320			12	424				
01:15		28	319			13	401				
01:30		21	384			15	391				
01:45		12	299	88	1322	21	391	61	1607	149	2929
02:00		22	324			10	424				
02:15		16	371			8	387				
02:30		12	330			20	431				
02:45		18	356	68	1381	18	410	56	1652	124	3033
03:00		22	359			23	405				
03:15		21	327			28	434				
03:30		22	330			29	469				
03:45		37	284	102	1300	47	469	127	1777	229	3077
04:00		49	334			57	445				
04:15		64	318			102	409				
04:30		102	320			85	437				
04:45		113	334	328	1306	83	434	327	1725	655	3031
05:00		150	350			105	450				
05:15		161	336			125	416				
05:30		199	332			144	459				
05:45		194	313	704	1331	172	482	546	1807	1250	3138
06:00		243	327			175	432				
06:15		244	325			203	460				
06:30		295	307			236	441				
06:45		296	316	1078	1275	271	406	885	1739	1963	3014
07:00		347	353			282	360				
07:15		375	350			276	297				
07:30		343	323			313	280				
07:45		239	310	1304	1336	390	262	1261	1199	2565	2535
08:00		295	321			295	193				
08:15		327	285			360	194				
08:30		257	303			370	190				
08:45		332	244	1211	1153	361	173	1386	750	2597	1903
09:00		317	210			339	134				
09:15		327	96			302	148				
09:30		304	57			369	119				
09:45		316	72	1264	435	340	126	1350	527	2614	962
10:00		351	122			347	60				
10:15		347	123			352	48				
10:30		352	90			400	38				
10:45		353	90	1403	425	410	38	1509	184	2912	609
11:00		351	85			359	42				
11:15		331	58			431	20				
11:30		307	61			409	33				
11:45		381	32	1370	236	401	24	1600	119	2970	355
Total		9035	12863	9035	12863	9217	14829	9217	14829	18252	27692
Combined Total		21898		21898		24046		24046		45944	
AM Peak	-	10:00	-	-	-	10:45	-	-	-	-	-
Vol.	-	1403	-	-	-	1609	-	-	-	-	-
P.H.F.		0.994				0.933					
PM Peak	-	-	02:15	-	-	-	05:30	-	-	-	-
Vol.	-	-	1416	-	-	-	1833	-	-	-	-
P.H.F.			0.954				0.951				
Percentage		41.3%	58.7%			38.3%	61.7%				
ADT/AADT		ADT 45,944	AADT 45,944								

Counts Unlimited, Inc.

City of Menifee
 Newport Road
 B/ Interstate 215 Northbound Ramp - Antelope Road
 24 Hour Directional Volume Counts

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

MEN002
 Site Code: 057-16093

Start Time	25-Feb-16 Thu	Eastbound		Hour Totals		Westbound		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		48	397			37	367				
12:15		50	411			22	379				
12:30		36	375			14	428				
12:45		32	393	166	1576	27	401	100	1575	266	3151
01:00		29	393			11	368				
01:15		19	436			18	358				
01:30		21	501			15	358				
01:45		23	496	92	1826	13	374	57	1458	149	3284
02:00		14	415			14	370				
02:15		19	445			16	405				
02:30		18	449			27	360				
02:45		16	475	67	1784	25	381	82	1516	149	3300
03:00		8	547			33	264				
03:15		17	506			53	399				
03:30		14	496			64	407				
03:45		22	546	61	2095	74	380	224	1450	285	3545
04:00		20	497			125	365				
04:15		25	523			172	355				
04:30		34	547			201	356				
04:45		47	518	126	2085	204	355	702	1431	828	3516
05:00		55	530			243	383				
05:15		61	527			240	364				
05:30		81	517			301	356				
05:45		99	533	296	2107	301	392	1085	1495	1381	3602
06:00		122	484			279	378				
06:15		169	497			322	390				
06:30		171	513			401	332				
06:45		278	493	740	1987	402	355	1404	1455	2144	3442
07:00		281	444			393	261				
07:15		358	390			378	257				
07:30		380	381			447	251				
07:45		396	325	1415	1540	441	229	1659	998	3074	2538
08:00		299	297			369	193				
08:15		265	286			428	197				
08:30		297	253			402	192				
08:45		335	276	1196	1112	388	210	1587	792	2783	1904
09:00		387	201			372	129				
09:15		362	159			374	68				
09:30		352	185			380	95				
09:45		318	190	1419	735	380	106	1506	398	2925	1133
10:00		332	110			334	86				
10:15		364	68			390	87				
10:30		339	59			391	71				
10:45		379	61	1414	298	409	70	1524	314	2938	612
11:00		367	46			339	56				
11:15		355	35			441	37				
11:30		371	32			347	50				
11:45		382	29	1475	142	384	42	1511	185	2986	327
Total		8467	17287	8467	17287	11441	13067	11441	13067	19908	30354
Combined Total		25754		25754		24508		24508		50262	
AM Peak	-	11:00	-	-	-	07:30	-	-	-	-	-
Vol.	-	1475	-	-	-	1685	-	-	-	-	-
P.H.F.	-	0.965	-	-	-	0.942	-	-	-	-	-
PM Peak	-	-	04:30	-	-	-	00:15	-	-	-	-
Vol.	-	-	2122	-	-	-	1576	-	-	-	-
P.H.F.	-	-	0.970	-	-	-	0.921	-	-	-	-
Percentage		32.9%	67.1%			46.7%	53.3%				
ADT/AADT		ADT 50,262	AADT 50,262								

Counts Unlimited, Inc.

City of Menifee
Newport Road
B/ Antelope Road - Menifee Road
24 Hour Directional Volume Counts

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

MEN003
Site Code: 057-16093

Start Time	25-Feb-16 Thu	Eastbound		Hour Totals		Westbound		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		42	253			30	258				
12:15		43	270			22	252				
12:30		32	247			18	243				
12:45		24	249	141	1019	18	286	88	1039	229	2058
01:00		27	263			10	255				
01:15		21	289			12	246				
01:30		22	321			12	265				
01:45		11	300	81	1173	10	231	44	997	125	2170
02:00		14	284			13	296				
02:15		13	275			16	308				
02:30		13	295			21	301				
02:45		12	321	52	1175	25	291	75	1196	127	2371
03:00		14	357			20	274				
03:15		10	300			36	246				
03:30		24	337			50	279				
03:45		18	299	66	1293	68	227	174	1026	240	2319
04:00		18	346			92	263				
04:15		24	318			136	251				
04:30		39	340			144	262				
04:45		36	327	117	1331	203	251	575	1027	692	2358
05:00		59	363			192	299				
05:15		45	315			175	256				
05:30		79	361			246	295				
05:45		65	333	248	1372	215	257	828	1107	1076	2479
06:00		127	308			217	275				
06:15		120	272			253	267				
06:30		172	320			300	243				
06:45		206	321	625	1221	304	198	1074	983	1699	2204
07:00		285	294			323	164				
07:15		258	253			367	181				
07:30		230	219			362	149				
07:45		198	218	971	984	307	129	1359	623	2330	1607
08:00		194	216			297	135				
08:15		180	200			308	134				
08:30		202	231			319	112				
08:45		201	179	777	826	260	116	1184	497	1961	1323
09:00		209	152			262	103				
09:15		190	173			238	96				
09:30		180	143			276	68				
09:45		193	127	772	595	243	69	1019	336	1791	931
10:00		216	69			242	70				
10:15		187	69			257	61				
10:30		215	49			267	61				
10:45		216	46	834	233	280	46	1046	238	1880	471
11:00		244	56			240	49				
11:15		212	28			279	35				
11:30		243	26			258	38				
11:45		234	25	933	135	247	30	1024	152	1957	287
Total		5617	11357	5617	11357	8490	9221	8490	9221	14107	20578
Combined Total		16974		16974		17711		17711		34685	
AM Peak	-	06:45	-	-	-	07:00	-	-	-	-	-
Vol.	-	979	-	-	-	1359	-	-	-	-	-
P.H.F.	-	0.859	-	-	-	0.926	-	-	-	-	-
PM Peak	-	-	05:00	-	-	-	02:00	-	-	-	-
Vol.	-	-	1372	-	-	-	1196	-	-	-	-
P.H.F.	-	-	0.945	-	-	-	0.971	-	-	-	-
Percentage		33.1%	66.9%			47.9%	52.1%				
ADT/AADT		ADT 34,685		AADT 34,685							

Counts Unlimited, Inc.

City of Menifee
Newport Road
B/ Menifee Road - Laguna Vista Drive
24 Hour Directional Volume Counts

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

MEN004
Site Code: 057-16093

Start Time	25-Feb-16 Thu	Eastbound		Hour Totals		Westbound		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		31	200			26	209				
12:15		30	212			20	192				
12:30		33	215			15	193				
12:45		21	171	115	798	11	241	72	835	187	1633
01:00		23	170			9	203				
01:15		15	193			15	200				
01:30		15	214			8	215				
01:45		21	204	74	781	8	207	40	825	114	1606
02:00		6	216			15	195				
02:15		13	226			13	203				
02:30		9	233			16	211				
02:45		10	212	38	887	19	241	63	850	101	1737
03:00		11	268			20	213				
03:15		14	272			29	205				
03:30		10	228			42	224				
03:45		23	277	58	1045	42	209	133	851	191	1896
04:00		13	276			74	202				
04:15		22	261			106	223				
04:30		22	270			111	211				
04:45		47	217	104	1024	151	227	442	863	546	1887
05:00		30	309			146	265				
05:15		52	263			141	229				
05:30		74	252			201	223				
05:45		70	252	226	1076	160	232	648	949	874	2025
06:00		72	282			162	229				
06:15		126	240			187	228				
06:30		128	203			263	191				
06:45		152	250	478	975	247	173	859	821	1337	1796
07:00		178	255			259	142				
07:15		190	182			295	151				
07:30		205	180			266	113				
07:45		177	165	750	782	262	104	1082	510	1832	1292
08:00		167	159			239	98				
08:15		170	166			250	115				
08:30		182	166			230	81				
08:45		149	142	668	633	236	98	955	392	1623	1025
09:00		199	130			208	76				
09:15		156	118			202	78				
09:30		170	131			211	59				
09:45		170	131	695	510	181	57	802	270	1497	780
10:00		134	68			192	55				
10:15		180	62			223	54				
10:30		152	51			221	52				
10:45		175	52	641	233	236	48	872	209	1513	442
11:00		179	32			178	35				
11:15		190	35			185	30				
11:30		191	19			190	32				
11:45		166	18	726	104	184	23	737	120	1463	224
Total		4573	8848	4573	8848	6705	7495	6705	7495	11278	16343
Combined Total		13421		13421		14200		14200		27621	
AM Peak	-	07:00	-	-	-	07:00	-	-	-	-	-
Vol.	-	750	-	-	-	1082	-	-	-	-	-
P.H.F.	-	0.915	-	-	-	0.917	-	-	-	-	-
PM Peak	-	-	03:45	-	-	-	05:00	-	-	-	-
Vol.	-	-	1084	-	-	-	949	-	-	-	-
P.H.F.	-	-	0.978	-	-	-	0.895	-	-	-	-
Percentage		34.1%	65.9%			47.2%	52.8%				
ADT/AADT		ADT 27,621	AADT 27,621								

Counts Unlimited, Inc.

City of Menifee
 Menifee Road
 B/ Newport Road - Rockport Road
 24 Hour Directional Volume Counts

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

MEN005
 Site Code: 057-16093

Start Time	25-Feb-16 Thu	Northbound		Hour Totals		Southbound		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		9	70			12	57				
12:15		2	91			7	68				
12:30		3	87			4	45				
12:45		6	47	20	295	3	63	26	233	46	528
01:00		2	51			7	68				
01:15		0	54			3	53				
01:30		3	65			6	83				
01:45		3	84	8	254	3	90	19	294	27	548
02:00		2	113			3	69				
02:15		6	96			1	92				
02:30		0	79			1	64				
02:45		1	77	9	365	3	87	8	312	17	677
03:00		6	97			4	113				
03:15		2	108			3	96				
03:30		2	106			1	89				
03:45		14	102	24	413	6	102	14	400	38	813
04:00		6	104			4	91				
04:15		13	104			6	94				
04:30		15	91			8	82				
04:45		16	93	50	392	9	101	27	368	77	760
05:00		24	104			1	103				
05:15		20	105			12	84				
05:30		29	116			13	96				
05:45		29	101	102	426	17	84	43	367	145	793
06:00		29	121			13	99				
06:15		48	74			29	83				
06:30		47	80			42	65				
06:45		72	81	196	356	64	83	148	330	344	686
07:00		57	55			68	56				
07:15		97	55			120	47				
07:30		92	48			192	51				
07:45		72	61	318	219	133	34	513	188	831	407
08:00		58	35			76	46				
08:15		68	48			80	41				
08:30		87	47			60	39				
08:45		55	28	268	158	74	37	290	163	558	321
09:00		54	41			61	31				
09:15		55	56			84	27				
09:30		58	35			51	30				
09:45		62	33	229	165	59	23	255	111	484	276
10:00		61	21			67	26				
10:15		75	14			64	17				
10:30		55	14			83	24				
10:45		60	20	251	69	67	18	281	85	532	154
11:00		66	12			59	15				
11:15		66	6			67	10				
11:30		80	3			53	8				
11:45		62	11	274	32	61	16	240	49	514	81
Total		1749	3144	1749	3144	1864	2900	1864	2900	3613	6044
Combined Total		4893		4893		4764		4764		9657	
AM Peak	-	07:15	-	-	-	07:15	-	-	-	-	-
Vol.	-	319	-	-	-	521	-	-	-	-	-
P.H.F.	-	0.822	-	-	-	0.678	-	-	-	-	-
PM Peak	-	-	05:15	-	-	-	03:00	-	-	-	-
Vol.	-	-	443	-	-	-	400	-	-	-	-
P.H.F.	-	-	0.915	-	-	-	0.885	-	-	-	-
Percentage		35.7%	64.3%			39.1%	60.9%				
ADT/AADT		ADT 9,657	AADT 9,657								

Counts Unlimited, Inc.

City of Menifee
 Rockport Road
 B/ Menifee Road - Laguna Vista Drive
 24 Hour Directional Volume Counts

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

MEN006
 Site Code: 057-16093

Start Time	25-Feb-16 Thu	Eastbound		Hour Totals		Westbound		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		2	7			2	8				
12:15		0	4			0	9				
12:30		0	7			0	1				
12:45		0	3	2	21	1	14	3	32	5	53
01:00		0	8			0	3				
01:15		1	2			2	5				
01:30		2	3			0	6				
01:45		0	8	3	21	0	11	2	25	5	46
02:00		0	9			0	8				
02:15		1	13			0	18				
02:30		0	11			0	9				
02:45		2	13	3	46	0	13	0	48	3	94
03:00		2	16			0	9				
03:15		2	13			0	6				
03:30		0	6			0	14				
03:45		1	7	5	42	1	7	1	36	6	78
04:00		1	6			1	6				
04:15		0	7			0	8				
04:30		0	5			2	10				
04:45		1	13	2	31	2	4	5	28	7	59
05:00		0	6			6	17				
05:15		0	11			2	7				
05:30		0	10			2	9				
05:45		0	11	0	38	4	10	14	43	14	81
06:00		1	14			1	9				
06:15		5	11			5	5				
06:30		4	7			5	6				
06:45		4	5	14	37	5	0	16	20	30	57
07:00		4	8			10	4				
07:15		10	5			8	4				
07:30		11	5			14	2				
07:45		5	2	30	20	11	5	43	15	73	35
08:00		8	8			14	1				
08:15		6	5			17	2				
08:30		7	12			16	1				
08:45		4	3	25	28	4	5	51	9	76	37
09:00		4	8			6	2				
09:15		3	5			11	1				
09:30		5	3			8	0				
09:45		1	3	13	19	11	3	36	6	49	25
10:00		3	3			5	0				
10:15		3	2			7	1				
10:30		6	4			5	3				
10:45		5	3	17	12	5	0	22	4	39	16
11:00		8	4			10	2				
11:15		7	2			3	0				
11:30		5	3			9	0				
11:45		4	0	24	9	4	2	26	4	50	13
Total		138	324	138	324	219	270	219	270	357	594
Combined Total		462		462		489		489		951	
AM Peak	-	07:15	-	-	-	07:45	-	-	-	-	-
Vol.	-	34	-	-	-	58	-	-	-	-	-
P.H.F.	-	0.773	-	-	-	0.853	-	-	-	-	-
PM Peak	-	-	02:15	-	-	-	02:15	-	-	-	-
Vol.	-	-	53	-	-	-	49	-	-	-	-
P.H.F.	-	-	0.828	-	-	-	0.681	-	-	-	-
Percentage		29.9%	70.1%			44.8%	55.2%				
ADT/AADT		ADT 951		AADT 951							

Counts Unlimited, Inc.

City of Menifee
 Old Newport Road
 E/ Laguna Vista Drive
 24 Hour Directional Volume Counts.

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

MEN007
 Site Code: 057-16093

Start Time	25-Feb-16 Thu	Eastbound		Hour Totals		Westbound		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		6	31			5	17				
12:15		1	23			0	14				
12:30		3	25			0	13				
12:45		1	20	11	99	0	23	5	67	16	166
01:00		2	23			1	14				
01:15		0	25			3	12				
01:30		4	35			0	19				
01:45		2	30	8	113	0	8	4	53	12	166
02:00		1	25			0	26				
02:15		0	53			2	15				
02:30		1	22			1	11				
02:45		3	38	5	138	2	20	5	72	10	210
03:00		3	44			1	11				
03:15		1	44			2	18				
03:30		0	32			3	24				
03:45		3	37	7	157	4	17	10	70	17	227
04:00		2	33			6	13				
04:15		0	32			5	18				
04:30		1	33			10	10				
04:45		7	30	10	128	10	10	31	51	41	179
05:00		2	33			15	20				
05:15		2	41			9	10				
05:30		1	31			13	14				
05:45		1	29	6	134	14	20	51	64	57	198
06:00		7	41			16	17				
06:15		9	35			8	22				
06:30		3	30			25	7				
06:45		24	26	43	132	15	11	64	57	107	189
07:00		16	33			28	19				
07:15		27	30			28	7				
07:30		31	26			32	8				
07:45		16	16	90	105	30	6	118	40	208	145
08:00		21	17			21	12				
08:15		25	25			29	10				
08:30		18	29			28	4				
08:45		16	27	80	98	15	3	93	29	173	127
09:00		17	12			25	5				
09:15		13	17			14	10				
09:30		18	10			23	4				
09:45		19	9	67	48	19	5	81	24	148	72
10:00		14	8			18	5				
10:15		11	10			15	6				
10:30		24	11			11	2				
10:45		23	10	72	39	22	1	66	14	138	53
11:00		19	9			24	2				
11:15		32	7			12	3				
11:30		23	3			20	3				
11:45		25	3	99	22	21	2	77	10	176	32
Total		498	1213	498	1213	605	551	605	551	1103	1764
Combined Total		1711		1711		1156		1156		2867	
AM Peak	-	11:00	-	-	-	07:00	-	-	-	-	-
Vol.	-	99	-	-	-	118	-	-	-	-	-
P.H.F.	-	0.773	-	-	-	0.922	-	-	-	-	-
PM Peak	-	-	02:45	-	-	-	02:45	-	-	-	-
Vol.	-	-	158	-	-	-	73	-	-	-	-
P.H.F.	-	-	0.898	-	-	-	0.760	-	-	-	-
Percentage		29.1%	70.9%			52.3%	47.7%				
ADT/AADT		ADT 2,867	AADT 2,867								

Counts Unlimited, Inc.

City of Menifee
 Menifee Road
 B/ Rockport Road - Loire Valley Lane
 24 Hour Directional Volume Counts

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

MEN008
 Site Code: 057-16093

Start Time	25-Feb-16 Thu	Northbound		Hour Totals		Southbound		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		8	74			11	61				
12:15		2	92			6	56				
12:30		3	74			4	50				
12:45		4	44	17	284	5	59	26	226	43	510
01:00		2	51			4	51				
01:15		2	61			6	45				
01:30		1	88			4	69				
01:45		3	131	8	331	3	84	17	249	25	580
02:00		2	114			2	110				
02:15		6	90			1	134				
02:30		0	71			1	82				
02:45		3	75	11	350	2	96	6	422	17	772
03:00		7	108			3	116				
03:15		2	112			3	88				
03:30		2	100			1	91				
03:45		14	90	25	410	7	101	14	396	39	806
04:00		4	101			5	90				
04:15		11	100			6	96				
04:30		10	77			10	95				
04:45		12	92	37	370	11	107	32	388	69	758
05:00		14	95			3	99				
05:15		14	103			10	91				
05:30		26	114			14	92				
05:45		28	105	82	417	18	88	45	370	127	787
06:00		27	108			16	90				
06:15		43	90			22	73				
06:30		51	71			46	69				
06:45		56	87	177	356	47	75	131	307	308	663
07:00		71	55			65	48				
07:15		180	58			128	52				
07:30		131	53			238	45				
07:45		65	61	447	227	123	35	554	180	1001	407
08:00		54	32			89	44				
08:15		60	59			75	43				
08:30		77	49			75	31				
08:45		52	27	243	167	68	31	307	149	550	316
09:00		56	47			64	30				
09:15		48	53			88	25				
09:30		51	41			56	28				
09:45		57	31	212	172	61	21	269	104	481	276
10:00		57	18			59	25				
10:15		89	17			95	17				
10:30		56	15			73	21				
10:45		66	21	268	71	64	15	291	78	559	149
11:00		73	12			51	15				
11:15		67	8			74	7				
11:30		62	8			57	6				
11:45		50	9	252	37	58	17	240	45	492	82
Total		1779	3192	1779	3192	1932	2914	1932	2914	3711	6106
Combined Total		4971		4971		4846		4846		9817	
AM Peak	-	07:00	-	-	-	07:15	-	-	-	-	-
Vol.	-	447	-	-	-	578	-	-	-	-	-
P.H.F.	-	0.621	-	-	-	0.607	-	-	-	-	-
PM Peak	-	-	05:15	-	-	-	02:15	-	-	-	-
Vol.	-	-	430	-	-	-	428	-	-	-	-
P.H.F.	-	-	0.821	-	-	-	0.799	-	-	-	-
Percentage		35.8%	64.2%			39.9%	60.1%				
ADT/AADT		ADT 9,817	AADT 9,817								

Counts Unlimited, Inc.

City of Menifee
Tres Lagos Drive
E/ Menifee Road
24 Hour Directional Volume Counts

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

MEN009
Site Code: 057-16093

Start Time	25-Feb-16 Thu	Eastbound		Hour Totals		Westbound		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		2	11			1	6				
12:15		1	13			0	5				
12:30		0	13			0	8				
12:45		3	5	6	42	1	5	2	24	8	66
01:00		0	8			0	8				
01:15		1	7			2	6				
01:30		1	3			0	8				
01:45		2	11	4	29	0	3	2	25	6	54
02:00		0	18			1	11				
02:15		0	16			1	21				
02:30		0	6			0	11				
02:45		1	11	1	51	0	22	2	65	3	116
03:00		3	35			0	20				
03:15		0	22			2	15				
03:30		0	22			0	13				
03:45		2	15	5	94	1	12	3	60	8	154
04:00		0	14			1	9				
04:15		0	16			4	10				
04:30		0	17			2	11				
04:45		1	9	1	56	1	7	8	37	9	93
05:00		0	15			3	8				
05:15		1	11			3	17				
05:30		2	20			1	6				
05:45		0	16	3	62	2	17	9	48	12	110
06:00		1	16			6	9				
06:15		2	12			5	1				
06:30		0	16			11	15				
06:45		5	16	8	60	10	12	32	37	40	97
07:00		4	12			7	14				
07:15		13	16			17	4				
07:30		19	15			27	5				
07:45		9	8	45	51	13	2	64	25	109	76
08:00		5	7			18	4				
08:15		10	11			32	3				
08:30		19	14			24	3				
08:45		11	12	45	44	3	2	77	12	122	56
09:00		2	12			3	2				
09:15		3	8			10	2				
09:30		7	5			10	1				
09:45		5	4	17	29	8	4	31	9	48	38
10:00		8	5			7	2				
10:15		13	9			5	1				
10:30		6	6			6	1				
10:45		5	4	32	24	4	2	22	6	54	30
11:00		10	1			9	0				
11:15		13	4			6	1				
11:30		9	1			8	1				
11:45		12	2	44	8	8	1	31	3	75	11
Total		211	550	211	550	283	351	283	351	494	901
Combined Total		761		761		634		634		1395	
AM Peak	-	07:15	-	-	-	07:30	-	-	-	-	-
Vol.	-	46	-	-	-	90	-	-	-	-	-
P.H.F.	-	0.605	-	-	-	0.703	-	-	-	-	-
PM Peak	-	-	03:00	-	-	-	02:15	-	-	-	-
Vol.	-	-	94	-	-	-	74	-	-	-	-
P.H.F.	-	-	0.671	-	-	-	0.841	-	-	-	-
Percentage		27.7%	72.3%			44.6%	55.4%				
ADT/AADT		ADT 1,395	AADT 1,395								

Counts Unlimited, Inc.

City of Menifee
 Briggs Road
 B/ Old Newport Road - Tres Lagos Drive
 24 Hour Directional Volume Counts

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

MEN010
 Site Code: 057-16093

Start Time	25-Feb-16 Thu	Northbound		Hour Totals		Southbound		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		0	12			0	6				
12:15		1	12			0	6				
12:30		1	22			0	6				
12:45		0	9	2	55	1	8	1	26	3	81
01:00		1	13			0	15				
01:15		0	11			1	18				
01:30		1	9			0	17				
01:45		0	29	2	62	1	19	2	69	4	131
02:00		0	23			0	25				
02:15		0	9			1	10				
02:30		0	12			0	25				
02:45		1	19	1	63	0	26	1	86	2	149
03:00		1	27			1	17				
03:15		3	20			1	9				
03:30		2	8			2	13				
03:45		0	12	6	67	0	10	4	49	10	116
04:00		1	16			0	13				
04:15		2	11			2	12				
04:30		4	5			1	12				
04:45		2	11	9	43	0	14	3	51	12	94
05:00		4	8			3	12				
05:15		6	14			3	12				
05:30		2	10			1	4				
05:45		5	7	17	39	4	8	11	36	28	75
06:00		2	5			3	10				
06:15		7	5			3	6				
06:30		6	2			5	5				
06:45		9	9	24	21	15	4	26	25	50	46
07:00		26	5			35	10				
07:15		37	5			23	8				
07:30		13	5			9	1				
07:45		7	2	83	17	10	4	77	23	160	40
08:00		13	3			8	3				
08:15		12	5			6	1				
08:30		12	1			5	6				
08:45		10	4	47	13	6	5	25	15	72	28
09:00		5	5			6	4				
09:15		11	2			7	2				
09:30		12	4			11	2				
09:45		13	0	41	11	5	3	29	11	70	22
10:00		13	4			9	1				
10:15		10	1			17	2				
10:30		17	3			14	1				
10:45		16	2	56	10	12	4	52	8	108	18
11:00		20	0			14	1				
11:15		15	2			14	0				
11:30		17	2			7	0				
11:45		12	1	64	5	11	0	46	1	110	6
Total		352	406	352	406	277	400	277	400	629	806
Combined Total		758		758		677		677		1435	
AM Peak	-	06:45	-	-	-	06:45	-	-	-	-	-
Vol.	-	85	-	-	-	82	-	-	-	-	-
P.H.F.	-	0.574	-	-	-	0.586	-	-	-	-	-
PM Peak	-	-	02:30	-	-	-	02:00	-	-	-	-
Vol.	-	-	78	-	-	-	86	-	-	-	-
P.H.F.	-	-	0.722	-	-	-	0.827	-	-	-	-
Percentage		46.4%	53.6%			40.9%	59.1%				
ADT/AADT		ADT 1,435	AADT 1,435								

Counts Unlimited, Inc.

City of Menifee
 Briggs Road
 B/ Tres Lagos Road - Holland Road
 24 Hour Directional Volume Count

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

MEN011
 Site Code: 057-16093

Start Time	25-Feb-16 Thu	Northbound		Hour Totals		Southbound		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		1	11			1	9				
12:15		1	7			0	5				
12:30		0	9			1	6				
12:45		1	12	3	39	0	4	2	24	5	63
01:00		0	5			0	9				
01:15		0	6			1	12				
01:30		0	7			0	12				
01:45		0	24	0	42	0	24	1	57	1	99
02:00		0	26			0	9				
02:15		1	15			0	24				
02:30		2	18			0	15				
02:45		0	16	3	75	0	10	0	58	3	133
03:00		1	14			1	8				
03:15		1	21			0	16				
03:30		0	9			1	5				
03:45		1	17	3	61	1	9	3	38	6	99
04:00		0	10			1	5				
04:15		2	16			2	8				
04:30		1	12			0	5				
04:45		1	10	4	48	6	8	9	26	13	74
05:00		1	4			1	12				
05:15		1	2			2	9				
05:30		3	8			2	4				
05:45		0	15	5	29	7	6	12	31	17	60
06:00		4	9			6	6				
06:15		6	13			7	9				
06:30		0	14			5	0				
06:45		9	7	19	43	19	3	37	18	56	61
07:00		23	4			30	4				
07:15		30	10			7	2				
07:30		5	3			8	1				
07:45		7	8	65	25	8	2	53	9	118	34
08:00		6	8			6	3				
08:15		3	4			11	3				
08:30		8	5			7	3				
08:45		3	5	20	22	10	1	34	10	54	32
09:00		8	3			8	2				
09:15		4	4			11	4				
09:30		7	6			10	2				
09:45		5	3	24	16	9	1	38	9	62	25
10:00		7	2			9	1				
10:15		13	2			10	0				
10:30		3	4			12	0				
10:45		22	1	45	9	16	0	47	1	92	10
11:00		13	0			11	0				
11:15		9	1			13	0				
11:30		8	1			9	0				
11:45		13	0	43	2	5	1	38	1	81	3
Total		234	411	234	411	274	282	274	282	508	693
Combined Total		645		645		556		556		1201	
AM Peak	-	06:45	-	-	-	06:45	-	-	-	-	-
Vol.	-	67	-	-	-	64	-	-	-	-	-
P.H.F.	-	0.558	-	-	-	0.533	-	-	-	-	-
PM Peak	-	-	01:45	-	-	-	01:45	-	-	-	-
Vol.	-	-	83	-	-	-	72	-	-	-	-
P.H.F.	-	-	0.798	-	-	-	0.750	-	-	-	-
Percentage		36.3%	63.7%			49.3%	50.7%				
ADT/AADT		ADT 1,201		AADT 1,201							

Counts Unlimited, Inc.

City of Menifee
 Holland Road
 B/ Antelope Road - Hanover Lane
 24 Hour Directional Volume Count

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

MENHONHA
 Site Code: 057-17194

Start Time	3/30/2017 Thu	Eastbound		Hour Totals		Westbound		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		10	52			5	51				
12:15		5	41			1	46				
12:30		5	33			3	37				
12:45		6	50	26	176	3	40	12	174	38	350
01:00		2	46			2	40				
01:15		2	49			2	46				
01:30		2	41			1	39				
01:45		6	58	12	194	4	56	9	181	21	375
02:00		5	65			2	53				
02:15		6	55			3	67				
02:30		3	50			2	48				
02:45		3	49	17	219	5	50	12	218	29	437
03:00		0	56			1	51				
03:15		1	63			5	44				
03:30		2	49			11	56				
03:45		1	66	4	234	6	58	23	209	27	443
04:00		2	58			21	46				
04:15		3	49			25	53				
04:30		3	70			29	52				
04:45		2	60	10	237	32	40	107	191	117	428
05:00		4	64			21	52				
05:15		3	88			19	42				
05:30		2	66			35	53				
05:45		9	64	18	282	29	52	104	199	122	481
06:00		7	70			34	43				
06:15		9	61			40	53				
06:30		16	67			42	43				
06:45		32	65	64	263	48	56	164	195	228	458
07:00		28	52			105	44				
07:15		30	60			90	37				
07:30		34	69			103	36				
07:45		25	58	117	239	72	32	370	149	487	388
08:00		27	42			56	34				
08:15		38	71			66	21				
08:30		26	39			73	31				
08:45		19	54	110	206	55	18	250	104	360	310
09:00		27	36			47	18				
09:15		29	32			57	17				
09:30		28	37			56	11				
09:45		27	24	111	129	37	14	197	60	308	189
10:00		27	16			45	8				
10:15		37	16			46	8				
10:30		27	20			64	6				
10:45		42	18	133	70	52	4	207	26	340	96
11:00		41	12			26	10				
11:15		47	10			46	1				
11:30		45	11			59	5				
11:45		41	7	174	40	35	2	166	18	340	58
Total		796	2289	796	2289	1621	1724	1621	1724	2417	4013
Combined Total		3085		3085		3345		3345		6430	
AM Peak	-	10:45	-	-	-	07:00	-	-	-	-	-
Vol.	-	175	-	-	-	370	-	-	-	-	-
P.H.F.		0.931				0.881					
PM Peak	-	-	05:15	-	-	-	01:45	-	-	-	-
Vol.	-	-	288	-	-	-	224	-	-	-	-
P.H.F.			0.818				0.836				
Percentage		25.8%	74.2%			48.5%	51.5%				
ADT/AADT		ADT 6,430		AADT 6,430							

Counts Unlimited, Inc.

City of Menifee
 Holland Road
 B/ Antelope Road - Menifee Road
 24 Hour Directional Volume Counts

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

MEN012
 Site Code: 057-16093

Start Time	25-Feb-16 Thu	Eastbound		Hour Totals		Westbound		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		8	42			3	37				
12:15		5	41			5	30				
12:30		5	33			1	37				
12:45		7	30	25	146	1	39	10	143	35	289
01:00		2	53			1	28				
01:15		2	53			0	37				
01:30		0	49			1	39				
01:45		4	52	8	207	0	37	2	141	10	348
02:00		1	50			2	67				
02:15		3	47			1	76				
02:30		1	51			3	48				
02:45		3	61	8	209	4	55	10	246	18	455
03:00		2	65			5	52				
03:15		1	57			10	71				
03:30		1	53			8	66				
03:45		0	44	4	219	6	42	29	231	33	450
04:00		4	54			13	35				
04:15		1	61			11	38				
04:30		1	53			32	35				
04:45		2	66	8	234	22	50	78	158	86	392
05:00		7	63			32	45				
05:15		6	84			25	37				
05:30		5	65			29	50				
05:45		10	63	28	275	26	40	112	172	140	447
06:00		8	66			28	35				
06:15		9	61			38	43				
06:30		17	75			47	41				
06:45		18	46	52	248	47	38	160	157	212	405
07:00		43	50			64	29				
07:15		51	47			75	24				
07:30		22	53			105	16				
07:45		29	38	145	188	80	31	324	100	469	288
08:00		23	46			67	27				
08:15		13	31			68	21				
08:30		22	28			48	18				
08:45		27	20	85	125	34	10	217	76	302	201
09:00		29	43			49	20				
09:15		24	33			51	12				
09:30		22	24			38	16				
09:45		33	26	108	126	39	7	177	55	285	181
10:00		24	20			42	12				
10:15		45	16			47	5				
10:30		19	14			44	5				
10:45		39	18	127	68	29	5	162	27	289	95
11:00		39	11			51	1				
11:15		36	13			68	8				
11:30		29	2			43	6				
11:45		33	9	137	35	30	10	192	25	329	60
Total		735	2080	735	2080	1473	1531	1473	1531	2208	3611
Combined Total		2815		2815		3004		3004		5819	
AM Peak	-	07:00	-	-	-	07:15	-	-	-	-	-
Vol.	-	145	-	-	-	327	-	-	-	-	-
P.H.F.	-	0.711	-	-	-	0.779	-	-	-	-	-
PM Peak	-	-	04:45	-	-	-	02:00	-	-	-	-
Vol.	-	-	278	-	-	-	246	-	-	-	-
P.H.F.	-	-	0.827	-	-	-	0.809	-	-	-	-
Percentage		26.1%	73.9%			49.0%	51.0%				
ADT/AADT		ADT 5,819	AADT 5,819								

Counts Unlimited, Inc.

City of Menifee
 Holland Road
 B/ Southshore Drive - Briggs Road
 24 Hour Directional Volume Counts

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

MEN013
 Site Code: 057-16093

Start Time	25-Feb-16 Thu	Eastbound		Hour Totals		Westbound		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		0	3			0	4				
12:15		0	2			2	1				
12:30		0	5			0	4				
12:45		0	4	0	14	0	1	2	10	2	24
01:00		0	4			1	2				
01:15		1	6			0	9				
01:30		0	4			0	12				
01:45		0	10	1	24	0	15	1	38	2	62
02:00		0	23			0	18				
02:15		0	37			0	19				
02:30		0	5			0	8				
02:45		0	13	0	78	0	21	0	66	0	144
03:00		0	23			0	27				
03:15		1	45			0	13				
03:30		0	11			0	2				
03:45		0	2	1	81	0	3	0	45	1	126
04:00		0	4			0	2				
04:15		0	5			0	2				
04:30		0	6			1	4				
04:45		0	8	0	23	0	10	1	18	1	41
05:00		0	6			1	9				
05:15		0	2			0	5				
05:30		0	5			0	4				
05:45		2	8	2	21	1	4	2	22	4	43
06:00		2	5			1	2				
06:15		0	4			1	4				
06:30		1	2			2	2				
06:45		1	4	4	15	1	3	5	11	9	26
07:00		7	5			17	3				
07:15		38	2			63	3				
07:30		53	2			29	2				
07:45		14	2	112	11	6	2	115	10	227	21
08:00		4	3			4	0				
08:15		3	0			7	0				
08:30		4	2			8	2				
08:45		6	5	17	10	2	1	21	3	38	13
09:00		3	2			3	2				
09:15		0	5			5	0				
09:30		4	0			4	3				
09:45		3	1	10	8	3	0	15	5	25	13
10:00		3	2			6	1				
10:15		6	1			4	0				
10:30		6	0			8	0				
10:45		5	2	20	5	8	0	26	1	46	6
11:00		5	1			22	0				
11:15		20	0			14	1				
11:30		5	2			7	1				
11:45		1	0	31	3	3	0	46	2	77	5
Total		198	293	198	293	234	231	234	231	432	524
Combined Total		491		491		465		465		956	
AM Peak	-	07:00	-	-	-	07:00	-	-	-	-	-
Vol.	-	112	-	-	-	115	-	-	-	-	-
P.H.F.	-	0.528	-	-	-	0.456	-	-	-	-	-
PM Peak	-	-	02:45	-	-	-	02:15	-	-	-	-
Vol.	-	-	92	-	-	-	75	-	-	-	-
P.H.F.	-	-	0.511	-	-	-	0.694	-	-	-	-
Percentage		40.3%	59.7%			50.3%	49.7%				
ADT/AADT		ADT 956		AADT 956							

APPENDIX B
MODEL POST-PROCESSING WORKSHEETS

APPENDIX B-1

YEAR 2020

1. I-215 SB Ramps at Newport Road

AM PEAK HOUR

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86

Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	APPROACH	FY TOTAL
NORTH BOUND	LEFT THRU	0	NORTHBOUND	0
	RIGHT	0	OUT ...	427
SOUTH BOUND	LEFT THRU	277	SOUTHBOUND	821
	RIGHT	454	OUT ...	616
EAST BOUND	LEFT THRU	869	EASTBOUND	1418
	RIGHT	412	OUT ...	1729
WEST BOUND	LEFT THRU	1102	WESTBOUND	1811
	RIGHT	616	OUT ...	1278

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT THRU	0	0
	RIGHT	0	0
SOUTH BOUND	LEFT THRU	277	299
	RIGHT	454	529
EAST BOUND	LEFT THRU	869	985
	RIGHT	412	445
WEST BOUND	LEFT THRU	1,102	1,200
	RIGHT	616	665

2. I-215 NB Ramps at Newport Road

AM PEAK HOUR

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86

Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	APPROACH	FY TOTAL
NORTH BOUND	LEFT THRU	287 0	NORTHBOUND IN ...	955
	RIGHT	646	OUT ...	247
SOUTH BOUND	LEFT THRU	0 0	SOUTHBOUND IN ...	0
	RIGHT	0	OUT ...	476
EAST BOUND	LEFT THRU	0 892	EASTBOUND IN ...	1271
	RIGHT	247	OUT ...	1829
WEST BOUND	LEFT THRU	0 1449	WESTBOUND IN ...	1939
	RIGHT	433	OUT ...	1612

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT THRU	287 0	349 0
	RIGHT	646	698
SOUTH BOUND	LEFT THRU	0 0	0 0
	RIGHT	0	0
EAST BOUND	LEFT THRU	0 892	0 1,009
	RIGHT	247	267
WEST BOUND	LEFT THRU	0 1,449	0 1,565
	RIGHT	433	476

3. Antelope Road at Newport Road

AM PEAK HOUR

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86

Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	APPROACH	FY TOTAL
NORTH BOUND	LEFT THRU	376	NORTHBOUND	
	RIGHT	40	IN ...	498
		87	OUT ...	608
SOUTH BOUND	LEFT THRU	93	SOUTHBOUND	
	RIGHT	78	IN ...	294
		149	OUT ...	149
EAST BOUND	LEFT THRU	50	EASTBOUND	
	RIGHT	988	IN ...	1,554
		442	OUT ...	1,962
WEST BOUND	LEFT THRU	69	WESTBOUND	
	RIGHT	1380	IN ...	1,602
		65	OUT ...	1,230

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT THRU	376	406
	RIGHT	40	43
		87	94
SOUTH BOUND	LEFT THRU	93	100
	RIGHT	78	84
		149	161
EAST BOUND	LEFT THRU	50	54
	RIGHT	988	1,067
		442	477
WEST BOUND	LEFT THRU	69	76
	RIGHT	1,380	1,490
		65	70

4. Menifee Road at Newport Road

AM PEAK HOUR

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86

Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	APPROACH	FY TOTAL
NORTH BOUND	LEFT THRU	165 205	NORTHBOUND IN ...	543
	RIGHT	123	OUT ...	736
SOUTH BOUND	LEFT THRU	53 280	SOUTHBOUND IN ...	723
	RIGHT	281	OUT ...	537
EAST BOUND	LEFT THRU	188 790	EASTBOUND IN ...	1,164
	RIGHT	131	OUT ...	1,419
WEST BOUND	LEFT THRU	255 901	WESTBOUND IN ...	1,198
	RIGHT	30	OUT ...	935

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT THRU	165 205	178 254
	RIGHT	123	133
SOUTH BOUND	LEFT THRU	53 280	57 333
	RIGHT	281	336
EAST BOUND	LEFT THRU	188 790	247 853
	RIGHT	131	147
WEST BOUND	LEFT THRU	255 901	275 973
	RIGHT	30	35

5. Laguna Vista Drive at Newport Road

AM PEAK HOUR

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86

Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	APPROACH	FY TOTAL
NORTH BOUND	LEFT THRU	167	NORTHBOUND	
	RIGHT	0	IN ...	232
		91	OUT ...	146
SOUTH BOUND	LEFT THRU	0	SOUTHBOUND	
	RIGHT	0	IN ...	0
		0	OUT ...	0
EAST BOUND	LEFT THRU	0	EASTBOUND	
	RIGHT	895	IN ...	933
		69	OUT ...	1,169
WEST BOUND	LEFT THRU	91	WESTBOUND	
	RIGHT	990	IN ...	1,116
		0	OUT ...	966

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT THRU	167	180
	RIGHT	0	0
		91	98
SOUTH BOUND	LEFT THRU	0	0
	RIGHT	0	0
		0	0
EAST BOUND	LEFT THRU	0	0
	RIGHT	895	967
		69	75
WEST BOUND	LEFT THRU	91	98
	RIGHT	990	1,069
		0	0

6. Menifee Road at Rockport Road

AM PEAK HOUR

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86

Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	APPROACH	FY TOTAL
NORTH BOUND	LEFT	0	NORTHBOUND	
	THRU	430	IN ...	493
	RIGHT	13	OUT ...	735
SOUTH BOUND	LEFT	7	SOUTHBOUND	
	THRU	630	IN ...	707
	RIGHT	0	OUT ...	515
EAST BOUND	LEFT	0	EASTBOUND	
	THRU	0	IN ...	0
	RIGHT	0	OUT ...	0
WEST BOUND	LEFT	35	WESTBOUND	
	THRU	0	IN ...	70
	RIGHT	35	OUT ...	20

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	0	0
	THRU	430	480
	RIGHT	13	14
SOUTH BOUND	LEFT	7	10
	THRU	630	700
	RIGHT	0	0
EAST BOUND	LEFT	0	0
	THRU	0	0
	RIGHT	0	0
WEST BOUND	LEFT	35	38
	THRU	0	0
	RIGHT	35	38

7. Laguna Vista Drive at Rockport Road

AM PEAK HOUR

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86

Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	APPROACH	FY TOTAL
NORTH BOUND	LEFT THRU	1	NORTHBOUND	
	RIGHT	98	IN ...	95
		8	OUT ...	68
SOUTH BOUND	LEFT THRU	82	SOUTHBOUND	
	RIGHT	60	IN ...	141
		14	OUT ...	239
EAST BOUND	LEFT THRU	11	EASTBOUND	
	RIGHT	11	IN ...	22
		0	OUT ...	42
WEST BOUND	LEFT THRU	13	WESTBOUND	
	RIGHT	27	IN ...	182
		156	OUT ...	91

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT THRU	1	10
	RIGHT	98	106
		8	10
SOUTH BOUND	LEFT THRU	82	89
	RIGHT	60	65
		14	15
EAST BOUND	LEFT THRU	11	12
	RIGHT	11	12
		0	10
WEST BOUND	LEFT THRU	13	14
	RIGHT	27	29
		156	168

8. Menifee Road at Loire Valley Lane/Tres Lagos Drive

AM PEAK HOUR

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86

Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	APPROACH	FY TOTAL
NORTH BOUND	LEFT	53	NORTHBOUND	
	THRU	451	IN ...	559
	RIGHT	29	OUT ...	883
SOUTH BOUND	LEFT	25	SOUTHBOUND	
	THRU	656	IN ...	764
	RIGHT	13	OUT ...	524
EAST BOUND	LEFT	11	EASTBOUND	
	THRU	2	IN ...	99
	RIGHT	86	OUT ...	70
WEST BOUND	LEFT	81	WESTBOUND	
	THRU	4	IN ...	123
	RIGHT	12	OUT ...	69

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	53	57
	THRU	451	489
	RIGHT	29	31
SOUTH BOUND	LEFT	25	36
	THRU	656	708
	RIGHT	13	16
EAST BOUND	LEFT	11	15
	THRU	2	10
	RIGHT	86	93
WEST BOUND	LEFT	81	97
	THRU	4	6
	RIGHT	12	20

9. Laguna Vista Drive at Tres Lagos Drive

AM PEAK HOUR

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86

Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	APPROACH	FY TOTAL
NORTH BOUND	LEFT	39	NORTHBOUND	
	THRU	118	IN ...	201
	RIGHT	17	OUT ...	120
SOUTH BOUND	LEFT	8	SOUTHBOUND	
	THRU	53	IN ...	60
	RIGHT	4	OUT ...	123
EAST BOUND	LEFT	6	EASTBOUND	
	THRU	9	IN ...	57
	RIGHT	29	OUT ...	87
WEST BOUND	LEFT	27	WESTBOUND	
	THRU	18	IN ...	64
	RIGHT	11	OUT ...	42

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	39	61
	THRU	118	127
	RIGHT	17	24
SOUTH BOUND	LEFT	8	10
	THRU	53	57
	RIGHT	4	10
EAST BOUND	LEFT	6	10
	THRU	9	11
	RIGHT	29	39
WEST BOUND	LEFT	27	32
	THRU	18	22
	RIGHT	11	12

10. Menifee Road at Holland Road

AM PEAK HOUR

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86

Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	APPROACH	FY TOTAL
NORTH BOUND	LEFT	54	NORTHBOUND	
	THRU	287	IN ...	478
	RIGHT	99	OUT ...	422
SOUTH BOUND	LEFT	38	SOUTHBOUND	
	THRU	273	IN ...	557
	RIGHT	182	OUT ...	556
EAST BOUND	LEFT	150	EASTBOUND	
	THRU	122	IN ...	349
	RIGHT	32	OUT ...	517
WEST BOUND	LEFT	54	WESTBOUND	
	THRU	198	IN ...	418
	RIGHT	91	OUT ...	307

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	54	64
	THRU	287	310
	RIGHT	99	117
SOUTH BOUND	LEFT	38	42
	THRU	273	312
	RIGHT	182	203
EAST BOUND	LEFT	150	162
	THRU	122	148
	RIGHT	32	40
WEST BOUND	LEFT	54	70
	THRU	198	249
	RIGHT	91	99

11. Briggs Road at Holland Road

AM PEAK HOUR

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86

Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	APPROACH	FY TOTAL
NORTH BOUND	LEFT	54	NORTHBOUND	
	THRU	6	IN ...	85
	RIGHT	1	OUT ...	84
SOUTH BOUND	LEFT	1	SOUTHBOUND	
	THRU	18	IN ...	91
	RIGHT	65	OUT ...	75
EAST BOUND	LEFT	52	EASTBOUND	
	THRU	24	IN ...	160
	RIGHT	48	OUT ...	178
WEST BOUND	LEFT	2	WESTBOUND	
	THRU	18	IN ...	69
	RIGHT	5	OUT ...	68

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	54	70
	THRU	6	10
	RIGHT	1	4
SOUTH BOUND	LEFT	1	3
	THRU	18	25
	RIGHT	65	70
EAST BOUND	LEFT	52	56
	THRU	24	60
	RIGHT	48	52
WEST BOUND	LEFT	2	7
	THRU	18	45
	RIGHT	5	16

29. Briggs Road at Old Newport Road
AM PEAK HOUR

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86

Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	APPROACH	FY TOTAL
-----	-----	----	-----	-----
NORTH	LEFT	57	NORTHBOUND	
BOUND	THRU	13	IN ...	88
	RIGHT	1	OUT ...	94
SOUTH	LEFT	1	SOUTHBOUND	
BOUND	THRU	22	IN ...	59
	RIGHT	20	OUT ...	44
EAST	LEFT	8	EASTBOUND	
BOUND	THRU	2	IN ...	65
	RIGHT	60	OUT ...	72
WEST	LEFT	1	WESTBOUND	
BOUND	THRU	2	IN ...	0
	RIGHT	1	OUT ...	2

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
-----	-----	----	-----
NORTH	LEFT	57	60
BOUND	THRU	13	34
	RIGHT	1	1
SOUTH	LEFT	1	1
BOUND	THRU	22	40
	RIGHT	20	21
EAST	LEFT	8	10
BOUND	THRU	2	2
	RIGHT	60	64
WEST	LEFT	1	1
BOUND	THRU	2	2
	RIGHT	1	1

30. Briggs Road at Gold Crest Drive

AM PEAK HOUR

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86

Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	APPROACH	FY TOTAL
-----	-----	----	-----	-----
NORTH	LEFT	1	NORTHBOUND	
BOUND	THRU	67	IN ...	78
	RIGHT	1	OUT ...	88
SOUTH	LEFT	1	SOUTHBOUND	
BOUND	THRU	79	IN ...	89
	RIGHT	1	OUT ...	86
EAST	LEFT	1	EASTBOUND	
BOUND	THRU	2	IN ...	10
	RIGHT	1	OUT ...	9
WEST	LEFT	1	WESTBOUND	
BOUND	THRU	2	IN ...	9
	RIGHT	2	OUT ...	2

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
-----	-----	----	-----
NORTH	LEFT	1	2
BOUND	THRU	67	78
	RIGHT	1	1
SOUTH	LEFT	1	1
BOUND	THRU	79	85
	RIGHT	1	2
EAST	LEFT	1	5
BOUND	THRU	2	2
	RIGHT	1	3
WEST	LEFT	1	1
BOUND	THRU	2	5
	RIGHT	2	3

1. I-215 SB Ramps at Newport Road

PM PEAK HOUR

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86

Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	APPROACH	FY TOTAL
NORTH BOUND	LEFT	0	NORTHBOUND	
	THRU	0	IN ...	0
	RIGHT	0	OUT ...	478
SOUTH BOUND	LEFT	514	SOUTHBOUND	
	THRU	0	IN ...	965
	RIGHT	421	OUT ...	430
EAST BOUND	LEFT	0	EASTBOUND	
	THRU	878	IN ...	1502
	RIGHT	367	OUT ...	1719
WEST BOUND	LEFT	0	WESTBOUND	
	THRU	1116	IN ...	1731
	RIGHT	430	OUT ...	1572

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	0	0
	THRU	0	0
	RIGHT	0	0
SOUTH BOUND	LEFT	514	555
	THRU	0	0
	RIGHT	421	455
EAST BOUND	LEFT	0	0
	THRU	878	1,030
	RIGHT	367	478
WEST BOUND	LEFT	0	0
	THRU	1,116	1,295
	RIGHT	430	464

2. I-215 NB Ramps at Newport Road

PM PEAK HOUR

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86

Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	APPROACH	FY TOTAL
NORTH BOUND	LEFT	477	NORTHBOUND	
	THRU	0	IN ...	1130
	RIGHT	649	OUT ...	289
SOUTH BOUND	LEFT	0	SOUTHBOUND	
	THRU	0	IN ...	0
	RIGHT	0	OUT ...	399
EAST BOUND	LEFT	0	EASTBOUND	
	THRU	1148	IN ...	1617
	RIGHT	289	OUT ...	1782
WEST BOUND	LEFT	0	WESTBOUND	
	THRU	1120	IN ...	1579
	RIGHT	298	OUT ...	1856

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	477	583
	THRU	0	0
	RIGHT	649	701
SOUTH BOUND	LEFT	0	0
	THRU	0	0
	RIGHT	0	0
EAST BOUND	LEFT	0	0
	THRU	1,148	1,309
	RIGHT	289	312
WEST BOUND	LEFT	0	0
	THRU	1,120	1,210
	RIGHT	298	399

3. Antelope Road at Newport Road

PM PEAK HOUR

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86

Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	APPROACH	FY TOTAL
NORTH BOUND	LEFT	370	NORTHBOUND	
	THRU	136	IN ...	812
	RIGHT	278	OUT ...	628
SOUTH BOUND	LEFT	20	SOUTHBOUND	
	THRU	82	IN ...	201
	RIGHT	104	OUT ...	320
EAST BOUND	LEFT	157	EASTBOUND	
	THRU	1092	IN ...	1,727
	RIGHT	419	OUT ...	1,560
WEST BOUND	LEFT	131	WESTBOUND	
	THRU	925	IN ...	1,249
	RIGHT	41	OUT ...	1,480

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	370	400
	THRU	136	147
	RIGHT	278	300
SOUTH BOUND	LEFT	20	22
	THRU	82	89
	RIGHT	104	112
EAST BOUND	LEFT	157	170
	THRU	1,092	1,179
	RIGHT	419	453
WEST BOUND	LEFT	131	141
	THRU	925	1,066
	RIGHT	41	44

4. Menifee Road at Newport Road

PM PEAK HOUR

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86

Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	APPROACH	FY TOTAL
NORTH BOUND	LEFT	126	NORTHBOUND	
	THRU	238	IN ...	649
	RIGHT	179	OUT ...	525
SOUTH BOUND	LEFT	41	SOUTHBOUND	
	THRU	175	IN ...	532
	RIGHT	117	OUT ...	609
EAST BOUND	LEFT	187	EASTBOUND	
	THRU	936	IN ...	1,284
	RIGHT	88	OUT ...	1,130
WEST BOUND	LEFT	173	WESTBOUND	
	THRU	746	IN ...	972
	RIGHT	43	OUT ...	1,172

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	126	156
	THRU	238	314
	RIGHT	179	193
SOUTH BOUND	LEFT	41	57
	THRU	175	270
	RIGHT	117	205
EAST BOUND	LEFT	187	248
	THRU	936	1,011
	RIGHT	88	97
WEST BOUND	LEFT	173	187
	THRU	746	806
	RIGHT	43	47

5. Laguna Vista Drive at Newport Road

PM PEAK HOUR

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86

Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	APPROACH	FY TOTAL
NORTH BOUND	LEFT	87	NORTHBOUND	
	THRU	0	IN ...	106
	RIGHT	37	OUT ...	168
SOUTH BOUND	LEFT	0	SOUTHBOUND	
	THRU	0	IN ...	0
	RIGHT	0	OUT ...	0
EAST BOUND	LEFT	0	EASTBOUND	
	THRU	1069	IN ...	1,223
	RIGHT	138	OUT ...	1,029
WEST BOUND	LEFT	57	WESTBOUND	
	THRU	932	IN ...	1,014
	RIGHT	0	OUT ...	1,146

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	87	94
	THRU	0	0
	RIGHT	37	40
SOUTH BOUND	LEFT	0	0
	THRU	0	0
	RIGHT	0	0
EAST BOUND	LEFT	0	0
	THRU	1,069	1,155
	RIGHT	138	149
WEST BOUND	LEFT	57	62
	THRU	932	1,007
	RIGHT	0	0

6. Menifee Road at Rockport Road

PM PEAK HOUR

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86

Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	APPROACH	FY TOTAL
NORTH BOUND	LEFT	0	NORTHBOUND	
	THRU	512	IN ...	645
	RIGHT	27	OUT ...	519
SOUTH BOUND	LEFT	22	SOUTHBOUND	
	THRU	406	IN ...	517
	RIGHT	0	OUT ...	652
EAST BOUND	LEFT	0	EASTBOUND	
	THRU	0	IN ...	0
	RIGHT	0	OUT ...	0
WEST BOUND	LEFT	24	WESTBOUND	
	THRU	0	IN ...	58
	RIGHT	34	OUT ...	49

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	0	0
	THRU	512	618
	RIGHT	27	29
SOUTH BOUND	LEFT	22	24
	THRU	406	495
	RIGHT	0	0
EAST BOUND	LEFT	0	0
	THRU	0	0
	RIGHT	0	0
WEST BOUND	LEFT	24	26
	THRU	0	0
	RIGHT	34	37

7. Laguna Vista Drive at Rockport Road

PM PEAK HOUR

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86

Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	APPROACH	FY TOTAL
NORTH BOUND	LEFT	1	NORTHBOUND	
	THRU	37	IN ...	36
	RIGHT	5	OUT ...	56
SOUTH BOUND	LEFT	121	SOUTHBOUND	
	THRU	60	IN ...	159
	RIGHT	6	OUT ...	104
EAST BOUND	LEFT	5	EASTBOUND	
	THRU	29	IN ...	36
	RIGHT	2	OUT ...	40
WEST BOUND	LEFT	5	WESTBOUND	
	THRU	33	IN ...	107
	RIGHT	81	OUT ...	138

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	1	10
	THRU	37	40
	RIGHT	5	10
SOUTH BOUND	LEFT	121	131
	THRU	60	65
	RIGHT	6	10
EAST BOUND	LEFT	5	10
	THRU	29	29
	RIGHT	2	10
WEST BOUND	LEFT	5	10
	THRU	33	33
	RIGHT	81	87

8. Menifee Road at Loire Valley Lane/Tres Lagos Drive

PM PEAK HOUR

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86

Modified by: FHWA 12/21/87

APPROACH	TURN	MOVEMENT	BY COUNT	APPROACH	FY TOTAL
-----	-----	-----	-----	-----	-----
NORTH	LEFT		40	NORTHBOUND	
BOUND	THRU		374	IN ...	548
	RIGHT		43	OUT ...	360
SOUTH	LEFT		41	SOUTHBOUND	
BOUND	THRU		239	IN ...	425
	RIGHT		56	OUT ...	607
EAST	LEFT		69	EASTBOUND	
BOUND	THRU		106	IN ...	214
	RIGHT		39	OUT ...	170
WEST	LEFT		16	WESTBOUND	
BOUND	THRU		74	IN ...	166
	RIGHT		58	OUT ...	217

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN	MOVEMENT	BY COUNT	FY FORECAST
-----	-----	-----	-----	-----
NORTH	LEFT		40	43
BOUND	THRU		374	460
	RIGHT		43	52
SOUTH	LEFT		41	58
BOUND	THRU		239	306
	RIGHT		56	61
EAST	LEFT		69	75
BOUND	THRU		106	114
	RIGHT		39	42
WEST	LEFT		16	18
BOUND	THRU		74	80
	RIGHT		58	75

9. Laguna Vista Drive at Tres Lagos Drive

PM PEAK HOUR

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86

Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	APPROACH	FY TOTAL
NORTH BOUND	LEFT	35	NORTHBOUND	
	THRU	34	IN ...	84
	RIGHT	0	OUT ...	146
SOUTH BOUND	LEFT	10	SOUTHBOUND	
	THRU	62	IN ...	62
	RIGHT	1	OUT ...	30
EAST BOUND	LEFT	1	EASTBOUND	
	THRU	30	IN ...	104
	RIGHT	46	OUT ...	62
WEST BOUND	LEFT	9	WESTBOUND	
	THRU	8	IN ...	32
	RIGHT	2	OUT ...	50

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	35	52
	THRU	34	37
	RIGHT	0	10
SOUTH BOUND	LEFT	10	11
	THRU	62	67
	RIGHT	1	10
EAST BOUND	LEFT	1	10
	THRU	30	41
	RIGHT	46	68
WEST BOUND	LEFT	9	22
	THRU	8	10
	RIGHT	2	10

10. Menifee Road at Holland Road

PM PEAK HOUR

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86

Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	APPROACH	FY TOTAL
NORTH BOUND	LEFT	44	NORTHBOUND	
	THRU	452	IN ...	629
	RIGHT	37	OUT ...	477
SOUTH BOUND	LEFT	58	SOUTHBOUND	
	THRU	332	IN ...	525
	RIGHT	80	OUT ...	640
EAST BOUND	LEFT	45	EASTBOUND	
	THRU	34	IN ...	251
	RIGHT	76	OUT ...	209
WEST BOUND	LEFT	29	WESTBOUND	
	THRU	15	IN ...	142
	RIGHT	45	OUT ...	221

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	44	66
	THRU	452	503
	RIGHT	37	60
SOUTH BOUND	LEFT	58	87
	THRU	332	359
	RIGHT	80	112
EAST BOUND	LEFT	45	68
	THRU	34	74
	RIGHT	76	109
WEST BOUND	LEFT	29	42
	THRU	15	31
	RIGHT	45	69

11. Briggs Road at Holland Road

PM PEAK HOUR

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86

Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	APPROACH	FY TOTAL
NORTH BOUND	LEFT	12	NORTHBOUND	
	THRU	17	IN ...	61
	RIGHT	5	OUT ...	79
SOUTH BOUND	LEFT	5	SOUTHBOUND	
	THRU	14	IN ...	55
	RIGHT	17	OUT ...	52
EAST BOUND	LEFT	15	EASTBOUND	
	THRU	11	IN ...	98
	RIGHT	18	OUT ...	81
WEST BOUND	LEFT	2	WESTBOUND	
	THRU	18	IN ...	77
	RIGHT	3	OUT ...	77

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	12	14
	THRU	17	24
	RIGHT	5	22
SOUTH BOUND	LEFT	5	15
	THRU	14	26
	RIGHT	17	18
EAST BOUND	LEFT	15	17
	THRU	11	40
	RIGHT	18	40
WEST BOUND	LEFT	2	13
	THRU	18	53
	RIGHT	3	10

29. Briggs Road at Old Newport Road
PM PEAK HOUR

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86

Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	APPROACH	FY TOTAL
-----	-----	----	-----	-----
NORTH	LEFT	44	NORTHBOUND	
BOUND	THRU	10	IN ...	80
	RIGHT	1	OUT ...	102
SOUTH	LEFT	1	SOUTHBOUND	
BOUND	THRU	4	IN ...	48
	RIGHT	7	OUT ...	52
EAST	LEFT	11	EASTBOUND	
BOUND	THRU	1	IN ...	73
	RIGHT	68	OUT ...	46
WEST	LEFT	1	WESTBOUND	
BOUND	THRU	2	IN ...	0
	RIGHT	1	OUT ...	1

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
-----	-----	----	-----
NORTH	LEFT	44	47
BOUND	THRU	10	43
	RIGHT	1	1
SOUTH	LEFT	1	1
BOUND	THRU	4	37
	RIGHT	7	11
EAST	LEFT	11	12
BOUND	THRU	1	1
	RIGHT	68	72
WEST	LEFT	1	1
BOUND	THRU	2	2
	RIGHT	1	1

30. Briggs Road at Gold Crest Drive

PM PEAK HOUR

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86

Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	APPROACH	FY TOTAL
-----	-----	----	-----	-----
NORTH	LEFT	1	NORTHBOUND	
BOUND	THRU	45	IN ...	62
	RIGHT	1	OUT ...	88
	LEFT	1	SOUTHBOUND	
SOUTH	THRU	69	IN ...	97
BOUND	RIGHT	1	OUT ...	69
	LEFT	1	EASTBOUND	
EAST	THRU	2	IN ...	11
BOUND	RIGHT	1	OUT ...	14
	LEFT	1	WESTBOUND	
WEST	THRU	2	IN ...	7
BOUND	RIGHT	1	OUT ...	6

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
-----	-----	----	-----
NORTH	LEFT	1	3
BOUND	THRU	45	62
	RIGHT	1	1
	LEFT	1	1
SOUTH	THRU	69	86
BOUND	RIGHT	1	6
	LEFT	1	5
EAST	THRU	2	4
BOUND	RIGHT	1	2
	LEFT	1	1
WEST	THRU	2	5
BOUND	RIGHT	1	1

APPENDIX B-II

YEAR 2040

1. I-215 SB Ramps at Newport Road

AM PEAK HOUR

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86

Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	APPROACH	FY TOTAL
NORTH BOUND	LEFT	0	NORTHBOUND	
	THRU	0	IN ...	0
	RIGHT	0	OUT ...	505
SOUTH BOUND	LEFT	277	SOUTHBOUND	
	THRU	0	IN ...	1272
	RIGHT	454	OUT ...	616
EAST BOUND	LEFT	0	EASTBOUND	
	THRU	869	IN ...	2104
	RIGHT	412	OUT ...	2595
WEST BOUND	LEFT	0	WESTBOUND	
	THRU	1102	IN ...	2279
	RIGHT	616	OUT ...	1938

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	0	0
	THRU	0	0
	RIGHT	0	0
SOUTH BOUND	LEFT	277	371
	THRU	0	0
	RIGHT	454	905
EAST BOUND	LEFT	0	0
	THRU	869	1,567
	RIGHT	412	505
WEST BOUND	LEFT	0	0
	THRU	1,102	1,690
	RIGHT	616	665

2. I-215 NB Ramps at Newport Road

AM PEAK HOUR

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86

Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	APPROACH	FY TOTAL
NORTH BOUND	LEFT	287	NORTHBOUND	
	THRU	0	IN ...	1066
	RIGHT	646	OUT ...	247
SOUTH BOUND	LEFT	0	SOUTHBOUND	
	THRU	0	IN ...	0
	RIGHT	0	OUT ...	693
EAST BOUND	LEFT	0	EASTBOUND	
	THRU	892	IN ...	1931
	RIGHT	247	OUT ...	2297
WEST BOUND	LEFT	0	WESTBOUND	
	THRU	1449	IN ...	2226
	RIGHT	433	OUT ...	1985

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	287	660
	THRU	0	0
	RIGHT	646	698
SOUTH BOUND	LEFT	0	0
	THRU	0	0
	RIGHT	0	0
EAST BOUND	LEFT	0	0
	THRU	892	1,576
	RIGHT	247	267
WEST BOUND	LEFT	0	0
	THRU	1,449	1,637
	RIGHT	433	693

3. Antelope Road at Newport Road

AM PEAK HOUR

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86

Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	APPROACH	FY TOTAL
NORTH BOUND	LEFT THRU	376 40	NORTHBOUND	
	RIGHT	87	OUT ...	473
SOUTH BOUND	LEFT THRU	93 78	SOUTHBOUND	
	RIGHT	149	OUT ...	165
EAST BOUND	LEFT THRU	50 988	EASTBOUND	
	RIGHT	442	OUT ...	1,927
WEST BOUND	LEFT THRU	69 1380	WESTBOUND	
	RIGHT	65	OUT ...	2,249
				2,043
				1,537

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT THRU	376 40	406 43
	RIGHT	87	110
SOUTH BOUND	LEFT THRU	93 78	100 84
	RIGHT	149	161
EAST BOUND	LEFT THRU	50 988	54 1,369
	RIGHT	442	544
WEST BOUND	LEFT THRU	69 1,380	116 1,848
	RIGHT	65	70

4. Menifee Road at Newport Road

AM PEAK HOUR

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86

Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	APPROACH	FY TOTAL
NORTH BOUND	LEFT	165	NORTHBOUND	
	THRU	205	IN ...	791
	RIGHT	123	OUT ...	1,087
SOUTH BOUND	LEFT	53	SOUTHBOUND	
	THRU	280	IN ...	1,271
	RIGHT	281	OUT ...	1,110
EAST BOUND	LEFT	188	EASTBOUND	
	THRU	790	IN ...	1,438
	RIGHT	131	OUT ...	1,780
WEST BOUND	LEFT	255	WESTBOUND	
	THRU	901	IN ...	1,259
	RIGHT	30	OUT ...	782

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	165	223
	THRU	205	488
	RIGHT	123	133
SOUTH BOUND	LEFT	53	57
	THRU	280	603
	RIGHT	281	614
EAST BOUND	LEFT	188	567
	THRU	790	853
	RIGHT	131	221
WEST BOUND	LEFT	255	275
	THRU	901	973
	RIGHT	30	55

5. Laguna Vista Drive at Newport Road

AM PEAK HOUR

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86

Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	APPROACH	FY TOTAL
NORTH BOUND	LEFT THRU	167	NORTHBOUND	
	RIGHT	0	IN ...	103
		91	OUT ...	76
SOUTH BOUND	LEFT THRU	0	SOUTHBOUND	
	RIGHT	0	IN ...	0
		0	OUT ...	0
EAST BOUND	LEFT THRU	0	EASTBOUND	
	RIGHT	895	IN ...	780
		69	OUT ...	1,230
WEST BOUND	LEFT THRU	91	WESTBOUND	
	RIGHT	990	IN ...	1,288
		0	OUT ...	866

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT THRU	167	180
	RIGHT	0	0
		91	98
SOUTH BOUND	LEFT THRU	0	0
	RIGHT	0	0
		0	0
EAST BOUND	LEFT THRU	0	0
	RIGHT	895	967
		69	75
WEST BOUND	LEFT THRU	91	98
	RIGHT	990	1,183
		0	0

6. Menifee Road at Rockport Road

AM PEAK HOUR

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86

Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	APPROACH	FY TOTAL
NORTH BOUND	LEFT	0	NORTHBOUND	
	THRU	430	IN ...	741
	RIGHT	13	OUT ...	1,086
SOUTH BOUND	LEFT	7	SOUTHBOUND	
	THRU	630	IN ...	1,058
	RIGHT	0	OUT ...	763
EAST BOUND	LEFT	0	EASTBOUND	
	THRU	0	IN ...	0
	RIGHT	0	OUT ...	0
WEST BOUND	LEFT	35	WESTBOUND	
	THRU	0	IN ...	70
	RIGHT	35	OUT ...	20

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	0	0
	THRU	430	728
	RIGHT	13	14
SOUTH BOUND	LEFT	7	10
	THRU	630	1,051
	RIGHT	0	0
EAST BOUND	LEFT	0	0
	THRU	0	0
	RIGHT	0	0
WEST BOUND	LEFT	35	38
	THRU	0	0
	RIGHT	35	38

7. Laguna Vista Drive at Rockport Road

AM PEAK HOUR

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86

Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	APPROACH	FY TOTAL
NORTH	LEFT	1	NORTHBOUND	
BOUND	THRU	98	IN ...	36
	RIGHT	8	OUT ...	42
SOUTH	LEFT	82	SOUTHBOUND	
BOUND	THRU	60	IN ...	68
	RIGHT	14	OUT ...	109
EAST	LEFT	11	EASTBOUND	
BOUND	THRU	11	IN ...	22
	RIGHT	0	OUT ...	42
WEST	LEFT	13	WESTBOUND	
BOUND	THRU	27	IN ...	111
	RIGHT	156	OUT ...	44

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH	LEFT	1	10
BOUND	THRU	98	106
	RIGHT	8	10
SOUTH	LEFT	82	89
BOUND	THRU	60	65
	RIGHT	14	15
EAST	LEFT	11	12
BOUND	THRU	11	13
	RIGHT	0	10
WEST	LEFT	13	14
BOUND	THRU	27	32
	RIGHT	156	168

8. Menifee Road at Loire Valley Lane/Tres Lagos Drive

AM PEAK HOUR

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86

Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	APPROACH	FY TOTAL
NORTH BOUND	LEFT THRU	53	NORTHBOUND	
	RIGHT	451	IN ...	690
		29	OUT ...	1,180
SOUTH BOUND	LEFT THRU	25	SOUTHBOUND	
	RIGHT	656	IN ...	1,115
		13	OUT ...	772
EAST BOUND	LEFT THRU	11	EASTBOUND	
	RIGHT	2	IN ...	99
		86	OUT ...	70
WEST BOUND	LEFT THRU	81	WESTBOUND	
	RIGHT	4	IN ...	256
		12	OUT ...	136

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT THRU	53	57
	RIGHT	451	656
		29	32
SOUTH BOUND	LEFT THRU	25	100
	RIGHT	656	958
		13	28
EAST BOUND	LEFT THRU	11	30
	RIGHT	2	10
		86	93
WEST BOUND	LEFT THRU	81	158
	RIGHT	4	11
		12	86

9. Laguna Vista Drive at Tres Lagos Drive

AM PEAK HOUR

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86

Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	APPROACH	FY TOTAL
NORTH BOUND	LEFT	39	NORTHBOUND	
	THRU	118	IN ...	337
	RIGHT	17	OUT ...	174
SOUTH BOUND	LEFT	8	SOUTHBOUND	
	THRU	53	IN ...	34
	RIGHT	4	OUT ...	64
EAST BOUND	LEFT	6	EASTBOUND	
	THRU	9	IN ...	124
	RIGHT	29	OUT ...	220
WEST BOUND	LEFT	27	WESTBOUND	
	THRU	18	IN ...	107
	RIGHT	11	OUT ...	80

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	39	182
	THRU	118	127
	RIGHT	17	58
SOUTH BOUND	LEFT	8	10
	THRU	53	57
	RIGHT	4	10
EAST BOUND	LEFT	6	10
	THRU	9	20
	RIGHT	29	91
WEST BOUND	LEFT	27	57
	THRU	18	37
	RIGHT	11	12

10. Menifee Road at Holland Road

AM PEAK HOUR

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86

Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	APPROACH	FY TOTAL
NORTH BOUND	LEFT	54	NORTHBOUND	
	THRU	287	IN ...	669
	RIGHT	99	OUT ...	739
SOUTH BOUND	LEFT	38	SOUTHBOUND	
	THRU	273	IN ...	879
	RIGHT	182	OUT ...	696
EAST BOUND	LEFT	150	EASTBOUND	
	THRU	122	IN ...	575
	RIGHT	32	OUT ...	931
WEST BOUND	LEFT	54	WESTBOUND	
	THRU	198	IN ...	790
	RIGHT	91	OUT ...	547

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	54	114
	THRU	287	352
	RIGHT	99	202
SOUTH BOUND	LEFT	38	63
	THRU	273	506
	RIGHT	182	311
EAST BOUND	LEFT	150	209
	THRU	122	282
	RIGHT	32	83
WEST BOUND	LEFT	54	150
	THRU	198	506
	RIGHT	91	135

11. Briggs Road at Holland Road

AM PEAK HOUR

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86

Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	APPROACH	FY TOTAL
NORTH BOUND	LEFT	54	NORTHBOUND	
	THRU	6	IN ...	203
	RIGHT	1	OUT ...	166
SOUTH BOUND	LEFT	1	SOUTHBOUND	
	THRU	18	IN ...	133
	RIGHT	65	OUT ...	132
EAST BOUND	LEFT	52	EASTBOUND	
	THRU	24	IN ...	341
	RIGHT	48	OUT ...	385
WEST BOUND	LEFT	2	WESTBOUND	
	THRU	18	IN ...	291
	RIGHT	5	OUT ...	285

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	54	140
	THRU	6	21
	RIGHT	1	40
SOUTH BOUND	LEFT	1	17
	THRU	18	47
	RIGHT	65	70
EAST BOUND	LEFT	52	56
	THRU	24	228
	RIGHT	48	72
WEST BOUND	LEFT	2	47
	THRU	18	175
	RIGHT	5	67

29. Briggs Road at Old Newport Road
AM PEAK HOUR

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86

Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	APPROACH	FY TOTAL
NORTH	LEFT	57	NORTHBOUND	
BOUND	THRU	13	IN ...	178
	RIGHT	1	OUT ...	154
SOUTH	LEFT	1	SOUTHBOUND	
BOUND	THRU	22	IN ...	144
	RIGHT	20	OUT ...	156
EAST	LEFT	8	EASTBOUND	
BOUND	THRU	2	IN ...	40
	RIGHT	60	OUT ...	50
WEST	LEFT	1	WESTBOUND	
BOUND	THRU	2	IN ...	0
	RIGHT	1	OUT ...	2

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH	LEFT	57	60
BOUND	THRU	13	145
	RIGHT	1	1
SOUTH	LEFT	1	1
BOUND	THRU	22	125
	RIGHT	20	21
EAST	LEFT	8	11
BOUND	THRU	2	2
	RIGHT	60	64
WEST	LEFT	1	1
BOUND	THRU	2	2
	RIGHT	1	1

30. Briggs Road at Gold Crest Drive

AM PEAK HOUR

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86

Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	APPROACH	FY TOTAL
-----	-----	----	-----	-----
NORTH	LEFT	1	NORTHBOUND	
BOUND	THRU	67	IN ...	134
	RIGHT	1	OUT ...	127
SOUTH	LEFT	1	SOUTHBOUND	
BOUND	THRU	79	IN ...	137
	RIGHT	1	OUT ...	171
EAST	LEFT	1	EASTBOUND	
BOUND	THRU	2	IN ...	59
	RIGHT	1	OUT ...	56
WEST	LEFT	1	WESTBOUND	
BOUND	THRU	2	IN ...	40
	RIGHT	2	OUT ...	15

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
-----	-----	----	-----
NORTH	LEFT	1	8
BOUND	THRU	67	129
	RIGHT	1	1
SOUTH	LEFT	1	1
BOUND	THRU	79	114
	RIGHT	1	17
EAST	LEFT	1	34
BOUND	THRU	2	14
	RIGHT	1	11
WEST	LEFT	1	1
BOUND	THRU	2	31
	RIGHT	2	8

1. I-215 SB Ramps at Newport Road

PM PEAK HOUR

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86

Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	APPROACH	FY TOTAL
NORTH BOUND	LEFT	0	NORTHBOUND	
	THRU	0	IN ...	0
	RIGHT	0	OUT ...	1034
SOUTH BOUND	LEFT	514	SOUTHBOUND	
	THRU	0	IN ...	1118
	RIGHT	421	OUT ...	430
EAST BOUND	LEFT	0	EASTBOUND	
	THRU	878	IN ...	2790
	RIGHT	367	OUT ...	2628
WEST BOUND	LEFT	0	WESTBOUND	
	THRU	1116	IN ...	2659
	RIGHT	430	OUT ...	2473

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	0	0
	THRU	0	0
	RIGHT	0	0
SOUTH BOUND	LEFT	514	670
	THRU	0	0
	RIGHT	421	455
EAST BOUND	LEFT	0	0
	THRU	878	1,803
	RIGHT	367	1,034
WEST BOUND	LEFT	0	0
	THRU	1,116	2,178
	RIGHT	430	464

2. I-215 NB Ramps at Newport Road

PM PEAK HOUR

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86

Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	APPROACH	FY TOTAL
NORTH BOUND	LEFT	477	NORTHBOUND	
	THRU	0	IN ...	1151
	RIGHT	649	OUT ...	289
SOUTH BOUND	LEFT	0	SOUTHBOUND	
	THRU	0	IN ...	0
	RIGHT	0	OUT ...	906
EAST BOUND	LEFT	0	EASTBOUND	
	THRU	1148	IN ...	2518
	RIGHT	289	OUT ...	2710
WEST BOUND	LEFT	0	WESTBOUND	
	THRU	1120	IN ...	2387
	RIGHT	298	OUT ...	2151

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	477	1,020
	THRU	0	0
	RIGHT	649	701
SOUTH BOUND	LEFT	0	0
	THRU	0	0
	RIGHT	0	0
EAST BOUND	LEFT	0	0
	THRU	1,148	1,965
	RIGHT	289	312
WEST BOUND	LEFT	0	0
	THRU	1,120	1,690
	RIGHT	298	906

**3. Antelope Road at Newport Road
PM PEAK HOUR**

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86

Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	APPROACH	FY TOTAL
NORTH BOUND	LEFT THRU	370	NORTHBOUND	
	RIGHT	136	IN ...	950
		278	OUT ...	608
SOUTH BOUND	LEFT THRU	20	SOUTHBOUND	
	RIGHT	82	IN ...	173
		104	OUT ...	249
EAST BOUND	LEFT THRU	157	EASTBOUND	
	RIGHT	1092	IN ...	2,022
		419	OUT ...	2,368
WEST BOUND	LEFT THRU	131	WESTBOUND	
	RIGHT	925	IN ...	2,008
		41	OUT ...	1,929

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT THRU	370	477
	RIGHT	136	147
		278	379
SOUTH BOUND	LEFT THRU	20	22
	RIGHT	82	89
		104	112
EAST BOUND	LEFT THRU	157	170
	RIGHT	1,092	1,529
		419	453
WEST BOUND	LEFT THRU	131	174
	RIGHT	925	1,792
		41	44

4. Menifee Road at Newport Road

PM PEAK HOUR

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86

Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	APPROACH	FY TOTAL
NORTH	LEFT	126	NORTHBOUND	
BOUND	THRU	238	IN ...	1,176
	RIGHT	179	OUT ...	969
SOUTH	LEFT	41	SOUTHBOUND	
BOUND	THRU	175	IN ...	1,526
	RIGHT	117	OUT ...	1,316
EAST	LEFT	187	EASTBOUND	
BOUND	THRU	936	IN ...	1,649
	RIGHT	88	OUT ...	1,838
WEST	LEFT	173	WESTBOUND	
BOUND	THRU	746	IN ...	1,019
	RIGHT	43	OUT ...	1,249

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH	LEFT	126	291
BOUND	THRU	238	701
	RIGHT	179	193
SOUTH	LEFT	41	110
BOUND	THRU	175	706
	RIGHT	117	714
EAST	LEFT	187	553
BOUND	THRU	936	1,011
	RIGHT	88	135
WEST	LEFT	173	187
BOUND	THRU	746	833
	RIGHT	43	61

5. Laguna Vista Drive at Newport Road

PM PEAK HOUR

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86

Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	APPROACH	FY TOTAL
NORTH BOUND	LEFT	87	NORTHBOUND	
	THRU	0	IN ...	15
	RIGHT	37	OUT ...	30
SOUTH BOUND	LEFT	0	SOUTHBOUND	
	THRU	0	IN ...	0
	RIGHT	0	OUT ...	0
EAST BOUND	LEFT	0	EASTBOUND	
	THRU	1069	IN ...	1,300
	RIGHT	138	OUT ...	1,076
WEST BOUND	LEFT	57	WESTBOUND	
	THRU	932	IN ...	1,137
	RIGHT	0	OUT ...	1,347

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	87	94
	THRU	0	0
	RIGHT	37	40
SOUTH BOUND	LEFT	0	0
	THRU	0	0
	RIGHT	0	0
EAST BOUND	LEFT	0	0
	THRU	1,069	1,340
	RIGHT	138	149
WEST BOUND	LEFT	57	62
	THRU	932	1,068
	RIGHT	0	0

6. Menifee Road at Rockport Road

PM PEAK HOUR

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86

Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	APPROACH	FY TOTAL
NORTH BOUND	LEFT	0	NORTHBOUND	
	THRU	512	IN ...	1,172
	RIGHT	27	OUT ...	963
SOUTH BOUND	LEFT	22	SOUTHBOUND	
	THRU	406	IN ...	961
	RIGHT	0	OUT ...	1,179
EAST BOUND	LEFT	0	EASTBOUND	
	THRU	0	IN ...	0
	RIGHT	0	OUT ...	0
WEST BOUND	LEFT	24	WESTBOUND	
	THRU	0	IN ...	58
	RIGHT	34	OUT ...	49

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	0	0
	THRU	512	1,145
	RIGHT	27	29
SOUTH BOUND	LEFT	22	24
	THRU	406	939
	RIGHT	0	0
EAST BOUND	LEFT	0	0
	THRU	0	0
	RIGHT	0	0
WEST BOUND	LEFT	24	26
	THRU	0	0
	RIGHT	34	37

7. Laguna Vista Drive at Rockport Road

PM PEAK HOUR

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86

Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	APPROACH	FY TOTAL
NORTH BOUND	LEFT	1	NORTHBOUND	
	THRU	37	IN ...	2
	RIGHT	5	OUT ...	2
SOUTH BOUND	LEFT	121	SOUTHBOUND	
	THRU	60	IN ...	19
	RIGHT	6	OUT ...	8
EAST BOUND	LEFT	5	EASTBOUND	
	THRU	29	IN ...	36
	RIGHT	2	OUT ...	40
WEST BOUND	LEFT	5	WESTBOUND	
	THRU	33	IN ...	44
	RIGHT	81	OUT ...	52

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	1	9
	THRU	37	40
	RIGHT	5	10
SOUTH BOUND	LEFT	121	131
	THRU	60	66
	RIGHT	6	10
EAST BOUND	LEFT	5	10
	THRU	29	35
	RIGHT	2	10
WEST BOUND	LEFT	5	10
	THRU	33	38
	RIGHT	81	87

8. Menifee Road at Loire Valley Lane/Tres Lagos Drive

PM PEAK HOUR

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86

Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	APPROACH	FY TOTAL
NORTH BOUND	LEFT	40	NORTHBOUND	
	THRU	374	IN ...	1,005
	RIGHT	43	OUT ...	692
SOUTH BOUND	LEFT	41	SOUTHBOUND	
	THRU	239	IN ...	869
	RIGHT	56	OUT ...	1,134
EAST BOUND	LEFT	69	EASTBOUND	
	THRU	106	IN ...	214
	RIGHT	39	OUT ...	170
WEST BOUND	LEFT	16	WESTBOUND	
	THRU	74	IN ...	258
	RIGHT	58	OUT ...	349

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	40	43
	THRU	374	891
	RIGHT	43	91
SOUTH BOUND	LEFT	41	152
	THRU	239	635
	RIGHT	56	74
EAST BOUND	LEFT	69	79
	THRU	106	114
	RIGHT	39	42
WEST BOUND	LEFT	16	29
	THRU	74	80
	RIGHT	58	164

9. Laguna Vista Drive at Tres Lagos Drive

PM PEAK HOUR

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86

Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	APPROACH	FY TOTAL
NORTH BOUND	LEFT	35	NORTHBOUND	
	THRU	34	IN ...	156
	RIGHT	0	OUT ...	292
SOUTH BOUND	LEFT	10	SOUTHBOUND	
	THRU	62	IN ...	8
	RIGHT	1	OUT ...	-4
EAST BOUND	LEFT	1	EASTBOUND	
	THRU	30	IN ...	236
	RIGHT	46	OUT ...	154
WEST BOUND	LEFT	9	WESTBOUND	
	THRU	8	IN ...	94
	RIGHT	2	OUT ...	97

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	35	146
	THRU	34	37
	RIGHT	0	10
SOUTH BOUND	LEFT	10	11
	THRU	62	67
	RIGHT	1	10
EAST BOUND	LEFT	1	10
	THRU	30	96
	RIGHT	46	184
WEST BOUND	LEFT	9	100
	THRU	8	10
	RIGHT	2	10

10. Menifee Road at Holland Road

PM PEAK HOUR

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86

Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	APPROACH	FY TOTAL
NORTH BOUND	LEFT	44	NORTHBOUND	
	THRU	452	IN ...	1109
	RIGHT	37	OUT ...	679
SOUTH BOUND	LEFT	58	SOUTHBOUND	
	THRU	332	IN ...	798
	RIGHT	80	OUT ...	1127
EAST BOUND	LEFT	45	EASTBOUND	
	THRU	34	IN ...	733
	RIGHT	76	OUT ...	560
WEST BOUND	LEFT	29	WESTBOUND	
	THRU	15	IN ...	406
	RIGHT	45	OUT ...	681

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	44	175
	THRU	452	776
	RIGHT	37	159
SOUTH BOUND	LEFT	58	195
	THRU	332	359
	RIGHT	80	248
EAST BOUND	LEFT	45	173
	THRU	34	327
	RIGHT	76	233
WEST BOUND	LEFT	29	91
	THRU	15	137
	RIGHT	45	178

11. Briggs Road at Holland Road

PM PEAK HOUR

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86

Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	APPROACH	FY TOTAL
NORTH BOUND	LEFT	12	NORTHBOUND	
	THRU	17	IN ...	196
	RIGHT	5	OUT ...	306
SOUTH BOUND	LEFT	5	SOUTHBOUND	
	THRU	14	IN ...	147
	RIGHT	17	OUT ...	135
EAST BOUND	LEFT	15	EASTBOUND	
	THRU	11	IN ...	365
	RIGHT	18	OUT ...	254
WEST BOUND	LEFT	2	WESTBOUND	
	THRU	18	IN ...	345
	RIGHT	3	OUT ...	360

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	12	29
	THRU	17	54
	RIGHT	5	114
SOUTH BOUND	LEFT	5	56
	THRU	14	71
	RIGHT	17	20
EAST BOUND	LEFT	15	36
	THRU	11	190
	RIGHT	18	140
WEST BOUND	LEFT	2	96
	THRU	18	205
	RIGHT	3	45

29. Briggs Road at Old Newport Road
PM PEAK HOUR

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86

Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	APPROACH	FY TOTAL
-----	-----	----	-----	-----
NORTH	LEFT	44	NORTHBOUND	
BOUND	THRU	10	IN ...	208
	RIGHT	1	OUT ...	252
SOUTH	LEFT	1	SOUTHBOUND	
BOUND	THRU	4	IN ...	232
	RIGHT	7	OUT ...	209
EAST	LEFT	11	EASTBOUND	
BOUND	THRU	1	IN ...	39
	RIGHT	68	OUT ...	18
WEST	LEFT	1	WESTBOUND	
BOUND	THRU	2	IN ...	0
	RIGHT	1	OUT ...	1

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
-----	-----	----	-----
NORTH	LEFT	44	47
BOUND	THRU	10	199
	RIGHT	1	1
SOUTH	LEFT	1	1
BOUND	THRU	4	223
	RIGHT	7	9
EAST	LEFT	11	12
BOUND	THRU	1	1
	RIGHT	68	72
WEST	LEFT	1	1
BOUND	THRU	2	2
	RIGHT	1	1

30. Briggs Road at Gold Crest Drive

PM PEAK HOUR

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86

Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	APPROACH	FY TOTAL
-----	-----	----	-----	-----
NORTH	LEFT	1	NORTHBOUND	
BOUND	THRU	45	IN ...	142
	RIGHT	1	OUT ...	177
SOUTH	LEFT	1	SOUTHBOUND	
BOUND	THRU	69	IN ...	240
	RIGHT	1	OUT ...	192
EAST	LEFT	1	EASTBOUND	
BOUND	THRU	2	IN ...	67
	RIGHT	1	OUT ...	84
WEST	LEFT	1	WESTBOUND	
BOUND	THRU	2	IN ...	34
	RIGHT	1	OUT ...	30

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
-----	-----	----	-----
NORTH	LEFT	1	7
BOUND	THRU	45	144
	RIGHT	1	1
	RIGHT	1	6
SOUTH	LEFT	1	6
BOUND	THRU	69	171
	RIGHT	1	50
	RIGHT	1	5
EAST	LEFT	1	42
BOUND	THRU	2	23
	RIGHT	1	5
	RIGHT	1	5
WEST	LEFT	1	1
BOUND	THRU	2	27
	RIGHT	1	6
	RIGHT	1	6

APPENDIX C

EXISTING TRAFFIC CONDITIONS INTERSECTION LEVEL OF SERVICE CALCULATION WORKSHEETS

APPENDIX C-1

EXISTING TRAFFIC CONDITIONS

Intersection Level Of Service Report
Intersection 1: I-215 SB Ramps at Newport Road

Control Type:	Signalized	Delay (sec / veh):	16.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.472

Intersection Setup

Name	I-215 SB Ramps			I-215 SB Ramps			Newport Road			Newport 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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			No		

Volumes

Name	I-215 SB Ramps			I-215 SB Ramps			Newport Road			Newport Road		
Base Volume Input [veh/h]	0	0	0	280	0	449	0	1012	423	0	1334	616
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	0	0	0	280	0	449	0	1012	423	0	1334	616
Peak Hour Factor	1.0000	1.0000	1.0000	0.9350	1.0000	0.9350	1.0000	0.9350	0.9350	1.0000	0.9350	0.9350
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	0	0	0	75	0	120	0	271	0	0	357	0
Total Analysis Volume [veh/h]	0	0	0	299	0	480	0	1082	0	0	1427	0
Presence of On-Street Parking				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
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	1 - Newport Rd Ramps
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Split	Permiss	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	0	0	4	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lag	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	5	0	0	0	5	0	0	5	0
Maximum Green [s]	0	0	0	30	0	0	0	30	0	0	30	0
Amber [s]	0.0	0.0	0.0	4.5	0.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
All red [s]	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	45	0	0	0	75	0	0	75	0
Vehicle Extension [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	0	0	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	15	0
Rest In Walk				No				No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	3.5	0.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
Minimum Recall				No				No			No	
Maximum Recall				No				No			No	
Pedestrian Recall				No				No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	C	R	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.50	5.50	5.50	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.50	3.50	3.50	4.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	21	21	21	87	87	87	87
g / C, Green / Cycle	0.18	0.18	0.18	0.72	0.72	0.72	0.72
(v / s)_i Volume / Saturation Flow Rate	0.15	0.16	0.16	0.16	0.00	0.28	0.00
s, saturation flow rate [veh/h]	1774	1601	1583	6765	1583	5074	1583
c, Capacity [veh/h]	317	286	283	4906	1148	3680	1148
d1, Uniform Delay [s]	47.72	48.03	48.06	5.38	0.00	6.29	0.00
k, delay calibration	0.04	0.04	0.04	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.64	3.73	3.89	0.10	0.00	0.31	0.00
d3, Initial Queue Delay [s]	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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

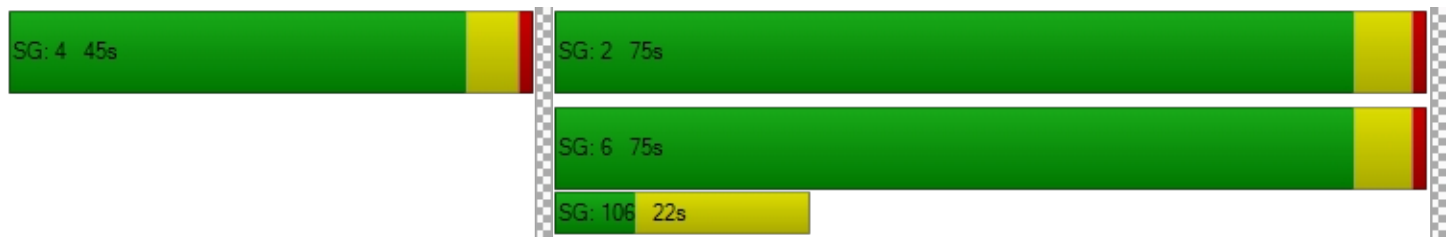
X, volume / capacity	0.86	0.89	0.89	0.22	0.00	0.39	0.00
d, Delay for Lane Group [s/veh]	50.36	51.76	51.95	5.49	0.00	6.60	0.00
Lane Group LOS	D	D	D	A	A	A	A
Critical Lane Group	No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	8.09	7.69	7.65	2.06	0.00	4.26	0.00
50th-Percentile Queue Length [ft/ln]	202.37	192.30	191.23	51.43	0.00	106.53	0.00
95th-Percentile Queue Length [veh/ln]	12.76	12.24	12.19	3.70	0.00	7.65	0.00
95th-Percentile Queue Length [ft/ln]	319.03	306.01	304.63	92.58	0.00	191.17	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	50.53	0.00	51.86	0.00	5.49	0.00	0.00	6.60	0.00
Movement LOS				D		D		A	A		A	A
d_A, Approach Delay [s/veh]	0.00			51.33			5.49			6.60		
Approach LOS	A			D			A			A		
d_I, Intersection Delay [s/veh]	16.83											
Intersection LOS	B											
Intersection V/C	0.472											

Sequence

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



Intersection Level Of Service Report
Intersection 2: I-215 NB Ramps at Newport Road

Control Type:	Signalized	Delay (sec / veh):	18.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.490

Intersection Setup

Name	I-215 NB Ramps			I-215 NB Ramps			Newport Road			Newport 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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			No			No		

Volumes

Name	I-215 NB Ramps			I-215 NB Ramps			Newport Road			Newport Road		
Base Volume Input [veh/h]	298	0	609	0	0	0	0	1035	247	0	1672	434
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	298	0	609	0	0	0	0	1035	247	0	1672	434
Peak Hour Factor	0.9600	1.0000	0.9600	1.0000	1.0000	1.0000	1.0000	0.9600	0.9600	1.0000	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	78	0	159	0	0	0	0	270	0	0	435	0
Total Analysis Volume [veh/h]	310	0	634	0	0	0	0	1078	0	0	1742	0
Presence of On-Street Parking	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
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	1 - Newport Rd Ramps
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	74.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Split	Permiss	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	8	0	0	0	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	5	0	0	0	0	0	0	5	0	0	5	0
Maximum Green [s]	30	0	0	0	0	0	0	30	0	0	30	0
Amber [s]	4.5	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
All red [s]	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	53	0	0	0	0	0	0	67	0	0	67	0
Vehicle Extension [s]	2.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	0	0	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	15	0	0	0	0
Rest In Walk	No							No			No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	3.5	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
Minimum Recall	No							No			No	
Maximum Recall	No							No			No	
Pedestrian Recall	No							No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R		C	R	C	R
C, Cycle Length [s]	120	120	120		120	120	120	120
L, Total Lost Time per Cycle [s]	5.50	5.50	5.50		6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.50	3.50	3.50		4.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	26	26	26		82	82	82	82
g / C, Green / Cycle	0.22	0.22	0.22		0.68	0.68	0.68	0.68
(v / s)_i Volume / Saturation Flow Rate	0.17	0.20	0.20		0.21	0.00	0.26	0.00
s, saturation flow rate [veh/h]	1774	1583	1583		5074	1583	6765	1583
c, Capacity [veh/h]	390	348	348		3470	1083	4627	1083
d1, Uniform Delay [s]	44.16	45.56	45.56		7.60	0.00	8.06	0.00
k, delay calibration	0.04	0.04	0.04		0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.40	3.82	3.82		0.23	0.00	0.23	0.00
d3, Initial Queue Delay [s]	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
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

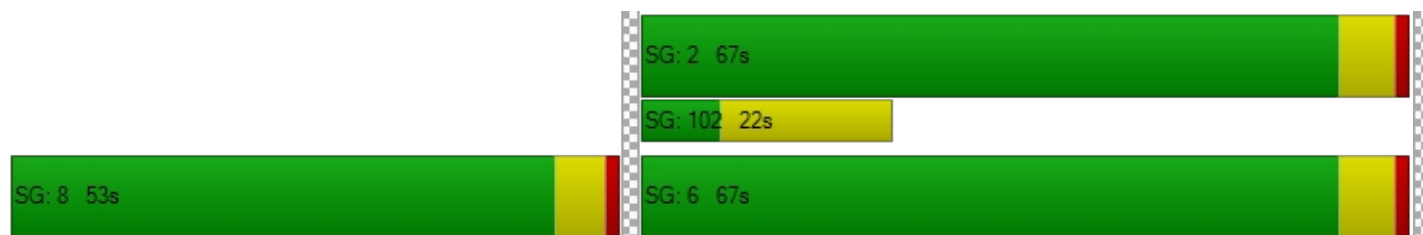
X, volume / capacity	0.79	0.91	0.91		0.31	0.00	0.38	0.00
d, Delay for Lane Group [s/veh]	45.56	49.38	49.38		7.83	0.00	8.29	0.00
Lane Group LOS	D	D	D		A	A	A	A
Critical Lane Group	No	No	Yes		No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	8.82	9.52	9.52		3.57	0.00	4.57	0.00
50th-Percentile Queue Length [ft/ln]	220.52	237.90	237.90		89.21	0.00	114.15	0.00
95th-Percentile Queue Length [veh/ln]	13.69	14.58	14.58		6.42	0.00	8.07	0.00
95th-Percentile Queue Length [ft/ln]	342.29	364.38	364.38		160.58	0.00	201.76	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	45.56	0.00	49.38	0.00	0.00	0.00	0.00	7.83	0.00	0.00	8.29	0.00
Movement LOS	D		D					A	A		A	A
d_A, Approach Delay [s/veh]	48.13			0.00			7.83			8.29		
Approach LOS	D			A			A			A		
d_I, Intersection Delay [s/veh]	18.15											
Intersection LOS	B											
Intersection V/C	0.490											

Sequence

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



Intersection Level Of Service Report
Intersection 3: Antelope Road at Newport Road

Control Type:	Signalized	Delay (sec / veh):	26.6
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.788

Intersection Setup

Name	Antelope Road			Antelope Road			Newport Road			Newport Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T 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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name	Antelope Road			Antelope Road			Newport Road			Newport Road		
Base Volume Input [veh/h]	504	45	95	79	76	156	53	1009	518	68	1464	58
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	504	45	95	79	76	156	53	1009	518	68	1464	58
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
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]	133	12	25	21	20	41	14	266	136	18	385	15
Total Analysis Volume [veh/h]	531	47	100	83	80	164	56	1062	545	72	1541	61
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	29.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	8	7	4	0
Auxiliary Signal Groups									5,8			
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	4	5	0	4	5	0	4	6	6	4	6	0
Maximum Green [s]	30	30	0	30	30	0	30	30	30	30	30	0
Amber [s]	3.5	3.9	0.0	3.5	3.9	0.0	3.5	4.7	4.7	3.5	4.7	0.0
All red [s]	0.5	1.0	0.0	0.5	1.0	0.0	0.5	2.0	2.0	0.5	2.0	0.0
Split [s]	59	66	0	16	23	0	8	30	30	8	30	0
Vehicle Extension [s]	2.0	3.0	0.0	2.0	3.0	0.0	2.0	4.0	4.0	2.0	4.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	5	0	5	0
Pedestrian Clearance [s]	0	26	0	0	0	0	0	18	18	0	18	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	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.9	0.0	2.0	2.9	0.0	2.0	4.7	4.7	2.0	4.7	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	76	76	76	76	76	76	76	76	76	76	76	76
L, Total Lost Time per Cycle [s]	4.00	4.90	4.90	4.00	4.90	4.90	4.00	6.70	6.70	4.00	6.70	6.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.90	2.90	2.00	2.90	2.90	2.00	4.70	4.70	2.00	4.70	4.70
g_i, Effective Green Time [s]	14	21	21	3	10	10	3	29	29	3	30	30
g / C, Green / Cycle	0.19	0.28	0.28	0.04	0.13	0.13	0.04	0.38	0.38	0.04	0.39	0.39
(v / s)_i Volume / Saturation Flow Rate	0.15	0.03	0.06	0.02	0.04	0.10	0.02	0.30	0.34	0.02	0.30	0.30
s, saturation flow rate [veh/h]	3445	1863	1583	3445	1863	1583	3445	3547	1583	3445	3547	1827
c, Capacity [veh/h]	639	514	437	151	249	212	127	1358	606	142	1374	708
d1, Uniform Delay [s]	29.99	20.58	21.41	35.84	29.98	32.00	36.07	20.79	22.21	35.90	20.44	20.45
k, delay calibration	0.04	0.11	0.11	0.04	0.11	0.11	0.04	0.15	0.33	0.04	0.15	0.26
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.09	0.08	0.26	1.17	0.73	5.91	0.90	1.44	13.54	1.03	1.33	4.29
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.83	0.09	0.23	0.55	0.32	0.77	0.44	0.78	0.90	0.51	0.77	0.77
d, Delay for Lane Group [s/veh]	31.09	20.66	21.68	37.01	30.71	37.92	36.97	22.23	35.75	36.93	21.77	24.73
Lane Group LOS	C	C	C	D	C	D	D	C	D	D	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	4.61	0.61	1.36	0.76	1.35	3.18	0.52	8.00	10.75	0.66	7.86	8.68
50th-Percentile Queue Length [ft/ln]	115.35	15.32	34.11	19.10	33.63	79.53	12.88	199.97	268.83	16.54	196.44	217.02
95th-Percentile Queue Length [veh/ln]	8.14	1.10	2.46	1.38	2.42	5.73	0.93	12.64	16.13	1.19	12.45	13.51
95th-Percentile Queue Length [ft/ln]	203.42	27.57	61.40	34.38	60.53	143.15	23.18	315.93	403.27	29.78	311.37	337.82

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	31.09	20.66	21.68	37.01	30.71	37.92	36.97	22.23	35.75	36.93	22.70	24.73
Movement LOS	C	C	C	D	C	D	D	C	D	D	C	C
d_A, Approach Delay [s/veh]	28.98			35.92			27.16			23.39		
Approach LOS	C			D			C			C		
d_I, Intersection Delay [s/veh]	26.65											
Intersection LOS	C											
Intersection V/C	0.788											

Sequence

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



Intersection Level Of Service Report
Intersection 4: Menifee Road at Newport Road

Control Type:	Signalized	Delay (sec / veh):	33.0
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.727

Intersection Setup

Name	Menifee Road			Menifee Road			Newport Road			Newport Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	[Diagram]			[Diagram]			[Diagram]			[Diagram]		
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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Menifee Road			Menifee Road			Newport Road			Newport Road		
Base Volume Input [veh/h]	160	183	96	48	251	314	213	779	129	214	944	29
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	160	183	96	48	251	314	213	779	129	214	944	29
Peak Hour Factor	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260
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]	43	49	26	13	68	85	58	210	35	58	255	8
Total Analysis Volume [veh/h]	173	198	104	52	271	339	230	841	139	231	1019	31
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
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	6	0	5	6	0	5	8	0	5	8	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.2	4.3	0.0	3.2	4.3	0.0	3.2	5.0	0.0	3.2	5.0	0.0
All red [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
Split [s]	12	47	0	11	46	0	21	51	0	11	41	0
Vehicle Extension [s]	1.5	3.0	0.0	1.5	3.0	0.0	1.5	4.0	0.0	1.5	4.0	0.0
Walk [s]	0	10	0	0	10	0	0	10	0	0	10	0
Pedestrian Clearance [s]	0	30	0	0	24	0	0	24	0	0	24	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]	3.2	4.3	0.0	3.2	4.3	0.0	3.2	5.0	0.0	3.2	5.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	L	C	R
C, Cycle Length [s]	88	88	88	88	88	88	88	88	88	88	88	88
L, Total Lost Time per Cycle [s]	5.20	6.30	6.30	5.20	6.30	6.30	5.20	7.00	7.00	5.20	7.00	7.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.20	4.30	4.30	3.20	4.30	4.30	3.20	5.00	5.00	3.20	5.00	5.00
g_i, Effective Green Time [s]	6	24	24	4	21	21	13	23	23	13	23	23
g / C, Green / Cycle	0.07	0.28	0.28	0.04	0.24	0.24	0.15	0.26	0.26	0.15	0.26	0.26
(v / s)_i Volume / Saturation Flow Rate	0.05	0.06	0.07	0.03	0.08	0.21	0.13	0.19	0.19	0.13	0.20	0.02
s, saturation flow rate [veh/h]	3445	3547	1583	1774	3547	1583	1774	3547	1731	1774	5074	1583
c, Capacity [veh/h]	251	979	437	73	866	387	268	931	454	269	1335	416
d1, Uniform Delay [s]	39.90	24.48	24.73	41.75	27.25	32.03	36.49	29.44	29.45	36.47	29.95	24.42
k, delay calibration	0.04	0.11	0.11	0.04	0.11	0.15	0.04	0.15	0.15	0.04	0.15	0.15
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.27	0.10	0.28	4.74	0.20	8.45	3.09	1.42	2.90	3.09	1.32	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	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

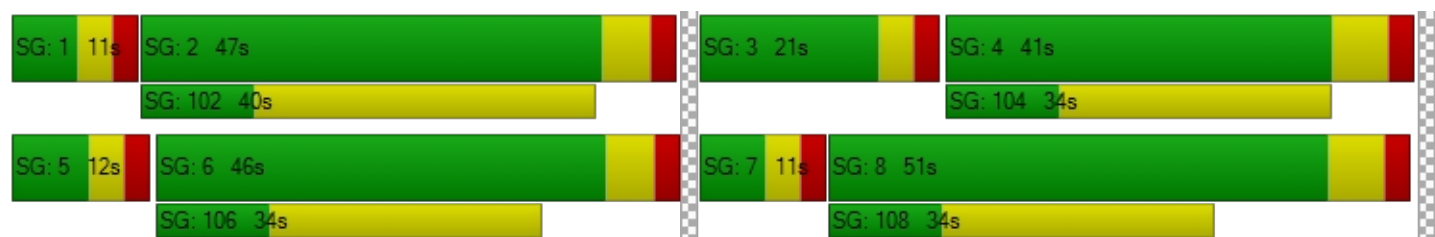
X, volume / capacity	0.69	0.20	0.24	0.71	0.31	0.88	0.86	0.71	0.71	0.86	0.76	0.07
d, Delay for Lane Group [s/veh]	41.17	24.58	25.01	46.49	27.46	40.48	39.58	30.86	32.35	39.56	31.28	24.52
Lane Group LOS	D	C	C	D	C	D	D	C	C	D	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.84	1.57	1.68	1.20	2.31	7.63	4.95	6.30	6.35	4.97	6.59	0.49
50th-Percentile Queue Length [ft/ln]	46.10	39.16	42.05	29.90	57.75	190.70	123.70	157.42	158.70	124.22	164.70	12.26
95th-Percentile Queue Length [veh/ln]	3.32	2.82	3.03	2.15	4.16	12.16	8.60	10.41	10.48	8.62	10.80	0.88
95th-Percentile Queue Length [ft/ln]	82.99	70.49	75.69	53.82	103.95	303.94	214.90	260.30	261.99	215.61	269.94	22.06

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	41.17	24.58	25.01	46.49	27.46	40.48	39.58	31.19	32.35	39.56	31.28	24.52
Movement LOS	D	C	C	D	C	D	D	C	C	D	C	C
d_A, Approach Delay [s/veh]	30.72			35.62			32.92			32.61		
Approach LOS	C			D			C			C		
d_I, Intersection Delay [s/veh]	33.01											
Intersection LOS	C											
Intersection V/C	0.727											

Sequence

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



Intersection Level Of Service Report
Intersection 5: Laguna Vista Drive at Newport Road

Control Type:	Signalized	Delay (sec / veh):	9.7
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.502

Intersection Setup

Name	Laguna Vista Drive		Newport Road		Newport Road	
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 Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		Yes	

Volumes

Name	Laguna Vista Drive		Newport Road		Newport Road	
Base Volume Input [veh/h]	180	93	849	69	91	977
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
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
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	180	93	849	69	91	977
Peak Hour Factor	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	48	25	225	18	24	259
Total Analysis Volume [veh/h]	191	99	900	73	97	1036
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Split	Split	Permissive	Permissive	Protected	Permissive
Signal group	5	0	8	0	7	4
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	6	0	6	0	5	6
Maximum Green [s]	30	0	30	0	30	30
Amber [s]	4.0	0.0	4.7	0.0	4.0	4.7
All red [s]	1.0	0.0	2.0	0.0	1.0	2.0
Split [s]	43	0	41	0	16	57
Vehicle Extension [s]	2.0	0.0	4.0	0.0	1.5	4.0
Walk [s]	7	0	7	0	0	0
Pedestrian Clearance [s]	28	0	24	0	0	0
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	3.0	0.0	4.7	0.0	3.0	4.7
Minimum Recall	No		No		No	No
Maximum Recall	No		No		No	No
Pedestrian Recall	No		No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	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

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	R	C	C	L	C
C, Cycle Length [s]	38	38	38	38	38	38
L, Total Lost Time per Cycle [s]	5.00	5.00	6.70	6.70	5.00	6.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	4.70	4.70	3.00	4.70
g_i, Effective Green Time [s]	6	6	12	12	3	21
g / C, Green / Cycle	0.16	0.16	0.32	0.32	0.08	0.54
(v / s)_i Volume / Saturation Flow Rate	0.11	0.06	0.18	0.18	0.05	0.20
s, saturation flow rate [veh/h]	1774	1583	3547	1792	1774	5074
c, Capacity [veh/h]	278	248	1152	582	151	2739
d1, Uniform Delay [s]	15.36	14.62	10.76	10.74	17.07	5.13
k, delay calibration	0.04	0.04	0.15	0.15	0.04	0.15
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.12	0.38	0.62	1.19	1.68	0.12
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

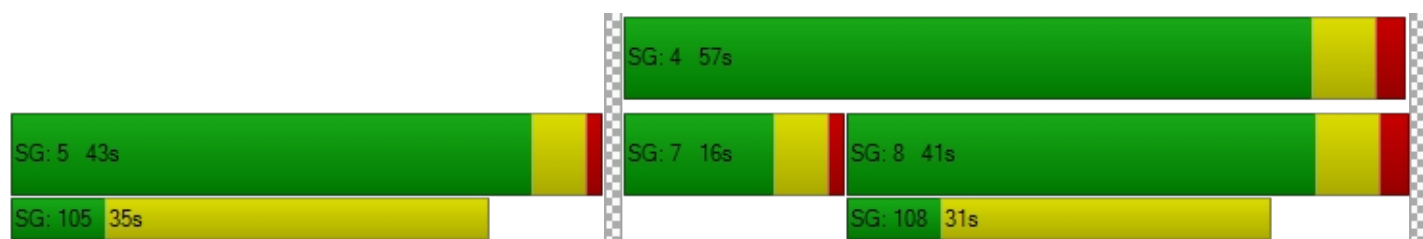
X, volume / capacity	0.69	0.40	0.56	0.56	0.64	0.38
d, Delay for Lane Group [s/veh]	16.49	15.01	11.38	11.93	18.74	5.26
Lane Group LOS	B	B	B	B	B	A
Critical Lane Group	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.40	0.67	1.82	1.91	0.78	0.91
50th-Percentile Queue Length [ft/ln]	34.93	16.82	45.41	47.66	19.42	22.82
95th-Percentile Queue Length [veh/ln]	2.51	1.21	3.27	3.43	1.40	1.64
95th-Percentile Queue Length [ft/ln]	62.87	30.28	81.74	85.79	34.95	41.08

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	16.49	15.01	11.53	11.93	18.74	5.26
Movement LOS	B	B	B	B	B	A
d_A, Approach Delay [s/veh]	15.98		11.56		6.41	
Approach LOS	B		B		A	
d_I, Intersection Delay [s/veh]	9.66					
Intersection LOS	A					
Intersection V/C	0.502					

Sequence

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



Intersection Level Of Service Report
Intersection 6: Menifee Road at Rockport Road

Control Type:	Signalized	Delay (sec / veh):	6.2
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.422

Intersection Setup

Name	Menifee Road		Menifee Road		Rockport Road	
Approach	Northbound		Southbound		Westbound	
Lane Configuration	III		II		II	
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		Yes		Yes	

Volumes

Name	Menifee Road		Menifee Road		Rockport Road	
Base Volume Input [veh/h]	376	13	7	558	35	35
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
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
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	376	13	7	558	35	35
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	111	4	2	164	10	10
Total Analysis Volume [veh/h]	442	15	8	656	41	41
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Split	Split
Signal group	2	0	1	6	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	6	0	5	6	6	0
Maximum Green [s]	30	0	30	30	30	0
Amber [s]	4.3	0.0	4.0	4.3	4.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	33	0	30	63	37	0
Vehicle Extension [s]	3.0	0.0	1.5	3.0	2.5	0.0
Walk [s]	10	0	0	0	10	0
Pedestrian Clearance [s]	15	0	0	0	22	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.3	0.0	3.0	3.3	3.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	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

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	R
C, Cycle Length [s]	24	24	24	24	24	24
L, Total Lost Time per Cycle [s]	5.30	5.30	5.00	5.30	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.30	3.30	3.00	3.30	3.00	3.00
g_i, Effective Green Time [s]	6	6	0	11	3	3
g / C, Green / Cycle	0.24	0.24	0.01	0.46	0.11	0.11
(v / s)_j Volume / Saturation Flow Rate	0.09	0.08	0.00	0.18	0.02	0.03
s, saturation flow rate [veh/h]	3547	1831	1774	3547	1774	1583
c, Capacity [veh/h]	854	441	25	1637	199	178
d1, Uniform Delay [s]	7.62	7.60	11.80	4.30	9.75	9.78
k, delay calibration	0.11	0.11	0.04	0.11	0.08	0.08
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.25	0.46	2.74	0.16	0.38	0.49
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

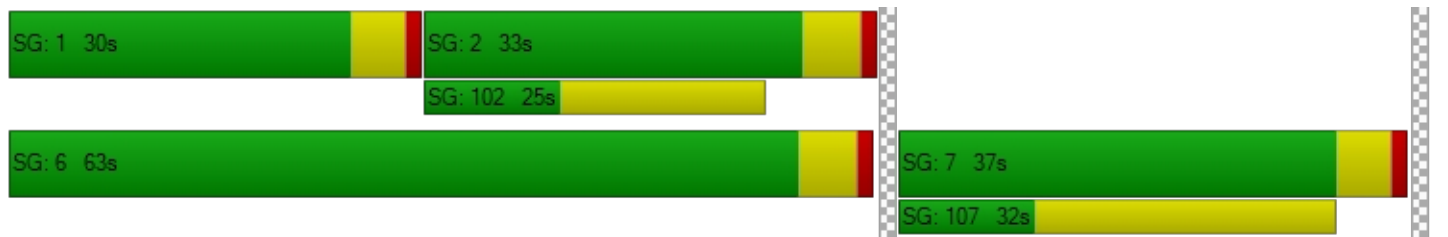
X, volume / capacity	0.36	0.35	0.32	0.40	0.21	0.23
d, Delay for Lane Group [s/veh]	7.87	8.06	14.55	4.46	10.13	10.26
Lane Group LOS	A	A	B	A	B	B
Critical Lane Group	No	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	0.39	0.42	0.05	0.32	0.15	0.15
50th-Percentile Queue Length [ft/ln]	9.83	10.47	1.22	8.01	3.72	3.81
95th-Percentile Queue Length [veh/ln]	0.71	0.75	0.09	0.58	0.27	0.27
95th-Percentile Queue Length [ft/ln]	17.69	18.85	2.19	14.42	6.70	6.86

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	7.93	8.06	14.55	4.46	10.13	10.26
Movement LOS	A	A	B	A	B	B
d_A, Approach Delay [s/veh]	7.94		4.58		10.20	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	6.24					
Intersection LOS	A					
Intersection V/C	0.422					

Sequence

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



Intersection Level Of Service Report
Intersection 7: Laguna Vista Drive at Rockport Road

Control Type:	All-way stop	Delay (sec / veh):	9.0
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.274

Intersection Setup

Name	Laguna Vista Drive			Laguna Vista Drive			Rockport Road			Old Newport 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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Laguna Vista Drive			Laguna Vista Drive			Rockport Road			Old Newport Road		
Base Volume Input [veh/h]	1	104	8	81	62	14	11	11	0	13	27	164
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	1	104	8	81	62	14	11	11	0	13	27	164
Peak Hour Factor	0.9120	0.9120	0.9120	0.9120	0.9120	0.9120	0.9120	0.9120	0.9120	0.9120	0.9120	0.9120
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	29	2	22	17	4	3	3	0	4	7	45
Total Analysis Volume [veh/h]	1	114	9	89	68	15	12	12	0	14	30	180
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	764	760	599	654	620	767
Degree of Utilization, x	0.16	0.23	0.02	0.02	0.02	0.27

Movement, Approach, & Intersection Results



95th-Percentile Queue Length [veh]	0.58	0.87	0.06	0.06	0.07	1.11
95th-Percentile Queue Length [ft]	14.41	21.69	1.53	1.40	1.73	27.87
Approach Delay [s/veh]	8.62	9.12	8.57		9.13	
Approach LOS	A	A	A		A	
Intersection Delay [s/veh]	8.98					
Intersection LOS	A					

Intersection Level Of Service Report

Intersection 8: Menifee Road at Loire Valley Lane/Tres Lagos Drive

Control Type:	Signalized	Delay (sec / veh):	13.9
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.711

Intersection Setup

Name	Menifee Road			Menifee Road			Loire Valley Lane			Tres Lagos Drive		
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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Menifee Road			Menifee Road			Loire Valley Lane			Tres Lagos Drive		
Base Volume Input [veh/h]	53	397	29	25	584	13	11	2	86	81	4	12
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	53	397	29	25	584	13	11	2	86	81	4	12
Peak Hour Factor	0.7100	0.7100	0.7100	0.7100	0.7100	0.7100	0.7100	0.7100	0.7100	0.7100	0.7100	0.7100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	140	10	9	206	5	4	1	30	29	1	4
Total Analysis Volume [veh/h]	75	559	41	35	823	18	15	3	121	114	6	17
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
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
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	4.0	4.3	0.0	4.0	4.3	0.0	0.0	4.0	0.0	0.0	4.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	12	42	0	18	48	0	0	40	0	0	40	0
Vehicle Extension [s]	1.5	3.0	0.0	1.5	3.0	0.0	0.0	2.5	0.0	0.0	2.5	0.0
Walk [s]	0	10	0	0	10	0	0	10	0	0	10	0
Pedestrian Clearance [s]	0	22	0	0	14	0	0	25	0	0	25	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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.3	0.0	3.0	3.3	0.0	0.0	3.0	0.0	0.0	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	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C	R
C, Cycle Length [s]	42	42	42	42	42	42	42	42	42
L, Total Lost Time per Cycle [s]	5.00	5.30	5.30	5.00	5.30	5.30	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	3.00	3.30	3.30	3.00	3.30	3.30	3.00	3.00	3.00
g_i, Effective Green Time [s]	4	14	14	2	12	12	10	10	10
g / C, Green / Cycle	0.10	0.34	0.34	0.06	0.30	0.30	0.24	0.24	0.24
(v / s)_j Volume / Saturation Flow Rate	0.04	0.11	0.11	0.02	0.23	0.23	0.16	0.24	0.01
s, saturation flow rate [veh/h]	1774	3547	1799	1774	1863	1849	886	503	1583
c, Capacity [veh/h]	172	1205	611	98	556	552	306	288	375
d1, Uniform Delay [s]	17.72	10.21	10.23	18.94	13.24	13.24	13.49	15.76	12.24
k, delay calibration	0.04	0.11	0.11	0.04	0.11	0.11	0.08	0.08	0.08
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.65	0.16	0.32	0.81	2.17	2.18	0.78	0.71	0.04
d3, Initial Queue Delay [s]	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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.44	0.33	0.33	0.36	0.76	0.76	0.45	0.42	0.05
d, Delay for Lane Group [s/veh]	18.37	10.37	10.54	19.74	15.41	15.43	14.27	16.47	12.28
Lane Group LOS	B	B	B	B	B	B	B	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.63	1.10	1.15	0.31	3.21	3.19	0.97	0.99	0.11
50th-Percentile Queue Length [ft/ln]	15.69	27.46	28.83	7.78	80.37	79.84	24.30	24.77	2.65
95th-Percentile Queue Length [veh/ln]	1.13	1.98	2.08	0.56	5.79	5.75	1.75	1.78	0.19
95th-Percentile Queue Length [ft/ln]	28.24	49.43	51.90	14.00	144.66	143.70	43.73	44.59	4.77

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	18.37	10.42	10.54	19.74	15.42	15.43	14.27	14.27	14.27	16.47	16.47	12.28
Movement LOS	B	B	B	B	B	B	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	11.31			15.59			14.27			15.95		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	13.94											
Intersection LOS	B											
Intersection V/C	0.711											

Sequence

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



Intersection Level Of Service Report
Intersection 9: Laguna Vista Drive at Tres Lagos Drive

Control Type:	All-way stop	Delay (sec / veh):	8.7
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.292

Intersection Setup

Name	Laguna Vista Drive			Laguna Vista Drive			Tres Lagos Drive			Tres Lagos Drive		
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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Laguna Vista Drive			Laguna Vista Drive			Tres Lagos Drive			Tres Lagos Drive		
Base Volume Input [veh/h]	37	121	15	9	53	5	8	10	27	24	19	13
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	37	121	15	9	53	5	8	10	27	24	19	13
Peak Hour Factor	0.7220	0.7220	0.7220	0.7220	0.7220	0.7220	0.7220	0.7220	0.7220	0.7220	0.7220	0.7220
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]	13	42	5	3	18	2	3	3	9	8	7	5
Total Analysis Volume [veh/h]	51	168	21	12	73	7	11	14	37	33	26	18
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	821	793	639	766	619	712
Degree of Utilization, x	0.29	0.12	0.04	0.05	0.06	0.05

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	1.22	0.39	0.12	0.15	0.20	0.17
95th-Percentile Queue Length [ft]	30.46	9.79	3.05	3.80	4.96	4.28
Approach Delay [s/veh]	9.18	8.13	8.01		8.47	
Approach LOS	A	A	A		A	
Intersection Delay [s/veh]	8.71					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 10: Menifee Road at Holland Road

Control Type:	All-way stop	Delay (sec / veh):	12.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.438

Intersection Setup

Name	Menifee Road			Menifee Road			Holland Road			Holland Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T 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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	45.00			45.00			45.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			Yes		

Volumes

Name	Menifee Road			Menifee Road			Holland Road			Holland Road		
Base Volume Input [veh/h]	40	265	111	40	265	127	98	97	23	63	166	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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	40	265	111	40	265	127	98	97	23	63	166	95
Peak Hour Factor	0.8180	0.8180	0.8180	0.8180	0.8180	0.8180	0.8180	0.8180	0.8180	0.8180	0.8180	0.8180
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]	12	81	34	12	81	39	30	30	7	19	51	29
Total Analysis Volume [veh/h]	49	324	136	49	324	155	120	119	28	77	203	116
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	511	545	578	512	547	582	499	530	549	492	524	561
Degree of Utilization, x	0.10	0.42	0.40	0.10	0.44	0.41	0.24	0.14	0.13	0.16	0.30	0.28

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.32	2.08	1.90	0.32	2.21	2.00	0.93	0.48	0.46	0.55	1.28	1.16
95th-Percentile Queue Length [ft]	7.92	52.03	47.62	7.89	55.27	50.04	23.29	11.96	11.51	13.76	31.92	29.12
Approach Delay [s/veh]	13.24			13.42			11.21			11.95		
Approach LOS	B			B			B			B		
Intersection Delay [s/veh]	12.68											
Intersection LOS	B											

**Intersection Level Of Service Report
Intersection 11: Briggs Road at Holland Road**

Control Type:	Two-way stop	Delay (sec / veh):	12.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.039

Intersection Setup

Name	Briggs Road			Briggs Road			Holland Road			Holland 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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Briggs Road			Briggs Road			Holland Road			Holland Road		
Base Volume Input [veh/h]	50	8	1	0	23	61	56	15	45	2	13	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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	50	8	1	0	23	61	56	15	45	2	13	5
Peak Hour Factor	0.6280	0.6280	0.6280	0.6280	0.6280	0.6280	0.6280	0.6280	0.6280	0.6280	0.6280	0.6280
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]	20	3	0	0	9	24	22	6	18	1	5	2
Total Analysis Volume [veh/h]	80	13	2	0	37	97	89	24	72	3	21	8
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	0.06	0.00	0.00	0.00	0.00	0.00	0.14	0.04	0.07	0.01	0.04	0.01
d_M, Delay for Movement [s/veh]	7.63	0.00	0.00	7.25	0.00	0.00	12.44	12.61	10.39	11.78	11.58	8.67
Movement LOS	A	A	A	A	A	A	B	B	B	B	B	A
95th-Percentile Queue Length [veh/ln]	0.11	0.11	0.11	0.00	0.00	0.00	1.01	1.01	1.01	0.16	0.16	0.16
95th-Percentile Queue Length [ft/ln]	2.68	2.68	2.68	0.00	0.00	0.00	25.35	25.35	25.35	3.91	3.91	3.91
d_A, Approach Delay [s/veh]	6.42			0.00			11.67			10.87		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	6.99											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 39: Briggs Road at Old Newport Road

Control Type:	All-way stop	Delay (sec / veh):	7.6
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.132

Intersection Setup

Name	Briggs Road			Briggs Road			Old Newport Road			Old Newport 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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Briggs Road			Briggs Road			Old Newport Road			Old Newport Road		
Base Volume Input [veh/h]	63	14	0	0	23	21	7	2	60	0	0	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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	63	14	0	0	23	21	7	2	60	0	0	0
Peak Hour Factor	0.7090	0.7090	0.7090	0.7090	0.7090	0.7090	0.7090	0.7090	0.7090	0.7090	0.7090	0.7090
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]	22	5	0	0	8	7	2	1	21	0	0	0
Total Analysis Volume [veh/h]	89	20	0	0	32	30	10	3	85	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	826	909	945	816
Degree of Utilization, x	0.13	0.07	0.10	0.00

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.45	0.22	0.35	0.00
95th-Percentile Queue Length [ft]	11.35	5.48	8.65	0.00
Approach Delay [s/veh]	8.02	7.25	7.25	0.00
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	7.56			
Intersection LOS	A			

Intersection Level Of Service Report

Intersection 40: Briggs Road at Tres Lagos Road/Gold Crest Drive

Control Type:	Two-way stop	Delay (sec / veh):	9.7
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

Intersection Setup

Name	Briggs Road		Briggs Road		Gold Crest Drive	
Approach	Northbound		Southbound		Westbound	
Lane Configuration	↩		↪		↩	
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Briggs Road		Briggs Road		Gold Crest Drive	
Base Volume Input [veh/h]	74	0	0	80	1	2
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
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]	74	0	0	80	1	2
Peak Hour Factor	0.7010	0.7010	0.7010	0.7010	0.7010	0.7010
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	26	0	0	29	0	1
Total Analysis Volume [veh/h]	106	0	0	114	1	3
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.42	0.00	9.70	8.81
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.01	0.01
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.34	0.34
d_A, Approach Delay [s/veh]	0.00		0.00		9.04	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.16					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 1: I-215 SB Ramps at Newport Road

Control Type:	Signalized	Delay (sec / veh):	18.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.501

Intersection Setup

Name	I-215 SB Ramps			I-215 SB Ramps			Newport Road			Newport 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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			No		

Volumes

Name	I-215 SB Ramps			I-215 SB Ramps			Newport Road			Newport Road		
Base Volume Input [veh/h]	0	0	0	477	0	450	0	1215	352	0	1324	430
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	0	0	0	477	0	450	0	1215	352	0	1324	430
Peak Hour Factor	1.0000	1.0000	1.0000	0.9740	1.0000	0.9740	1.0000	0.9740	0.9740	1.0000	0.9740	0.9740
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	0	0	0	122	0	116	0	312	0	0	340	0
Total Analysis Volume [veh/h]	0	0	0	490	0	462	0	1247	0	0	1359	0
Presence of On-Street Parking				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
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	1 - Newport Rd Ramps
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Split	Permiss	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	0	0	4	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lag	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	5	0	0	0	5	0	0	5	0
Maximum Green [s]	0	0	0	30	0	0	0	30	0	0	30	0
Amber [s]	0.0	0.0	0.0	4.5	0.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
All red [s]	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	52	0	0	0	68	0	0	68	0
Vehicle Extension [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	0	0	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	15	0
Rest In Walk				No				No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	3.5	0.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
Minimum Recall				No				No			No	
Maximum Recall				No				No			No	
Pedestrian Recall				No				No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	C	R	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.50	5.50	5.50	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.50	3.50	3.50	4.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	26	26	26	82	82	82	82
g / C, Green / Cycle	0.22	0.22	0.22	0.68	0.68	0.68	0.68
(v / s)_i Volume / Saturation Flow Rate	0.18	0.19	0.20	0.18	0.00	0.27	0.00
s, saturation flow rate [veh/h]	1774	1681	1583	6765	1583	5074	1583
c, Capacity [veh/h]	388	368	347	4635	1085	3476	1085
d1, Uniform Delay [s]	44.56	45.06	45.65	7.28	0.00	8.11	0.00
k, delay calibration	0.04	0.04	0.04	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.67	2.37	3.87	0.14	0.00	0.33	0.00
d3, Initial Queue Delay [s]	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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

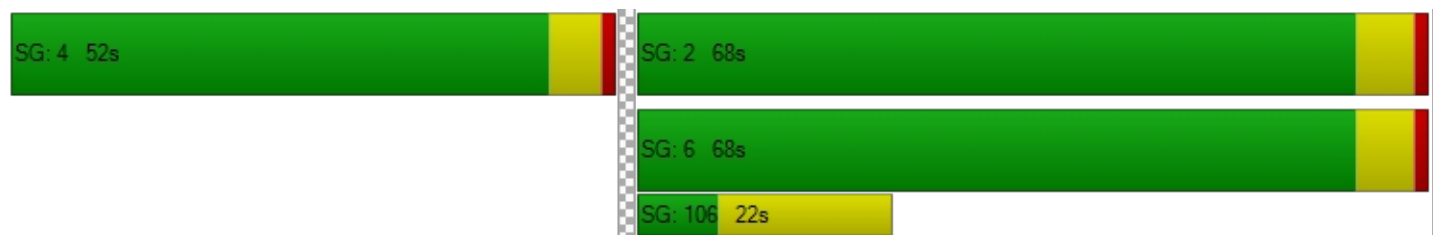
X, volume / capacity	0.82	0.86	0.91	0.27	0.00	0.39	0.00
d, Delay for Lane Group [s/veh]	46.23	47.43	49.51	7.43	0.00	8.45	0.00
Lane Group LOS	D	D	D	A	A	A	A
Critical Lane Group	No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	9.17	9.29	9.48	2.96	0.00	4.82	0.00
50th-Percentile Queue Length [ft/ln]	229.24	232.20	237.11	73.94	0.00	120.51	0.00
95th-Percentile Queue Length [veh/ln]	14.14	14.29	14.53	5.32	0.00	8.42	0.00
95th-Percentile Queue Length [ft/ln]	353.40	357.15	363.37	133.09	0.00	210.52	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	46.65	0.00	48.86	0.00	7.43	0.00	0.00	8.45	0.00
Movement LOS				D		D		A	A		A	A
d_A, Approach Delay [s/veh]	0.00			47.72			7.43			8.45		
Approach LOS	A			D			A			A		
d_I, Intersection Delay [s/veh]	18.60											
Intersection LOS	B											
Intersection V/C	0.501											

Sequence

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



Intersection Level Of Service Report
Intersection 2: I-215 NB Ramps at Newport Road

Control Type:	Signalized	Delay (sec / veh):	21.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.585

Intersection Setup

Name	I-215 NB Ramps			I-215 NB Ramps			Newport Road			Newport 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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			No			No		

Volumes

Name	I-215 NB Ramps			I-215 NB Ramps			Newport Road			Newport Road		
Base Volume Input [veh/h]	494	0	626	0	0	0	0	1445	289	0	1302	302
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	494	0	626	0	0	0	0	1445	289	0	1302	302
Peak Hour Factor	0.9530	1.0000	0.9530	1.0000	1.0000	1.0000	1.0000	0.9530	0.9530	1.0000	0.9530	0.9530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	130	0	164	0	0	0	0	379	0	0	342	0
Total Analysis Volume [veh/h]	518	0	657	0	0	0	0	1516	0	0	1366	0
Presence of On-Street Parking	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
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	1 - Newport Rd Ramps
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	57.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Split	Permiss	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	8	0	0	0	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	5	0	0	0	0	0	0	5	0	0	5	0
Maximum Green [s]	30	0	0	0	0	0	0	30	0	0	30	0
Amber [s]	4.5	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
All red [s]	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	55	0	0	0	0	0	0	65	0	0	65	0
Vehicle Extension [s]	2.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	0	0	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	15	0	0	0	0
Rest In Walk	No							No			No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	3.5	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
Minimum Recall	No							No			No	
Maximum Recall	No							No			No	
Pedestrian Recall	No							No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R		C	R	C	R
C, Cycle Length [s]	120	120	120		120	120	120	120
L, Total Lost Time per Cycle [s]	5.50	5.50	5.50		6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.50	3.50	3.50		4.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	32	32	32		76	76	76	76
g / C, Green / Cycle	0.27	0.27	0.27		0.64	0.64	0.64	0.64
(v / s)_i Volume / Saturation Flow Rate	0.22	0.24	0.25		0.30	0.00	0.20	0.00
s, saturation flow rate [veh/h]	1774	1640	1583		5074	1583	6765	1583
c, Capacity [veh/h]	475	439	424		3229	1008	4305	1008
d1, Uniform Delay [s]	41.23	42.21	42.69		11.30	0.00	9.93	0.00
k, delay calibration	0.04	0.08	0.09		0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.41	4.74	7.94		0.49	0.00	0.19	0.00
d3, Initial Queue Delay [s]	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
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

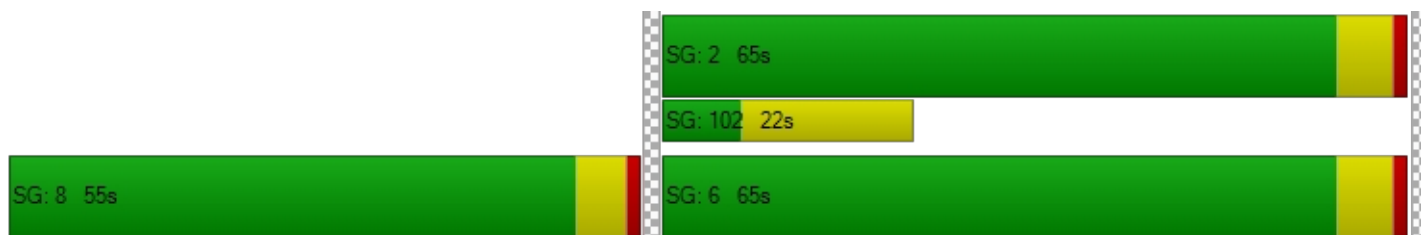
X, volume / capacity	0.82	0.89	0.92		0.47	0.00	0.32	0.00
d, Delay for Lane Group [s/veh]	42.64	46.94	50.62		11.79	0.00	10.12	0.00
Lane Group LOS	D	D	D		B	A	B	A
Critical Lane Group	No	No	Yes		Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	10.99	11.64	12.12		6.81	0.00	4.01	0.00
50th-Percentile Queue Length [ft/ln]	274.68	290.88	302.94		170.21	0.00	100.33	0.00
95th-Percentile Queue Length [veh/ln]	16.42	17.23	17.83		11.09	0.00	7.22	0.00
95th-Percentile Queue Length [ft/ln]	410.58	430.73	445.67		277.19	0.00	180.59	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	43.69	0.00	49.14	0.00	0.00	0.00	0.00	11.79	0.00	0.00	10.12	0.00
Movement LOS	D		D					B	A		B	A
d_A, Approach Delay [s/veh]	46.73			0.00			11.79			10.12		
Approach LOS	D			A			B			B		
d_I, Intersection Delay [s/veh]	21.35											
Intersection LOS	C											
Intersection V/C	0.585											

Sequence

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



Intersection Level Of Service Report
Intersection 3: Antelope Road at Newport Road

Control Type:	Signalized	Delay (sec / veh):	26.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.790

Intersection Setup

Name	Antelope Road			Antelope Road			Newport Road			Newport Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T 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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name	Antelope Road			Antelope Road			Newport Road			Newport Road		
Base Volume Input [veh/h]	484	121	275	16	81	110	157	1210	573	131	988	30
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	484	121	275	16	81	110	157	1210	573	131	988	30
Peak Hour Factor	0.9840	0.9840	0.9840	0.9840	0.9840	0.9840	0.9840	0.9840	0.9840	0.9840	0.9840	0.9840
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]	123	31	70	4	21	28	40	307	146	33	251	8
Total Analysis Volume [veh/h]	492	123	279	16	82	112	160	1230	582	133	1004	30
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
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	31.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	8	7	4	0
Auxiliary Signal Groups									5,8			
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	4	5	0	4	5	0	4	6	6	4	6	0
Maximum Green [s]	30	30	0	30	30	0	30	30	30	30	30	0
Amber [s]	3.5	3.9	0.0	3.5	3.9	0.0	3.5	4.7	4.7	3.5	4.7	0.0
All red [s]	0.5	1.0	0.0	0.5	1.0	0.0	0.5	2.0	2.0	0.5	2.0	0.0
Split [s]	47	56	0	9	18	0	9	47	47	8	46	0
Vehicle Extension [s]	2.0	3.0	0.0	2.0	3.0	0.0	2.0	4.0	4.0	2.0	4.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	5	0	5	0
Pedestrian Clearance [s]	0	26	0	0	0	0	0	18	18	0	18	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	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.9	0.0	2.0	2.9	0.0	2.0	4.7	4.7	2.0	4.7	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	74	74	74	74	74	74	74	74	74	74	74	74
L, Total Lost Time per Cycle [s]	4.00	4.90	4.90	4.00	4.90	4.90	4.00	6.70	6.70	4.00	6.70	6.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.90	2.90	2.00	2.90	2.90	2.00	4.70	4.70	2.00	4.70	4.70
g_i, Effective Green Time [s]	13	19	19	1	7	7	5	30	30	5	29	29
g / C, Green / Cycle	0.17	0.26	0.26	0.02	0.10	0.10	0.07	0.40	0.40	0.06	0.39	0.39
(v / s)_i Volume / Saturation Flow Rate	0.14	0.07	0.18	0.00	0.04	0.07	0.05	0.35	0.37	0.04	0.19	0.19
s, saturation flow rate [veh/h]	3445	1863	1583	3445	1863	1583	3445	3547	1583	3445	3547	1835
c, Capacity [veh/h]	601	483	410	53	186	159	250	1416	632	217	1382	715
d1, Uniform Delay [s]	29.61	21.89	24.82	36.28	31.56	32.47	33.60	20.58	21.26	34.02	17.18	17.18
k, delay calibration	0.04	0.11	0.11	0.04	0.11	0.11	0.04	0.15	0.35	0.04	0.15	0.15
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.07	0.28	1.98	1.16	1.63	5.67	1.02	2.48	16.12	1.05	0.39	0.75
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

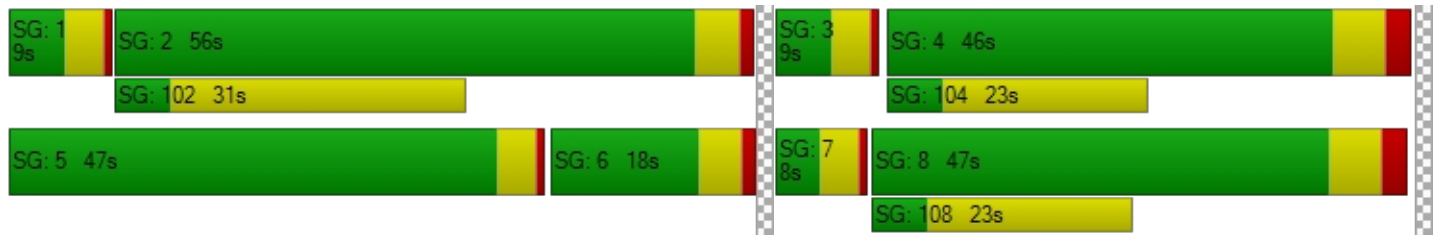
X, volume / capacity	0.82	0.25	0.68	0.30	0.44	0.71	0.64	0.87	0.92	0.61	0.49	0.49
d, Delay for Lane Group [s/veh]	30.68	22.17	26.80	37.44	33.19	38.13	34.62	23.07	37.38	35.07	17.57	17.93
Lane Group LOS	C	C	C	D	C	D	C	C	D	D	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	4.16	1.67	4.44	0.15	1.43	2.14	1.40	9.45	11.59	1.17	4.17	4.39
50th-Percentile Queue Length [ft/ln]	103.95	41.85	110.91	3.72	35.80	53.59	35.04	236.33	289.82	29.29	104.33	109.85
95th-Percentile Queue Length [veh/ln]	7.48	3.01	7.89	0.27	2.58	3.86	2.52	14.50	17.18	2.11	7.51	7.83
95th-Percentile Queue Length [ft/ln]	187.10	75.33	197.26	6.70	64.45	96.46	63.06	362.39	429.42	52.72	187.79	195.79

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	30.68	22.17	26.80	37.44	33.19	38.13	34.62	23.07	37.38	35.07	17.68	17.93
Movement LOS	C	C	C	D	C	D	C	C	D	D	B	B
d_A, Approach Delay [s/veh]	28.30			36.15			28.23			19.67		
Approach LOS	C			D			C			B		
d_I, Intersection Delay [s/veh]	26.28											
Intersection LOS	C											
Intersection V/C	0.790											

Sequence

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



Intersection Level Of Service Report
Intersection 4: Menifee Road at Newport Road

Control Type:	Signalized	Delay (sec / veh):	23.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.581

Intersection Setup

Name	Menifee Road			Menifee Road			Newport Road			Newport 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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Menifee Road			Menifee Road			Newport Road			Newport Road		
Base Volume Input [veh/h]	109	186	115	36	158	140	239	985	95	139	790	41
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	109	186	115	36	158	140	239	985	95	139	790	41
Peak Hour Factor	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	29	49	30	10	42	37	63	261	25	37	209	11
Total Analysis Volume [veh/h]	115	197	122	38	167	148	253	1042	101	147	836	43
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
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	6	0	5	6	0	5	8	0	5	8	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.2	4.3	0.0	3.2	4.3	0.0	3.2	5.0	0.0	3.2	5.0	0.0
All red [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
Split [s]	12	47	0	11	46	0	21	47	0	15	41	0
Vehicle Extension [s]	1.5	3.0	0.0	1.5	3.0	0.0	1.5	4.0	0.0	1.5	4.0	0.0
Walk [s]	0	10	0	0	10	0	0	10	0	0	10	0
Pedestrian Clearance [s]	0	30	0	0	24	0	0	24	0	0	24	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]	3.2	4.3	0.0	3.2	4.3	0.0	3.2	5.0	0.0	3.2	5.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	L	C	R
C, Cycle Length [s]	63	63	63	63	63	63	63	63	63	63	63	63
L, Total Lost Time per Cycle [s]	5.20	6.30	6.30	5.20	6.30	6.30	5.20	7.00	7.00	5.20	7.00	7.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.20	4.30	4.30	3.20	4.30	4.30	3.20	5.00	5.00	3.20	5.00	5.00
g_i, Effective Green Time [s]	4	10	10	2	8	8	11	20	20	7	16	16
g / C, Green / Cycle	0.07	0.16	0.16	0.04	0.13	0.13	0.17	0.32	0.32	0.11	0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.03	0.06	0.08	0.02	0.05	0.09	0.14	0.21	0.21	0.08	0.16	0.03
s, saturation flow rate [veh/h]	3445	3547	1583	1774	3547	1583	1774	3547	1780	1774	5074	1583
c, Capacity [veh/h]	237	577	258	69	471	210	304	1128	566	189	1283	400
d1, Uniform Delay [s]	28.42	23.53	24.07	29.91	25.01	26.29	25.37	18.77	18.77	27.59	21.18	18.19
k, delay calibration	0.04	0.11	0.11	0.04	0.11	0.11	0.04	0.15	0.15	0.04	0.15	0.15
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.57	0.35	1.35	2.49	0.45	4.25	2.27	1.01	2.01	2.61	0.80	0.17
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

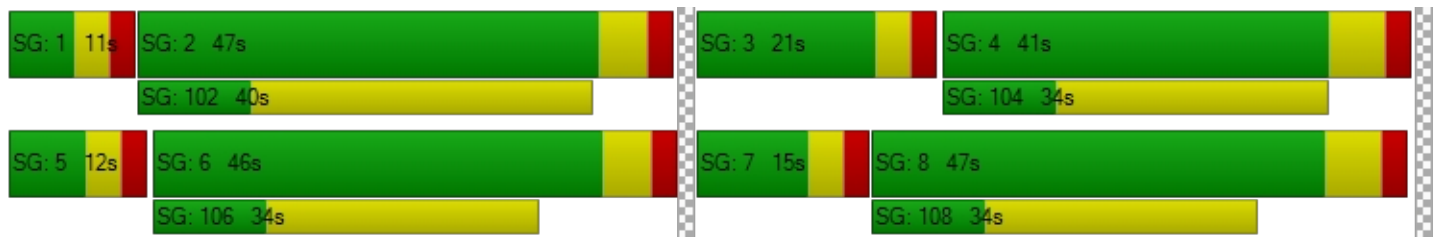
X, volume / capacity	0.48	0.34	0.47	0.55	0.35	0.70	0.83	0.67	0.68	0.78	0.65	0.11
d, Delay for Lane Group [s/veh]	28.99	23.87	25.42	32.40	25.46	30.54	27.64	19.79	20.78	30.21	21.99	18.35
Lane Group LOS	C	C	C	C	C	C	C	B	C	C	C	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.82	1.26	1.66	0.59	1.11	2.26	3.63	4.56	4.74	2.19	3.51	0.47
50th-Percentile Queue Length [ft/ln]	20.48	31.50	41.46	14.78	27.78	56.59	90.86	114.12	118.45	54.74	87.75	11.77
95th-Percentile Queue Length [veh/ln]	1.47	2.27	2.98	1.06	2.00	4.07	6.54	8.07	8.31	3.94	6.32	0.85
95th-Percentile Queue Length [ft/ln]	36.87	56.71	74.62	26.60	50.00	101.86	163.55	201.72	207.69	98.54	157.95	21.19

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	28.99	23.87	25.42	32.40	25.46	30.54	27.64	20.06	20.78	30.21	21.99	18.35
Movement LOS	C	C	C	C	C	C	C	C	C	C	C	B
d_A, Approach Delay [s/veh]	25.67			28.34			21.48			23.01		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	23.29											
Intersection LOS	C											
Intersection V/C	0.581											

Sequence

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



Intersection Level Of Service Report
Intersection 5: Laguna Vista Drive at Newport Road

Control Type:	Signalized	Delay (sec / veh):	8.5
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.471

Intersection Setup

Name	Laguna Vista Drive		Newport Road		Newport Road	
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 Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		Yes	

Volumes

Name	Laguna Vista Drive		Newport Road		Newport Road	
Base Volume Input [veh/h]	97	39	1036	148	59	927
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
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
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	97	39	1036	148	59	927
Peak Hour Factor	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	25	10	272	39	16	244
Total Analysis Volume [veh/h]	102	41	1089	156	62	975
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Split	Split	Permissive	Permissive	Protected	Permissive
Signal group	5	0	8	0	7	4
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	6	0	6	0	5	6
Maximum Green [s]	30	0	30	0	30	30
Amber [s]	4.0	0.0	4.7	0.0	4.0	4.7
All red [s]	1.0	0.0	2.0	0.0	1.0	2.0
Split [s]	40	0	48	0	12	60
Vehicle Extension [s]	2.0	0.0	4.0	0.0	1.5	4.0
Walk [s]	7	0	7	0	0	0
Pedestrian Clearance [s]	28	0	24	0	0	0
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	3.0	0.0	4.7	0.0	3.0	4.7
Minimum Recall	No		No		No	No
Maximum Recall	No		No		No	No
Pedestrian Recall	No		No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	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

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	R	C	C	L	C
C, Cycle Length [s]	40	40	40	40	40	40
L, Total Lost Time per Cycle [s]	5.00	5.00	6.70	6.70	5.00	6.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	4.70	4.70	3.00	4.70
g_i, Effective Green Time [s]	5	5	16	16	3	24
g / C, Green / Cycle	0.12	0.12	0.40	0.40	0.06	0.59
(v / s)_j Volume / Saturation Flow Rate	0.06	0.03	0.23	0.24	0.03	0.19
s, saturation flow rate [veh/h]	1774	1583	3547	1747	1774	5074
c, Capacity [veh/h]	214	191	1419	699	112	2984
d1, Uniform Delay [s]	16.47	15.94	9.43	9.47	18.24	4.22
k, delay calibration	0.04	0.04	0.15	0.15	0.04	0.15
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.62	0.21	0.55	1.15	1.56	0.09
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.48	0.22	0.59	0.59	0.55	0.33
d, Delay for Lane Group [s/veh]	17.09	16.14	9.98	10.63	19.80	4.31
Lane Group LOS	B	B	A	B	B	A
Critical Lane Group	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.78	0.30	2.16	2.29	0.53	0.71
50th-Percentile Queue Length [ft/ln]	19.57	7.53	54.03	57.16	13.31	17.73
95th-Percentile Queue Length [veh/ln]	1.41	0.54	3.89	4.12	0.96	1.28
95th-Percentile Queue Length [ft/ln]	35.23	13.55	97.26	102.89	23.97	31.91

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	17.09	16.14	10.13	10.63	19.80	4.31
Movement LOS	B	B	B	B	B	A
d_A, Approach Delay [s/veh]	16.82		10.19		5.23	
Approach LOS	B		B		A	
d_I, Intersection Delay [s/veh]	8.46					
Intersection LOS	A					
Intersection V/C	0.471					

Sequence

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



Intersection Level Of Service Report
Intersection 6: Menifee Road at Rockport Road

Control Type:	Signalized	Delay (sec / veh):	6.4
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.258

Intersection Setup

Name	Menifee Road		Menifee Road		Rockport Road	
Approach	Northbound		Southbound		Westbound	
Lane Configuration			←		←→	
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		Yes		Yes	

Volumes

Name	Menifee Road		Menifee Road		Rockport Road	
Base Volume Input [veh/h]	382	25	24	360	25	33
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
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
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	382	25	24	360	25	33
Peak Hour Factor	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
Total 15-Minute Volume [veh/h]	100	7	6	94	7	9
Total Analysis Volume [veh/h]	400	26	25	377	26	35
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Split	Split
Signal group	2	0	1	6	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	6	0	5	6	6	0
Maximum Green [s]	30	0	30	30	30	0
Amber [s]	4.3	0.0	4.0	4.3	4.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	31	0	32	63	37	0
Vehicle Extension [s]	3.0	0.0	1.5	3.0	2.5	0.0
Walk [s]	10	0	0	0	10	0
Pedestrian Clearance [s]	15	0	0	0	22	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.3	0.0	3.0	3.3	3.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	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

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	R
C, Cycle Length [s]	24	24	24	24	24	24
L, Total Lost Time per Cycle [s]	5.30	5.30	5.00	5.30	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.30	3.30	3.00	3.30	3.00	3.00
g_i, Effective Green Time [s]	6	6	1	12	2	2
g / C, Green / Cycle	0.24	0.24	0.03	0.48	0.09	0.09
(v / s)_i Volume / Saturation Flow Rate	0.08	0.08	0.01	0.11	0.01	0.02
s, saturation flow rate [veh/h]	3547	1804	1774	3547	1774	1583
c, Capacity [veh/h]	847	431	65	1712	160	143
d1, Uniform Delay [s]	7.59	7.58	11.36	3.61	10.13	10.20
k, delay calibration	0.11	0.11	0.04	0.11	0.08	0.08
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.23	0.44	1.40	0.06	0.35	0.65
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

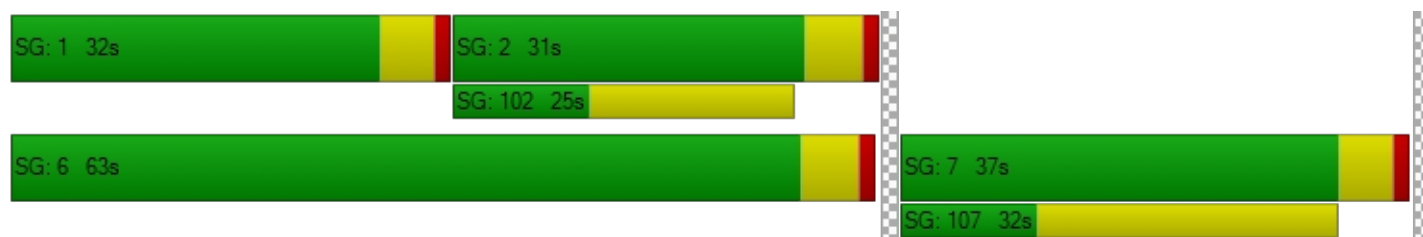
X, volume / capacity	0.34	0.33	0.39	0.22	0.16	0.24
d, Delay for Lane Group [s/veh]	7.83	8.03	12.75	3.68	10.48	10.86
Lane Group LOS	A	A	B	A	B	B
Critical Lane Group	No	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	0.36	0.39	0.11	0.13	0.10	0.14
50th-Percentile Queue Length [ft/ln]	9.08	9.71	2.87	3.33	2.49	3.49
95th-Percentile Queue Length [veh/ln]	0.65	0.70	0.21	0.24	0.18	0.25
95th-Percentile Queue Length [ft/ln]	16.35	17.48	5.16	5.99	4.47	6.29

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	7.88	8.03	12.75	3.68	10.48	10.86
Movement LOS	A	A	B	A	B	B
d_A, Approach Delay [s/veh]	7.89		4.24		10.70	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	6.43					
Intersection LOS	A					
Intersection V/C	0.258					

Sequence

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



Intersection Level Of Service Report
Intersection 7: Laguna Vista Drive at Rockport Road

Control Type:	All-way stop	Delay (sec / veh):	9.0
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.305

Intersection Setup

Name	Laguna Vista Drive			Laguna Vista Drive			Rockport Road			Old Newport 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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Laguna Vista Drive			Laguna Vista Drive			Rockport Road			Old Newport Road		
Base Volume Input [veh/h]	1	44	5	118	74	6	6	28	3	6	33	86
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	1	44	5	118	74	6	6	28	3	6	33	86
Peak Hour Factor	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270
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	13	2	36	22	2	2	8	1	2	10	26
Total Analysis Volume [veh/h]	1	53	6	143	89	7	7	34	4	7	40	104
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	774	784	607	672	618	748
Degree of Utilization, x	0.08	0.30	0.01	0.06	0.01	0.19

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.25	1.29	0.04	0.18	0.03	0.71
95th-Percentile Queue Length [ft]	6.29	32.29	0.88	4.49	0.86	17.72
Approach Delay [s/veh]	8.04	9.60	8.43		8.66	
Approach LOS	A	A	A		A	
Intersection Delay [s/veh]	9.02					
Intersection LOS	A					

Intersection Level Of Service Report

Intersection 8: Menifee Road at Loire Valley Lane/Tres Lagos Drive

Control Type:	Signalized	Delay (sec / veh):	11.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.463

Intersection Setup

Name	Menifee Road			Menifee Road			Loire Valley Lane			Tres Lagos Drive		
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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Menifee Road			Menifee Road			Loire Valley Lane			Tres Lagos Drive		
Base Volume Input [veh/h]	34	256	36	39	197	55	62	115	37	15	82	52
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	34	256	36	39	197	55	62	115	37	15	82	52
Peak Hour Factor	0.9140	0.9140	0.9140	0.9140	0.9140	0.9140	0.9140	0.9140	0.9140	0.9140	0.9140	0.9140
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	70	10	11	54	15	17	31	10	4	22	14
Total Analysis Volume [veh/h]	37	280	39	43	216	60	68	126	40	16	90	57
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
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
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	4.0	4.3	0.0	4.0	4.3	0.0	0.0	4.0	0.0	0.0	4.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	12	38	0	12	38	0	0	50	0	0	50	0
Vehicle Extension [s]	1.5	3.0	0.0	1.5	3.0	0.0	0.0	2.5	0.0	0.0	2.5	0.0
Walk [s]	0	10	0	0	10	0	0	10	0	0	10	0
Pedestrian Clearance [s]	0	22	0	0	14	0	0	25	0	0	25	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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.3	0.0	3.0	3.3	0.0	0.0	3.0	0.0	0.0	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	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C	R
C, Cycle Length [s]	31	31	31	31	31	31	31	31	31
L, Total Lost Time per Cycle [s]	5.00	5.30	5.30	5.00	5.30	5.30	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	3.00	3.30	3.30	3.00	3.30	3.30	3.00	3.00	3.00
g_i, Effective Green Time [s]	2	7	7	2	7	7	7	7	7
g / C, Green / Cycle	0.06	0.21	0.21	0.07	0.22	0.22	0.23	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.02	0.06	0.06	0.02	0.08	0.08	0.19	0.06	0.04
s, saturation flow rate [veh/h]	1774	3547	1751	1774	1863	1727	1260	1794	1583
c, Capacity [veh/h]	113	752	371	127	411	381	432	535	355
d1, Uniform Delay [s]	13.92	10.26	10.28	13.72	10.22	10.25	11.66	9.93	9.71
k, delay calibration	0.04	0.11	0.11	0.04	0.11	0.11	0.08	0.08	0.08
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.62	0.20	0.43	0.57	0.49	0.56	0.79	0.13	0.16
d3, Initial Queue Delay [s]	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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.33	0.28	0.29	0.34	0.34	0.35	0.54	0.20	0.16
d, Delay for Lane Group [s/veh]	14.55	10.46	10.71	14.30	10.71	10.81	12.45	10.06	9.87
Lane Group LOS	B	B	B	B	B	B	B	B	A
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.22	0.46	0.50	0.25	0.65	0.63	1.25	0.45	0.24
50th-Percentile Queue Length [ft/ln]	5.42	11.57	12.42	6.18	16.14	15.65	31.28	11.18	6.01
95th-Percentile Queue Length [veh/ln]	0.39	0.83	0.89	0.45	1.16	1.13	2.25	0.81	0.43
95th-Percentile Queue Length [ft/ln]	9.76	20.83	22.36	11.13	29.05	28.16	56.31	20.13	10.81

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	14.55	10.52	10.71	14.30	10.75	10.81	12.45	12.45	12.45	10.06	10.06	9.87
Movement LOS	B	B	B	B	B	B	B	B	B	B	B	A
d_A, Approach Delay [s/veh]	10.96			11.24			12.45			9.99		
Approach LOS	B			B			B			A		
d_I, Intersection Delay [s/veh]	11.22											
Intersection LOS	B											
Intersection V/C	0.463											

Sequence

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



Intersection Level Of Service Report
Intersection 9: Laguna Vista Drive at Tres Lagos Drive

Control Type:	All-way stop	Delay (sec / veh):	7.6
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.107

Intersection Setup

Name	Laguna Vista Drive			Laguna Vista Drive			Tres Lagos Drive			Tres Lagos Drive		
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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Laguna Vista Drive			Laguna Vista Drive			Tres Lagos Drive			Tres Lagos Drive		
Base Volume Input [veh/h]	25	35	0	12	66	7	5	28	40	3	12	4
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	25	35	0	12	66	7	5	28	40	3	12	4
Peak Hour Factor	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260
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]	7	9	0	3	18	2	1	8	11	1	3	1
Total Analysis Volume [veh/h]	27	38	0	13	71	8	5	30	43	3	13	4
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	830	857	722	855	705	770
Degree of Utilization, x	0.08	0.11	0.05	0.05	0.01	0.01

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.25	0.36	0.15	0.16	0.04	0.04
95th-Percentile Queue Length [ft]	6.35	8.99	3.81	3.97	1.08	0.99
Approach Delay [s/veh]	7.70	7.71	7.49		7.66	
Approach LOS	A	A	A		A	
Intersection Delay [s/veh]	7.64					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 10: Menifee Road at Holland Road

Control Type:	All-way stop	Delay (sec / veh):	11.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.385

Intersection Setup

Name	Menifee Road			Menifee Road			Holland Road			Holland Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T 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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	45.00			45.00			45.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			Yes		

Volumes

Name	Menifee Road			Menifee Road			Holland Road			Holland Road		
Base Volume Input [veh/h]	14	406	64	28	340	7	2	3	14	44	2	17
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	14	406	64	28	340	7	2	3	14	44	2	17
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
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	106	17	7	89	2	1	1	4	11	1	4
Total Analysis Volume [veh/h]	15	423	67	29	354	7	2	3	15	46	2	18
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	585	636	658	568	617	619	493	528	587	497	533	594
Degree of Utilization, x	0.03	0.39	0.37	0.05	0.29	0.29	0.00	0.01	0.03	0.09	0.00	0.03

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.08	1.81	1.72	0.16	1.22	1.21	0.01	0.02	0.08	0.30	0.01	0.09
95th-Percentile Queue Length [ft]	1.97	45.30	43.03	4.03	30.39	30.20	0.31	0.43	1.97	7.61	0.28	2.34
Approach Delay [s/veh]	11.54			10.80			9.19			10.17		
Approach LOS	B			B			A			B		
Intersection Delay [s/veh]	11.11											
Intersection LOS	B											

**Intersection Level Of Service Report
Intersection 11: Briggs Road at Holland Road**

Control Type:	Two-way stop	Delay (sec / veh):	9.6
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.004

Intersection Setup

Name	Briggs Road			Briggs Road			Holland Road			Holland 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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Briggs Road			Briggs Road			Holland Road			Holland Road		
Base Volume Input [veh/h]	7	24	2	3	16	14	13	3	9	1	7	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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	24	2	3	16	14	13	3	9	1	7	3
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]	2	7	1	1	5	4	4	1	3	0	2	1
Total Analysis Volume [veh/h]	8	27	2	3	18	16	15	3	10	1	8	3
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	0.02	0.00	0.01	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	7.29	0.00	0.00	7.28	0.00	0.00	9.16	9.58	8.55	9.11	9.56	8.50
Movement LOS	A	A	A	A	A	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.01	0.01	0.01	0.01	0.09	0.09	0.09	0.04	0.04	0.04
95th-Percentile Queue Length [ft/ln]	0.33	0.33	0.33	0.14	0.14	0.14	2.32	2.32	2.32	1.06	1.06	1.06
d_A, Approach Delay [s/veh]	1.58			0.59			8.98			9.25		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	3.88											
Intersection LOS	A											

Intersection Level Of Service Report
Intersection 39: Briggs Road at Old Newport Road

Control Type:	All-way stop	Delay (sec / veh):	7.3
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.106

Intersection Setup

Name	Briggs Road			Briggs Road			Old Newport Road			Old Newport 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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Briggs Road			Briggs Road			Old Newport Road			Old Newport Road		
Base Volume Input [veh/h]	48	11	0	0	4	8	10	1	66	0	0	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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	48	11	0	0	4	8	10	1	66	0	0	0
Peak Hour Factor	0.7400	0.7400	0.7400	0.7400	0.7400	0.7400	0.7400	0.7400	0.7400	0.7400	0.7400	0.7400
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]	16	4	0	0	1	3	3	0	22	0	0	0
Total Analysis Volume [veh/h]	65	15	0	0	5	11	14	1	89	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	834	946	984	849
Degree of Utilization, x	0.10	0.02	0.11	0.00

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.32	0.05	0.35	0.00
95th-Percentile Queue Length [ft]	7.93	1.29	8.84	0.00
Approach Delay [s/veh]	7.77	6.87	7.09	0.00
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	7.35			
Intersection LOS	A			

Intersection Level Of Service Report

Intersection 40: Briggs Road at Tres Lagos Road/Gold Crest Drive

Control Type:	Two-way stop	Delay (sec / veh):	9.3
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

Intersection Setup

Name	Briggs Road		Briggs Road		Gold Crest Drive	
Approach	Northbound		Southbound		Westbound	
Lane Configuration	↬		↵		↵	
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Briggs Road		Briggs Road		Gold Crest Drive	
Base Volume Input [veh/h]	51	1	0	68	1	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
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]	51	1	0	68	1	0
Peak Hour Factor	0.7760	0.7760	0.7760	0.7760	0.7760	0.7760
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	0	0	22	0	0
Total Analysis Volume [veh/h]	66	1	0	88	1	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.35	0.00	9.31	8.62
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.09	0.09
d_A, Approach Delay [s/veh]	0.00		0.00		9.31	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.06					
Intersection LOS	A					

APPENDIX D

EXISTING WITH PROJECT TRAFFIC CONDITIONS INTERSECTION LEVEL OF SERVICE CALCULATION WORKSHEETS

APPENDIX D-1

EXISTING WITH PROJECT TRAFFIC CONDITIONS

Intersection Level Of Service Report
Intersection 1: I-215 SB Ramps at Newport Road

Control Type:	Signalized	Delay (sec / veh):	17.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.482

Intersection Setup

Name	I-215 SB Ramps			I-215 SB Ramps			Newport Road			Newport 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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			No		

Volumes

Name	I-215 SB Ramps			I-215 SB Ramps			Newport Road			Newport Road		
Base Volume Input [veh/h]	0	0	0	297	0	449	0	1021	423	0	1360	668
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	0	0	0	297	0	449	0	1021	423	0	1360	668
Peak Hour Factor	1.0000	1.0000	1.0000	0.9350	1.0000	0.9350	1.0000	0.9350	0.9350	1.0000	0.9350	0.9350
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	0	0	0	79	0	120	0	273	0	0	364	0
Total Analysis Volume [veh/h]	0	0	0	318	0	480	0	1092	0	0	1455	0
Presence of On-Street Parking				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
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	1 - Newport Rd Ramps
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Split	Permiss	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	0	0	4	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lag	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	5	0	0	0	5	0	0	5	0
Maximum Green [s]	0	0	0	30	0	0	0	30	0	0	30	0
Amber [s]	0.0	0.0	0.0	4.5	0.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
All red [s]	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	45	0	0	0	75	0	0	75	0
Vehicle Extension [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	0	0	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	15	0
Rest In Walk				No				No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	3.5	0.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
Minimum Recall				No				No			No	
Maximum Recall				No				No			No	
Pedestrian Recall				No				No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	C	R	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.50	5.50	5.50	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.50	3.50	3.50	4.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	22	22	22	86	86	86	86
g / C, Green / Cycle	0.18	0.18	0.18	0.72	0.72	0.72	0.72
(v / s)_i Volume / Saturation Flow Rate	0.16	0.16	0.16	0.16	0.00	0.29	0.00
s, saturation flow rate [veh/h]	1774	1610	1583	6765	1583	5074	1583
c, Capacity [veh/h]	324	294	290	4879	1142	3659	1142
d1, Uniform Delay [s]	47.42	47.76	47.81	5.56	0.00	6.53	0.00
k, delay calibration	0.04	0.04	0.04	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.54	3.64	3.89	0.11	0.00	0.32	0.00
d3, Initial Queue Delay [s]	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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.86	0.89	0.89	0.22	0.00	0.40	0.00
d, Delay for Lane Group [s/veh]	49.96	51.39	51.70	5.66	0.00	6.86	0.00
Lane Group LOS	D	D	D	A	A	A	A
Critical Lane Group	No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	8.23	7.89	7.84	2.12	0.00	4.47	0.00
50th-Percentile Queue Length [ft/ln]	205.79	197.30	195.92	53.11	0.00	111.81	0.00
95th-Percentile Queue Length [veh/ln]	12.94	12.50	12.43	3.82	0.00	7.94	0.00
95th-Percentile Queue Length [ft/ln]	323.42	312.48	310.70	95.60	0.00	198.51	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	50.18	0.00	51.56	0.00	5.66	0.00	0.00	6.86	0.00
Movement LOS				D		D		A	A		A	A
d_A, Approach Delay [s/veh]	0.00			50.99			5.66			6.86		
Approach LOS	A			D			A			A		
d_I, Intersection Delay [s/veh]	17.00											
Intersection LOS	B											
Intersection V/C	0.482											

Sequence

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



Intersection Level Of Service Report
Intersection 2: I-215 NB Ramps at Newport Road

Control Type:	Signalized	Delay (sec / veh):	18.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.509

Intersection Setup

Name	I-215 NB Ramps			I-215 NB Ramps			Newport Road			Newport 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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			No			No		

Volumes

Name	I-215 NB Ramps			I-215 NB Ramps			Newport Road			Newport Road		
Base Volume Input [veh/h]	298	0	626	0	0	0	0	1061	247	0	1749	486
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	298	0	626	0	0	0	0	1061	247	0	1749	486
Peak Hour Factor	0.9600	1.0000	0.9600	1.0000	1.0000	1.0000	1.0000	0.9600	0.9600	1.0000	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	78	0	163	0	0	0	0	276	0	0	455	0
Total Analysis Volume [veh/h]	310	0	652	0	0	0	0	1105	0	0	1822	0
Presence of On-Street Parking	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
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	1 - Newport Rd Ramps
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	74.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Split	Permiss	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	8	0	0	0	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	5	0	0	0	0	0	0	5	0	0	5	0
Maximum Green [s]	30	0	0	0	0	0	0	30	0	0	30	0
Amber [s]	4.5	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
All red [s]	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	53	0	0	0	0	0	0	67	0	0	67	0
Vehicle Extension [s]	2.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	0	0	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	15	0	0	0	0
Rest In Walk	No							No			No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	3.5	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
Minimum Recall	No							No			No	
Maximum Recall	No							No			No	
Pedestrian Recall	No							No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R		C	R	C	R
C, Cycle Length [s]	120	120	120		120	120	120	120
L, Total Lost Time per Cycle [s]	5.50	5.50	5.50		6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.50	3.50	3.50		4.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	27	27	27		81	81	81	81
g / C, Green / Cycle	0.23	0.23	0.23		0.68	0.68	0.68	0.68
(v / s)_i Volume / Saturation Flow Rate	0.17	0.21	0.21		0.22	0.00	0.27	0.00
s, saturation flow rate [veh/h]	1774	1583	1583		5074	1583	6765	1583
c, Capacity [veh/h]	401	357	357		3442	1074	4589	1074
d1, Uniform Delay [s]	43.51	45.22	45.22		7.93	0.00	8.49	0.00
k, delay calibration	0.04	0.04	0.04		0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.22	3.82	3.82		0.25	0.00	0.26	0.00
d3, Initial Queue Delay [s]	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
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

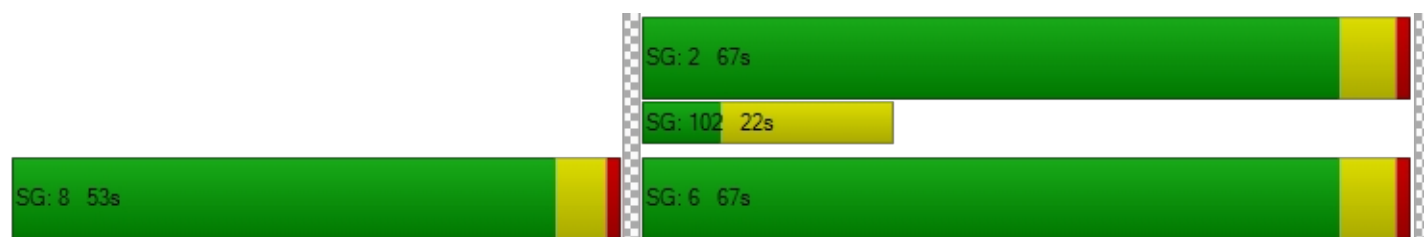
X, volume / capacity	0.77	0.91	0.91		0.32	0.00	0.40	0.00
d, Delay for Lane Group [s/veh]	44.73	49.04	49.04		8.18	0.00	8.75	0.00
Lane Group LOS	D	D	D		A	A	A	A
Critical Lane Group	No	Yes	No		No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	8.73	9.77	9.77		3.77	0.00	4.97	0.00
50th-Percentile Queue Length [ft/ln]	218.32	244.37	244.37		94.34	0.00	124.34	0.00
95th-Percentile Queue Length [veh/ln]	13.58	14.90	14.90		6.79	0.00	8.63	0.00
95th-Percentile Queue Length [ft/ln]	339.49	372.55	372.55		169.80	0.00	215.77	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	44.73	0.00	49.04	0.00	0.00	0.00	0.00	8.18	0.00	0.00	8.75	0.00
Movement LOS	D		D					A	A		A	A
d_A, Approach Delay [s/veh]	47.65			0.00			8.18			8.75		
Approach LOS	D			A			A			A		
d_I, Intersection Delay [s/veh]	18.21											
Intersection LOS	B											
Intersection V/C	0.509											

Sequence

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



Intersection Level Of Service Report
Intersection 3: Antelope Road at Newport Road

Control Type:	Signalized	Delay (sec / veh):	27.5
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.788

Intersection Setup

Name	Antelope Road			Antelope Road			Newport Road			Newport Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T 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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name	Antelope Road			Antelope Road			Newport Road			Newport Road		
Base Volume Input [veh/h]	504	45	95	79	76	156	53	1052	518	68	1593	58
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	504	45	95	79	76	156	53	1052	518	68	1593	58
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
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]	133	12	25	21	20	41	14	277	136	18	419	15
Total Analysis Volume [veh/h]	531	47	100	83	80	164	56	1107	545	72	1677	61
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	29.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	8	7	4	0
Auxiliary Signal Groups									5,8			
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	4	5	0	4	5	0	4	6	6	4	6	0
Maximum Green [s]	30	30	0	30	30	0	30	30	30	30	30	0
Amber [s]	3.5	3.9	0.0	3.5	3.9	0.0	3.5	4.7	4.7	3.5	4.7	0.0
All red [s]	0.5	1.0	0.0	0.5	1.0	0.0	0.5	2.0	2.0	0.5	2.0	0.0
Split [s]	59	67	0	15	23	0	8	30	30	8	30	0
Vehicle Extension [s]	2.0	3.0	0.0	2.0	3.0	0.0	2.0	4.0	4.0	2.0	4.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	5	0	5	0
Pedestrian Clearance [s]	0	26	0	0	0	0	0	18	18	0	18	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	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.9	0.0	2.0	2.9	0.0	2.0	4.7	4.7	2.0	4.7	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	76	76	76	76	76	76	76	76	76	76	76	76
L, Total Lost Time per Cycle [s]	4.00	4.90	4.90	4.00	4.90	4.90	4.00	6.70	6.70	4.00	6.70	6.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.90	2.90	2.00	2.90	2.90	2.00	4.70	4.70	2.00	4.70	4.70
g_i, Effective Green Time [s]	14	21	21	3	10	10	3	29	29	3	30	30
g / C, Green / Cycle	0.19	0.28	0.28	0.04	0.13	0.13	0.04	0.38	0.38	0.04	0.39	0.39
(v / s)_i Volume / Saturation Flow Rate	0.15	0.03	0.06	0.02	0.04	0.10	0.02	0.31	0.34	0.02	0.32	0.32
s, saturation flow rate [veh/h]	3445	1863	1583	3445	1863	1583	3445	3547	1583	3445	3547	1829
c, Capacity [veh/h]	639	514	437	150	249	212	127	1359	607	142	1376	710
d1, Uniform Delay [s]	30.03	20.60	21.44	35.87	30.01	32.04	36.11	21.16	22.20	35.93	21.19	21.20
k, delay calibration	0.04	0.11	0.11	0.04	0.11	0.11	0.04	0.15	0.33	0.04	0.15	0.30
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.10	0.08	0.26	1.17	0.73	5.92	0.90	1.75	13.47	1.03	1.96	7.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.83	0.09	0.23	0.55	0.32	0.77	0.44	0.81	0.90	0.51	0.83	0.83
d, Delay for Lane Group [s/veh]	31.12	20.68	21.70	37.05	30.74	37.96	37.01	22.92	35.67	36.97	23.15	28.24
Lane Group LOS	C	C	C	D	C	D	D	C	D	D	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	4.62	0.61	1.37	0.77	1.35	3.19	0.52	8.54	10.75	0.66	8.93	10.22
50th-Percentile Queue Length [ft/ln]	115.50	15.34	34.16	19.13	33.67	79.63	12.89	213.43	268.65	16.56	223.20	255.60
95th-Percentile Queue Length [veh/ln]	8.14	1.10	2.46	1.38	2.42	5.73	0.93	13.33	16.12	1.19	13.83	15.47
95th-Percentile Queue Length [ft/ln]	203.62	27.61	61.48	34.43	60.60	143.33	23.20	333.22	403.06	29.81	345.70	386.70

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	31.12	20.68	21.70	37.05	30.74	37.96	37.01	22.92	35.67	36.97	24.76	28.24
Movement LOS	C	C	C	D	C	D	D	C	D	D	C	C
d_A, Approach Delay [s/veh]	29.01			35.96			27.45			25.37		
Approach LOS	C			D			C			C		
d_I, Intersection Delay [s/veh]	27.46											
Intersection LOS	C											
Intersection V/C	0.788											

Sequence

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



Intersection Level Of Service Report
Intersection 4: Menifee Road at Newport Road

Control Type:	Signalized	Delay (sec / veh):	35.2
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.754

Intersection Setup

Name	Menifee Road			Menifee Road			Newport Road			Newport Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	[Diagram]			[Diagram]			[Diagram]			[Diagram]		
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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Menifee Road			Menifee Road			Newport Road			Newport Road		
Base Volume Input [veh/h]	194	192	96	48	254	314	213	810	140	214	1039	29
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	194	192	96	48	254	314	213	810	140	214	1039	29
Peak Hour Factor	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260
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]	52	52	26	13	69	85	58	219	38	58	281	8
Total Analysis Volume [veh/h]	210	207	104	52	274	339	230	875	151	231	1122	31
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
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	6	0	5	6	0	5	8	0	5	8	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.2	4.3	0.0	3.2	4.3	0.0	3.2	5.0	0.0	3.2	5.0	0.0
All red [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
Split [s]	13	47	0	11	45	0	21	42	0	20	41	0
Vehicle Extension [s]	1.5	3.0	0.0	1.5	3.0	0.0	1.5	4.0	0.0	1.5	4.0	0.0
Walk [s]	0	10	0	0	10	0	0	10	0	0	10	0
Pedestrian Clearance [s]	0	30	0	0	24	0	0	24	0	0	24	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]	3.2	4.3	0.0	3.2	4.3	0.0	3.2	5.0	0.0	3.2	5.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	L	C	R
C, Cycle Length [s]	94	94	94	94	94	94	94	94	94	94	94	94
L, Total Lost Time per Cycle [s]	5.20	6.30	6.30	5.20	6.30	6.30	5.20	7.00	7.00	5.20	7.00	7.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.20	4.30	4.30	3.20	4.30	4.30	3.20	5.00	5.00	3.20	5.00	5.00
g_i, Effective Green Time [s]	8	27	27	4	23	23	14	26	26	14	26	26
g / C, Green / Cycle	0.08	0.28	0.28	0.04	0.24	0.24	0.15	0.27	0.27	0.15	0.27	0.27
(v / s)_i Volume / Saturation Flow Rate	0.06	0.06	0.07	0.03	0.08	0.21	0.13	0.19	0.19	0.13	0.22	0.02
s, saturation flow rate [veh/h]	3445	3547	1583	1774	3547	1583	1774	3547	1726	1774	5074	1583
c, Capacity [veh/h]	285	1009	450	70	857	382	266	973	473	267	1394	435
d1, Uniform Delay [s]	42.25	25.63	25.83	44.80	29.40	34.51	39.17	30.83	30.84	39.14	31.83	25.29
k, delay calibration	0.04	0.11	0.11	0.04	0.11	0.18	0.04	0.15	0.17	0.04	0.15	0.15
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.40	0.10	0.26	5.55	0.21	10.78	3.33	1.38	3.11	3.33	1.61	0.10
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.74	0.21	0.23	0.74	0.32	0.89	0.87	0.71	0.71	0.87	0.80	0.07
d, Delay for Lane Group [s/veh]	43.65	25.73	26.09	50.34	29.61	45.30	42.49	32.20	33.95	42.47	33.44	25.39
Lane Group LOS	D	C	C	D	C	D	D	C	C	D	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.41	1.75	1.79	1.30	2.54	8.46	5.36	7.07	7.12	5.38	7.92	0.52
50th-Percentile Queue Length [ft/ln]	60.36	43.83	44.85	32.46	63.54	211.39	133.94	176.83	178.12	134.51	198.10	13.00
95th-Percentile Queue Length [veh/ln]	4.35	3.16	3.23	2.34	4.57	13.22	9.15	11.43	11.50	9.18	12.54	0.94
95th-Percentile Queue Length [ft/ln]	108.64	78.90	80.72	58.43	114.37	330.61	228.84	285.87	287.56	229.61	313.51	23.40

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	43.65	25.73	26.09	50.34	29.61	45.30	42.49	32.57	33.95	42.47	33.44	25.39
Movement LOS	D	C	C	D	C	D	D	C	C	D	C	C
d_A, Approach Delay [s/veh]	33.03			39.23			34.56			34.77		
Approach LOS	C			D			C			C		
d_I, Intersection Delay [s/veh]	35.24											
Intersection LOS	D											
Intersection V/C	0.754											

Sequence

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



Intersection Level Of Service Report
Intersection 5: Laguna Vista Drive at Newport Road

Control Type:	Signalized	Delay (sec / veh):	11.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.573

Intersection Setup

Name	Laguna Vista Drive		Newport Road		Newport Road	
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 Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		Yes	

Volumes

Name	Laguna Vista Drive		Newport Road		Newport Road	
Base Volume Input [veh/h]	275	115	849	100	98	977
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
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
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	275	115	849	100	98	977
Peak Hour Factor	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	73	30	225	27	26	259
Total Analysis Volume [veh/h]	292	122	900	106	104	1036
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Split	Split	Permissive	Permissive	Protected	Permissive
Signal group	5	0	8	0	7	4
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	6	0	6	0	5	6
Maximum Green [s]	30	0	30	0	30	30
Amber [s]	4.0	0.0	4.7	0.0	4.0	4.7
All red [s]	1.0	0.0	2.0	0.0	1.0	2.0
Split [s]	43	0	41	0	16	57
Vehicle Extension [s]	2.0	0.0	4.0	0.0	1.5	4.0
Walk [s]	7	0	7	0	0	0
Pedestrian Clearance [s]	28	0	24	0	0	0
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	3.0	0.0	4.7	0.0	3.0	4.7
Minimum Recall	No		No		No	No
Maximum Recall	No		No		No	No
Pedestrian Recall	No		No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	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

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	R	C	C	L	C
C, Cycle Length [s]	43	43	43	43	43	43
L, Total Lost Time per Cycle [s]	5.00	5.00	6.70	6.70	5.00	6.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	4.70	4.70	3.00	4.70
g_i, Effective Green Time [s]	9	9	14	14	4	22
g / C, Green / Cycle	0.21	0.21	0.32	0.32	0.08	0.52
(v / s)_i Volume / Saturation Flow Rate	0.16	0.08	0.19	0.19	0.06	0.20
s, saturation flow rate [veh/h]	1774	1583	3547	1764	1774	5074
c, Capacity [veh/h]	377	336	1129	562	148	2624
d1, Uniform Delay [s]	16.06	14.54	12.40	12.41	19.30	6.33
k, delay calibration	0.04	0.04	0.15	0.15	0.04	0.15
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.31	0.24	0.72	1.45	2.27	0.14
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

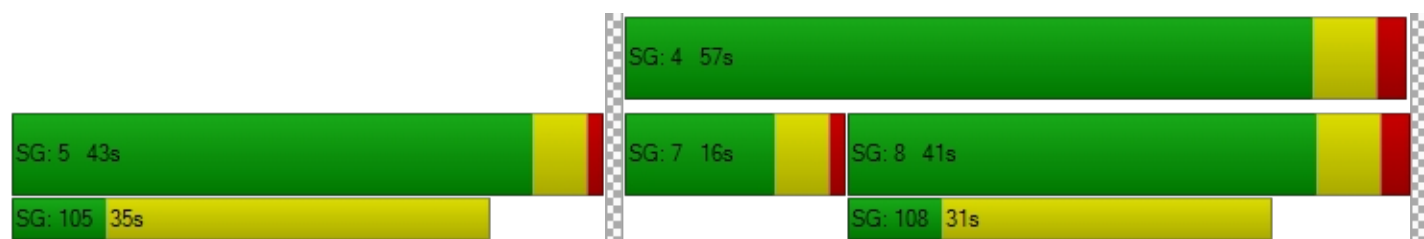
X, volume / capacity	0.78	0.36	0.59	0.60	0.70	0.39
d, Delay for Lane Group [s/veh]	17.37	14.79	13.11	13.86	21.57	6.47
Lane Group LOS	B	B	B	B	C	A
Critical Lane Group	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	2.43	0.89	2.30	2.42	0.99	1.29
50th-Percentile Queue Length [ft/ln]	60.74	22.25	57.47	60.39	24.70	32.32
95th-Percentile Queue Length [veh/ln]	4.37	1.60	4.14	4.35	1.78	2.33
95th-Percentile Queue Length [ft/ln]	109.34	40.05	103.44	108.70	44.46	58.18

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	17.37	14.79	13.30	13.86	21.57	6.47
Movement LOS	B	B	B	B	C	A
d_A, Approach Delay [s/veh]	16.61		13.36		7.85	
Approach LOS	B		B		A	
d_I, Intersection Delay [s/veh]	11.43					
Intersection LOS	B					
Intersection V/C	0.573					

Sequence

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



Intersection Level Of Service Report
Intersection 6: Menifee Road at Rockport Road

Control Type:	Signalized	Delay (sec / veh):	6.9
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.436

Intersection Setup

Name	Menifee Road		Menifee Road		Rockport Road	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		Yes		Yes	

Volumes

Name	Menifee Road		Menifee Road		Rockport Road	
Base Volume Input [veh/h]	393	16	21	558	35	61
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
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
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	393	16	21	558	35	61
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	116	5	6	164	10	18
Total Analysis Volume [veh/h]	462	19	25	656	41	72
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Split	Split
Signal group	2	0	1	6	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	6	0	5	6	6	0
Maximum Green [s]	30	0	30	30	30	0
Amber [s]	4.3	0.0	4.0	4.3	4.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	33	0	30	63	37	0
Vehicle Extension [s]	3.0	0.0	1.5	3.0	2.5	0.0
Walk [s]	10	0	0	0	10	0
Pedestrian Clearance [s]	15	0	0	0	22	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.3	0.0	3.0	3.3	3.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	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

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	R
C, Cycle Length [s]	25	25	25	25	25	25
L, Total Lost Time per Cycle [s]	5.30	5.30	5.00	5.30	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.30	3.30	3.00	3.30	3.00	3.00
g_i, Effective Green Time [s]	6	6	1	12	3	3
g / C, Green / Cycle	0.23	0.23	0.03	0.46	0.13	0.13
(v / s)_i Volume / Saturation Flow Rate	0.09	0.09	0.01	0.18	0.02	0.05
s, saturation flow rate [veh/h]	3547	1825	1774	3547	1774	1583
c, Capacity [veh/h]	817	420	64	1637	242	216
d1, Uniform Delay [s]	8.34	8.32	12.07	4.56	9.78	10.01
k, delay calibration	0.11	0.11	0.04	0.11	0.08	0.08
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.31	0.57	1.44	0.16	0.24	0.67
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

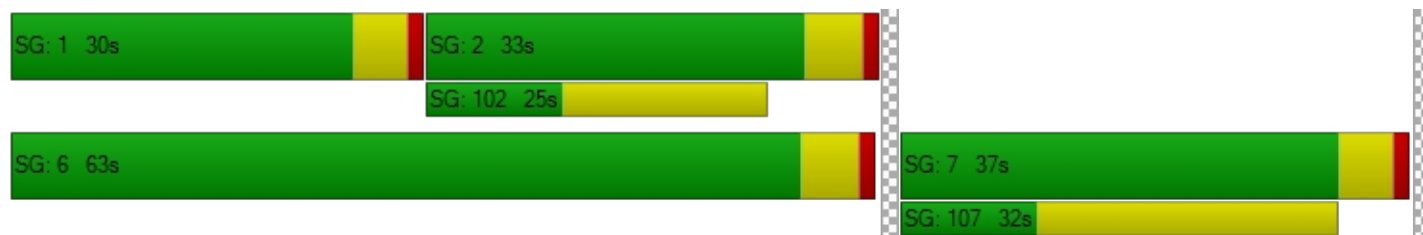
X, volume / capacity	0.39	0.38	0.39	0.40	0.17	0.33
d, Delay for Lane Group [s/veh]	8.65	8.89	13.52	4.72	10.02	10.67
Lane Group LOS	A	A	B	A	B	B
Critical Lane Group	No	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	0.48	0.52	0.13	0.41	0.15	0.28
50th-Percentile Queue Length [ft/ln]	12.12	12.88	3.14	10.19	3.80	7.10
95th-Percentile Queue Length [veh/ln]	0.87	0.93	0.23	0.73	0.27	0.51
95th-Percentile Queue Length [ft/ln]	21.82	23.19	5.64	18.34	6.84	12.77

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	8.72	8.89	13.52	4.72	10.02	10.67
Movement LOS	A	A	B	A	B	B
d_A, Approach Delay [s/veh]	8.73		5.04		10.44	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	6.91					
Intersection LOS	A					
Intersection V/C	0.436					

Sequence

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



Intersection Level Of Service Report
Intersection 7: Laguna Vista Drive at Rockport Road

Control Type:	All-way stop	Delay (sec / veh):	11.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.494

Intersection Setup

Name	Laguna Vista Drive			Laguna Vista Drive			Rockport Road			Old Newport 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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Laguna Vista Drive			Laguna Vista Drive			Rockport Road			Old Newport Road		
Base Volume Input [veh/h]	1	111	8	120	62	14	11	28	0	13	53	274
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	1	111	8	120	62	14	11	28	0	13	53	274
Peak Hour Factor	0.9120	0.9120	0.9120	0.9120	0.9120	0.9120	0.9120	0.9120	0.9120	0.9120	0.9120	0.9120
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	30	2	33	17	4	3	8	0	4	15	75
Total Analysis Volume [veh/h]	1	122	9	132	68	15	12	31	0	14	58	300
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	681	684	557	605	593	725
Degree of Utilization, x	0.19	0.31	0.02	0.05	0.02	0.49

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.71	1.35	0.07	0.16	0.07	2.76
95th-Percentile Queue Length [ft]	17.84	33.67	1.65	4.04	1.81	69.03
Approach Delay [s/veh]	9.55	10.67	9.07		12.28	
Approach LOS	A	B	A		B	
Intersection Delay [s/veh]	11.17					
Intersection LOS	B					

Intersection Level Of Service Report

Intersection 8: Menifee Road at Loire Valley Lane/Tres Lagos Drive

Control Type:	Signalized	Delay (sec / veh):	22.9
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.926

Intersection Setup

Name	Menifee Road			Menifee Road			Loire Valley Lane			Tres Lagos Drive		
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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Menifee Road			Menifee Road			Loire Valley Lane			Tres Lagos Drive		
Base Volume Input [veh/h]	53	400	29	25	584	13	11	2	86	90	4	29
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	53	400	29	25	584	13	11	2	86	90	4	29
Peak Hour Factor	0.7100	0.7100	0.7100	0.7100	0.7100	0.7100	0.7100	0.7100	0.7100	0.7100	0.7100	0.7100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	141	10	9	206	5	4	1	30	32	1	10
Total Analysis Volume [veh/h]	75	563	41	35	823	18	15	3	121	127	6	41
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
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
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	4.0	4.3	0.0	4.0	4.3	0.0	0.0	4.0	0.0	0.0	4.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	12	42	0	18	48	0	0	40	0	0	40	0
Vehicle Extension [s]	1.5	3.0	0.0	1.5	3.0	0.0	0.0	2.5	0.0	0.0	2.5	0.0
Walk [s]	0	10	0	0	10	0	0	10	0	0	10	0
Pedestrian Clearance [s]	0	22	0	0	14	0	0	25	0	0	25	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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.3	0.0	3.0	3.3	0.0	0.0	3.0	0.0	0.0	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	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C	R
C, Cycle Length [s]	65	65	65	65	65	65	65	65	65
L, Total Lost Time per Cycle [s]	5.00	5.30	5.30	5.00	5.30	5.30	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	3.00	3.30	3.30	3.00	3.30	3.30	3.00	3.00	3.00
g_i, Effective Green Time [s]	5	19	19	3	17	17	27	27	27
g / C, Green / Cycle	0.08	0.30	0.30	0.05	0.27	0.27	0.42	0.42	0.42
(v / s)_j Volume / Saturation Flow Rate	0.04	0.11	0.11	0.02	0.23	0.23	0.18	0.49	0.03
s, saturation flow rate [veh/h]	1774	3547	1799	1774	1863	1849	783	274	1583
c, Capacity [veh/h]	141	1058	537	88	500	497	386	223	656
d1, Uniform Delay [s]	28.48	17.86	17.88	29.65	22.26	22.26	13.54	20.58	11.33
k, delay calibration	0.04	0.11	0.11	0.04	0.11	0.11	0.08	0.46	0.08
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.16	0.22	0.45	1.07	3.97	4.00	0.42	10.35	0.03
d3, Initial Queue Delay [s]	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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.53	0.38	0.38	0.40	0.84	0.84	0.36	0.60	0.06
d, Delay for Lane Group [s/veh]	29.65	18.08	18.33	30.72	26.22	26.25	13.96	30.93	11.36
Lane Group LOS	C	B	B	C	C	C	B	C	B
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.12	2.24	2.33	0.54	6.19	6.15	1.21	2.62	0.33
50th-Percentile Queue Length [ft/ln]	28.09	56.01	58.28	13.42	154.87	153.82	30.19	65.45	8.18
95th-Percentile Queue Length [veh/ln]	2.02	4.03	4.20	0.97	10.28	10.22	2.17	4.71	0.59
95th-Percentile Queue Length [ft/ln]	50.56	100.82	104.91	24.15	256.92	255.53	54.34	117.82	14.72

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	29.65	18.15	18.33	30.72	26.24	26.25	13.96	13.96	13.96	30.93	30.93	11.36
Movement LOS	C	B	B	C	C	C	B	B	B	C	C	B
d_A, Approach Delay [s/veh]	19.43			26.42			13.96			26.32		
Approach LOS	B			C			B			C		
d_I, Intersection Delay [s/veh]	22.94											
Intersection LOS	C											
Intersection V/C	0.926											

Sequence

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



Intersection Level Of Service Report
Intersection 9: Laguna Vista Drive at Tres Lagos Drive

Control Type:	All-way stop	Delay (sec / veh):	8.9
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.300

Intersection Setup

Name	Laguna Vista Drive			Laguna Vista Drive			Tres Lagos Drive			Tres Lagos Drive		
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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Laguna Vista Drive			Laguna Vista Drive			Tres Lagos Drive			Tres Lagos Drive		
Base Volume Input [veh/h]	37	121	15	9	53	5	8	10	27	24	45	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	37	121	15	9	53	5	8	10	27	24	45	20
Peak Hour Factor	0.7220	0.7220	0.7220	0.7220	0.7220	0.7220	0.7220	0.7220	0.7220	0.7220	0.7220	0.7220
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]	13	42	5	3	18	2	3	3	9	8	16	7
Total Analysis Volume [veh/h]	51	168	21	12	73	7	11	14	37	33	62	28
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	799	772	631	754	634	708
Degree of Utilization, x	0.30	0.12	0.04	0.05	0.10	0.09

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	1.26	0.40	0.12	0.15	0.32	0.28
95th-Percentile Queue Length [ft]	31.59	10.10	3.09	3.87	8.02	7.11
Approach Delay [s/veh]	9.42	8.30	8.09		8.63	
Approach LOS	A	A	A		A	
Intersection Delay [s/veh]	8.87					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 10: Menifee Road at Holland Road

Control Type:	All-way stop	Delay (sec / veh):	12.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.449

Intersection Setup

Name	Menifee Road			Menifee Road			Holland Road			Holland Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T 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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			Yes		

Volumes

Name	Menifee Road			Menifee Road			Holland Road			Holland Road		
Base Volume Input [veh/h]	40	268	111	40	274	127	98	97	23	63	166	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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	40	268	111	40	274	127	98	97	23	63	166	95
Peak Hour Factor	0.8180	0.8180	0.8180	0.8180	0.8180	0.8180	0.8180	0.8180	0.8180	0.8180	0.8180	0.8180
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]	12	82	34	12	84	39	30	30	7	19	51	29
Total Analysis Volume [veh/h]	49	328	136	49	335	155	120	119	28	77	203	116
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	510	544	575	512	546	581	498	529	547	490	523	559
Degree of Utilization, x	0.10	0.43	0.40	0.10	0.45	0.42	0.24	0.14	0.13	0.16	0.31	0.29

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.32	2.12	1.94	0.32	2.30	2.08	0.93	0.48	0.46	0.55	1.28	1.17
95th-Percentile Queue Length [ft]	7.94	52.96	48.50	7.90	57.49	52.12	23.37	12.00	11.54	13.81	32.07	29.27
Approach Delay [s/veh]	13.35			13.63			11.24			12.00		
Approach LOS	B			B			B			B		
Intersection Delay [s/veh]	12.80											
Intersection LOS	B											

**Intersection Level Of Service Report
Intersection 11: Briggs Road at Holland Road**

Control Type:	Two-way stop	Delay (sec / veh):	12.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.040

Intersection Setup

Name	Briggs Road			Briggs Road			Holland Road			Holland 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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Briggs Road			Briggs Road			Holland Road			Holland Road		
Base Volume Input [veh/h]	50	9	1	0	26	61	56	15	45	2	13	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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	50	9	1	0	26	61	56	15	45	2	13	5
Peak Hour Factor	0.6280	0.6280	0.6280	0.6280	0.6280	0.6280	0.6280	0.6280	0.6280	0.6280	0.6280	0.6280
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]	20	4	0	0	10	24	22	6	18	1	5	2
Total Analysis Volume [veh/h]	80	14	2	0	41	97	89	24	72	3	21	8
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	0.06	0.00	0.00	0.00	0.00	0.00	0.14	0.04	0.07	0.01	0.04	0.01
d_M, Delay for Movement [s/veh]	7.64	0.00	0.00	7.25	0.00	0.00	12.51	12.68	10.44	11.84	11.63	8.68
Movement LOS	A	A	A	A	A	A	B	B	B	B	B	A
95th-Percentile Queue Length [veh/ln]	0.11	0.11	0.11	0.00	0.00	0.00	1.02	1.02	1.02	0.16	0.16	0.16
95th-Percentile Queue Length [ft/ln]	2.69	2.69	2.69	0.00	0.00	0.00	25.57	25.57	25.57	3.93	3.93	3.93
d_A, Approach Delay [s/veh]	6.36			0.00			11.73			10.91		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	6.94											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 39: Briggs Road at Old Newport Road

Control Type:	All-way stop	Delay (sec / veh):	7.6
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.134

Intersection Setup

Name	Briggs Road			Briggs Road			Old Newport Road			Old Newport 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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Briggs Road			Briggs Road			Old Newport Road			Old Newport Road		
Base Volume Input [veh/h]	64	14	0	0	23	21	7	2	71	0	0	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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	64	14	0	0	23	21	7	2	71	0	0	0
Peak Hour Factor	0.7090	0.7090	0.7090	0.7090	0.7090	0.7090	0.7090	0.7090	0.7090	0.7090	0.7090	0.7090
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	23	5	0	0	8	7	2	1	25	0	0	0
Total Analysis Volume [veh/h]	90	20	0	0	32	30	10	3	100	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	820	902	947	813
Degree of Utilization, x	0.13	0.07	0.12	0.00

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.46	0.22	0.41	0.00
95th-Percentile Queue Length [ft]	11.57	5.53	10.13	0.00
Approach Delay [s/veh]	8.07	7.29	7.32	0.00
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	7.60			
Intersection LOS	A			

Intersection Level Of Service Report

Intersection 40: Briggs Road at Tres Lagos Road/Gold Crest Drive

Control Type:	Two-way stop	Delay (sec / veh):	10.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name	Briggs Road			Briggs Road			Tres Lagos Drive			Gold Crest Drive		
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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Briggs Road			Briggs Road			Tres Lagos Drive			Gold Crest Drive		
Base Volume Input [veh/h]	0	75	0	0	82	0	0	0	2	1	0	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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	75	0	0	82	0	0	0	2	1	0	2
Peak Hour Factor	0.7010	0.7010	0.7010	0.7010	0.7010	1.0000	0.7010	0.7010	0.7010	0.7010	0.7010	0.7010
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	27	0	0	29	0	0	0	1	0	0	1
Total Analysis Volume [veh/h]	0	107	0	0	117	0	0	0	3	1	0	3
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	0.00
d_M, Delay for Movement [s/veh]	7.45	0.00	0.00	7.43	0.00	0.00	9.96	10.35	8.86	9.97	10.35	8.82
Movement LOS	A	A	A	A	A		A	B	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00	0.24	0.24	0.24	0.34	0.34	0.34
d_A, Approach Delay [s/veh]	0.00			0.00			8.86			9.11		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	0.27											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 1: I-215 SB Ramps at Newport Road

Control Type:	Signalized	Delay (sec / veh):	19.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.519

Intersection Setup

Name	I-215 SB Ramps			I-215 SB Ramps			Newport Road			Newport 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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			No		

Volumes

Name	I-215 SB Ramps			I-215 SB Ramps			Newport Road			Newport Road		
Base Volume Input [veh/h]	0	0	0	535	0	450	0	1244	352	0	1341	464
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	0	0	0	535	0	450	0	1244	352	0	1341	464
Peak Hour Factor	1.0000	1.0000	1.0000	0.9740	1.0000	0.9740	1.0000	0.9740	0.9740	1.0000	0.9740	0.9740
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	0	0	0	137	0	116	0	319	0	0	344	0
Total Analysis Volume [veh/h]	0	0	0	549	0	462	0	1277	0	0	1377	0
Presence of On-Street Parking				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
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	1 - Newport Rd Ramps
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Split	Permiss	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	0	0	4	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lag	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	5	0	0	0	5	0	0	5	0
Maximum Green [s]	0	0	0	30	0	0	0	30	0	0	30	0
Amber [s]	0.0	0.0	0.0	4.5	0.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
All red [s]	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	53	0	0	0	67	0	0	67	0
Vehicle Extension [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	0	0	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	15	0
Rest In Walk				No				No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	3.5	0.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
Minimum Recall				No				No			No	
Maximum Recall				No				No			No	
Pedestrian Recall				No				No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	C	R	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.50	5.50	5.50	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.50	3.50	3.50	4.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	28	28	28	80	80	80	80
g / C, Green / Cycle	0.23	0.23	0.23	0.67	0.67	0.67	0.67
(v / s)_i Volume / Saturation Flow Rate	0.19	0.20	0.21	0.19	0.00	0.27	0.00
s, saturation flow rate [veh/h]	1774	1698	1583	6765	1583	5074	1583
c, Capacity [veh/h]	412	395	368	4543	1063	3407	1063
d1, Uniform Delay [s]	43.56	44.02	44.83	7.97	0.00	8.87	0.00
k, delay calibration	0.04	0.04	0.04	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.54	2.07	3.86	0.15	0.00	0.36	0.00
d3, Initial Queue Delay [s]	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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.82	0.85	0.92	0.28	0.00	0.40	0.00
d, Delay for Lane Group [s/veh]	45.10	46.09	48.69	8.12	0.00	9.23	0.00
Lane Group LOS	D	D	D	A	A	A	A
Critical Lane Group	No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	9.60	9.75	10.10	3.22	0.00	5.20	0.00
50th-Percentile Queue Length [ft/ln]	240.10	243.87	252.42	80.62	0.00	129.93	0.00
95th-Percentile Queue Length [veh/ln]	14.69	14.88	15.31	5.80	0.00	8.94	0.00
95th-Percentile Queue Length [ft/ln]	367.16	371.92	382.70	145.12	0.00	223.40	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	45.48	0.00	47.98	0.00	8.12	0.00	0.00	9.23	0.00
Movement LOS				D		D		A	A		A	A
d_A, Approach Delay [s/veh]	0.00			46.63			8.12			9.23		
Approach LOS	A			D			A			A		
d_I, Intersection Delay [s/veh]	19.16											
Intersection LOS	B											
Intersection V/C	0.519											

Sequence

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



Intersection Level Of Service Report
Intersection 2: I-215 NB Ramps at Newport Road

Control Type:	Signalized	Delay (sec / veh):	22.5
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.618

Intersection Setup

Name	I-215 NB Ramps			I-215 NB Ramps			Newport Road			Newport 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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			No			No		

Volumes

Name	I-215 NB Ramps			I-215 NB Ramps			Newport Road			Newport Road		
Base Volume Input [veh/h]	494	0	684	0	0	0	0	1531	289	0	1353	336
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	494	0	684	0	0	0	0	1531	289	0	1353	336
Peak Hour Factor	0.9530	1.0000	0.9530	1.0000	1.0000	1.0000	1.0000	0.9530	0.9530	1.0000	0.9530	0.9530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	130	0	179	0	0	0	0	402	0	0	355	0
Total Analysis Volume [veh/h]	518	0	718	0	0	0	0	1607	0	0	1420	0
Presence of On-Street Parking	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
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	1 - Newport Rd Ramps
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	57.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Split	Permiss	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	8	0	0	0	0	0	0	2	0	0	6	0	0
Auxiliary Signal Groups													
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	5	0	0	0	0	0	0	5	0	0	5	0	0
Maximum Green [s]	30	0	0	0	0	0	0	30	0	0	30	0	0
Amber [s]	4.5	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0
All red [s]	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0
Split [s]	54	0	0	0	0	0	0	66	0	0	66	0	0
Vehicle Extension [s]	2.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0
Walk [s]	0	0	0	0	0	0	0	7	0	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	15	0	0	0	0	0
Rest In Walk	No							No			No		
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	3.5	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0
Minimum Recall	No							No			No		
Maximum Recall	No							No			No		
Pedestrian Recall	No							No			No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	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	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R		C	R	C	R
C, Cycle Length [s]	120	120	120		120	120	120	120
L, Total Lost Time per Cycle [s]	5.50	5.50	5.50		6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.50	3.50	3.50		4.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	34	34	34		75	75	75	75
g / C, Green / Cycle	0.28	0.28	0.28		0.62	0.62	0.62	0.62
(v / s)_i Volume / Saturation Flow Rate	0.23	0.25	0.26		0.32	0.00	0.21	0.00
s, saturation flow rate [veh/h]	1774	1628	1583		5074	1583	6765	1583
c, Capacity [veh/h]	498	457	444		3163	987	4217	987
d1, Uniform Delay [s]	40.38	41.50	41.90		12.44	0.00	10.76	0.00
k, delay calibration	0.07	0.12	0.13		0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.43	7.22	10.32		0.59	0.00	0.22	0.00
d3, Initial Queue Delay [s]	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
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

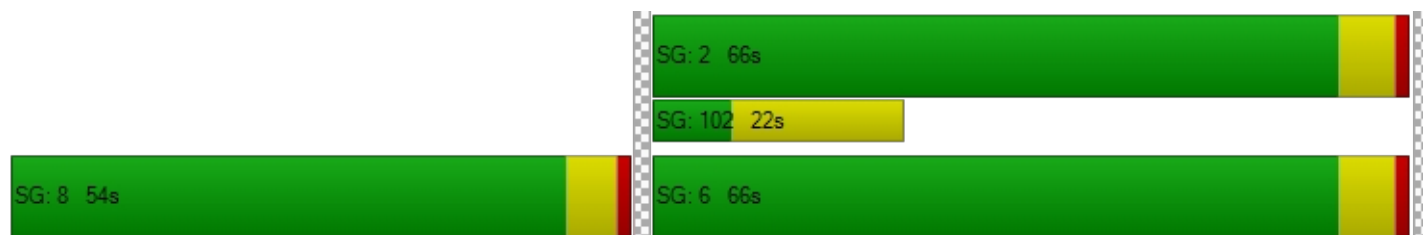
X, volume / capacity	0.83	0.90	0.93		0.51	0.00	0.34	0.00
d, Delay for Lane Group [s/veh]	42.81	48.72	52.23		13.02	0.00	10.97	0.00
Lane Group LOS	D	D	D		B	A	B	A
Critical Lane Group	No	No	Yes		Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	11.64	12.53	13.00		7.76	0.00	4.41	0.00
50th-Percentile Queue Length [ft/ln]	290.92	313.27	325.04		193.92	0.00	110.27	0.00
95th-Percentile Queue Length [veh/ln]	17.23	18.34	18.92		12.32	0.00	7.85	0.00
95th-Percentile Queue Length [ft/ln]	430.78	458.40	472.88		308.11	0.00	196.37	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	44.02	0.00	50.73	0.00	0.00	0.00	0.00	13.02	0.00	0.00	10.97	0.00
Movement LOS	D		D					B	A		B	A
d_A, Approach Delay [s/veh]	47.92			0.00			13.02			10.97		
Approach LOS	D			A			B			B		
d_I, Intersection Delay [s/veh]	22.46											
Intersection LOS	C											
Intersection V/C	0.618											

Sequence

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



Intersection Level Of Service Report
Intersection 3: Antelope Road at Newport Road

Control Type:	Signalized	Delay (sec / veh):	28.8
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.815

Intersection Setup

Name	Antelope Road			Antelope Road			Newport Road			Newport Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T 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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name	Antelope Road			Antelope Road			Newport Road			Newport Road		
Base Volume Input [veh/h]	484	121	275	16	81	110	157	1354	573	131	1073	30
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	484	121	275	16	81	110	157	1354	573	131	1073	30
Peak Hour Factor	0.9840	0.9840	0.9840	0.9840	0.9840	0.9840	0.9840	0.9840	0.9840	0.9840	0.9840	0.9840
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]	123	31	70	4	21	28	40	344	146	33	273	8
Total Analysis Volume [veh/h]	492	123	279	16	82	112	160	1376	582	133	1090	30
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
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	31.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	8	7	4	0
Auxiliary Signal Groups									5,8			
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	4	5	0	4	5	0	4	6	6	4	6	0
Maximum Green [s]	30	30	0	30	30	0	30	30	30	30	30	0
Amber [s]	3.5	3.9	0.0	3.5	3.9	0.0	3.5	4.7	4.7	3.5	4.7	0.0
All red [s]	0.5	1.0	0.0	0.5	1.0	0.0	0.5	2.0	2.0	0.5	2.0	0.0
Split [s]	17	36	0	8	27	0	8	68	68	8	68	0
Vehicle Extension [s]	2.0	3.0	0.0	2.0	3.0	0.0	2.0	4.0	4.0	2.0	4.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	5	0	5	0
Pedestrian Clearance [s]	0	26	0	0	0	0	0	18	18	0	18	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	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.9	0.0	2.0	2.9	0.0	2.0	4.7	4.7	2.0	4.7	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	75	75	75	75	75	75	75	75	75	75	75	75
L, Total Lost Time per Cycle [s]	4.00	4.90	4.90	4.00	4.90	4.90	4.00	6.70	6.70	4.00	6.70	6.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.90	2.90	2.00	2.90	2.90	2.00	4.70	4.70	2.00	4.70	4.70
g_i, Effective Green Time [s]	13	19	19	1	7	7	5	30	30	5	29	29
g / C, Green / Cycle	0.17	0.26	0.26	0.02	0.10	0.10	0.07	0.40	0.40	0.06	0.39	0.39
(v / s)_i Volume / Saturation Flow Rate	0.14	0.07	0.18	0.00	0.04	0.07	0.05	0.38	0.39	0.04	0.21	0.21
s, saturation flow rate [veh/h]	3445	1863	1583	3445	1863	1583	3445	3547	1598	3445	3547	1837
c, Capacity [veh/h]	602	483	411	54	187	159	251	1420	640	218	1386	718
d1, Uniform Delay [s]	29.77	22.01	24.95	36.48	31.73	32.65	33.79	21.64	22.04	34.21	17.57	17.57
k, delay calibration	0.04	0.11	0.11	0.04	0.11	0.11	0.04	0.15	0.39	0.04	0.15	0.15
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.06	0.27	1.98	1.12	1.62	5.63	1.01	5.28	24.89	1.04	0.45	0.88
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

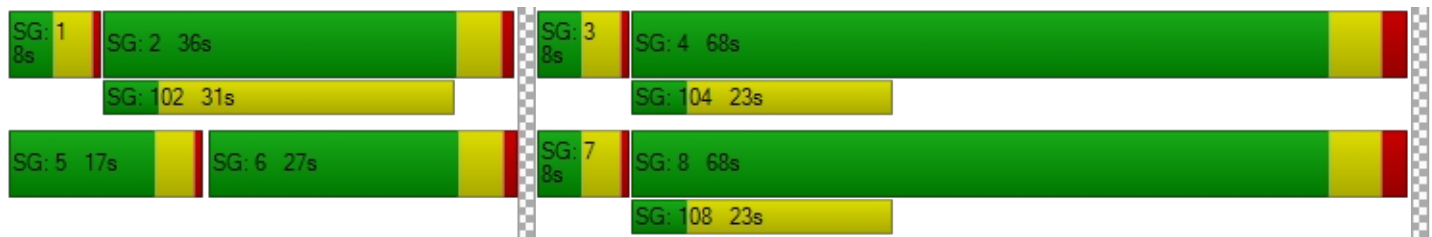
X, volume / capacity	0.82	0.25	0.68	0.30	0.44	0.71	0.64	0.94	0.97	0.61	0.53	0.53
d, Delay for Lane Group [s/veh]	30.83	22.28	26.93	37.60	33.35	38.27	34.80	26.92	46.93	35.25	18.02	18.45
Lane Group LOS	C	C	C	D	C	D	C	C	D	D	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	4.19	1.69	4.47	0.15	1.44	2.15	1.41	11.31	14.13	1.18	4.63	4.89
50th-Percentile Queue Length [ft/ln]	104.63	42.14	111.66	3.74	36.03	53.87	35.26	282.68	353.15	29.47	115.85	122.18
95th-Percentile Queue Length [veh/ln]	7.53	3.03	7.93	0.27	2.59	3.88	2.54	16.82	20.29	2.12	8.16	8.51
95th-Percentile Queue Length [ft/ln]	188.34	75.86	198.30	6.74	64.85	96.97	63.46	420.55	507.25	53.05	204.12	212.81

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	30.83	22.28	26.93	37.60	33.35	38.27	34.80	27.48	46.93	35.25	18.16	18.45
Movement LOS	C	C	C	D	C	D	C	C	D	D	B	B
d_A, Approach Delay [s/veh]	28.44			36.30			33.38			19.98		
Approach LOS	C			D			C			B		
d_I, Intersection Delay [s/veh]	28.78											
Intersection LOS	C											
Intersection V/C	0.815											

Sequence

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



Intersection Level Of Service Report
Intersection 4: Menifee Road at Newport Road

Control Type:	Signalized	Delay (sec / veh):	24.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.609

Intersection Setup

Name	Menifee Road			Menifee Road			Newport Road			Newport 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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Menifee Road			Menifee Road			Newport Road			Newport Road		
Base Volume Input [veh/h]	132	192	115	36	168	140	239	1091	133	139	852	41
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	132	192	115	36	168	140	239	1091	133	139	852	41
Peak Hour Factor	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450
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]	35	51	30	10	44	37	63	289	35	37	225	11
Total Analysis Volume [veh/h]	140	203	122	38	178	148	253	1154	141	147	902	43
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
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	6	0	5	6	0	5	8	0	5	8	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.2	4.3	0.0	3.2	4.3	0.0	3.2	5.0	0.0	3.2	5.0	0.0
All red [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
Split [s]	12	47	0	11	46	0	21	44	0	18	41	0
Vehicle Extension [s]	1.5	3.0	0.0	1.5	3.0	0.0	1.5	4.0	0.0	1.5	4.0	0.0
Walk [s]	0	10	0	0	10	0	0	10	0	0	10	0
Pedestrian Clearance [s]	0	30	0	0	24	0	0	24	0	0	24	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]	3.2	4.3	0.0	3.2	4.3	0.0	3.2	5.0	0.0	3.2	5.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	L	C	R
C, Cycle Length [s]	66	66	66	66	66	66	66	66	66	66	66	66
L, Total Lost Time per Cycle [s]	5.20	6.30	6.30	5.20	6.30	6.30	5.20	7.00	7.00	5.20	7.00	7.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.20	4.30	4.30	3.20	4.30	4.30	3.20	5.00	5.00	3.20	5.00	5.00
g_i, Effective Green Time [s]	5	11	11	3	9	9	11	22	22	7	18	18
g / C, Green / Cycle	0.07	0.16	0.16	0.04	0.13	0.13	0.17	0.33	0.33	0.11	0.27	0.27
(v / s)_i Volume / Saturation Flow Rate	0.04	0.06	0.08	0.02	0.05	0.09	0.14	0.24	0.24	0.08	0.18	0.03
s, saturation flow rate [veh/h]	3445	3547	1583	1774	3547	1583	1774	3547	1761	1774	5074	1583
c, Capacity [veh/h]	242	579	259	68	467	208	302	1184	588	188	1367	427
d1, Uniform Delay [s]	29.80	24.56	25.09	31.24	26.26	27.51	26.54	19.41	19.41	28.82	21.47	18.15
k, delay calibration	0.04	0.11	0.11	0.04	0.11	0.11	0.04	0.15	0.15	0.04	0.15	0.15
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.81	0.36	1.34	2.61	0.51	4.42	2.36	1.26	2.51	2.67	0.78	0.15
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

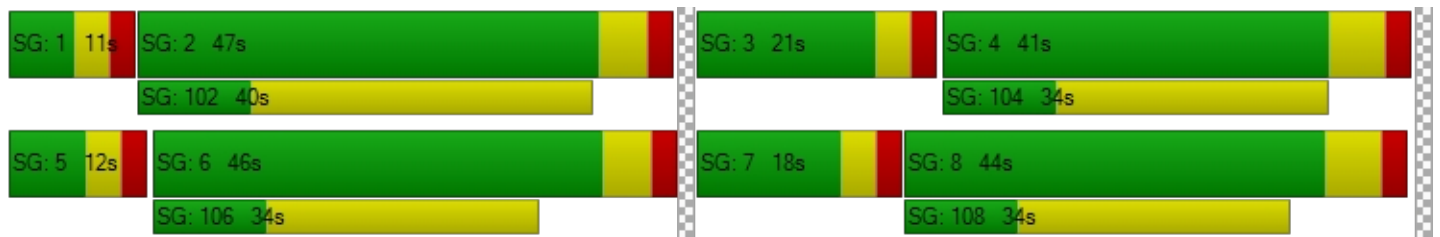
X, volume / capacity	0.58	0.35	0.47	0.56	0.38	0.71	0.84	0.73	0.73	0.78	0.66	0.10
d, Delay for Lane Group [s/veh]	30.62	24.92	26.42	33.85	26.77	31.93	28.90	20.67	21.92	31.49	22.25	18.29
Lane Group LOS	C	C	C	C	C	C	C	C	C	C	C	B
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.06	1.37	1.74	0.62	1.25	2.38	3.83	5.54	5.71	2.30	3.94	0.48
50th-Percentile Queue Length [ft/ln]	26.49	34.23	43.53	15.54	31.36	59.58	95.86	138.58	142.74	57.59	98.50	12.04
95th-Percentile Queue Length [veh/ln]	1.91	2.46	3.13	1.12	2.26	4.29	6.90	9.40	9.63	4.15	7.09	0.87
95th-Percentile Queue Length [ft/ln]	47.69	61.61	78.36	27.97	56.44	107.25	172.55	235.11	240.71	103.66	177.31	21.67

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	30.62	24.92	26.42	33.85	26.77	31.93	28.90	20.98	21.92	31.49	22.25	18.29
Movement LOS	C	C	C	C	C	C	C	C	C	C	C	B
d_A, Approach Delay [s/veh]	27.03			29.61			22.36			23.34		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	24.06											
Intersection LOS	C											
Intersection V/C	0.609											

Sequence

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



Intersection Level Of Service Report
Intersection 5: Laguna Vista Drive at Newport Road

Control Type:	Signalized	Delay (sec / veh):	9.7
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.563

Intersection Setup

Name	Laguna Vista Drive		Newport Road		Newport Road	
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 Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		Yes	

Volumes

Name	Laguna Vista Drive		Newport Road		Newport Road	
Base Volume Input [veh/h]	159	54	1036	254	84	927
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
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
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	159	54	1036	254	84	927
Peak Hour Factor	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	42	14	272	67	22	244
Total Analysis Volume [veh/h]	167	57	1089	267	88	975
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Split	Split	Permissive	Permissive	Protected	Permissive
Signal group	5	0	8	0	7	4
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	6	0	6	0	5	6
Maximum Green [s]	30	0	30	0	30	30
Amber [s]	4.0	0.0	4.7	0.0	4.0	4.7
All red [s]	1.0	0.0	2.0	0.0	1.0	2.0
Split [s]	40	0	48	0	12	60
Vehicle Extension [s]	2.0	0.0	4.0	0.0	1.5	4.0
Walk [s]	7	0	7	0	0	0
Pedestrian Clearance [s]	28	0	24	0	0	0
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	3.0	0.0	4.7	0.0	3.0	4.7
Minimum Recall	No		No		No	No
Maximum Recall	No		No		No	No
Pedestrian Recall	No		No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	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

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	R	C	C	L	C
C, Cycle Length [s]	45	45	45	45	45	45
L, Total Lost Time per Cycle [s]	5.00	5.00	6.70	6.70	5.00	6.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	4.70	4.70	3.00	4.70
g_i, Effective Green Time [s]	6	6	19	19	3	27
g / C, Green / Cycle	0.13	0.13	0.42	0.42	0.07	0.61
(v / s)_i Volume / Saturation Flow Rate	0.09	0.04	0.25	0.27	0.05	0.19
s, saturation flow rate [veh/h]	1774	1583	3547	1687	1774	5074
c, Capacity [veh/h]	235	210	1485	706	133	3073
d1, Uniform Delay [s]	18.56	17.44	10.14	10.32	20.11	4.30
k, delay calibration	0.04	0.04	0.15	0.15	0.04	0.15
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.48	0.26	0.58	1.38	2.07	0.08
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	0.27	0.61	0.64	0.66	0.32
d, Delay for Lane Group [s/veh]	20.04	17.70	10.72	11.70	22.19	4.39
Lane Group LOS	C	B	B	B	C	A
Critical Lane Group	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	1.55	0.48	2.74	2.94	0.87	0.83
50th-Percentile Queue Length [ft/ln]	38.67	12.00	68.51	73.48	21.76	20.75
95th-Percentile Queue Length [veh/ln]	2.78	0.86	4.93	5.29	1.57	1.49
95th-Percentile Queue Length [ft/ln]	69.60	21.60	123.31	132.26	39.18	37.34

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	20.04	17.70	10.89	11.70	22.19	4.39
Movement LOS	C	B	B	B	C	A
d_A, Approach Delay [s/veh]	19.44		11.05		5.86	
Approach LOS	B		B		A	
d_I, Intersection Delay [s/veh]	9.67					
Intersection LOS	A					
Intersection V/C	0.563					

Sequence

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



Intersection Level Of Service Report
Intersection 6: Menifee Road at Rockport Road

Control Type:	Signalized	Delay (sec / veh):	7.4
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.296

Intersection Setup

Name	Menifee Road		Menifee Road		Rockport Road	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		Yes		Yes	

Volumes

Name	Menifee Road		Menifee Road		Rockport Road	
Base Volume Input [veh/h]	393	35	72	360	25	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
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
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	393	35	72	360	25	50
Peak Hour Factor	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
Total 15-Minute Volume [veh/h]	103	9	19	94	7	13
Total Analysis Volume [veh/h]	411	37	75	377	26	52
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Split	Split
Signal group	2	0	1	6	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	6	0	5	6	6	0
Maximum Green [s]	30	0	30	30	30	0
Amber [s]	4.3	0.0	4.0	4.3	4.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	31	0	32	63	37	0
Vehicle Extension [s]	3.0	0.0	1.5	3.0	2.5	0.0
Walk [s]	10	0	0	0	10	0
Pedestrian Clearance [s]	15	0	0	0	22	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.3	0.0	3.0	3.3	3.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	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

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	R
C, Cycle Length [s]	26	26	26	26	26	26
L, Total Lost Time per Cycle [s]	5.30	5.30	5.00	5.30	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.30	3.30	3.00	3.30	3.00	3.00
g_i, Effective Green Time [s]	6	6	2	13	3	3
g / C, Green / Cycle	0.22	0.22	0.08	0.50	0.10	0.10
(v / s)_j Volume / Saturation Flow Rate	0.08	0.08	0.04	0.11	0.01	0.03
s, saturation flow rate [veh/h]	3547	1785	1774	3547	1774	1583
c, Capacity [veh/h]	794	400	153	1777	188	168
d1, Uniform Delay [s]	8.62	8.61	11.42	3.65	10.63	10.83
k, delay calibration	0.11	0.11	0.04	0.11	0.08	0.08
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.29	0.58	0.90	0.06	0.25	0.77
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

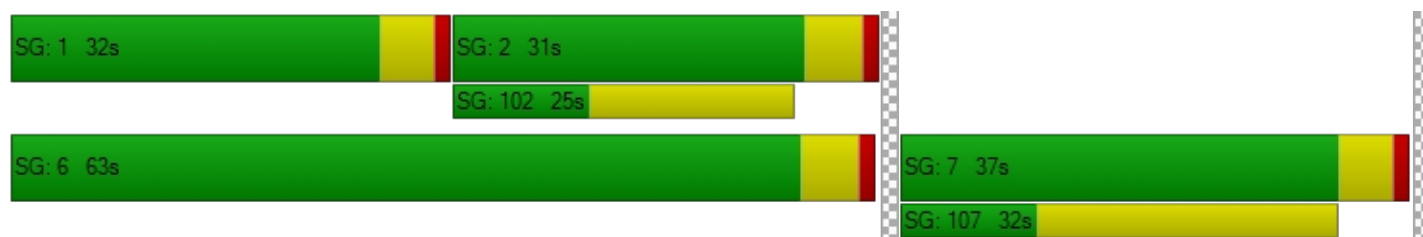
X, volume / capacity	0.38	0.37	0.49	0.21	0.14	0.31
d, Delay for Lane Group [s/veh]	8.91	9.19	12.32	3.71	10.88	11.60
Lane Group LOS	A	A	B	A	B	B
Critical Lane Group	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.48	0.51	0.33	0.17	0.11	0.23
50th-Percentile Queue Length [ft/ln]	11.89	12.68	8.26	4.18	2.69	5.72
95th-Percentile Queue Length [veh/ln]	0.86	0.91	0.59	0.30	0.19	0.41
95th-Percentile Queue Length [ft/ln]	21.41	22.83	14.86	7.52	4.84	10.30

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	8.99	9.19	12.32	3.71	10.88	11.60
Movement LOS	A	A	B	A	B	B
d_A, Approach Delay [s/veh]	9.00		5.14		11.36	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	7.41					
Intersection LOS	A					
Intersection V/C	0.296					

Sequence

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



Intersection Level Of Service Report
Intersection 7: Laguna Vista Drive at Rockport Road

Control Type:	All-way stop	Delay (sec / veh):	12.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.576

Intersection Setup

Name	Laguna Vista Drive			Laguna Vista Drive			Rockport Road			Old Newport 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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Laguna Vista Drive			Laguna Vista Drive			Rockport Road			Old Newport Road		
Base Volume Input [veh/h]	1	49	5	249	74	6	6	86	3	6	50	158
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	1	49	5	249	74	6	6	86	3	6	50	158
Peak Hour Factor	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270
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	15	2	75	22	2	2	26	1	2	15	48
Total Analysis Volume [veh/h]	1	59	6	301	89	7	7	104	4	7	60	191
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	645	690	534	580	550	656
Degree of Utilization, x	0.10	0.58	0.01	0.19	0.01	0.38

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.34	3.70	0.04	0.68	0.04	1.80
95th-Percentile Queue Length [ft]	8.52	92.47	1.00	16.97	0.97	44.94
Approach Delay [s/veh]	9.22	15.07	10.28		11.50	
Approach LOS	A	C	B		B	
Intersection Delay [s/veh]	12.84					
Intersection LOS	B					

Intersection Level Of Service Report

Intersection 8: Menifee Road at Loire Valley Lane/Tres Lagos Drive

Control Type:	Signalized	Delay (sec / veh):	11.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.465

Intersection Setup

Name	Menifee Road			Menifee Road			Loire Valley Lane			Tres Lagos Drive		
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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Menifee Road			Menifee Road			Loire Valley Lane			Tres Lagos Drive		
Base Volume Input [veh/h]	34	266	36	39	197	55	62	115	37	21	82	63
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	34	266	36	39	197	55	62	115	37	21	82	63
Peak Hour Factor	0.9140	0.9140	0.9140	0.9140	0.9140	0.9140	0.9140	0.9140	0.9140	0.9140	0.9140	0.9140
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	73	10	11	54	15	17	31	10	6	22	17
Total Analysis Volume [veh/h]	37	291	39	43	216	60	68	126	40	23	90	69
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
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
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	4.0	4.3	0.0	4.0	4.3	0.0	0.0	4.0	0.0	0.0	4.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	12	38	0	12	38	0	0	50	0	0	50	0
Vehicle Extension [s]	1.5	3.0	0.0	1.5	3.0	0.0	0.0	2.5	0.0	0.0	2.5	0.0
Walk [s]	0	10	0	0	10	0	0	10	0	0	10	0
Pedestrian Clearance [s]	0	22	0	0	14	0	0	25	0	0	25	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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.3	0.0	3.0	3.3	0.0	0.0	3.0	0.0	0.0	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	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C	R
C, Cycle Length [s]	31	31	31	31	31	31	31	31	31
L, Total Lost Time per Cycle [s]	5.00	5.30	5.30	5.00	5.30	5.30	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	3.00	3.30	3.30	3.00	3.30	3.30	3.00	3.00	3.00
g_i, Effective Green Time [s]	2	7	7	2	7	7	7	7	7
g / C, Green / Cycle	0.06	0.21	0.21	0.07	0.22	0.22	0.23	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.02	0.06	0.06	0.02	0.08	0.08	0.19	0.06	0.04
s, saturation flow rate [veh/h]	1774	3547	1755	1774	1863	1727	1250	1746	1583
c, Capacity [veh/h]	112	754	373	127	411	381	431	533	358
d1, Uniform Delay [s]	13.99	10.32	10.34	13.79	10.26	10.29	11.67	9.96	9.78
k, delay calibration	0.04	0.11	0.11	0.04	0.11	0.11	0.08	0.08	0.08
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.63	0.21	0.45	0.58	0.49	0.56	0.79	0.15	0.19
d3, Initial Queue Delay [s]	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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

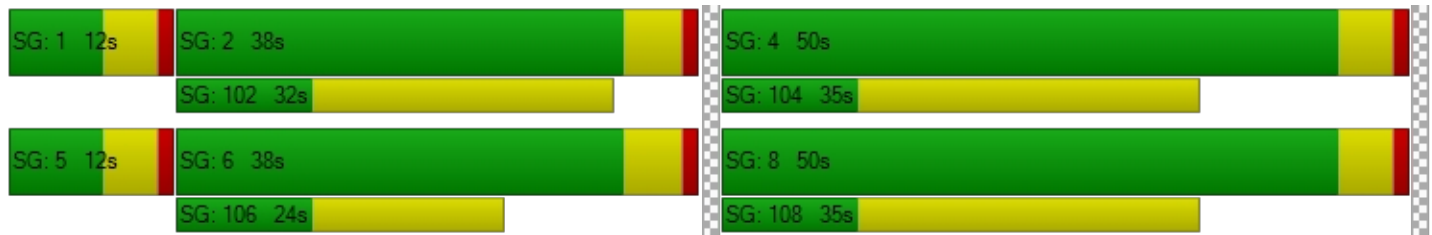
X, volume / capacity	0.33	0.29	0.30	0.34	0.34	0.35	0.54	0.21	0.19
d, Delay for Lane Group [s/veh]	14.62	10.53	10.79	14.37	10.75	10.84	12.46	10.11	9.98
Lane Group LOS	B	B	B	B	B	B	B	B	A
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.22	0.48	0.52	0.25	0.65	0.63	1.26	0.48	0.29
50th-Percentile Queue Length [ft/ln]	5.46	12.08	12.97	6.23	16.24	15.74	31.52	12.02	7.36
95th-Percentile Queue Length [veh/ln]	0.39	0.87	0.93	0.45	1.17	1.13	2.27	0.87	0.53
95th-Percentile Queue Length [ft/ln]	9.83	21.75	23.35	11.21	29.24	28.34	56.73	21.64	13.26

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	14.62	10.60	10.79	14.37	10.78	10.84	12.46	12.46	12.46	10.11	10.11	9.98
Movement LOS	B	B	B	B	B	B	B	B	B	B	B	A
d_A, Approach Delay [s/veh]	11.02			11.28			12.46			10.06		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	11.24											
Intersection LOS	B											
Intersection V/C	0.465											

Sequence

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



Intersection Level Of Service Report
Intersection 9: Laguna Vista Drive at Tres Lagos Drive

Control Type:	All-way stop	Delay (sec / veh):	7.7
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.109

Intersection Setup

Name	Laguna Vista Drive			Laguna Vista Drive			Tres Lagos Drive			Tres Lagos Drive		
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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Laguna Vista Drive			Laguna Vista Drive			Tres Lagos Drive			Tres Lagos Drive		
Base Volume Input [veh/h]	25	35	0	12	66	7	5	28	40	3	29	9
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	25	35	0	12	66	7	5	28	40	3	29	9
Peak Hour Factor	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260
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]	7	9	0	3	18	2	1	8	11	1	8	2
Total Analysis Volume [veh/h]	27	38	0	13	71	8	5	30	43	3	31	10
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	820	845	719	850	715	775
Degree of Utilization, x	0.08	0.11	0.05	0.05	0.03	0.03

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.26	0.37	0.15	0.16	0.10	0.09
95th-Percentile Queue Length [ft]	6.44	9.13	3.83	3.99	2.38	2.19
Approach Delay [s/veh]	7.77	7.78	7.52		7.69	
Approach LOS	A	A	A		A	
Intersection Delay [s/veh]	7.69					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 10: Menifee Road at Holland Road

Control Type:	All-way stop	Delay (sec / veh):	11.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.394

Intersection Setup

Name	Menifee Road			Menifee Road			Holland Road			Holland 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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			Yes		

Volumes

Name	Menifee Road			Menifee Road			Holland Road			Holland Road		
Base Volume Input [veh/h]	14	416	64	28	346	7	2	3	14	44	2	17
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	14	416	64	28	346	7	2	3	14	44	2	17
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
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	108	17	7	90	2	1	1	4	11	1	4
Total Analysis Volume [veh/h]	15	433	67	29	360	7	2	3	15	46	2	18
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	583	634	656	566	614	616	490	525	583	495	530	590
Degree of Utilization, x	0.03	0.39	0.38	0.05	0.30	0.30	0.00	0.01	0.03	0.09	0.00	0.03

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.08	1.88	1.79	0.16	1.25	1.24	0.01	0.02	0.08	0.31	0.01	0.09
95th-Percentile Queue Length [ft]	1.98	46.95	44.63	4.04	31.25	31.05	0.31	0.43	1.98	7.65	0.28	2.36
Approach Delay [s/veh]	11.69			10.90			9.23			10.22		
Approach LOS	B			B			A			B		
Intersection Delay [s/veh]	11.23											
Intersection LOS	B											

**Intersection Level Of Service Report
Intersection 11: Briggs Road at Holland Road**

Control Type:	Two-way stop	Delay (sec / veh):	9.6
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.004

Intersection Setup

Name	Briggs Road			Briggs Road			Holland Road			Holland 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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Briggs Road			Briggs Road			Holland Road			Holland Road		
Base Volume Input [veh/h]	7	28	2	3	18	14	13	3	9	1	7	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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	28	2	3	18	14	13	3	9	1	7	3
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]	2	8	1	1	5	4	4	1	3	0	2	1
Total Analysis Volume [veh/h]	8	32	2	3	20	16	15	3	10	1	8	3
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	0.02	0.00	0.01	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	7.30	0.00	0.00	7.29	0.00	0.00	9.20	9.62	8.56	9.15	9.60	8.52
Movement LOS	A	A	A	A	A	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.01	0.01	0.01	0.01	0.09	0.09	0.09	0.04	0.04	0.04
95th-Percentile Queue Length [ft/ln]	0.33	0.33	0.33	0.14	0.14	0.14	2.34	2.34	2.34	1.07	1.07	1.07
d_A, Approach Delay [s/veh]	1.39			0.56			9.02			9.29		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	3.67											
Intersection LOS	A											

Intersection Level Of Service Report
Intersection 39: Briggs Road at Old Newport Road

Control Type:	All-way stop	Delay (sec / veh):	7.5
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.155

Intersection Setup

Name	Briggs Road			Briggs Road			Old Newport Road			Old Newport 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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Briggs Road			Briggs Road			Old Newport Road			Old Newport Road		
Base Volume Input [veh/h]	52	11	0	0	4	8	10	1	102	0	0	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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	52	11	0	0	4	8	10	1	102	0	0	0
Peak Hour Factor	0.7400	0.7400	0.7400	0.7400	0.7400	0.7400	0.7400	0.7400	0.7400	0.7400	0.7400	0.7400
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]	18	4	0	0	1	3	3	0	34	0	0	0
Total Analysis Volume [veh/h]	70	15	0	0	5	11	14	1	138	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	816	920	989	837
Degree of Utilization, x	0.10	0.02	0.15	0.00

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.35	0.05	0.55	0.00
95th-Percentile Queue Length [ft]	8.69	1.33	13.66	0.00
Approach Delay [s/veh]	7.93	6.98	7.31	0.00
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	7.49			
Intersection LOS	A			

Intersection Level Of Service Report

Intersection 40: Briggs Road at Tres Lagos Road/Gold Crest Drive

Control Type:	Two-way stop	Delay (sec / veh):	9.9
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name	Briggs Road			Briggs Road			Tres Lagos Drive			Gold Crest Drive		
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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Briggs Road			Briggs Road			Tres Lagos Drive			Gold Crest Drive		
Base Volume Input [veh/h]	0	55	1	0	69	0	0	0	1	1	0	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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	55	1	0	69	0	0	0	1	1	0	0
Peak Hour Factor	0.7760	0.7760	0.7760	0.7760	0.7760	1.0000	0.7760	0.7760	0.7760	0.7760	0.7760	0.7760
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	18	0	0	22	0	0	0	0	0	0	0
Total Analysis Volume [veh/h]	0	71	1	0	89	0	0	0	1	1	0	0
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	0.00
d_M, Delay for Movement [s/veh]	7.39	0.00	0.00	7.36	0.00	0.00	9.48	9.93	8.72	9.49	9.93	8.64
Movement LOS	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	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.08	0.08	0.09	0.09	0.09
d_A, Approach Delay [s/veh]	0.00			0.00			8.72			9.49		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	0.11											
Intersection LOS	A											

APPENDIX D-II

**EXISTING WITH PROJECT WITH IMPROVEMENTS
TRAFFIC CONDITIONS**

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APPENDIX E

EXISTING WITH AMBIENT GROWTH WITH PROJECT TRAFFIC CONDITIONS INTERSECTION LEVEL OF SERVICE CALCULATION WORKSHEETS

APPENDIX E-1

**EXISTING WITH AMBIENT GROWTH YEAR 2020
WITH PROJECT TRAFFIC CONDITIONS**

Intersection Level Of Service Report
Intersection 1: I-215 SB Ramps at Newport Road

Control Type:	Signalized	Delay (sec / veh):	14.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.475

Intersection Setup

Name	I-215 SB Ramps			I-215 SB Ramps			Newport Road			Newport 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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			No		

Volumes

Name	I-215 SB Ramps			I-215 SB Ramps			Newport Road			Newport Road		
Base Volume Input [veh/h]	0	0	0	316	0	490	0	945	445	0	1207	717
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	0	0	0	316	0	490	0	945	445	0	1207	717
Peak Hour Factor	1.0000	1.0000	1.0000	0.9350	1.0000	0.9350	1.0000	0.9350	0.9350	1.0000	0.9350	0.9350
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	0	0	0	84	0	131	0	253	0	0	323	0
Total Analysis Volume [veh/h]	0	0	0	338	0	524	0	1011	0	0	1291	0
Presence of On-Street Parking				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
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	1 - Newport Rd Ramps
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Split	Permiss	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	0	0	4	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lag	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	5	0	0	0	5	0	0	5	0
Maximum Green [s]	0	0	0	30	0	0	0	30	0	0	30	0
Amber [s]	0.0	0.0	0.0	4.5	0.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
All red [s]	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	38	0	0	0	52	0	0	52	0
Vehicle Extension [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	0	0	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	15	0
Rest In Walk				No				No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	3.5	0.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
Minimum Recall				No				No			No	
Maximum Recall				No				No			No	
Pedestrian Recall				No				No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	C	R	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	5.50	5.50	5.50	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.50	3.50	3.50	4.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	18	18	18	60	60	60	60
g / C, Green / Cycle	0.20	0.20	0.20	0.67	0.67	0.67	0.67
(v / s)_i Volume / Saturation Flow Rate	0.17	0.18	0.18	0.15	0.00	0.25	0.00
s, saturation flow rate [veh/h]	1774	1609	1583	6765	1583	5074	1583
c, Capacity [veh/h]	362	328	323	4517	1057	3388	1057
d1, Uniform Delay [s]	34.10	34.50	34.57	5.82	0.00	6.64	0.00
k, delay calibration	0.04	0.04	0.04	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.75	2.69	2.91	0.11	0.00	0.33	0.00
d3, Initial Queue Delay [s]	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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

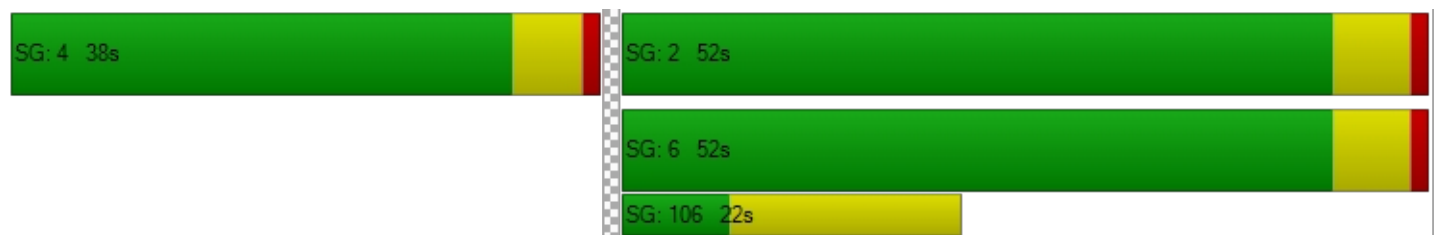
X, volume / capacity	0.82	0.86	0.87	0.22	0.00	0.38	0.00
d, Delay for Lane Group [s/veh]	35.85	37.19	37.47	5.94	0.00	6.97	0.00
Lane Group LOS	D	D	D	A	A	A	A
Critical Lane Group	No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	6.21	6.10	6.08	1.65	0.00	3.23	0.00
50th-Percentile Queue Length [ft/ln]	155.18	152.42	152.06	41.14	0.00	80.72	0.00
95th-Percentile Queue Length [veh/ln]	10.29	10.15	10.13	2.96	0.00	5.81	0.00
95th-Percentile Queue Length [ft/ln]	257.33	253.65	253.17	74.05	0.00	145.29	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	36.05	0.00	37.34	0.00	5.94	0.00	0.00	6.97	0.00
Movement LOS				D		D		A	A		A	A
d_A, Approach Delay [s/veh]	0.00			36.82			5.94			6.97		
Approach LOS	A			D			A			A		
d_I, Intersection Delay [s/veh]	14.77											
Intersection LOS	B											
Intersection V/C	0.475											

Sequence

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



Intersection Level Of Service Report
Intersection 2: I-215 NB Ramps at Newport Road

Control Type:	Signalized	Delay (sec / veh):	16.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.534

Intersection Setup

Name	I-215 NB Ramps			I-215 NB Ramps			Newport Road			Newport 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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			No			No		

Volumes

Name	I-215 NB Ramps			I-215 NB Ramps			Newport Road			Newport Road		
Base Volume Input [veh/h]	310	0	715	0	0	0	0	986	267	0	1634	520
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	310	0	715	0	0	0	0	986	267	0	1634	520
Peak Hour Factor	0.9600	1.0000	0.9600	1.0000	1.0000	1.0000	1.0000	0.9600	0.9600	1.0000	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	81	0	186	0	0	0	0	257	0	0	426	0
Total Analysis Volume [veh/h]	323	0	745	0	0	0	0	1027	0	0	1702	0
Presence of On-Street Parking	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
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	1 - Newport Rd Ramps
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	81.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Split	Permiss	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	8	0	0	0	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	5	0	0	0	0	0	0	5	0	0	5	0
Maximum Green [s]	30	0	0	0	0	0	0	30	0	0	30	0
Amber [s]	4.5	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
All red [s]	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	43	0	0	0	0	0	0	47	0	0	47	0
Vehicle Extension [s]	2.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	0	0	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	15	0	0	0	0
Rest In Walk	No							No			No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	3.5	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
Minimum Recall	No							No			No	
Maximum Recall	No							No			No	
Pedestrian Recall	No							No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R		C	R	C	R
C, Cycle Length [s]	90	90	90		90	90	90	90
L, Total Lost Time per Cycle [s]	5.50	5.50	5.50		6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.50	3.50	3.50		4.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	24	24	24		55	55	55	55
g / C, Green / Cycle	0.26	0.26	0.26		0.61	0.61	0.61	0.61
(v / s)_i Volume / Saturation Flow Rate	0.18	0.24	0.24		0.20	0.00	0.25	0.00
s, saturation flow rate [veh/h]	1774	1583	1583		5074	1583	6765	1583
c, Capacity [veh/h]	465	415	415		3094	966	4126	966
d1, Uniform Delay [s]	29.90	31.98	31.98		8.58	0.00	9.14	0.00
k, delay calibration	0.04	0.05	0.05		0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.70	3.81	3.81		0.29	0.00	0.31	0.00
d3, Initial Queue Delay [s]	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
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

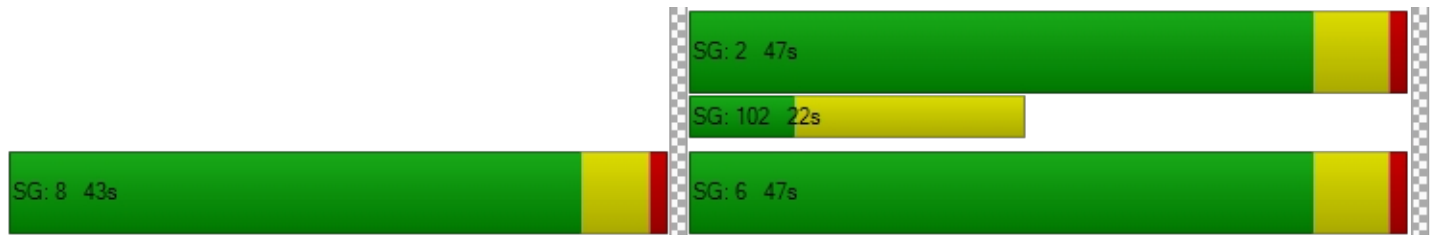
X, volume / capacity	0.69	0.90	0.90		0.33	0.00	0.41	0.00
d, Delay for Lane Group [s/veh]	30.60	35.79	35.79		8.86	0.00	9.44	0.00
Lane Group LOS	C	D	D		A	A	A	A
Critical Lane Group	No	Yes	No		No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	6.23	8.01	8.01		3.03	0.00	3.99	0.00
50th-Percentile Queue Length [ft/ln]	155.64	200.17	200.17		75.80	0.00	99.85	0.00
95th-Percentile Queue Length [veh/ln]	10.32	12.65	12.65		5.46	0.00	7.19	0.00
95th-Percentile Queue Length [ft/ln]	257.93	316.18	316.18		136.43	0.00	179.73	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	30.60	0.00	35.79	0.00	0.00	0.00	0.00	8.86	0.00	0.00	9.44	0.00
Movement LOS	C		D					A	A		A	A
d_A, Approach Delay [s/veh]	34.22			0.00			8.86			9.44		
Approach LOS	C			A			A			A		
d_I, Intersection Delay [s/veh]	16.26											
Intersection LOS	B											
Intersection V/C	0.534											

Sequence

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



Intersection Level Of Service Report
Intersection 3: Antelope Road at Newport Road

Control Type:	Signalized	Delay (sec / veh):	25.2
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.744

Intersection Setup

Name	Antelope Road			Antelope Road			Newport Road			Newport Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T 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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name	Antelope Road			Antelope Road			Newport Road			Newport Road		
Base Volume Input [veh/h]	406	43	94	100	84	161	54	1107	477	75	1610	70
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	406	43	94	100	84	161	54	1107	477	75	1610	70
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
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]	107	11	25	26	22	42	14	291	126	20	424	18
Total Analysis Volume [veh/h]	427	45	99	105	88	169	57	1165	502	79	1695	74
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
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	29.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	8	7	4	0
Auxiliary Signal Groups									5,8			
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	4	5	0	4	5	0	4	6	6	4	6	0
Maximum Green [s]	30	30	0	30	30	0	30	30	30	30	30	0
Amber [s]	3.5	3.9	0.0	3.5	3.9	0.0	3.5	4.7	4.7	3.5	4.7	0.0
All red [s]	0.5	1.0	0.0	0.5	1.0	0.0	0.5	2.0	2.0	0.5	2.0	0.0
Split [s]	42	43	0	9	10	0	8	30	30	8	30	0
Vehicle Extension [s]	2.0	3.0	0.0	2.0	3.0	0.0	2.0	4.0	4.0	2.0	4.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	5	0	5	0
Pedestrian Clearance [s]	0	26	0	0	0	0	0	18	18	0	18	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	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.9	0.0	2.0	2.9	0.0	2.0	4.7	4.7	2.0	4.7	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	72	72	72	72	72	72	72	72	72	72	72	72
L, Total Lost Time per Cycle [s]	4.00	4.90	4.90	4.00	4.90	4.90	4.00	6.70	6.70	4.00	6.70	6.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.90	2.90	2.00	2.90	2.90	2.00	4.70	4.70	2.00	4.70	4.70
g_i, Effective Green Time [s]	11	18	18	4	10	10	3	28	28	3	29	29
g / C, Green / Cycle	0.16	0.24	0.24	0.05	0.14	0.14	0.04	0.39	0.39	0.04	0.40	0.40
(v / s)_i Volume / Saturation Flow Rate	0.12	0.02	0.06	0.03	0.05	0.11	0.02	0.32	0.33	0.02	0.33	0.33
s, saturation flow rate [veh/h]	3445	1863	1583	3445	1863	1583	3445	3547	1591	3445	3547	1823
c, Capacity [veh/h]	539	452	385	181	259	220	131	1382	620	153	1404	722
d1, Uniform Delay [s]	29.43	21.28	22.15	33.53	28.17	30.05	34.08	19.97	20.01	33.86	19.71	19.73
k, delay calibration	0.04	0.11	0.11	0.04	0.11	0.11	0.04	0.15	0.28	0.04	0.15	0.28
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.01	0.09	0.35	1.09	0.77	5.52	0.84	1.93	7.47	1.01	1.91	6.52
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

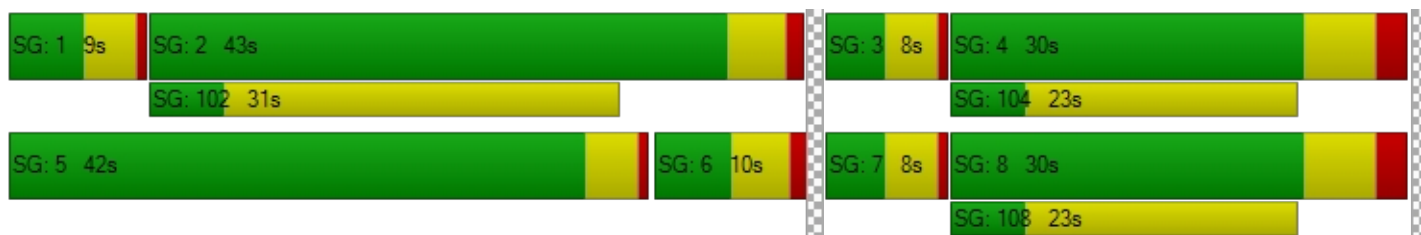
X, volume / capacity	0.79	0.10	0.26	0.58	0.34	0.77	0.43	0.83	0.84	0.52	0.83	0.83
d, Delay for Lane Group [s/veh]	30.44	21.37	22.50	34.62	28.94	35.57	34.92	21.90	27.48	34.86	21.62	26.24
Lane Group LOS	C	C	C	C	C	D	C	C	C	C	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.50	0.58	1.34	0.90	1.39	3.06	0.49	8.33	8.48	0.68	8.42	9.60
50th-Percentile Queue Length [ft/ln]	87.55	14.51	33.47	22.53	34.64	76.57	12.28	208.33	211.97	17.01	210.42	239.90
95th-Percentile Queue Length [veh/ln]	6.30	1.04	2.41	1.62	2.49	5.51	0.88	13.07	13.25	1.22	13.17	14.68
95th-Percentile Queue Length [ft/ln]	157.59	26.11	60.25	40.56	62.36	137.83	22.11	326.68	331.35	30.62	329.37	366.91

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	30.44	21.37	22.50	34.62	28.94	35.57	34.92	21.97	27.48	34.86	23.06	26.24
Movement LOS	C	C	C	C	C	D	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	28.35			33.68			24.01			23.69		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	25.20											
Intersection LOS	C											
Intersection V/C	0.744											

Sequence

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



Intersection Level Of Service Report
Intersection 4: Menifee Road at Newport Road

Control Type:	Signalized	Delay (sec / veh):	37.8
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.777

Intersection Setup

Name	Menifee Road			Menifee Road			Newport Road			Newport 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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Menifee Road			Menifee Road			Newport Road			Newport Road		
Base Volume Input [veh/h]	212	230	133	57	305	303	203	882	152	275	1059	32
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	212	230	133	57	305	303	203	882	152	275	1059	32
Peak Hour Factor	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	57	62	36	15	82	82	55	238	41	74	286	9
Total Analysis Volume [veh/h]	229	248	144	62	329	327	219	952	164	297	1144	35
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
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	6	0	5	6	0	5	8	0	5	8	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.2	4.3	0.0	3.2	4.3	0.0	3.2	5.0	0.0	3.2	5.0	0.0
All red [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
Split [s]	14	47	0	11	44	0	21	41	0	21	41	0
Vehicle Extension [s]	1.5	3.0	0.0	1.5	3.0	0.0	1.5	4.0	0.0	1.5	4.0	0.0
Walk [s]	0	10	0	0	10	0	0	10	0	0	10	0
Pedestrian Clearance [s]	0	30	0	0	24	0	0	24	0	0	24	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]	3.2	4.3	0.0	3.2	4.3	0.0	3.2	5.0	0.0	3.2	5.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	5.20	6.30	6.30	5.20	6.30	6.30	5.20	7.00	7.00	5.20	7.00	7.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.20	4.30	4.30	3.20	4.30	4.30	3.20	5.00	5.00	3.20	5.00	5.00
g_i, Effective Green Time [s]	9	27	27	5	23	23	14	25	25	19	30	30
g / C, Green / Cycle	0.09	0.27	0.27	0.05	0.23	0.23	0.14	0.26	0.26	0.19	0.30	0.30
(v / s)_i Volume / Saturation Flow Rate	0.07	0.07	0.09	0.03	0.09	0.21	0.12	0.21	0.21	0.17	0.23	0.02
s, saturation flow rate [veh/h]	3445	3547	1583	1774	3547	1583	1774	3547	1726	1774	5074	1583
c, Capacity [veh/h]	300	975	435	81	827	369	253	907	442	330	1520	474
d1, Uniform Delay [s]	44.50	28.19	28.84	47.08	32.33	36.96	41.83	35.02	35.02	39.66	31.58	25.01
k, delay calibration	0.04	0.11	0.11	0.04	0.11	0.19	0.04	0.15	0.23	0.04	0.15	0.15
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.51	0.14	0.44	5.66	0.31	11.57	3.50	2.82	7.99	3.82	1.10	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	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.76	0.25	0.33	0.77	0.40	0.89	0.87	0.83	0.83	0.90	0.75	0.07
d, Delay for Lane Group [s/veh]	46.02	28.33	29.28	52.74	32.64	48.53	45.33	37.84	43.02	43.48	32.67	25.10
Lane Group LOS	D	C	C	D	C	D	D	D	D	D	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.80	2.31	2.77	1.64	3.36	8.74	5.45	8.77	9.18	7.35	8.27	0.60
50th-Percentile Queue Length [ft/ln]	70.11	57.67	69.31	40.92	83.93	218.40	136.20	219.33	229.48	183.68	206.66	15.05
95th-Percentile Queue Length [veh/ln]	5.05	4.15	4.99	2.95	6.04	13.58	9.28	13.63	14.15	11.79	12.98	1.08
95th-Percentile Queue Length [ft/ln]	126.19	103.80	124.75	73.65	151.08	339.58	231.89	340.77	353.70	294.82	324.54	27.09

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	46.02	28.33	29.28	52.74	32.64	48.53	45.33	38.93	43.02	43.48	32.67	25.10
Movement LOS	D	C	C	D	C	D	D	D	D	D	C	C
d_A, Approach Delay [s/veh]	35.07			41.61			40.48			34.67		
Approach LOS	D			D			D			C		
d_I, Intersection Delay [s/veh]	37.80											
Intersection LOS	D											
Intersection V/C	0.777											

Sequence

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



Intersection Level Of Service Report
Intersection 5: Laguna Vista Drive at Newport Road

Control Type:	Signalized	Delay (sec / veh):	11.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.590

Intersection Setup

Name	Laguna Vista Drive		Newport Road		Newport Road	
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 Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		Yes	

Volumes

Name	Laguna Vista Drive		Newport Road		Newport Road	
Base Volume Input [veh/h]	266	112	967	104	103	1069
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
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
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	266	112	967	104	103	1069
Peak Hour Factor	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	71	30	256	28	27	283
Total Analysis Volume [veh/h]	282	119	1025	110	109	1134
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Split	Split	Permissive	Permissive	Protected	Permissive
Signal group	5	0	8	0	7	4
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	6	0	6	0	5	6
Maximum Green [s]	30	0	30	0	30	30
Amber [s]	4.0	0.0	4.7	0.0	4.0	4.7
All red [s]	1.0	0.0	2.0	0.0	1.0	2.0
Split [s]	43	0	57	0	20	77
Vehicle Extension [s]	2.0	0.0	4.0	0.0	1.5	4.0
Walk [s]	7	0	7	0	0	0
Pedestrian Clearance [s]	28	0	24	0	0	0
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	3.0	0.0	4.7	0.0	3.0	4.7
Minimum Recall	No		No		No	No
Maximum Recall	No		No		No	No
Pedestrian Recall	No		No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	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

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	R	C	C	L	C
C, Cycle Length [s]	45	45	45	45	45	45
L, Total Lost Time per Cycle [s]	5.00	5.00	6.70	6.70	5.00	6.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	4.70	4.70	3.00	4.70
g_i, Effective Green Time [s]	9	9	16	16	4	24
g / C, Green / Cycle	0.20	0.20	0.35	0.35	0.08	0.54
(v / s)_i Volume / Saturation Flow Rate	0.16	0.08	0.21	0.21	0.06	0.22
s, saturation flow rate [veh/h]	1774	1583	3547	1772	1774	5074
c, Capacity [veh/h]	363	324	1226	613	147	2733
d1, Uniform Delay [s]	17.14	15.58	12.40	12.40	20.40	6.25
k, delay calibration	0.04	0.04	0.15	0.15	0.04	0.15
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.37	0.26	0.73	1.45	2.71	0.14
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

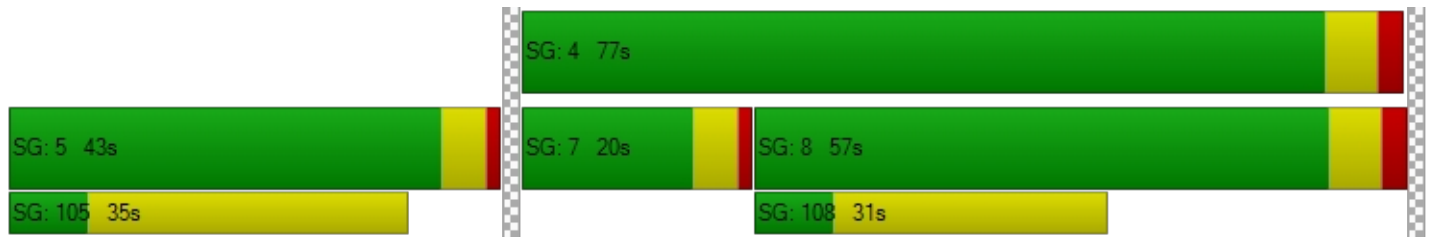
X, volume / capacity	0.78	0.37	0.62	0.62	0.74	0.41
d, Delay for Lane Group [s/veh]	18.50	15.84	13.12	13.85	23.11	6.39
Lane Group LOS	B	B	B	B	C	A
Critical Lane Group	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	2.54	0.94	2.71	2.83	1.12	1.47
50th-Percentile Queue Length [ft/ln]	63.44	23.60	67.70	70.79	27.98	36.68
95th-Percentile Queue Length [veh/ln]	4.57	1.70	4.87	5.10	2.01	2.64
95th-Percentile Queue Length [ft/ln]	114.19	42.49	121.85	127.42	50.37	66.02

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	18.50	15.84	13.31	13.85	23.11	6.39
Movement LOS	B	B	B	B	C	A
d_A, Approach Delay [s/veh]	17.71		13.36		7.86	
Approach LOS	B		B		A	
d_I, Intersection Delay [s/veh]	11.53					
Intersection LOS	B					
Intersection V/C	0.590					

Sequence

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



Intersection Level Of Service Report
Intersection 6: Menifee Road at Rockport Road

Control Type:	Signalized	Delay (sec / veh):	7.2
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.511

Intersection Setup

Name	Menifee Road		Menifee Road		Rockport Road	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		Yes		Yes	

Volumes

Name	Menifee Road		Menifee Road		Rockport Road	
Base Volume Input [veh/h]	481	20	22	680	38	64
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
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
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	481	20	22	680	38	64
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	141	6	6	200	11	19
Total Analysis Volume [veh/h]	566	24	26	800	45	75
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Split	Split
Signal group	2	0	1	6	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	6	0	5	6	6	0
Maximum Green [s]	30	0	30	30	30	0
Amber [s]	4.3	0.0	4.0	4.3	4.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	46	0	25	71	49	0
Vehicle Extension [s]	3.0	0.0	1.5	3.0	2.5	0.0
Walk [s]	10	0	0	0	10	0
Pedestrian Clearance [s]	15	0	0	0	22	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.3	0.0	3.0	3.3	3.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	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

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	R
C, Cycle Length [s]	26	26	26	26	26	26
L, Total Lost Time per Cycle [s]	5.30	5.30	5.00	5.30	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.30	3.30	3.00	3.30	3.00	3.00
g_i, Effective Green Time [s]	6	6	1	12	4	4
g / C, Green / Cycle	0.23	0.23	0.04	0.46	0.14	0.14
(v / s)_i Volume / Saturation Flow Rate	0.11	0.11	0.01	0.23	0.03	0.05
s, saturation flow rate [veh/h]	3547	1823	1774	3547	1774	1583
c, Capacity [veh/h]	826	425	66	1641	251	224
d1, Uniform Delay [s]	8.61	8.58	12.23	4.85	9.84	10.06
k, delay calibration	0.11	0.11	0.04	0.11	0.08	0.08
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.43	0.79	1.39	0.23	0.25	0.65
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

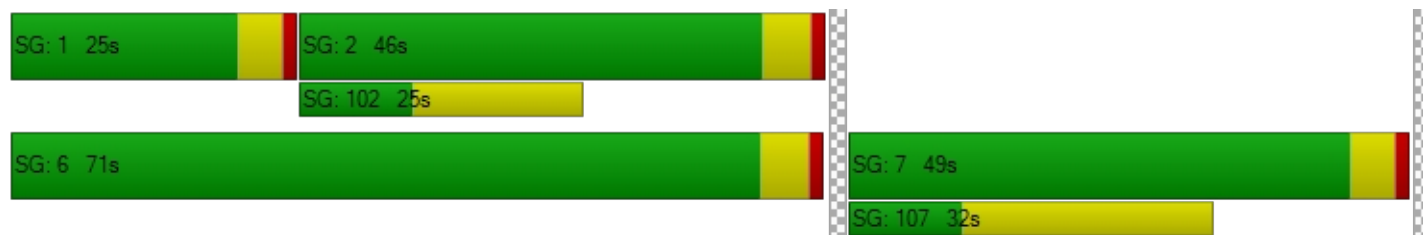
X, volume / capacity	0.48	0.46	0.39	0.49	0.18	0.34
d, Delay for Lane Group [s/veh]	9.03	9.36	13.62	5.07	10.09	10.71
Lane Group LOS	A	A	B	A	B	B
Critical Lane Group	No	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	0.63	0.67	0.13	0.55	0.17	0.30
50th-Percentile Queue Length [ft/ln]	15.68	16.72	3.29	13.81	4.23	7.47
95th-Percentile Queue Length [veh/ln]	1.13	1.20	0.24	0.99	0.30	0.54
95th-Percentile Queue Length [ft/ln]	28.22	30.10	5.93	24.86	7.61	13.44

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	9.13	9.36	13.62	5.07	10.09	10.71
Movement LOS	A	A	B	A	B	B
d_A, Approach Delay [s/veh]	9.14		5.34		10.48	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	7.20					
Intersection LOS	A					
Intersection V/C	0.511					

Sequence

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



Intersection Level Of Service Report
Intersection 7: Laguna Vista Drive at Rockport Road

Control Type:	All-way stop	Delay (sec / veh):	11.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.481

Intersection Setup

Name	Laguna Vista Drive			Laguna Vista Drive			Rockport Road			Old Newport 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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Laguna Vista Drive			Laguna Vista Drive			Rockport Road			Old Newport Road		
Base Volume Input [veh/h]	1	113	9	122	65	15	12	32	0	14	55	261
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	1	113	9	122	65	15	12	32	0	14	55	261
Peak Hour Factor	0.9120	0.9120	0.9120	0.9120	0.9120	0.9120	0.9120	0.9120	0.9120	0.9120	0.9120	0.9120
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	31	2	33	18	4	3	9	0	4	15	72
Total Analysis Volume [veh/h]	1	124	10	134	71	16	13	35	0	15	60	286
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	682	684	556	602	590	720
Degree of Utilization, x	0.20	0.32	0.02	0.06	0.03	0.48

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.73	1.40	0.07	0.18	0.08	2.63
95th-Percentile Queue Length [ft]	18.33	34.95	1.79	4.61	1.95	65.81
Approach Delay [s/veh]	9.58	10.75	9.12		12.12	
Approach LOS	A	B	A		B	
Intersection Delay [s/veh]	11.09					
Intersection LOS	B					

Intersection Level Of Service Report

Intersection 8: Menifee Road at Loire Valley Lane/Tres Lagos Drive

Control Type:	Signalized	Delay (sec / veh):	27.5
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.064

Intersection Setup

Name	Menifee Road			Menifee Road			Loire Valley Lane			Tres Lagos Drive		
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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Menifee Road			Menifee Road			Loire Valley Lane			Tres Lagos Drive		
Base Volume Input [veh/h]	57	493	31	27	708	14	12	2	93	104	4	30
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	57	493	31	27	708	14	12	2	93	104	4	30
Peak Hour Factor	0.7100	0.7100	0.7100	0.7100	0.7100	0.7100	0.7100	0.7100	0.7100	0.7100	0.7100	0.7100
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]	20	174	11	10	249	5	4	1	33	37	1	11
Total Analysis Volume [veh/h]	80	694	44	38	997	20	17	3	131	146	6	42
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
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
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	4.0	4.3	0.0	4.0	4.3	0.0	0.0	4.0	0.0	0.0	4.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	17	38	0	12	33	0	0	50	0	0	50	0
Vehicle Extension [s]	1.5	3.0	0.0	1.5	3.0	0.0	0.0	2.5	0.0	0.0	2.5	0.0
Walk [s]	0	10	0	0	10	0	0	10	0	0	10	0
Pedestrian Clearance [s]	0	22	0	0	14	0	0	25	0	0	25	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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.3	0.0	3.0	3.3	0.0	0.0	3.0	0.0	0.0	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	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C	R
C, Cycle Length [s]	74	74	74	74	74	74	74	74	74
L, Total Lost Time per Cycle [s]	5.00	5.30	5.30	5.00	5.30	5.30	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	3.00	3.30	3.30	3.00	3.30	3.30	3.00	3.00	3.00
g_i, Effective Green Time [s]	6	25	25	4	23	23	30	30	30
g / C, Green / Cycle	0.08	0.34	0.34	0.05	0.31	0.31	0.40	0.40	0.40
(v / s)_j Volume / Saturation Flow Rate	0.05	0.14	0.14	0.02	0.27	0.27	0.21	0.57	0.03
s, saturation flow rate [veh/h]	1774	3547	1807	1774	1863	1850	708	265	1583
c, Capacity [veh/h]	135	1195	609	90	581	577	341	203	641
d1, Uniform Delay [s]	33.03	18.84	18.86	34.01	24.11	24.11	16.33	26.18	13.43
k, delay calibration	0.04	0.11	0.11	0.04	0.19	0.19	0.08	0.50	0.08
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.54	0.22	0.44	1.15	7.60	7.65	0.67	22.09	0.03
d3, Initial Queue Delay [s]	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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.59	0.41	0.41	0.42	0.88	0.88	0.44	0.75	0.07
d, Delay for Lane Group [s/veh]	34.57	19.07	19.30	35.15	31.70	31.75	17.00	48.27	13.46
Lane Group LOS	C	B	B	D	C	C	B	D	B
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.41	3.08	3.19	0.67	9.13	9.08	1.62	3.93	0.41
50th-Percentile Queue Length [ft/ln]	35.18	76.89	79.80	16.86	228.37	227.01	40.51	98.30	10.22
95th-Percentile Queue Length [veh/ln]	2.53	5.54	5.75	1.21	14.09	14.02	2.92	7.08	0.74
95th-Percentile Queue Length [ft/ln]	63.32	138.41	143.63	30.35	352.29	350.56	72.92	176.94	18.40

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	34.57	19.14	19.30	35.15	31.73	31.75	17.00	17.00	17.00	48.27	48.27	13.46
Movement LOS	C	B	B	D	C	C	B	B	B	D	D	B
d_A, Approach Delay [s/veh]	20.65			31.85			17.00			40.74		
Approach LOS	C			C			B			D		
d_I, Intersection Delay [s/veh]	27.49											
Intersection LOS	C											
Intersection V/C	1.064											

Sequence

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



Intersection Level Of Service Report
Intersection 9: Laguna Vista Drive at Tres Lagos Drive

Control Type:	All-way stop	Delay (sec / veh):	9.1
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.328

Intersection Setup

Name	Laguna Vista Drive			Laguna Vista Drive			Tres Lagos Drive			Tres Lagos Drive		
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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Laguna Vista Drive			Laguna Vista Drive			Tres Lagos Drive			Tres Lagos Drive		
Base Volume Input [veh/h]	42	127	18	9	57	4	6	10	31	29	53	19
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	42	127	18	9	57	4	6	10	31	29	53	19
Peak Hour Factor	0.7220	0.7220	0.7220	0.7220	0.7220	0.7220	0.7220	0.7220	0.7220	0.7220	0.7220	0.7220
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]	15	44	6	3	20	1	2	3	11	10	18	7
Total Analysis Volume [veh/h]	58	176	25	12	79	6	8	14	43	40	73	26
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	789	757	625	739	624	690
Degree of Utilization, x	0.33	0.13	0.04	0.06	0.11	0.10

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	1.43	0.44	0.11	0.18	0.37	0.33
95th-Percentile Queue Length [ft]	35.86	10.97	2.73	4.62	9.35	8.36
Approach Delay [s/veh]	9.77	8.45	8.14		8.85	
Approach LOS	A	A	A		A	
Intersection Delay [s/veh]	9.13					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 10: Menifee Road at Holland Road

Control Type:	All-way stop	Delay (sec / veh):	14.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.570

Intersection Setup

Name	Menifee Road			Menifee Road			Holland Road			Holland Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T 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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			Yes		

Volumes

Name	Menifee Road			Menifee Road			Holland Road			Holland Road		
Base Volume Input [veh/h]	58	313	107	41	304	206	165	135	35	58	223	98
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	58	313	107	41	304	206	165	135	35	58	223	98
Peak Hour Factor	0.8180	0.8180	0.8180	0.8180	0.8180	0.8180	0.8180	0.8180	0.8180	0.8180	0.8180	0.8180
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]	18	96	33	13	93	63	50	41	11	18	68	30
Total Analysis Volume [veh/h]	71	383	131	50	372	252	202	165	43	71	273	120
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	496	526	550	516	548	590	494	523	541	485	514	541
Degree of Utilization, x	0.14	0.49	0.47	0.10	0.57	0.53	0.41	0.20	0.19	0.15	0.38	0.36

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.50	2.65	2.46	0.32	3.54	3.10	1.97	0.74	0.70	0.51	1.78	1.65
95th-Percentile Queue Length [ft]	12.42	66.35	61.59	8.01	88.61	77.45	49.31	18.38	17.62	12.74	44.50	41.23
Approach Delay [s/veh]	14.86			16.09			13.01			13.22		
Approach LOS	B			C			B			B		
Intersection Delay [s/veh]	14.54											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 11: Briggs Road at Holland Road

Control Type:	Two-way stop	Delay (sec / veh):	13.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.071

Intersection Setup

Name	Briggs Road			Briggs Road			Holland Road			Holland 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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Briggs Road			Briggs Road			Holland Road			Holland Road		
Base Volume Input [veh/h]	58	7	1	0	22	79	59	26	52	2	19	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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	58	7	1	0	22	79	59	26	52	2	19	5
Peak Hour Factor	0.6280	0.6280	0.6280	0.6280	0.6280	0.6280	0.6280	0.6280	0.6280	0.6280	0.6280	0.6280
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	23	3	0	0	9	31	23	10	21	1	8	2
Total Analysis Volume [veh/h]	92	11	2	0	35	126	94	41	83	3	30	8
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	0.06	0.00	0.00	0.00	0.00	0.00	0.16	0.07	0.09	0.01	0.06	0.01
d_M, Delay for Movement [s/veh]	7.71	0.00	0.00	7.24	0.00	0.00	13.71	13.73	11.24	12.78	12.23	8.83
Movement LOS	A	A	A	A	A	A	B	B	B	B	B	A
95th-Percentile Queue Length [veh/ln]	0.13	0.13	0.13	0.00	0.00	0.00	1.38	1.38	1.38	0.23	0.23	0.23
95th-Percentile Queue Length [ft/ln]	3.20	3.20	3.20	0.00	0.00	0.00	34.57	34.57	34.57	5.63	5.63	5.63
d_A, Approach Delay [s/veh]	6.76			0.00			12.77			11.61		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	7.56											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 39: Briggs Road at Old Newport Road

Control Type:	All-way stop	Delay (sec / veh):	7.6
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.134

Intersection Setup

Name	Briggs Road			Briggs Road			Old Newport Road			Old Newport 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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Briggs Road			Briggs Road			Old Newport Road			Old Newport Road		
Base Volume Input [veh/h]	64	14	0	0	23	21	8	2	72	0	0	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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	64	14	0	0	23	21	8	2	72	0	0	0
Peak Hour Factor	0.7090	0.7090	0.7090	0.7090	0.7090	0.7090	0.7090	0.7090	0.7090	0.7090	0.7090	0.7090
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	23	5	0	0	8	7	3	1	25	0	0	0
Total Analysis Volume [veh/h]	90	20	0	0	32	30	11	3	102	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	818	900	946	812
Degree of Utilization, x	0.13	0.07	0.12	0.00

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.46	0.22	0.42	0.00
95th-Percentile Queue Length [ft]	11.59	5.54	10.45	0.00
Approach Delay [s/veh]	8.08	7.30	7.34	0.00
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	7.61			
Intersection LOS	A			

Intersection Level Of Service Report

Intersection 40: Briggs Road at Tres Lagos Road/Gold Crest Drive

Control Type:	Two-way stop	Delay (sec / veh):	10.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name	Briggs Road			Briggs Road			Tres Lagos Drive			Gold Crest Drive		
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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Briggs Road			Briggs Road			Tres Lagos Drive			Gold Crest Drive		
Base Volume Input [veh/h]	0	75	0	0	91	0	0	0	5	1	0	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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	75	0	0	91	0	0	0	5	1	0	2
Peak Hour Factor	0.7010	0.7010	0.7010	0.7010	0.7010	1.0000	0.7010	0.7010	0.7010	0.7010	0.7010	0.7010
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	27	0	0	32	0	0	0	2	0	0	1
Total Analysis Volume [veh/h]	0	107	0	0	130	0	0	0	7	1	0	3
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	0.01	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.47	0.00	0.00	7.43	0.00	0.00	10.08	10.45	8.94	10.10	10.44	8.82
Movement LOS	A	A	A	A	A		B	B	A	B	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.02	0.02	0.01	0.01	0.01
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00	0.58	0.58	0.58	0.35	0.35	0.35
d_A, Approach Delay [s/veh]	0.00			0.00			8.94			9.14		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	0.40											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 1: I-215 SB Ramps at Newport Road

Control Type:	Signalized	Delay (sec / veh):	16.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.523

Intersection Setup

Name	I-215 SB Ramps			I-215 SB Ramps			Newport Road			Newport 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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			No		

Volumes

Name	I-215 SB Ramps			I-215 SB Ramps			Newport Road			Newport Road		
Base Volume Input [veh/h]	0	0	0	613	0	455	0	967	396	0	1216	498
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	0	0	0	613	0	455	0	967	396	0	1216	498
Peak Hour Factor	1.0000	1.0000	1.0000	0.9740	1.0000	0.9740	1.0000	0.9740	0.9740	1.0000	0.9740	0.9740
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	0	0	0	157	0	117	0	248	0	0	312	0
Total Analysis Volume [veh/h]	0	0	0	629	0	467	0	993	0	0	1248	0
Presence of On-Street Parking				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
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	1 - Newport Rd Ramps
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Split	Permiss	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	0	0	4	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lag	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	5	0	0	0	5	0	0	5	0
Maximum Green [s]	0	0	0	30	0	0	0	30	0	0	30	0
Amber [s]	0.0	0.0	0.0	4.5	0.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
All red [s]	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	44	0	0	0	46	0	0	46	0
Vehicle Extension [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	0	0	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	15	0
Rest In Walk				No				No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	3.5	0.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
Minimum Recall				No				No			No	
Maximum Recall				No				No			No	
Pedestrian Recall				No				No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	C	R	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	5.50	5.50	5.50	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.50	3.50	3.50	4.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	23	23	23	55	55	55	55
g / C, Green / Cycle	0.26	0.26	0.26	0.61	0.61	0.61	0.61
(v / s)_i Volume / Saturation Flow Rate	0.21	0.21	0.23	0.15	0.00	0.25	0.00
s, saturation flow rate [veh/h]	1774	1717	1583	6765	1583	5074	1583
c, Capacity [veh/h]	457	442	408	4158	973	3118	973
d1, Uniform Delay [s]	31.19	31.47	32.20	7.82	0.00	8.85	0.00
k, delay calibration	0.04	0.04	0.04	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.25	1.53	2.88	0.14	0.00	0.38	0.00
d3, Initial Queue Delay [s]	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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

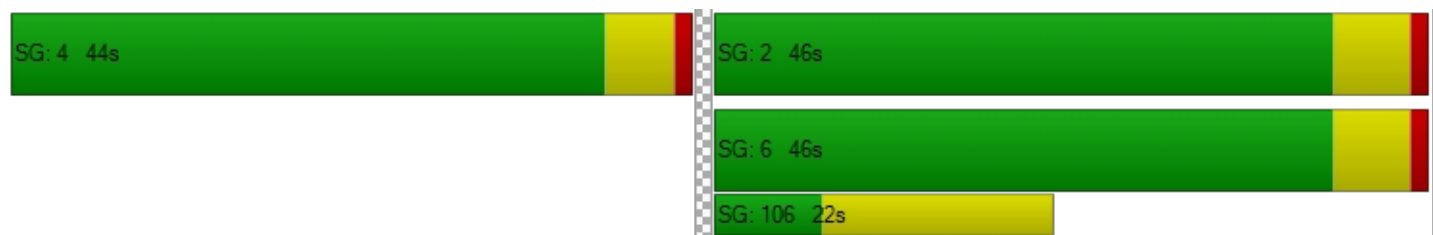
X, volume / capacity	0.80	0.83	0.90	0.24	0.00	0.40	0.00
d, Delay for Lane Group [s/veh]	32.44	33.00	35.08	7.96	0.00	9.24	0.00
Lane Group LOS	C	C	D	A	A	A	A
Critical Lane Group	No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	7.36	7.45	7.76	2.00	0.00	3.84	0.00
50th-Percentile Queue Length [ft/ln]	183.99	186.30	193.99	50.10	0.00	95.92	0.00
95th-Percentile Queue Length [veh/ln]	11.81	11.93	12.33	3.61	0.00	6.91	0.00
95th-Percentile Queue Length [ft/ln]	295.21	298.22	308.20	90.19	0.00	172.66	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	32.67	0.00	34.63	0.00	7.96	0.00	0.00	9.24	0.00
Movement LOS				C		C		A	A		A	A
d_A, Approach Delay [s/veh]	0.00			33.50			7.96			9.24		
Approach LOS	A			C			A			A		
d_I, Intersection Delay [s/veh]	16.83											
Intersection LOS	B											
Intersection V/C	0.523											

Sequence

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



Intersection Level Of Service Report
Intersection 2: I-215 NB Ramps at Newport Road

Control Type:	Signalized	Delay (sec / veh):	19.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.608

Intersection Setup

Name	I-215 NB Ramps			I-215 NB Ramps			Newport Road			Newport 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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			No			No		

Volumes

Name	I-215 NB Ramps			I-215 NB Ramps			Newport Road			Newport Road		
Base Volume Input [veh/h]	515	0	759	0	0	0	0	1317	312	0	1255	356
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	515	0	759	0	0	0	0	1317	312	0	1255	356
Peak Hour Factor	0.9530	1.0000	0.9530	1.0000	1.0000	1.0000	1.0000	0.9530	0.9530	1.0000	0.9530	0.9530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	135	0	199	0	0	0	0	345	0	0	329	0
Total Analysis Volume [veh/h]	540	0	796	0	0	0	0	1382	0	0	1317	0
Presence of On-Street Parking	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
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	1 - Newport Rd Ramps
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	77.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Split	Permiss	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	8	0	0	0	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	5	0	0	0	0	0	0	5	0	0	5	0
Maximum Green [s]	30	0	0	0	0	0	0	30	0	0	30	0
Amber [s]	4.5	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
All red [s]	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	45	0	0	0	0	0	0	45	0	0	45	0
Vehicle Extension [s]	2.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	0	0	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	15	0	0	0	0
Rest In Walk	No							No			No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	3.5	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
Minimum Recall	No							No			No	
Maximum Recall	No							No			No	
Pedestrian Recall	No							No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R		C	R	C	R
C, Cycle Length [s]	90	90	90		90	90	90	90
L, Total Lost Time per Cycle [s]	5.50	5.50	5.50		6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.50	3.50	3.50		4.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	28	28	28		51	51	51	51
g / C, Green / Cycle	0.31	0.31	0.31		0.56	0.56	0.56	0.56
(v / s)_i Volume / Saturation Flow Rate	0.25	0.27	0.28		0.27	0.00	0.19	0.00
s, saturation flow rate [veh/h]	1774	1620	1583		5074	1583	6765	1583
c, Capacity [veh/h]	548	501	489		2857	891	3809	891
d1, Uniform Delay [s]	28.64	29.58	29.85		11.79	0.00	10.65	0.00
k, delay calibration	0.06	0.11	0.12		0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.75	5.63	7.59		0.59	0.00	0.25	0.00
d3, Initial Queue Delay [s]	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
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

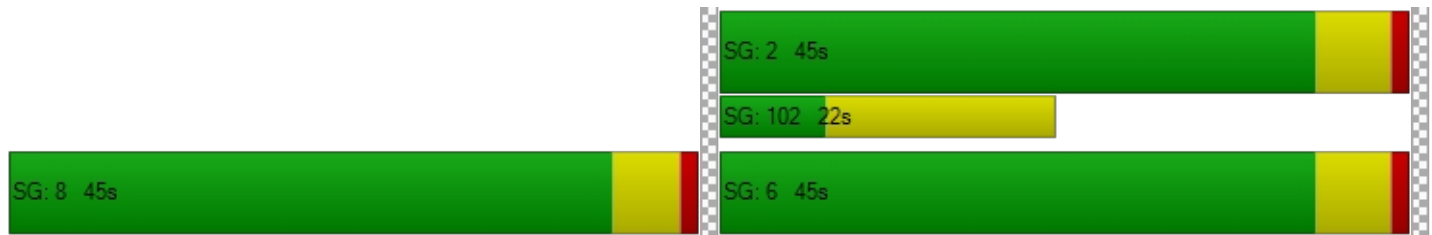
X, volume / capacity	0.81	0.89	0.91		0.48	0.00	0.35	0.00
d, Delay for Lane Group [s/veh]	30.39	35.22	37.43		12.38	0.00	10.90	0.00
Lane Group LOS	C	D	D		B	A	B	A
Critical Lane Group	No	No	Yes		Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	8.81	9.60	9.93		5.25	0.00	3.35	0.00
50th-Percentile Queue Length [ft/ln]	220.17	240.12	248.28		131.18	0.00	83.84	0.00
95th-Percentile Queue Length [veh/ln]	13.67	14.69	15.10		9.00	0.00	6.04	0.00
95th-Percentile Queue Length [ft/ln]	341.84	367.19	377.49		225.09	0.00	150.92	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	31.23	0.00	36.46	0.00	0.00	0.00	0.00	12.38	0.00	0.00	10.90	0.00
Movement LOS	C		D					B	A		B	A
d_A, Approach Delay [s/veh]	34.35			0.00			12.38			10.90		
Approach LOS	C			A			B			B		
d_I, Intersection Delay [s/veh]	19.17											
Intersection LOS	B											
Intersection V/C	0.608											

Sequence

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



Intersection Level Of Service Report
Intersection 3: Antelope Road at Newport Road

Control Type:	Signalized	Delay (sec / veh):	24.4
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.761

Intersection Setup

Name	Antelope Road			Antelope Road			Newport Road			Newport Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T 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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name	Antelope Road			Antelope Road			Newport Road			Newport Road		
Base Volume Input [veh/h]	400	147	300	22	89	112	170	1313	453	141	1078	44
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	400	147	300	22	89	112	170	1313	453	141	1078	44
Peak Hour Factor	0.9840	0.9840	0.9840	0.9840	0.9840	0.9840	0.9840	0.9840	0.9840	0.9840	0.9840	0.9840
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]	102	37	76	6	23	28	43	334	115	36	274	11
Total Analysis Volume [veh/h]	407	149	305	22	90	114	173	1334	460	143	1096	45
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
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	31.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	8	7	4	0
Auxiliary Signal Groups									5,8			
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	4	5	0	4	5	0	4	6	6	4	6	0
Maximum Green [s]	30	30	0	30	30	0	30	30	30	30	30	0
Amber [s]	3.5	3.9	0.0	3.5	3.9	0.0	3.5	4.7	4.7	3.5	4.7	0.0
All red [s]	0.5	1.0	0.0	0.5	1.0	0.0	0.5	2.0	2.0	0.5	2.0	0.0
Split [s]	36	38	0	8	10	0	8	33	33	11	36	0
Vehicle Extension [s]	2.0	3.0	0.0	2.0	3.0	0.0	2.0	4.0	4.0	2.0	4.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	5	0	5	0
Pedestrian Clearance [s]	0	26	0	0	0	0	0	18	18	0	18	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	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.9	0.0	2.0	2.9	0.0	2.0	4.7	4.7	2.0	4.7	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	71	71	71	71	71	71	71	71	71	71	71	71
L, Total Lost Time per Cycle [s]	4.00	4.90	4.90	4.00	4.90	4.90	4.00	6.70	6.70	4.00	6.70	6.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.90	2.90	2.00	2.90	2.90	2.00	4.70	4.70	2.00	4.70	4.70
g_i, Effective Green Time [s]	11	17	17	1	7	7	6	29	29	5	28	28
g / C, Green / Cycle	0.15	0.23	0.23	0.02	0.10	0.10	0.08	0.41	0.41	0.07	0.39	0.39
(v / s)_i Volume / Saturation Flow Rate	0.12	0.08	0.19	0.01	0.05	0.07	0.05	0.34	0.35	0.04	0.21	0.21
s, saturation flow rate [veh/h]	3445	1863	1583	3445	1863	1583	3445	3547	1631	3445	3547	1825
c, Capacity [veh/h]	519	435	370	70	192	163	269	1437	661	232	1400	720
d1, Uniform Delay [s]	29.29	22.87	26.06	34.60	30.27	31.04	32.05	19.33	19.49	32.49	16.66	16.66
k, delay calibration	0.04	0.11	0.11	0.04	0.11	0.11	0.04	0.15	0.31	0.04	0.15	0.15
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.00	0.47	4.68	0.96	1.78	5.32	0.97	2.13	9.25	0.99	0.46	0.89
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

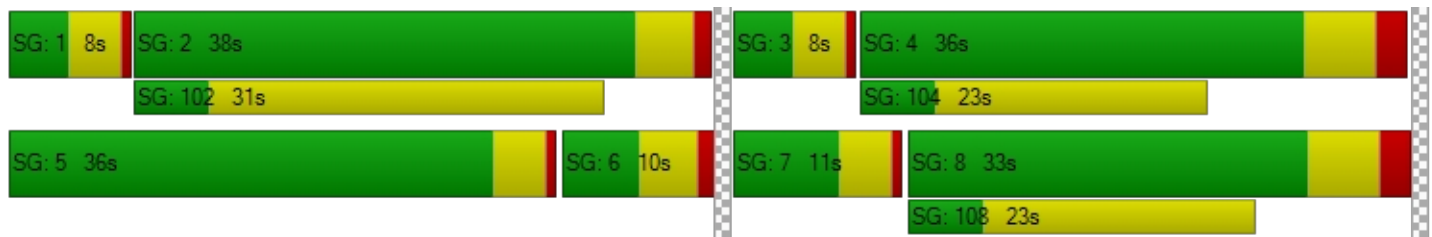
X, volume / capacity	0.78	0.34	0.82	0.32	0.47	0.70	0.64	0.85	0.86	0.62	0.54	0.54
d, Delay for Lane Group [s/veh]	30.29	23.33	30.74	35.55	32.04	36.36	33.02	21.47	28.74	33.48	17.12	17.55
Lane Group LOS	C	C	C	D	C	D	C	C	C	C	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.30	2.05	5.14	0.19	1.51	2.07	1.44	8.75	9.53	1.20	4.45	4.67
50th-Percentile Queue Length [ft/ln]	82.46	51.36	128.54	4.82	37.65	51.86	36.01	218.71	238.32	29.95	111.33	116.81
95th-Percentile Queue Length [veh/ln]	5.94	3.70	8.86	0.35	2.71	3.73	2.59	13.60	14.60	2.16	7.91	8.22
95th-Percentile Queue Length [ft/ln]	148.43	92.45	221.51	8.67	67.77	93.35	64.83	339.98	364.91	53.91	197.86	205.43

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	30.29	23.33	30.74	35.55	32.04	36.36	33.02	22.07	28.74	33.48	17.25	17.55
Movement LOS	C	C	C	D	C	D	C	C	C	C	B	B
d_A, Approach Delay [s/veh]	29.25			34.56			24.60			19.07		
Approach LOS	C			C			C			B		
d_I, Intersection Delay [s/veh]	24.40											
Intersection LOS	C											
Intersection V/C	0.761											

Sequence

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



Intersection Level Of Service Report
Intersection 4: Menifee Road at Newport Road

Control Type:	Signalized	Delay (sec / veh):	26.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.661

Intersection Setup

Name	Menifee Road			Menifee Road			Newport Road			Newport 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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Menifee Road			Menifee Road			Newport Road			Newport Road		
Base Volume Input [veh/h]	159	263	193	44	199	126	202	1107	133	187	863	46
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	159	263	193	44	199	126	202	1107	133	187	863	46
Peak Hour Factor	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	42	70	51	12	53	33	53	293	35	49	228	12
Total Analysis Volume [veh/h]	168	278	204	47	211	133	214	1171	141	198	913	49
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	6	0	5	6	0	5	8	0	5	8	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.2	4.3	0.0	3.2	4.3	0.0	3.2	5.0	0.0	3.2	5.0	0.0
All red [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
Split [s]	17	47	0	11	41	0	21	41	0	21	41	0
Vehicle Extension [s]	1.5	3.0	0.0	1.5	3.0	0.0	1.5	4.0	0.0	1.5	4.0	0.0
Walk [s]	0	10	0	0	10	0	0	10	0	0	10	0
Pedestrian Clearance [s]	0	30	0	0	24	0	0	24	0	0	24	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]	3.2	4.3	0.0	3.2	4.3	0.0	3.2	5.0	0.0	3.2	5.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	L	C	R
C, Cycle Length [s]	72	72	72	72	72	72	72	72	72	72	72	72
L, Total Lost Time per Cycle [s]	5.20	6.30	6.30	5.20	6.30	6.30	5.20	7.00	7.00	5.20	7.00	7.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.20	4.30	4.30	3.20	4.30	4.30	3.20	5.00	5.00	3.20	5.00	5.00
g_i, Effective Green Time [s]	5	12	12	3	10	10	10	23	23	10	23	23
g / C, Green / Cycle	0.07	0.17	0.17	0.04	0.13	0.13	0.15	0.33	0.33	0.14	0.32	0.32
(v / s)_i Volume / Saturation Flow Rate	0.05	0.08	0.13	0.03	0.06	0.08	0.12	0.25	0.25	0.11	0.18	0.03
s, saturation flow rate [veh/h]	3445	3547	1583	1774	3547	1583	1774	3547	1762	1774	5074	1583
c, Capacity [veh/h]	259	594	265	76	479	214	259	1155	574	242	1604	501
d1, Uniform Delay [s]	32.53	27.21	28.78	34.05	28.77	29.54	30.00	21.85	21.85	30.35	20.62	17.45
k, delay calibration	0.04	0.11	0.11	0.04	0.11	0.11	0.04	0.15	0.16	0.04	0.15	0.15
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.02	0.58	4.69	3.04	0.64	2.94	2.56	1.49	3.10	2.58	0.46	0.12
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

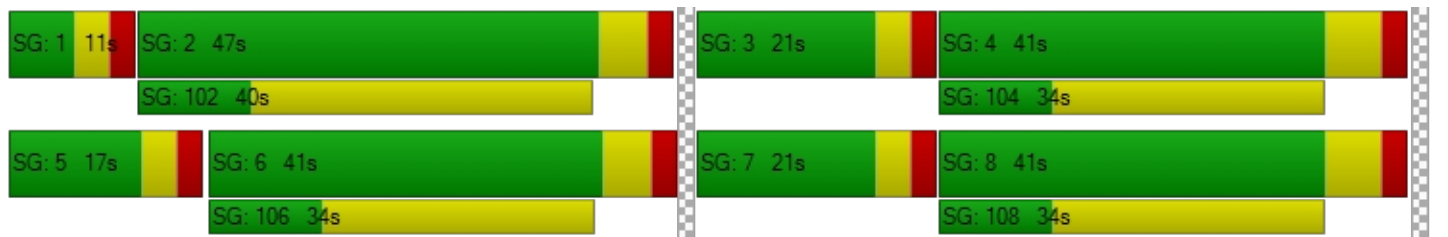
X, volume / capacity	0.65	0.47	0.77	0.62	0.44	0.62	0.83	0.76	0.76	0.82	0.57	0.10
d, Delay for Lane Group [s/veh]	33.55	27.78	33.47	37.09	29.41	32.48	32.55	23.34	24.95	32.93	21.08	17.57
Lane Group LOS	C	C	C	D	C	C	C	C	C	C	C	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.42	2.13	3.58	0.85	1.66	2.27	3.65	6.42	6.64	3.39	4.08	0.56
50th-Percentile Queue Length [ft/ln]	35.46	53.21	89.41	21.27	41.57	56.80	91.17	160.62	166.04	84.67	102.04	14.09
95th-Percentile Queue Length [veh/ln]	2.55	3.83	6.44	1.53	2.99	4.09	6.56	10.58	10.87	6.10	7.35	1.01
95th-Percentile Queue Length [ft/ln]	63.83	95.79	160.93	38.28	74.82	102.24	164.10	264.54	271.70	152.41	183.66	25.36

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	33.55	27.78	33.47	37.09	29.41	32.48	32.55	23.74	24.95	32.93	21.08	17.57
Movement LOS	C	C	C	D	C	C	C	C	C	C	C	B
d_A, Approach Delay [s/veh]	31.06			31.38			25.09			22.95		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	26.13											
Intersection LOS	C											
Intersection V/C	0.661											

Sequence

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



Intersection Level Of Service Report
Intersection 5: Laguna Vista Drive at Newport Road

Control Type:	Signalized	Delay (sec / veh):	9.5
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.573

Intersection Setup

Name	Laguna Vista Drive		Newport Road		Newport Road	
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 Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		Yes	

Volumes

Name	Laguna Vista Drive		Newport Road		Newport Road	
Base Volume Input [veh/h]	151	49	1155	245	77	1007
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
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
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	151	49	1155	245	77	1007
Peak Hour Factor	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	40	13	304	64	20	265
Total Analysis Volume [veh/h]	159	52	1215	258	81	1059
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Split	Split	Permissive	Permissive	Protected	Permissive
Signal group	5	0	8	0	7	4
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	6	0	6	0	5	6
Maximum Green [s]	30	0	30	0	30	30
Amber [s]	4.0	0.0	4.7	0.0	4.0	4.7
All red [s]	1.0	0.0	2.0	0.0	1.0	2.0
Split [s]	40	0	65	0	15	80
Vehicle Extension [s]	2.0	0.0	4.0	0.0	1.5	4.0
Walk [s]	7	0	7	0	0	0
Pedestrian Clearance [s]	28	0	24	0	0	0
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	3.0	0.0	4.7	0.0	3.0	4.7
Minimum Recall	No		No		No	No
Maximum Recall	No		No		No	No
Pedestrian Recall	No		No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	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

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	R	C	C	L	C
C, Cycle Length [s]	46	46	46	46	46	46
L, Total Lost Time per Cycle [s]	5.00	5.00	6.70	6.70	5.00	6.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	4.70	4.70	3.00	4.70
g_i, Effective Green Time [s]	6	6	20	20	3	29
g / C, Green / Cycle	0.13	0.13	0.44	0.44	0.07	0.62
(v / s)_i Volume / Saturation Flow Rate	0.09	0.03	0.28	0.29	0.05	0.21
s, saturation flow rate [veh/h]	1774	1583	3547	1705	1774	5074
c, Capacity [veh/h]	224	200	1564	752	125	3147
d1, Uniform Delay [s]	19.35	18.21	9.97	10.12	20.88	4.21
k, delay calibration	0.04	0.04	0.15	0.15	0.04	0.15
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.56	0.25	0.60	1.38	2.06	0.09
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

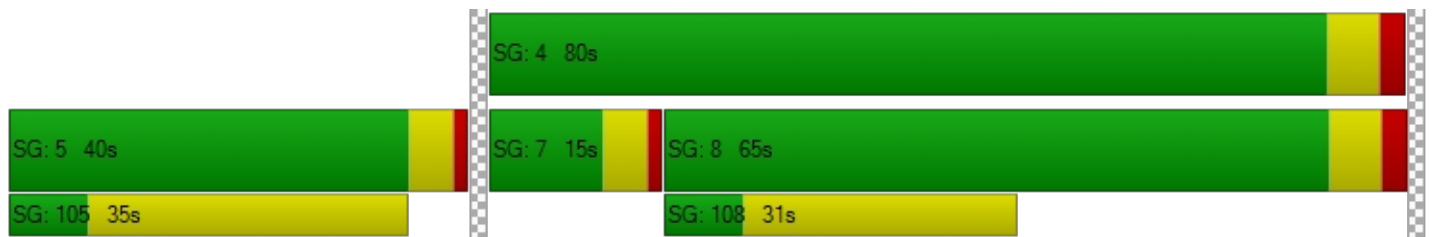
X, volume / capacity	0.71	0.26	0.63	0.65	0.65	0.34
d, Delay for Lane Group [s/veh]	20.90	18.47	10.56	11.50	22.94	4.30
Lane Group LOS	C	B	B	B	C	A
Critical Lane Group	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	1.55	0.46	3.03	3.23	0.84	0.91
50th-Percentile Queue Length [ft/ln]	38.64	11.50	75.65	80.74	20.90	22.68
95th-Percentile Queue Length [veh/ln]	2.78	0.83	5.45	5.81	1.50	1.63
95th-Percentile Queue Length [ft/ln]	69.55	20.70	136.18	145.32	37.62	40.83

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	20.90	18.47	10.74	11.50	22.94	4.30
Movement LOS	C	B	B	B	C	A
d_A, Approach Delay [s/veh]	20.30		10.88		5.62	
Approach LOS	C		B		A	
d_I, Intersection Delay [s/veh]	9.46					
Intersection LOS	A					
Intersection V/C	0.573					

Sequence

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



Intersection Level Of Service Report
Intersection 6: Menifee Road at Rockport Road

Control Type:	Signalized	Delay (sec / veh):	7.7
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.362

Intersection Setup

Name	Menifee Road		Menifee Road		Rockport Road	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		Yes		Yes	

Volumes

Name	Menifee Road		Menifee Road		Rockport Road	
Base Volume Input [veh/h]	564	48	72	438	26	54
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
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
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	564	48	72	438	26	54
Peak Hour Factor	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
Total 15-Minute Volume [veh/h]	147	13	19	115	7	14
Total Analysis Volume [veh/h]	590	50	75	458	27	56
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Split	Split
Signal group	2	0	1	6	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	6	0	5	6	6	0
Maximum Green [s]	30	0	30	30	30	0
Amber [s]	4.3	0.0	4.0	4.3	4.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	31	0	52	83	37	0
Vehicle Extension [s]	3.0	0.0	1.5	3.0	2.5	0.0
Walk [s]	10	0	0	0	10	0
Pedestrian Clearance [s]	15	0	0	0	22	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.3	0.0	3.0	3.3	3.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	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

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	R
C, Cycle Length [s]	26	26	26	26	26	26
L, Total Lost Time per Cycle [s]	5.30	5.30	5.00	5.30	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.30	3.30	3.00	3.30	3.00	3.00
g_i, Effective Green Time [s]	6	6	2	13	3	3
g / C, Green / Cycle	0.23	0.23	0.08	0.51	0.11	0.11
(v / s)_i Volume / Saturation Flow Rate	0.12	0.12	0.04	0.13	0.02	0.04
s, saturation flow rate [veh/h]	3547	1789	1774	3547	1774	1583
c, Capacity [veh/h]	834	420	146	1794	189	168
d1, Uniform Delay [s]	8.83	8.82	11.67	3.72	10.77	10.99
k, delay calibration	0.11	0.11	0.04	0.11	0.08	0.08
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.49	0.95	1.03	0.07	0.26	0.85
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

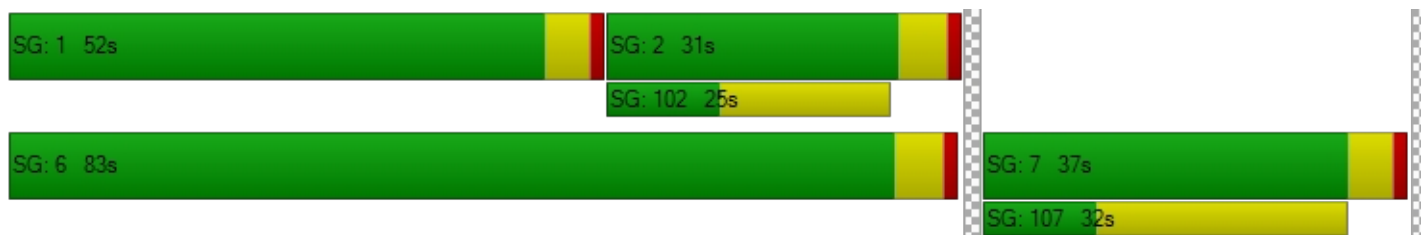
X, volume / capacity	0.51	0.51	0.51	0.26	0.14	0.33
d, Delay for Lane Group [s/veh]	9.32	9.77	12.70	3.80	11.02	11.84
Lane Group LOS	A	A	B	A	B	B
Critical Lane Group	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.72	0.77	0.34	0.22	0.11	0.25
50th-Percentile Queue Length [ft/ln]	18.02	19.36	8.60	5.40	2.86	6.34
95th-Percentile Queue Length [veh/ln]	1.30	1.39	0.62	0.39	0.21	0.46
95th-Percentile Queue Length [ft/ln]	32.43	34.84	15.49	9.72	5.15	11.42

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	9.45	9.77	12.70	3.80	11.02	11.84
Movement LOS	A	A	B	A	B	B
d_A, Approach Delay [s/veh]	9.47		5.05		11.58	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	7.73					
Intersection LOS	A					
Intersection V/C	0.362					

Sequence

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



Intersection Level Of Service Report
Intersection 7: Laguna Vista Drive at Rockport Road

Control Type:	All-way stop	Delay (sec / veh):	12.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.549

Intersection Setup

Name	Laguna Vista Drive			Laguna Vista Drive			Rockport Road			Old Newport 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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Laguna Vista Drive			Laguna Vista Drive			Rockport Road			Old Newport Road		
Base Volume Input [veh/h]	1	45	5	242	65	6	5	98	2	5	53	148
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	1	45	5	242	65	6	5	98	2	5	53	148
Peak Hour Factor	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270
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	14	2	73	20	2	2	30	1	2	16	45
Total Analysis Volume [veh/h]	1	54	6	293	79	7	6	119	2	6	64	179
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	648	690	541	587	555	659
Degree of Utilization, x	0.09	0.55	0.01	0.21	0.01	0.37

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.31	3.37	0.03	0.77	0.03	1.70
95th-Percentile Queue Length [ft]	7.76	84.17	0.84	19.22	0.82	42.38
Approach Delay [s/veh]	9.13	14.40	10.37		11.26	
Approach LOS	A	B	B		B	
Intersection Delay [s/veh]	12.42					
Intersection LOS	B					

Intersection Level Of Service Report

Intersection 8: Menifee Road at Loire Valley Lane/Tres Lagos Drive

Control Type:	Signalized	Delay (sec / veh):	12.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.510

Intersection Setup

Name	Menifee Road			Menifee Road			Loire Valley Lane			Tres Lagos Drive		
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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Menifee Road			Menifee Road			Loire Valley Lane			Tres Lagos Drive		
Base Volume Input [veh/h]	43	423	46	44	258	60	75	114	42	28	80	74
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	43	423	46	44	258	60	75	114	42	28	80	74
Peak Hour Factor	0.9140	0.9140	0.9140	0.9140	0.9140	0.9140	0.9140	0.9140	0.9140	0.9140	0.9140	0.9140
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]	12	116	13	12	71	16	21	31	11	8	22	20
Total Analysis Volume [veh/h]	47	463	50	48	282	66	82	125	46	31	88	81
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
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]	95
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	4.0	4.3	0.0	4.0	4.3	0.0	0.0	4.0	0.0	0.0	4.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	13	38	0	13	38	0	0	44	0	0	44	0
Vehicle Extension [s]	1.5	3.0	0.0	1.5	3.0	0.0	0.0	2.5	0.0	0.0	2.5	0.0
Walk [s]	0	10	0	0	10	0	0	10	0	0	10	0
Pedestrian Clearance [s]	0	22	0	0	14	0	0	25	0	0	25	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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.3	0.0	3.0	3.3	0.0	0.0	3.0	0.0	0.0	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	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C	R
C, Cycle Length [s]	33	33	33	33	33	33	33	33	33
L, Total Lost Time per Cycle [s]	5.00	5.30	5.30	5.00	5.30	5.30	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	3.00	3.30	3.30	3.00	3.30	3.30	3.00	3.00	3.00
g_i, Effective Green Time [s]	2	7	7	2	7	7	8	8	8
g / C, Green / Cycle	0.07	0.21	0.21	0.08	0.21	0.21	0.25	0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.03	0.10	0.10	0.03	0.10	0.10	0.20	0.07	0.05
s, saturation flow rate [veh/h]	1774	3547	1772	1774	1863	1743	1275	1678	1583
c, Capacity [veh/h]	133	752	376	135	397	372	458	550	388
d1, Uniform Delay [s]	14.41	11.27	11.29	14.38	11.23	11.25	11.86	9.98	9.85
k, delay calibration	0.04	0.11	0.11	0.04	0.11	0.11	0.08	0.08	0.08
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.59	0.43	0.88	0.58	0.79	0.88	0.77	0.14	0.20
d3, Initial Queue Delay [s]	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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

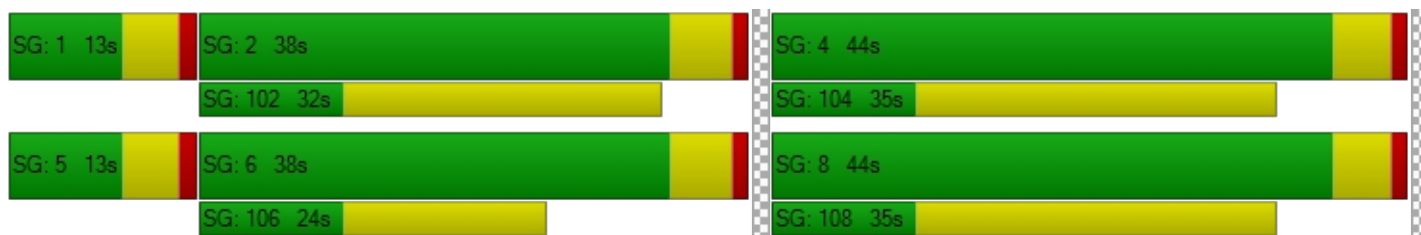
X, volume / capacity	0.35	0.45	0.46	0.35	0.45	0.46	0.55	0.22	0.21
d, Delay for Lane Group [s/veh]	15.00	11.69	12.17	14.96	12.02	12.13	12.64	10.12	10.04
Lane Group LOS	B	B	B	B	B	B	B	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.29	0.85	0.92	0.29	0.93	0.90	1.43	0.53	0.36
50th-Percentile Queue Length [ft/ln]	7.24	21.32	22.91	7.37	23.25	22.49	35.78	13.22	9.04
95th-Percentile Queue Length [veh/ln]	0.52	1.53	1.65	0.53	1.67	1.62	2.58	0.95	0.65
95th-Percentile Queue Length [ft/ln]	13.03	38.37	41.24	13.27	41.85	40.49	64.41	23.80	16.27

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	15.00	11.82	12.17	14.96	12.06	12.13	12.64	12.64	12.64	10.12	10.12	10.04
Movement LOS	B	B	B	B	B	B	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	12.12			12.42			12.64			10.09		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	12.01											
Intersection LOS	B											
Intersection V/C	0.510											

Sequence

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



Intersection Level Of Service Report
Intersection 9: Laguna Vista Drive at Tres Lagos Drive

Control Type:	All-way stop	Delay (sec / veh):	7.8
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.103

Intersection Setup

Name	Laguna Vista Drive			Laguna Vista Drive			Tres Lagos Drive			Tres Lagos Drive		
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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Laguna Vista Drive			Laguna Vista Drive			Tres Lagos Drive			Tres Lagos Drive		
Base Volume Input [veh/h]	38	37	0	11	67	1	1	32	50	10	32	7
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	38	37	0	11	67	1	1	32	50	10	32	7
Peak Hour Factor	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260
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]	10	10	0	3	18	0	0	9	13	3	9	2
Total Analysis Volume [veh/h]	41	40	0	12	72	1	1	35	54	11	35	8
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	808	823	721	842	691	751
Degree of Utilization, x	0.10	0.10	0.05	0.06	0.04	0.04

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.33	0.34	0.16	0.21	0.12	0.11
95th-Percentile Queue Length [ft]	8.33	8.61	3.93	5.13	3.04	2.79
Approach Delay [s/veh]	7.96	7.88	7.54		7.90	
Approach LOS	A	A	A		A	
Intersection Delay [s/veh]	7.81					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 10: Menifee Road at Holland Road

Control Type:	All-way stop	Delay (sec / veh):	13.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.499

Intersection Setup

Name	Menifee Road			Menifee Road			Holland Road			Holland Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T 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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			Yes		

Volumes

Name	Menifee Road			Menifee Road			Holland Road			Holland Road		
Base Volume Input [veh/h]	48	498	40	63	365	92	59	47	82	31	22	49
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	48	498	40	63	365	92	59	47	82	31	22	49
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
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]	13	130	10	16	95	24	15	12	21	8	6	13
Total Analysis Volume [veh/h]	50	519	42	66	380	96	61	49	85	32	23	51
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	523	562	571	512	550	574	468	499	549	482	514	564
Degree of Utilization, x	0.10	0.50	0.49	0.13	0.43	0.41	0.13	0.10	0.15	0.07	0.04	0.09

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.32	2.77	2.70	0.44	2.17	2.03	0.45	0.32	0.54	0.21	0.14	0.30
95th-Percentile Queue Length [ft]	7.89	69.34	67.48	11.00	54.18	50.70	11.13	8.12	13.62	5.30	3.51	7.42
Approach Delay [s/veh]	14.75			13.38			10.86			10.08		
Approach LOS	B			B			B			B		
Intersection Delay [s/veh]	13.38											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 11: Briggs Road at Holland Road

Control Type:	Two-way stop	Delay (sec / veh):	9.9
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.018

Intersection Setup

Name	Briggs Road			Briggs Road			Holland Road			Holland 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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Briggs Road			Briggs Road			Holland Road			Holland Road		
Base Volume Input [veh/h]	13	22	5	5	17	24	26	12	19	2	19	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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	13	22	5	5	17	24	26	12	19	2	19	3
Peak Hour Factor	0.8790	1.0000	0.8790	1.0000	1.0000	1.0000	1.0000	0.8790	0.8790	0.8790	0.8790	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	6	1	1	4	6	7	3	5	1	5	1
Total Analysis Volume [veh/h]	15	22	6	5	17	24	26	14	22	2	22	3
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	0.03	0.02	0.02	0.00	0.03	0.00
d_M, Delay for Movement [s/veh]	7.32	0.00	0.00	7.28	0.00	0.00	9.57	9.90	8.75	9.51	9.81	8.58
Movement LOS	A	A	A	A	A	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.03	0.03	0.03	0.01	0.01	0.01	0.22	0.22	0.22	0.10	0.10	0.10
95th-Percentile Queue Length [ft/ln]	0.63	0.63	0.63	0.24	0.24	0.24	5.61	5.61	5.61	2.61	2.61	2.61
d_A, Approach Delay [s/veh]	2.55			0.79			9.35			9.65		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	5.54											
Intersection LOS	A											

Intersection Level Of Service Report
Intersection 39: Briggs Road at Old Newport Road

Control Type:	All-way stop	Delay (sec / veh):	7.6
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.154

Intersection Setup

Name	Briggs Road			Briggs Road			Old Newport Road			Old Newport 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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Briggs Road			Briggs Road			Old Newport Road			Old Newport Road		
Base Volume Input [veh/h]	60	11	0	0	4	7	12	1	99	0	0	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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	60	11	0	0	4	7	12	1	99	0	0	0
Peak Hour Factor	0.7400	0.7400	0.7400	0.7400	0.7400	0.7400	0.7400	0.7400	0.7400	0.7400	0.7400	0.7400
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]	20	4	0	0	1	2	4	0	33	0	0	0
Total Analysis Volume [veh/h]	81	15	0	0	5	9	16	1	134	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	816	912	979	833
Degree of Utilization, x	0.12	0.02	0.15	0.00

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.40	0.05	0.54	0.00
95th-Percentile Queue Length [ft]	9.96	1.17	13.59	0.00
Approach Delay [s/veh]	8.00	7.01	7.34	0.00
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	7.57			
Intersection LOS	A			

Intersection Level Of Service Report

Intersection 40: Briggs Road at Tres Lagos Road/Gold Crest Drive

Control Type:	Two-way stop	Delay (sec / veh):	10.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name	Briggs Road			Briggs Road			Tres Lagos Drive			Gold Crest Drive		
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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Briggs Road			Briggs Road			Tres Lagos Drive			Gold Crest Drive		
Base Volume Input [veh/h]	0	61	1	0	78	0	0	0	3	1	0	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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	61	1	0	78	0	0	0	3	1	0	0
Peak Hour Factor	0.7760	0.7760	0.7760	0.7760	0.7760	1.0000	0.7760	0.7760	0.7760	0.7760	0.7760	0.7760
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	20	0	0	25	0	0	0	1	0	0	0
Total Analysis Volume [veh/h]	0	79	1	0	101	0	0	0	4	1	0	0
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	0.00
d_M, Delay for Movement [s/veh]	7.41	0.00	0.00	7.37	0.00	0.00	9.62	10.07	8.79	9.65	10.05	8.68
Movement LOS	A	A	A	A	A		A	B	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.32	0.32	0.10	0.10	0.10
d_A, Approach Delay [s/veh]	0.00			0.00			8.79			9.65		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	0.24											
Intersection LOS	B											

APPENDIX E-II

**EXISTING WITH AMBIENT GROWTH YEAR 2020
WITH PROJECT WITH IMPROVEMENTS
TRAFFIC CONDITIONS**

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APPENDIX F

EXISTING WITH AMBIENT GROWTH WITH CUMULATIVE WITH PROJECT TRAFFIC CONDITIONS INTERSECTION LEVEL OF SERVICE CALCULATION WORKSHEETS

APPENDIX F-1

**EXISTING WITH AMBIENT GROWTH YEAR 2020
WITH CUMULATIVE WITH PROJECT
TRAFFIC CONDITIONS**

Intersection Level Of Service Report
Intersection 1: I-215 SB Ramps at Newport Road

Control Type:	Signalized	Delay (sec / veh):	15.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.520

Intersection Setup

Name	I-215 SB Ramps			I-215 SB Ramps			Newport Road			Newport 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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			No		

Volumes

Name	I-215 SB Ramps			I-215 SB Ramps			Newport Road			Newport Road		
Base Volume Input [veh/h]	0	0	0	316	0	608	0	1037	453	0	1296	717
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	0	0	0	316	0	608	0	1037	453	0	1296	717
Peak Hour Factor	1.0000	1.0000	1.0000	0.9500	1.0000	0.9500	1.0000	0.9500	0.9500	1.0000	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	0	0	0	83	0	160	0	273	0	0	341	0
Total Analysis Volume [veh/h]	0	0	0	333	0	640	0	1092	0	0	1364	0
Presence of On-Street Parking				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
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	1 - Newport Rd Ramps
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Split	Permiss	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	0	0	4	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lag	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	5	0	0	0	5	0	0	5	0
Maximum Green [s]	0	0	0	30	0	0	0	30	0	0	30	0
Amber [s]	0.0	0.0	0.0	4.5	0.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
All red [s]	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	40	0	0	0	50	0	0	50	0
Vehicle Extension [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	0	0	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	15	0
Rest In Walk				No				No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	3.5	0.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
Minimum Recall				No				No			No	
Maximum Recall				No				No			No	
Pedestrian Recall				No				No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	C	R	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	5.50	5.50	5.50	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.50	3.50	3.50	4.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	21	21	21	58	58	58	58
g / C, Green / Cycle	0.23	0.23	0.23	0.64	0.64	0.64	0.64
(v / s)_i Volume / Saturation Flow Rate	0.18	0.20	0.20	0.16	0.00	0.27	0.00
s, saturation flow rate [veh/h]	1774	1588	1583	6765	1583	5074	1583
c, Capacity [veh/h]	410	367	366	4335	1015	3251	1015
d1, Uniform Delay [s]	32.46	33.33	33.36	6.90	0.00	7.92	0.00
k, delay calibration	0.04	0.04	0.04	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.32	2.85	2.92	0.14	0.00	0.40	0.00
d3, Initial Queue Delay [s]	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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

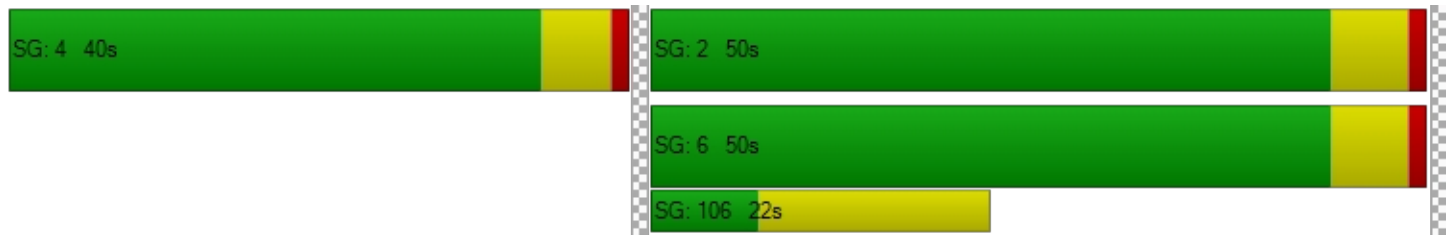
X, volume / capacity	0.79	0.88	0.89	0.25	0.00	0.42	0.00
d, Delay for Lane Group [s/veh]	33.77	36.18	36.27	7.04	0.00	8.32	0.00
Lane Group LOS	C	D	D	A	A	A	A
Critical Lane Group	No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	6.62	6.93	6.94	2.03	0.00	3.91	0.00
50th-Percentile Queue Length [ft/ln]	165.41	173.27	173.56	50.64	0.00	97.73	0.00
95th-Percentile Queue Length [veh/ln]	10.84	11.25	11.26	3.65	0.00	7.04	0.00
95th-Percentile Queue Length [ft/ln]	270.88	281.21	281.59	91.15	0.00	175.91	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	33.84	0.00	36.23	0.00	7.04	0.00	0.00	8.32	0.00
Movement LOS				C		D		A	A		A	A
d_A, Approach Delay [s/veh]	0.00			35.41			7.04			8.32		
Approach LOS	A			D			A			A		
d_I, Intersection Delay [s/veh]	15.60											
Intersection LOS	B											
Intersection V/C	0.520											

Sequence

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



Intersection Level Of Service Report
Intersection 2: I-215 NB Ramps at Newport Road

Control Type:	Signalized	Delay (sec / veh):	16.9
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.554

Intersection Setup

Name	I-215 NB Ramps			I-215 NB Ramps			Newport Road			Newport 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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			No			No		

Volumes

Name	I-215 NB Ramps			I-215 NB Ramps			Newport Road			Newport Road		
Base Volume Input [veh/h]	389	0	715	0	0	0	0	1050	295	0	1673	528
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	389	0	715	0	0	0	0	1050	295	0	1673	528
Peak Hour Factor	0.9500	1.0000	0.9500	1.0000	1.0000	1.0000	1.0000	0.9500	0.9500	1.0000	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	102	0	188	0	0	0	0	276	0	0	440	0
Total Analysis Volume [veh/h]	409	0	753	0	0	0	0	1105	0	0	1761	0
Presence of On-Street Parking	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
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	1 - Newport Rd Ramps
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	79.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Split	Permiss	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	8	0	0	0	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	5	0	0	0	0	0	0	5	0	0	5	0
Maximum Green [s]	30	0	0	0	0	0	0	30	0	0	30	0
Amber [s]	4.5	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
All red [s]	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	44	0	0	0	0	0	0	46	0	0	46	0
Vehicle Extension [s]	2.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	0	0	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	15	0	0	0	0
Rest In Walk	No							No			No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	3.5	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
Minimum Recall	No							No			No	
Maximum Recall	No							No			No	
Pedestrian Recall	No							No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R		C	R	C	R
C, Cycle Length [s]	90	90	90		90	90	90	90
L, Total Lost Time per Cycle [s]	5.50	5.50	5.50		6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.50	3.50	3.50		4.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	25	25	25		54	54	54	54
g / C, Green / Cycle	0.27	0.27	0.27		0.60	0.60	0.60	0.60
(v / s)_i Volume / Saturation Flow Rate	0.22	0.24	0.24		0.22	0.00	0.26	0.00
s, saturation flow rate [veh/h]	1774	1593	1583		5074	1583	6765	1583
c, Capacity [veh/h]	483	434	431		3044	950	4058	950
d1, Uniform Delay [s]	30.45	31.45	31.51		9.20	0.00	9.73	0.00
k, delay calibration	0.04	0.06	0.06		0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.20	3.79	4.19		0.34	0.00	0.34	0.00
d3, Initial Queue Delay [s]	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
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

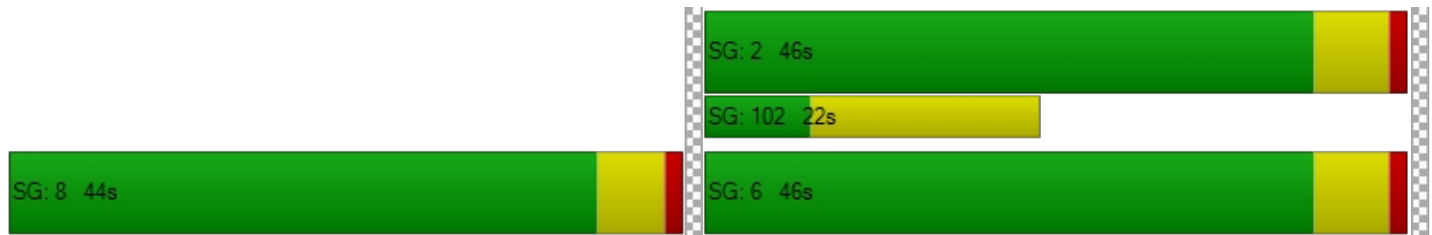
X, volume / capacity	0.80	0.89	0.90		0.36	0.00	0.43	0.00
d, Delay for Lane Group [s/veh]	31.64	35.23	35.69		9.53	0.00	10.07	0.00
Lane Group LOS	C	D	D		A	A	B	A
Critical Lane Group	No	No	Yes		No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	7.73	8.28	8.34		3.45	0.00	4.33	0.00
50th-Percentile Queue Length [ft/ln]	193.37	206.97	208.47		86.20	0.00	108.35	0.00
95th-Percentile Queue Length [veh/ln]	12.30	13.00	13.07		6.21	0.00	7.75	0.00
95th-Percentile Queue Length [ft/ln]	307.39	324.93	326.87		155.16	0.00	193.70	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	31.83	0.00	35.47	0.00	0.00	0.00	0.00	9.53	0.00	0.00	10.07	0.00
Movement LOS	C		D					A	A		B	A
d_A, Approach Delay [s/veh]	34.19			0.00			9.53			10.07		
Approach LOS	C			A			A			B		
d_I, Intersection Delay [s/veh]	16.88											
Intersection LOS	B											
Intersection V/C	0.554											

Sequence

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



Intersection Level Of Service Report
Intersection 3: Antelope Road at Newport Road

Control Type:	Signalized	Delay (sec / veh):	26.0
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.754

Intersection Setup

Name	Antelope Road			Antelope Road			Newport Road			Newport Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T 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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name	Antelope Road			Antelope Road			Newport Road			Newport Road		
Base Volume Input [veh/h]	408	43	94	100	84	166	58	1121	478	76	1642	70
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	408	43	94	100	84	166	58	1121	478	76	1642	70
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
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]	107	11	25	26	22	44	15	295	126	20	432	18
Total Analysis Volume [veh/h]	429	45	99	105	88	175	61	1180	503	80	1728	74
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
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	29.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	8	7	4	0
Auxiliary Signal Groups									5,8			
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	4	5	0	4	5	0	4	6	6	4	6	0
Maximum Green [s]	30	30	0	30	30	0	30	30	30	30	30	0
Amber [s]	3.5	3.9	0.0	3.5	3.9	0.0	3.5	4.7	4.7	3.5	4.7	0.0
All red [s]	0.5	1.0	0.0	0.5	1.0	0.0	0.5	2.0	2.0	0.5	2.0	0.0
Split [s]	13	44	0	8	39	0	8	30	30	8	30	0
Vehicle Extension [s]	2.0	3.0	0.0	2.0	3.0	0.0	2.0	4.0	4.0	2.0	4.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	5	0	5	0
Pedestrian Clearance [s]	0	26	0	0	0	0	0	18	18	0	18	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	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.9	0.0	2.0	2.9	0.0	2.0	4.7	4.7	2.0	4.7	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	73	73	73	73	73	73	73	73	73	73	73	73
L, Total Lost Time per Cycle [s]	4.00	4.90	4.90	4.00	4.90	4.90	4.00	6.70	6.70	4.00	6.70	6.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.90	2.90	2.00	2.90	2.90	2.00	4.70	4.70	2.00	4.70	4.70
g_i, Effective Green Time [s]	11	18	18	4	10	10	3	28	28	3	29	29
g / C, Green / Cycle	0.16	0.25	0.25	0.05	0.14	0.14	0.04	0.39	0.39	0.04	0.39	0.39
(v / s)_i Volume / Saturation Flow Rate	0.12	0.02	0.06	0.03	0.05	0.11	0.02	0.33	0.33	0.02	0.34	0.34
s, saturation flow rate [veh/h]	3445	1863	1583	3445	1863	1583	3445	3547	1593	3445	3547	1824
c, Capacity [veh/h]	539	460	391	181	266	226	135	1379	619	153	1397	718
d1, Uniform Delay [s]	29.76	21.29	22.16	33.92	28.25	30.26	34.42	20.33	20.38	34.25	20.25	20.27
k, delay calibration	0.04	0.11	0.11	0.04	0.11	0.11	0.04	0.15	0.29	0.04	0.15	0.30
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.03	0.09	0.34	1.10	0.72	5.59	0.87	2.06	8.20	1.04	2.20	7.77
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.80	0.10	0.25	0.58	0.33	0.77	0.45	0.84	0.85	0.52	0.85	0.85
d, Delay for Lane Group [s/veh]	30.79	21.38	22.50	35.02	28.97	35.85	35.29	22.39	28.58	35.29	22.45	28.03
Lane Group LOS	C	C	C	D	C	D	D	C	C	D	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	3.57	0.58	1.35	0.91	1.39	3.21	0.53	8.59	8.84	0.70	8.85	10.24
50th-Percentile Queue Length [ft/ln]	89.17	14.60	33.69	22.83	34.87	80.22	13.31	214.87	220.89	17.46	221.32	255.97
95th-Percentile Queue Length [veh/ln]	6.42	1.05	2.43	1.64	2.51	5.78	0.96	13.40	13.71	1.26	13.73	15.49
95th-Percentile Queue Length [ft/ln]	160.51	26.29	60.64	41.09	62.77	144.39	23.96	335.07	342.76	31.43	343.31	387.17

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	30.79	21.38	22.50	35.02	28.97	35.85	35.29	22.50	28.58	35.29	24.19	28.03
Movement LOS	C	C	C	D	C	D	D	C	C	D	C	C
d_A, Approach Delay [s/veh]	28.62			33.97			24.70			24.81		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	25.98											
Intersection LOS	C											
Intersection V/C	0.754											

Sequence

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



Intersection Level Of Service Report
Intersection 4: Menifee Road at Newport Road

Control Type:	Signalized	Delay (sec / veh):	40.3
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.788

Intersection Setup

Name	Menifee Road			Menifee Road			Newport Road			Newport 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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Menifee Road			Menifee Road			Newport Road			Newport Road		
Base Volume Input [veh/h]	213	263	133	57	336	341	251	891	159	275	1082	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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	213	263	133	57	336	341	251	891	159	275	1082	35
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
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]	56	69	35	15	88	90	66	234	42	72	285	9
Total Analysis Volume [veh/h]	224	277	140	60	354	359	264	938	167	289	1139	37
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
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	6	0	5	6	0	5	8	0	5	8	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.2	4.3	0.0	3.2	4.3	0.0	3.2	5.0	0.0	3.2	5.0	0.0
All red [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
Split [s]	16	47	0	11	42	0	11	41	0	11	41	0
Vehicle Extension [s]	1.5	3.0	0.0	1.5	3.0	0.0	1.5	4.0	0.0	1.5	4.0	0.0
Walk [s]	0	10	0	0	10	0	0	10	0	0	10	0
Pedestrian Clearance [s]	0	30	0	0	24	0	0	24	0	0	24	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]	3.2	4.3	0.0	3.2	4.3	0.0	3.2	5.0	0.0	3.2	5.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	L	C	R
C, Cycle Length [s]	103	103	103	103	103	103	103	103	103	103	103	103
L, Total Lost Time per Cycle [s]	5.20	6.30	6.30	5.20	6.30	6.30	5.20	7.00	7.00	5.20	7.00	7.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.20	4.30	4.30	3.20	4.30	4.30	3.20	5.00	5.00	3.20	5.00	5.00
g_i, Effective Green Time [s]	9	30	30	5	26	26	17	26	26	19	27	27
g / C, Green / Cycle	0.09	0.29	0.29	0.04	0.25	0.25	0.17	0.25	0.25	0.18	0.27	0.27
(v / s)_i Volume / Saturation Flow Rate	0.07	0.08	0.09	0.03	0.10	0.23	0.15	0.21	0.21	0.16	0.22	0.02
s, saturation flow rate [veh/h]	3445	3547	1583	1774	3547	1583	1774	3547	1722	1774	5074	1583
c, Capacity [veh/h]	293	1035	462	78	890	397	297	896	435	322	1353	422
d1, Uniform Delay [s]	46.10	28.00	28.32	48.71	32.11	37.38	41.95	36.39	36.40	41.24	35.71	28.36
k, delay calibration	0.04	0.11	0.11	0.04	0.11	0.25	0.04	0.15	0.24	0.04	0.15	0.15
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.56	0.14	0.37	5.78	0.29	15.65	3.65	2.91	8.55	4.10	2.12	0.13
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.76	0.27	0.30	0.77	0.40	0.90	0.89	0.83	0.83	0.90	0.84	0.09
d, Delay for Lane Group [s/veh]	47.66	28.14	28.69	54.49	32.40	53.02	45.60	39.30	44.95	45.34	37.83	28.48
Lane Group LOS	D	C	C	D	C	D	D	D	D	D	D	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.85	2.62	2.71	1.64	3.67	10.32	6.78	9.04	9.47	7.44	9.10	0.70
50th-Percentile Queue Length [ft/ln]	71.17	65.59	67.72	41.03	91.87	257.96	169.52	226.06	236.68	186.05	227.54	17.46
95th-Percentile Queue Length [veh/ln]	5.12	4.72	4.88	2.95	6.61	15.59	11.05	13.97	14.51	11.92	14.05	1.26
95th-Percentile Queue Length [ft/ln]	128.10	118.07	121.90	73.86	165.36	389.67	276.29	349.35	362.83	297.90	351.23	31.44

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	47.66	28.14	28.69	54.49	32.40	53.02	45.60	40.47	44.95	45.34	37.83	28.48
Movement LOS	D	C	C	D	C	D	D	D	D	D	D	C
d_A, Approach Delay [s/veh]	35.08			43.69			42.01			39.08		
Approach LOS	D			D			D			D		
d_I, Intersection Delay [s/veh]	40.26											
Intersection LOS	D											
Intersection V/C	0.788											

Sequence

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



Intersection Level Of Service Report
Intersection 5: Laguna Vista Drive at Newport Road

Control Type:	Signalized	Delay (sec / veh):	11.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.588

Intersection Setup

Name	Laguna Vista Drive		Newport Road		Newport Road	
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 Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		Yes	

Volumes

Name	Laguna Vista Drive		Newport Road		Newport Road	
Base Volume Input [veh/h]	266	112	975	104	103	1092
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
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
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	266	112	975	104	103	1092
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	70	29	257	27	27	287
Total Analysis Volume [veh/h]	280	118	1026	109	108	1149
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Split	Split	Permissive	Permissive	Protected	Permissive
Signal group	5	0	8	0	7	4
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	6	0	6	0	5	6
Maximum Green [s]	30	0	30	0	30	30
Amber [s]	4.0	0.0	4.7	0.0	4.0	4.7
All red [s]	1.0	0.0	2.0	0.0	1.0	2.0
Split [s]	43	0	57	0	20	77
Vehicle Extension [s]	2.0	0.0	4.0	0.0	1.5	4.0
Walk [s]	7	0	7	0	0	0
Pedestrian Clearance [s]	28	0	24	0	0	0
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	3.0	0.0	4.7	0.0	3.0	4.7
Minimum Recall	No		No		No	No
Maximum Recall	No		No		No	No
Pedestrian Recall	No		No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	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

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	R	C	C	L	C
C, Cycle Length [s]	45	45	45	45	45	45
L, Total Lost Time per Cycle [s]	5.00	5.00	6.70	6.70	5.00	6.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	4.70	4.70	3.00	4.70
g_i, Effective Green Time [s]	9	9	16	16	4	24
g / C, Green / Cycle	0.20	0.20	0.35	0.35	0.08	0.54
(v / s)_i Volume / Saturation Flow Rate	0.16	0.07	0.21	0.21	0.06	0.23
s, saturation flow rate [veh/h]	1774	1583	3547	1773	1774	5074
c, Capacity [veh/h]	361	322	1227	613	147	2735
d1, Uniform Delay [s]	17.11	15.57	12.35	12.35	20.34	6.24
k, delay calibration	0.04	0.04	0.15	0.15	0.04	0.15
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.36	0.26	0.72	1.44	2.65	0.15
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

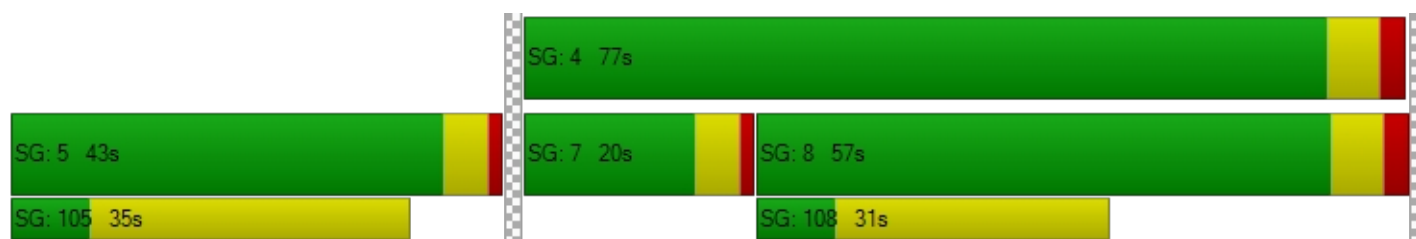
X, volume / capacity	0.78	0.37	0.62	0.62	0.73	0.42
d, Delay for Lane Group [s/veh]	18.47	15.83	13.07	13.79	23.00	6.39
Lane Group LOS	B	B	B	B	C	A
Critical Lane Group	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	2.51	0.93	2.69	2.82	1.10	1.48
50th-Percentile Queue Length [ft/ln]	62.79	23.35	67.37	70.44	27.59	37.05
95th-Percentile Queue Length [veh/ln]	4.52	1.68	4.85	5.07	1.99	2.67
95th-Percentile Queue Length [ft/ln]	113.01	42.02	121.26	126.79	49.67	66.69

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	18.47	15.83	13.26	13.79	23.00	6.39
Movement LOS	B	B	B	B	C	A
d_A, Approach Delay [s/veh]	17.69		13.31		7.82	
Approach LOS	B		B		A	
d_I, Intersection Delay [s/veh]	11.46					
Intersection LOS	B					
Intersection V/C	0.588					

Sequence

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



Intersection Level Of Service Report
Intersection 6: Menifee Road at Rockport Road

Control Type:	Signalized	Delay (sec / veh):	6.9
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.475

Intersection Setup

Name	Menifee Road		Menifee Road		Rockport Road	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		Yes		Yes	

Volumes

Name	Menifee Road		Menifee Road		Rockport Road	
Base Volume Input [veh/h]	498	20	24	701	38	64
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
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
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	498	20	24	701	38	64
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	131	5	6	184	10	17
Total Analysis Volume [veh/h]	524	21	25	738	40	67
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Split	Split
Signal group	2	0	1	6	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	6	0	5	6	6	0
Maximum Green [s]	30	0	30	30	30	0
Amber [s]	4.3	0.0	4.0	4.3	4.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	44	0	38	82	38	0
Vehicle Extension [s]	3.0	0.0	1.5	3.0	2.5	0.0
Walk [s]	10	0	0	0	10	0
Pedestrian Clearance [s]	15	0	0	0	22	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.3	0.0	3.0	3.3	3.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	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

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	R
C, Cycle Length [s]	25	25	25	25	25	25
L, Total Lost Time per Cycle [s]	5.30	5.30	5.00	5.30	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.30	3.30	3.00	3.30	3.00	3.00
g_i, Effective Green Time [s]	6	6	1	12	3	3
g / C, Green / Cycle	0.23	0.23	0.03	0.46	0.13	0.13
(v / s)_i Volume / Saturation Flow Rate	0.10	0.10	0.01	0.21	0.02	0.04
s, saturation flow rate [veh/h]	3547	1826	1774	3547	1774	1583
c, Capacity [veh/h]	829	427	64	1650	235	209
d1, Uniform Delay [s]	8.37	8.34	12.06	4.62	9.86	10.06
k, delay calibration	0.11	0.11	0.04	0.11	0.08	0.08
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.37	0.67	1.42	0.19	0.25	0.65
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

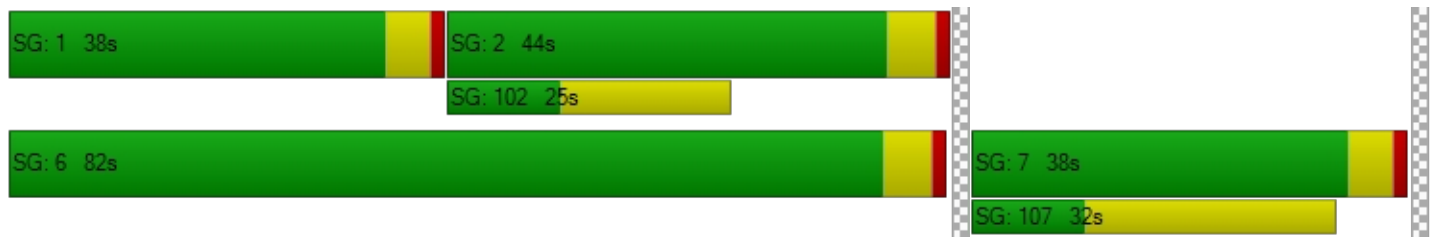
X, volume / capacity	0.44	0.43	0.39	0.45	0.17	0.32
d, Delay for Lane Group [s/veh]	8.74	9.02	13.48	4.81	10.11	10.71
Lane Group LOS	A	A	B	A	B	B
Critical Lane Group	No	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	0.55	0.59	0.12	0.46	0.15	0.27
50th-Percentile Queue Length [ft/ln]	13.81	14.71	3.12	11.47	3.74	6.63
95th-Percentile Queue Length [veh/ln]	0.99	1.06	0.22	0.83	0.27	0.48
95th-Percentile Queue Length [ft/ln]	24.86	26.48	5.62	20.65	6.73	11.94

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	8.82	9.02	13.48	4.81	10.11	10.71
Movement LOS	A	A	B	A	B	B
d_A, Approach Delay [s/veh]	8.83		5.09		10.49	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	6.94					
Intersection LOS	A					
Intersection V/C	0.475					

Sequence

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



Intersection Level Of Service Report
Intersection 7: Laguna Vista Drive at Rockport Road

Control Type:	All-way stop	Delay (sec / veh):	10.9
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.463

Intersection Setup

Name	Laguna Vista Drive			Laguna Vista Drive			Rockport Road			Old Newport 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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Laguna Vista Drive			Laguna Vista Drive			Rockport Road			Old Newport Road		
Base Volume Input [veh/h]	10	113	10	122	65	15	12	32	10	14	55	261
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	113	10	122	65	15	12	32	10	14	55	261
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
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	30	3	32	17	4	3	8	3	4	14	69
Total Analysis Volume [veh/h]	11	119	11	128	68	16	13	34	11	15	58	275
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	683	685	558	624	590	719
Degree of Utilization, x	0.21	0.31	0.02	0.07	0.03	0.46

Movement, Approach, & Intersection Results


95th-Percentile Queue Length [veh]	0.77	1.32	0.07	0.23	0.08	2.46
95th-Percentile Queue Length [ft]	19.28	32.92	1.79	5.81	1.95	61.58
Approach Delay [s/veh]	9.63	10.60	9.01		11.83	
Approach LOS	A	B	A		B	
Intersection Delay [s/veh]	10.86					
Intersection LOS	B					

Intersection Level Of Service Report

Intersection 8: Menifee Road at Loire Valley Lane/Tres Lagos Drive

Control Type:	Signalized	Delay (sec / veh):	15.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.732

Intersection Setup

Name	Menifee Road			Menifee Road			Loire Valley Lane			Tres Lagos Drive		
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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Menifee Road			Menifee Road			Loire Valley Lane			Tres Lagos Drive		
Base Volume Input [veh/h]	57	496	31	36	709	16	15	10	93	114	6	37
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	57	496	31	36	709	16	15	10	93	114	6	37
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
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]	15	131	8	9	187	4	4	3	24	30	2	10
Total Analysis Volume [veh/h]	60	522	33	38	746	17	16	11	98	120	6	39
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
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
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	4.0	4.3	0.0	4.0	4.3	0.0	0.0	4.0	0.0	0.0	4.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	12	40	0	12	40	0	0	48	0	0	48	0
Vehicle Extension [s]	1.5	3.0	0.0	1.5	3.0	0.0	0.0	2.5	0.0	0.0	2.5	0.0
Walk [s]	0	10	0	0	10	0	0	10	0	0	10	0
Pedestrian Clearance [s]	0	22	0	0	14	0	0	25	0	0	25	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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.3	0.0	3.0	3.3	0.0	0.0	3.0	0.0	0.0	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	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C	R
C, Cycle Length [s]	45	45	45	45	45	45	45	45	45
L, Total Lost Time per Cycle [s]	5.00	5.30	5.30	5.00	5.30	5.30	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	3.00	3.30	3.30	3.00	3.30	3.30	3.00	3.00	3.00
g_i, Effective Green Time [s]	4	13	13	3	12	12	14	14	14
g / C, Green / Cycle	0.08	0.29	0.29	0.06	0.27	0.27	0.31	0.31	0.31
(v / s)_i Volume / Saturation Flow Rate	0.03	0.10	0.10	0.02	0.21	0.21	0.13	0.30	0.02
s, saturation flow rate [veh/h]	1774	3547	1807	1774	1863	1848	956	427	1583
c, Capacity [veh/h]	144	1040	530	103	503	499	381	288	478
d1, Uniform Delay [s]	19.26	12.29	12.30	19.99	14.80	14.80	11.99	15.08	11.02
k, delay calibration	0.04	0.11	0.11	0.04	0.11	0.11	0.08	0.08	0.08
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.71	0.20	0.41	0.81	2.42	2.44	0.37	0.78	0.05
d3, Initial Queue Delay [s]	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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

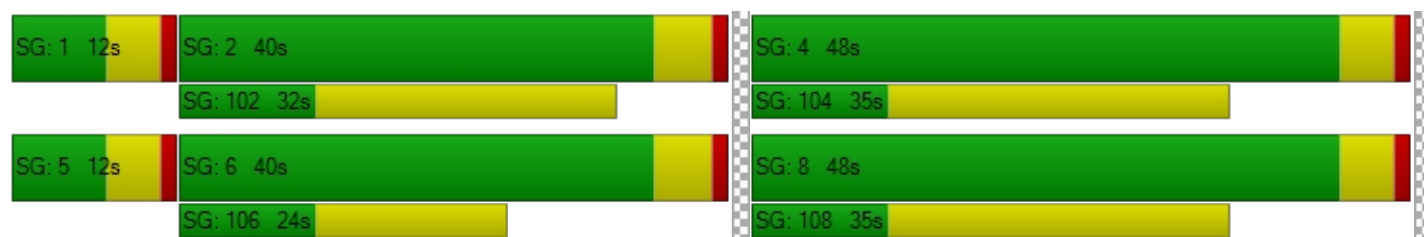
X, volume / capacity	0.42	0.35	0.36	0.37	0.76	0.76	0.33	0.44	0.08
d, Delay for Lane Group [s/veh]	19.97	12.49	12.71	20.81	17.22	17.24	12.36	15.86	11.08
Lane Group LOS	B	B	B	C	B	B	B	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.56	1.23	1.30	0.36	3.31	3.29	0.81	1.08	0.24
50th-Percentile Queue Length [ft/ln]	13.89	30.76	32.43	9.11	82.75	82.20	20.28	26.89	5.88
95th-Percentile Queue Length [veh/ln]	1.00	2.21	2.34	0.66	5.96	5.92	1.46	1.94	0.42
95th-Percentile Queue Length [ft/ln]	25.01	55.37	58.38	16.39	148.96	147.96	36.50	48.40	10.58

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	19.97	12.56	12.71	20.81	17.23	17.24	12.36	12.36	12.36	15.86	15.86	11.08
Movement LOS	B	B	B	C	B	B	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	13.29			17.40			12.36			14.73		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	15.29											
Intersection LOS	B											
Intersection V/C	0.732											

Sequence

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



Intersection Level Of Service Report
Intersection 9: Laguna Vista Drive at Tres Lagos Drive

Control Type:	All-way stop	Delay (sec / veh):	8.7
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.277

Intersection Setup

Name	Laguna Vista Drive			Laguna Vista Drive			Tres Lagos Drive			Tres Lagos Drive		
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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Laguna Vista Drive			Laguna Vista Drive			Tres Lagos Drive			Tres Lagos Drive		
Base Volume Input [veh/h]	61	127	24	10	57	10	10	11	39	32	56	19
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	61	127	24	10	57	10	10	11	39	32	56	19
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
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]	16	33	6	3	15	3	3	3	10	8	15	5
Total Analysis Volume [veh/h]	64	134	25	11	60	11	11	12	41	34	59	20
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	806	786	639	768	639	708
Degree of Utilization, x	0.28	0.10	0.04	0.05	0.09	0.08

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	1.13	0.35	0.11	0.17	0.29	0.26
95th-Percentile Queue Length [ft]	28.23	8.71	2.80	4.22	7.25	6.48
Approach Delay [s/veh]	9.16	8.12	7.98		8.55	
Approach LOS	A	A	A		A	
Intersection Delay [s/veh]	8.68					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 10: Menifee Road at Holland Road

Control Type:	All-way stop	Delay (sec / veh):	13.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.504

Intersection Setup

Name	Menifee Road			Menifee Road			Holland Road			Holland Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T 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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	45.00			45.00			45.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			Yes		

Volumes

Name	Menifee Road			Menifee Road			Holland Road			Holland Road		
Base Volume Input [veh/h]	71	313	117	42	321	215	167	157	45	70	266	99
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	71	313	117	42	321	215	167	157	45	70	266	99
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	82	31	11	84	57	44	41	12	18	70	26
Total Analysis Volume [veh/h]	75	329	123	44	338	226	176	165	47	74	280	104
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	503	535	562	526	560	603	499	530	551	497	529	555
Degree of Utilization, x	0.15	0.42	0.40	0.08	0.50	0.47	0.35	0.20	0.19	0.15	0.36	0.35

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.52	2.08	1.93	0.27	2.82	2.48	1.57	0.74	0.71	0.52	1.65	1.54
95th-Percentile Queue Length [ft]	13.01	52.06	48.25	6.82	70.45	62.00	39.27	18.49	17.65	12.97	41.18	38.43
Approach Delay [s/veh]	13.42			14.32			12.25			12.68		
Approach LOS	B			B			B			B		
Intersection Delay [s/veh]	13.30											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 11: Briggs Road at Holland Road

Control Type:	Two-way stop	Delay (sec / veh):	13.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.104

Intersection Setup

Name	Briggs Road			Briggs Road			Holland Road			Holland 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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Briggs Road			Briggs Road			Holland Road			Holland Road		
Base Volume Input [veh/h]	70	11	4	3	28	79	59	66	52	7	53	16
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	70	11	4	3	28	79	59	66	52	7	53	16
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
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]	18	3	1	1	7	21	16	17	14	2	14	4
Total Analysis Volume [veh/h]	74	12	4	3	29	83	62	69	55	7	56	17
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	0.05	0.00	0.00	0.00	0.00	0.00	0.10	0.11	0.06	0.01	0.09	0.02
d_M, Delay for Movement [s/veh]	7.56	0.00	0.00	7.25	0.00	0.00	12.98	12.67	10.55	12.42	11.82	9.15
Movement LOS	A	A	A	A	A	A	B	B	B	B	B	A
95th-Percentile Queue Length [veh/ln]	0.15	0.15	0.15	0.01	0.01	0.01	1.09	1.09	1.09	0.42	0.42	0.42
95th-Percentile Queue Length [ft/ln]	3.73	3.73	3.73	0.14	0.14	0.14	27.26	27.26	27.26	10.45	10.45	10.45
d_A, Approach Delay [s/veh]	6.22			0.19			12.15			11.31		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	7.95											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 39: Briggs Road at Old Newport Road

Control Type:	All-way stop	Delay (sec / veh):	7.5
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.124

Intersection Setup

Name	Briggs Road			Briggs Road			Old Newport Road			Old Newport 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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Briggs Road			Briggs Road			Old Newport Road			Old Newport Road		
Base Volume Input [veh/h]	64	34	1	1	40	21	10	2	72	1	2	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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	64	34	1	1	40	21	10	2	72	1	2	1
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
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]	17	9	0	0	11	6	3	1	19	0	1	0
Total Analysis Volume [veh/h]	67	36	1	1	42	22	11	2	76	1	2	1
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	836	894	942	839
Degree of Utilization, x	0.12	0.07	0.09	0.00

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.42	0.23	0.31	0.01
95th-Percentile Queue Length [ft]	10.61	5.87	7.80	0.36
Approach Delay [s/veh]	7.92	7.34	7.22	7.31
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	7.53			
Intersection LOS	A			

Intersection Level Of Service Report

Intersection 40: Briggs Road at Tres Lagos Road/Gold Crest Drive

Control Type:	Two-way stop	Delay (sec / veh):	10.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.003

Intersection Setup

Name	Briggs Road			Briggs Road			Tres Lagos Drive			Gold Crest Drive		
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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Briggs Road			Briggs Road			Tres Lagos Drive			Gold Crest Drive		
Base Volume Input [veh/h]	2	82	1	1	92	0	5	2	8	1	5	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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	82	1	1	92	0	5	2	8	1	5	3
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	1.0000	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
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	22	0	0	24	0	1	1	2	0	1	1
Total Analysis Volume [veh/h]	2	86	1	1	97	0	5	2	8	1	5	3
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	0.01	0.00	0.01	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	7.41	0.00	0.00	7.39	0.00	0.00	9.82	10.20	8.83	9.82	10.17	8.76
Movement LOS	A	A	A	A	A		A	B	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.05	0.03	0.03	0.03
95th-Percentile Queue Length [ft/ln]	0.10	0.10	0.10	0.05	0.05	0.00	1.36	1.36	1.36	0.87	0.87	0.87
d_A, Approach Delay [s/veh]	0.17			0.08			9.34			9.66		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	1.18											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 1: I-215 SB Ramps at Newport Road

Control Type:	Signalized	Delay (sec / veh):	18.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.617

Intersection Setup

Name	I-215 SB Ramps			I-215 SB Ramps			Newport Road			Newport 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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			No		

Volumes

Name	I-215 SB Ramps			I-215 SB Ramps			Newport Road			Newport Road		
Base Volume Input [veh/h]	0	0	0	613	0	579	0	1307	545	0	1436	498
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	0	0	0	613	0	579	0	1307	545	0	1436	498
Peak Hour Factor	1.0000	1.0000	1.0000	0.9500	1.0000	0.9500	1.0000	0.9500	0.9500	1.0000	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	0	0	0	161	0	152	0	344	0	0	378	0
Total Analysis Volume [veh/h]	0	0	0	645	0	609	0	1376	0	0	1512	0
Presence of On-Street Parking				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
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	1 - Newport Rd Ramps
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Split	Permiss	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	0	0	4	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lag	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	5	0	0	0	5	0	0	5	0
Maximum Green [s]	0	0	0	30	0	0	0	30	0	0	30	0
Amber [s]	0.0	0.0	0.0	4.5	0.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
All red [s]	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	42	0	0	0	48	0	0	48	0
Vehicle Extension [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	0	0	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	15	0
Rest In Walk				No				No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	3.5	0.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
Minimum Recall				No				No			No	
Maximum Recall				No				No			No	
Pedestrian Recall				No				No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	C	R	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	5.50	5.50	5.50	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.50	3.50	3.50	4.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	26	26	26	52	52	52	52
g / C, Green / Cycle	0.29	0.29	0.29	0.58	0.58	0.58	0.58
(v / s)_i Volume / Saturation Flow Rate	0.24	0.25	0.26	0.20	0.00	0.30	0.00
s, saturation flow rate [veh/h]	1774	1681	1583	6765	1583	5074	1583
c, Capacity [veh/h]	516	489	461	3931	920	2949	920
d1, Uniform Delay [s]	29.55	30.06	30.69	9.90	0.00	11.23	0.00
k, delay calibration	0.07	0.09	0.13	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.95	3.83	8.07	0.25	0.00	0.64	0.00
d3, Initial Queue Delay [s]	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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

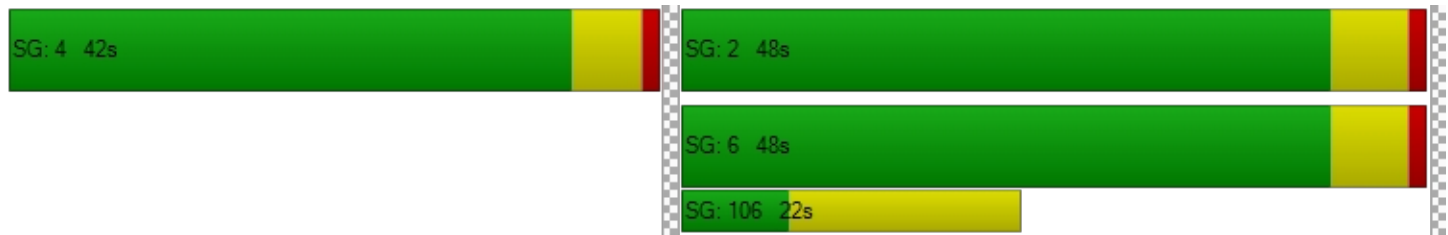
X, volume / capacity	0.81	0.85	0.91	0.35	0.00	0.51	0.00
d, Delay for Lane Group [s/veh]	31.50	33.90	38.77	10.14	0.00	11.87	0.00
Lane Group LOS	C	C	D	B	A	B	A
Critical Lane Group	No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	8.38	8.76	9.45	3.34	0.00	5.62	0.00
50th-Percentile Queue Length [ft/ln]	209.55	219.08	236.20	83.61	0.00	140.59	0.00
95th-Percentile Queue Length [veh/ln]	13.13	13.62	14.49	6.02	0.00	9.51	0.00
95th-Percentile Queue Length [ft/ln]	328.25	340.45	362.22	150.50	0.00	237.81	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	32.35	0.00	37.24	0.00	10.14	0.00	0.00	11.87	0.00
Movement LOS				C		D		B	A		B	A
d_A, Approach Delay [s/veh]	0.00			34.72			10.14			11.87		
Approach LOS	A			C			B			B		
d_I, Intersection Delay [s/veh]	18.21											
Intersection LOS	B											
Intersection V/C	0.617											

Sequence

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



Intersection Level Of Service Report
Intersection 2: I-215 NB Ramps at Newport Road

Control Type:	Signalized	Delay (sec / veh):	20.6
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.675

Intersection Setup

Name	I-215 NB Ramps			I-215 NB Ramps			Newport Road			Newport 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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			No			No		

Volumes

Name	I-215 NB Ramps			I-215 NB Ramps			Newport Road			Newport Road		
Base Volume Input [veh/h]	626	0	759	0	0	0	0	1485	470	0	1343	433
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	626	0	759	0	0	0	0	1485	470	0	1343	433
Peak Hour Factor	0.9500	1.0000	0.9500	1.0000	1.0000	1.0000	1.0000	0.9500	0.9500	1.0000	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	165	0	200	0	0	0	0	391	0	0	353	0
Total Analysis Volume [veh/h]	659	0	799	0	0	0	0	1563	0	0	1414	0
Presence of On-Street Parking	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
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	1 - Newport Rd Ramps
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	77.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Split	Permiss	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	8	0	0	0	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	5	0	0	0	0	0	0	5	0	0	5	0
Maximum Green [s]	30	0	0	0	0	0	0	30	0	0	30	0
Amber [s]	4.5	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
All red [s]	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	45	0	0	0	0	0	0	45	0	0	45	0
Vehicle Extension [s]	2.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	0	0	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	15	0	0	0	0
Rest In Walk	No							No			No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	3.5	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
Minimum Recall	No							No			No	
Maximum Recall	No							No			No	
Pedestrian Recall	No							No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R		C	R	C	R
C, Cycle Length [s]	90	90	90		90	90	90	90
L, Total Lost Time per Cycle [s]	5.50	5.50	5.50		6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.50	3.50	3.50		4.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	30	30	30		48	48	48	48
g / C, Green / Cycle	0.33	0.33	0.33		0.54	0.54	0.54	0.54
(v / s)_i Volume / Saturation Flow Rate	0.27	0.30	0.31		0.31	0.00	0.21	0.00
s, saturation flow rate [veh/h]	1774	1646	1583		5074	1583	6765	1583
c, Capacity [veh/h]	593	551	530		2728	851	3637	851
d1, Uniform Delay [s]	27.41	28.24	28.71		13.88	0.00	12.15	0.00
k, delay calibration	0.11	0.15	0.17		0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.83	6.47	10.14		0.88	0.00	0.31	0.00
d3, Initial Queue Delay [s]	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
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

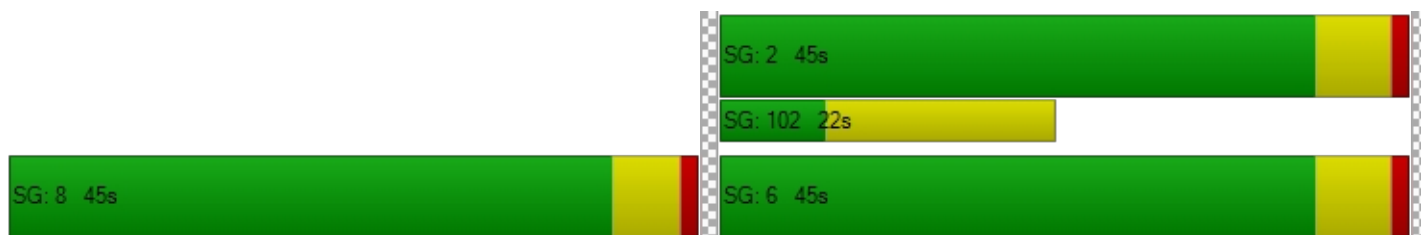
X, volume / capacity	0.82	0.88	0.92		0.57	0.00	0.39	0.00
d, Delay for Lane Group [s/veh]	30.24	34.70	38.85		14.77	0.00	12.46	0.00
Lane Group LOS	C	C	D		B	A	B	A
Critical Lane Group	No	No	Yes		Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	9.66	10.46	11.12		6.76	0.00	3.96	0.00
50th-Percentile Queue Length [ft/ln]	241.42	261.39	277.95		168.90	0.00	98.93	0.00
95th-Percentile Queue Length [veh/ln]	14.75	15.76	16.59		11.02	0.00	7.12	0.00
95th-Percentile Queue Length [ft/ln]	368.83	393.97	414.66		275.47	0.00	178.08	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	31.42	0.00	37.23	0.00	0.00	0.00	0.00	14.77	0.00	0.00	12.46	0.00
Movement LOS	C		D					B	A		B	A
d_A, Approach Delay [s/veh]	34.60			0.00			14.77			12.46		
Approach LOS	C			A			B			B		
d_I, Intersection Delay [s/veh]	20.55											
Intersection LOS	C											
Intersection V/C	0.675											

Sequence

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



Intersection Level Of Service Report
Intersection 3: Antelope Road at Newport Road

Control Type:	Signalized	Delay (sec / veh):	28.7
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.808

Intersection Setup

Name	Antelope Road			Antelope Road			Newport Road			Newport Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T 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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name	Antelope Road			Antelope Road			Newport Road			Newport Road		
Base Volume Input [veh/h]	412	147	300	22	89	127	186	1386	464	141	1206	44
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	412	147	300	22	89	127	186	1386	464	141	1206	44
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
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]	108	39	79	6	23	33	49	365	122	37	317	12
Total Analysis Volume [veh/h]	434	155	316	23	94	134	196	1459	488	148	1269	46
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
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	29.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	8	7	4	0
Auxiliary Signal Groups									5,8			
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	4	5	0	4	5	0	4	6	6	4	6	0
Maximum Green [s]	30	30	0	30	30	0	30	30	30	30	30	0
Amber [s]	3.5	3.9	0.0	3.5	3.9	0.0	3.5	4.7	4.7	3.5	4.7	0.0
All red [s]	0.5	1.0	0.0	0.5	1.0	0.0	0.5	2.0	2.0	0.5	2.0	0.0
Split [s]	12	39	0	13	40	0	8	30	30	8	30	0
Vehicle Extension [s]	2.0	3.0	0.0	2.0	3.0	0.0	2.0	4.0	4.0	2.0	4.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	5	0	5	0
Pedestrian Clearance [s]	0	26	0	0	0	0	0	18	18	0	18	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	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.9	0.0	2.0	2.9	0.0	2.0	4.7	4.7	2.0	4.7	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	75	75	75	75	75	75	75	75	75	75	75	75
L, Total Lost Time per Cycle [s]	4.00	4.90	4.90	4.00	4.90	4.90	4.00	6.70	6.70	4.00	6.70	6.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.90	2.90	2.00	2.90	2.90	2.00	4.70	4.70	2.00	4.70	4.70
g_i, Effective Green Time [s]	12	19	19	2	9	9	6	30	30	5	29	29
g / C, Green / Cycle	0.16	0.25	0.25	0.02	0.11	0.11	0.08	0.40	0.40	0.07	0.38	0.38
(v / s)_i Volume / Saturation Flow Rate	0.13	0.08	0.20	0.01	0.05	0.08	0.06	0.37	0.38	0.04	0.24	0.24
s, saturation flow rate [veh/h]	3445	1863	1583	3445	1863	1583	3445	3547	1638	3445	3547	1830
c, Capacity [veh/h]	542	469	398	72	215	183	291	1414	653	236	1356	700
d1, Uniform Delay [s]	30.58	22.99	26.33	36.32	31.02	32.17	33.43	21.68	22.04	34.12	19.00	19.00
k, delay calibration	0.04	0.11	0.11	0.04	0.11	0.11	0.04	0.15	0.38	0.04	0.15	0.18
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.06	0.41	3.60	0.94	1.40	5.61	1.01	4.78	22.40	1.03	0.72	1.58
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.80	0.33	0.79	0.32	0.44	0.73	0.67	0.93	0.96	0.63	0.64	0.64
d, Delay for Lane Group [s/veh]	31.65	23.40	29.93	37.26	32.42	37.79	34.44	26.47	44.44	35.15	19.72	20.58
Lane Group LOS	C	C	C	D	C	D	C	C	D	D	B	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.73	2.21	5.43	0.21	1.63	2.57	1.73	11.09	13.85	1.31	5.87	6.23
50th-Percentile Queue Length [ft/ln]	93.33	55.20	135.76	5.32	40.67	64.16	43.18	277.37	346.34	32.86	146.80	155.64
95th-Percentile Queue Length [veh/ln]	6.72	3.97	9.25	0.38	2.93	4.62	3.11	16.56	19.96	2.37	9.85	10.32
95th-Percentile Queue Length [ft/ln]	168.00	99.37	231.31	9.57	73.20	115.49	77.72	413.93	498.95	59.15	246.15	257.94

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	31.65	23.40	29.93	37.26	32.42	37.79	34.44	28.17	44.44	35.15	19.99	20.58
Movement LOS	C	C	C	D	C	D	C	C	D	D	B	C
d_A, Approach Delay [s/veh]	29.63			35.73			32.45			21.54		
Approach LOS	C			D			C			C		
d_I, Intersection Delay [s/veh]	28.74											
Intersection LOS	C											
Intersection V/C	0.808											

Sequence

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



Intersection Level Of Service Report
Intersection 4: Menifee Road at Newport Road

Control Type:	Signalized	Delay (sec / veh):	30.8
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.709

Intersection Setup

Name	Menifee Road			Menifee Road			Newport Road			Newport 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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Menifee Road			Menifee Road			Newport Road			Newport Road		
Base Volume Input [veh/h]	184	320	193	57	280	220	264	1153	140	187	897	47
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	184	320	193	57	280	220	264	1153	140	187	897	47
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
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]	48	84	51	15	74	58	69	303	37	49	236	12
Total Analysis Volume [veh/h]	194	337	203	60	295	232	278	1214	147	197	944	49
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	6	0	5	6	0	5	8	0	5	8	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.2	4.3	0.0	3.2	4.3	0.0	3.2	5.0	0.0	3.2	5.0	0.0
All red [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
Split [s]	13	47	0	11	45	0	21	42	0	20	41	0
Vehicle Extension [s]	1.5	3.0	0.0	1.5	3.0	0.0	1.5	4.0	0.0	1.5	4.0	0.0
Walk [s]	0	10	0	0	10	0	0	10	0	0	10	0
Pedestrian Clearance [s]	0	30	0	0	24	0	0	24	0	0	24	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]	3.2	4.3	0.0	3.2	4.3	0.0	3.2	5.0	0.0	3.2	5.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	L	C	R
C, Cycle Length [s]	82	82	82	82	82	82	82	82	82	82	82	82
L, Total Lost Time per Cycle [s]	5.20	6.30	6.30	5.20	6.30	6.30	5.20	7.00	7.00	5.20	7.00	7.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.20	4.30	4.30	3.20	4.30	4.30	3.20	5.00	5.00	3.20	5.00	5.00
g_i, Effective Green Time [s]	7	18	18	4	15	15	15	26	26	11	22	22
g / C, Green / Cycle	0.08	0.22	0.22	0.05	0.18	0.18	0.18	0.32	0.32	0.13	0.27	0.27
(v / s)_i Volume / Saturation Flow Rate	0.06	0.10	0.13	0.03	0.08	0.15	0.16	0.26	0.26	0.11	0.19	0.03
s, saturation flow rate [veh/h]	3445	3547	1583	1774	3547	1583	1774	3547	1762	1774	5074	1583
c, Capacity [veh/h]	278	766	342	81	641	286	319	1124	558	237	1374	429
d1, Uniform Delay [s]	36.86	27.97	29.04	38.80	30.14	32.37	32.84	25.83	25.83	34.76	26.90	22.59
k, delay calibration	0.04	0.11	0.11	0.04	0.11	0.11	0.04	0.15	0.23	0.04	0.15	0.15
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.18	0.40	1.65	4.85	0.52	5.46	2.91	2.03	5.78	2.88	0.88	0.17
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

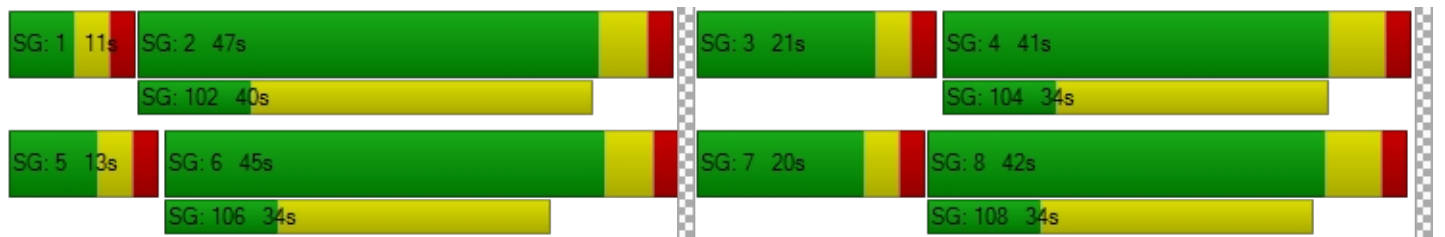
X, volume / capacity	0.70	0.44	0.59	0.74	0.46	0.81	0.87	0.81	0.81	0.83	0.69	0.11
d, Delay for Lane Group [s/veh]	38.04	28.37	30.69	43.65	30.65	37.84	35.75	27.86	31.61	37.65	27.78	22.76
Lane Group LOS	D	C	C	D	C	D	D	C	C	D	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.90	2.84	3.65	1.28	2.59	4.73	5.48	8.08	8.61	3.93	5.43	0.71
50th-Percentile Queue Length [ft/ln]	47.60	70.91	91.28	32.04	64.71	118.26	136.89	201.88	215.29	98.26	135.64	17.87
95th-Percentile Queue Length [veh/ln]	3.43	5.11	6.57	2.31	4.66	8.30	9.31	12.74	13.42	7.07	9.25	1.29
95th-Percentile Queue Length [ft/ln]	85.68	127.65	164.30	57.67	116.49	207.43	232.83	318.39	335.61	176.87	231.14	32.17

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	38.04	28.37	30.69	43.65	30.65	37.84	35.75	28.80	31.61	37.65	27.78	22.76
Movement LOS	D	C	C	D	C	D	D	C	C	D	C	C
d_A, Approach Delay [s/veh]	31.57			34.82			30.23			29.21		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	30.82											
Intersection LOS	C											
Intersection V/C	0.709											

Sequence

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



Intersection Level Of Service Report
Intersection 5: Laguna Vista Drive at Newport Road

Control Type:	Signalized	Delay (sec / veh):	9.5
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.581

Intersection Setup

Name	Laguna Vista Drive		Newport Road		Newport Road	
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 Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		Yes	

Volumes

Name	Laguna Vista Drive		Newport Road		Newport Road	
Base Volume Input [veh/h]	153	49	1198	247	77	1038
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
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
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	153	49	1198	247	77	1038
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	40	13	315	65	20	273
Total Analysis Volume [veh/h]	161	52	1261	260	81	1093
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Split	Split	Permissive	Permissive	Protected	Permissive
Signal group	5	0	8	0	7	4
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	6	0	6	0	5	6
Maximum Green [s]	30	0	30	0	30	30
Amber [s]	4.0	0.0	4.7	0.0	4.0	4.7
All red [s]	1.0	0.0	2.0	0.0	1.0	2.0
Split [s]	41	0	39	0	10	49
Vehicle Extension [s]	2.0	0.0	4.0	0.0	1.5	4.0
Walk [s]	7	0	7	0	0	0
Pedestrian Clearance [s]	28	0	24	0	0	0
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	3.0	0.0	4.7	0.0	3.0	4.7
Minimum Recall	No		No		No	No
Maximum Recall	No		No		No	No
Pedestrian Recall	No		No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	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

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	R	C	C	L	C
C, Cycle Length [s]	47	47	47	47	47	47
L, Total Lost Time per Cycle [s]	5.00	5.00	6.70	6.70	5.00	6.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	4.70	4.70	3.00	4.70
g_i, Effective Green Time [s]	6	6	21	21	3	29
g / C, Green / Cycle	0.13	0.13	0.45	0.45	0.07	0.62
(v / s)_j Volume / Saturation Flow Rate	0.09	0.03	0.29	0.30	0.05	0.22
s, saturation flow rate [veh/h]	1774	1583	3547	1708	1774	5074
c, Capacity [veh/h]	226	202	1591	766	125	3170
d1, Uniform Delay [s]	19.78	18.60	10.06	10.21	21.40	4.24
k, delay calibration	0.04	0.04	0.15	0.15	0.04	0.15
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.55	0.25	0.61	1.40	2.11	0.09
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	0.26	0.64	0.66	0.65	0.34
d, Delay for Lane Group [s/veh]	21.33	18.84	10.67	11.61	23.51	4.33
Lane Group LOS	C	B	B	B	C	A
Critical Lane Group	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	1.61	0.47	3.21	3.42	0.86	0.97
50th-Percentile Queue Length [ft/ln]	40.24	11.83	80.28	85.56	21.53	24.22
95th-Percentile Queue Length [veh/ln]	2.90	0.85	5.78	6.16	1.55	1.74
95th-Percentile Queue Length [ft/ln]	72.43	21.29	144.51	154.01	38.75	43.60

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	21.33	18.84	10.85	11.61	23.51	4.33
Movement LOS	C	B	B	B	C	A
d_A, Approach Delay [s/veh]	20.72		10.98		5.66	
Approach LOS	C		B		A	
d_I, Intersection Delay [s/veh]	9.55					
Intersection LOS	A					
Intersection V/C	0.581					

Sequence

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



Intersection Level Of Service Report
Intersection 6: Menifee Road at Rockport Road

Control Type:	Signalized	Delay (sec / veh):	7.7
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.382

Intersection Setup

Name	Menifee Road		Menifee Road		Rockport Road	
Approach	Northbound		Southbound		Westbound	
Lane Configuration	III		II		II	
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		Yes		Yes	

Volumes

Name	Menifee Road		Menifee Road		Rockport Road	
Base Volume Input [veh/h]	634	48	72	500	26	54
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
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
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	634	48	72	500	26	54
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	167	13	19	132	7	14
Total Analysis Volume [veh/h]	667	51	76	526	27	57
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Split	Split
Signal group	2	0	1	6	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	6	0	5	6	6	0
Maximum Green [s]	30	0	30	30	30	0
Amber [s]	4.3	0.0	4.0	4.3	4.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	60	0	23	83	37	0
Vehicle Extension [s]	3.0	0.0	1.5	3.0	2.5	0.0
Walk [s]	10	0	0	0	10	0
Pedestrian Clearance [s]	15	0	0	0	22	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.3	0.0	3.0	3.3	3.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	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

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	R
C, Cycle Length [s]	27	27	27	27	27	27
L, Total Lost Time per Cycle [s]	5.30	5.30	5.00	5.30	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.30	3.30	3.00	3.30	3.00	3.00
g_i, Effective Green Time [s]	7	7	2	14	3	3
g / C, Green / Cycle	0.25	0.25	0.08	0.52	0.11	0.11
(v / s)_i Volume / Saturation Flow Rate	0.13	0.13	0.04	0.15	0.02	0.04
s, saturation flow rate [veh/h]	3547	1795	1774	3547	1774	1583
c, Capacity [veh/h]	894	453	147	1835	189	168
d1, Uniform Delay [s]	8.85	8.83	12.03	3.74	11.10	11.34
k, delay calibration	0.11	0.11	0.04	0.11	0.08	0.08
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.50	0.96	1.05	0.09	0.26	0.88
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	0.54	0.53	0.52	0.29	0.14	0.34
d, Delay for Lane Group [s/veh]	9.35	9.79	13.09	3.83	11.35	12.21
Lane Group LOS	A	A	B	A	B	B
Critical Lane Group	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.83	0.89	0.37	0.26	0.12	0.27
50th-Percentile Queue Length [ft/ln]	20.79	22.22	9.14	6.52	3.00	6.77
95th-Percentile Queue Length [veh/ln]	1.50	1.60	0.66	0.47	0.22	0.49
95th-Percentile Queue Length [ft/ln]	37.43	40.00	16.46	11.74	5.40	12.18

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	9.47	9.79	13.09	3.83	11.35	12.21
Movement LOS	A	A	B	A	B	B
d_A, Approach Delay [s/veh]	9.50		5.00		11.94	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	7.71					
Intersection LOS	A					
Intersection V/C	0.382					

Sequence

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



Intersection Level Of Service Report
Intersection 7: Laguna Vista Drive at Rockport Road

Control Type:	All-way stop	Delay (sec / veh):	11.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.477

Intersection Setup

Name	Laguna Vista Drive			Laguna Vista Drive			Rockport Road			Old Newport 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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Laguna Vista Drive			Laguna Vista Drive			Rockport Road			Old Newport Road		
Base Volume Input [veh/h]	10	47	10	242	67	10	10	96	10	10	50	148
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	47	10	242	67	10	10	96	10	10	50	148
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
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	12	3	64	18	3	3	25	3	3	13	39
Total Analysis Volume [veh/h]	11	49	11	255	71	11	11	101	11	11	53	156
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	677	707	557	612	568	679
Degree of Utilization, x	0.10	0.48	0.02	0.18	0.02	0.31

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.35	2.59	0.06	0.67	0.06	1.31
95th-Percentile Queue Length [ft]	8.75	64.73	1.51	16.63	1.48	32.68
Approach Delay [s/veh]	8.94	12.65	9.85		10.30	
Approach LOS	A	B	A		B	
Intersection Delay [s/veh]	11.15					
Intersection LOS	B					

Intersection Level Of Service Report

Intersection 8: Menifee Road at Loire Valley Lane/Tres Lagos Drive

Control Type:	Signalized	Delay (sec / veh):	12.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.523

Intersection Setup

Name	Menifee Road			Menifee Road			Loire Valley Lane			Tres Lagos Drive		
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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Menifee Road			Menifee Road			Loire Valley Lane			Tres Lagos Drive		
Base Volume Input [veh/h]	43	484	52	58	311	61	75	114	42	29	80	86
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	43	484	52	58	311	61	75	114	42	29	80	86
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
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	127	14	15	82	16	20	30	11	8	21	23
Total Analysis Volume [veh/h]	45	509	55	61	327	64	79	120	44	31	84	91
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
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	4.0	4.3	0.0	4.0	4.3	0.0	0.0	4.0	0.0	0.0	4.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	14	41	0	17	44	0	0	52	0	0	52	0
Vehicle Extension [s]	1.5	3.0	0.0	1.5	3.0	0.0	0.0	2.5	0.0	0.0	2.5	0.0
Walk [s]	0	10	0	0	10	0	0	10	0	0	10	0
Pedestrian Clearance [s]	0	22	0	0	14	0	0	25	0	0	25	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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.3	0.0	3.0	3.3	0.0	0.0	3.0	0.0	0.0	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	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C	R
C, Cycle Length [s]	33	33	33	33	33	33	33	33	33
L, Total Lost Time per Cycle [s]	5.00	5.30	5.30	5.00	5.30	5.30	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	3.00	3.30	3.30	3.00	3.30	3.30	3.00	3.00	3.00
g_i, Effective Green Time [s]	2	7	7	3	8	8	8	8	8
g / C, Green / Cycle	0.07	0.21	0.21	0.09	0.23	0.23	0.24	0.24	0.24
(v / s)_i Volume / Saturation Flow Rate	0.03	0.11	0.11	0.03	0.11	0.11	0.19	0.07	0.06
s, saturation flow rate [veh/h]	1774	3547	1772	1774	1863	1759	1265	1673	1583
c, Capacity [veh/h]	129	746	373	163	428	404	444	534	375
d1, Uniform Delay [s]	14.65	11.57	11.59	14.18	11.03	11.05	12.17	10.30	10.25
k, delay calibration	0.04	0.11	0.11	0.04	0.11	0.11	0.08	0.08	0.08
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.60	0.52	1.08	0.53	0.79	0.87	0.79	0.15	0.25
d3, Initial Queue Delay [s]	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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

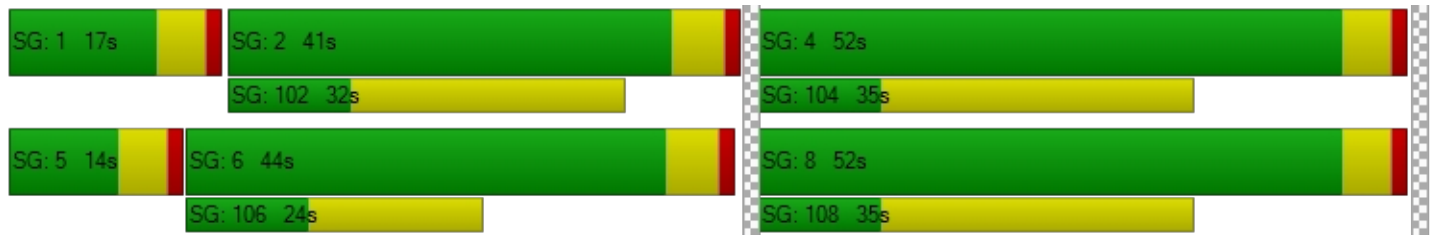
X, volume / capacity	0.35	0.50	0.51	0.38	0.47	0.47	0.55	0.22	0.24
d, Delay for Lane Group [s/veh]	15.25	12.09	12.67	14.71	11.83	11.92	12.95	10.45	10.50
Lane Group LOS	B	B	B	B	B	B	B	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.28	0.97	1.05	0.37	1.04	1.00	1.41	0.53	0.43
50th-Percentile Queue Length [ft/ln]	7.08	24.34	26.20	9.28	25.94	25.11	35.34	13.25	10.64
95th-Percentile Queue Length [veh/ln]	0.51	1.75	1.89	0.67	1.87	1.81	2.54	0.95	0.77
95th-Percentile Queue Length [ft/ln]	12.75	43.81	47.15	16.70	46.70	45.19	63.62	23.84	19.16

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	15.25	12.24	12.67	14.71	11.86	11.92	12.95	12.95	12.95	10.45	10.45	10.50
Movement LOS	B	B	B	B	B	B	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	12.50			12.26			12.95			10.47		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	12.22											
Intersection LOS	B											
Intersection V/C	0.523											

Sequence

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



Intersection Level Of Service Report
Intersection 9: Laguna Vista Drive at Tres Lagos Drive

Control Type:	All-way stop	Delay (sec / veh):	8.1
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.135

Intersection Setup

Name	Laguna Vista Drive			Laguna Vista Drive			Tres Lagos Drive			Tres Lagos Drive		
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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Laguna Vista Drive			Laguna Vista Drive			Tres Lagos Drive			Tres Lagos Drive		
Base Volume Input [veh/h]	52	39	10	11	69	10	10	41	68	22	33	15
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	52	39	10	11	69	10	10	41	68	22	33	15
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	10	3	3	18	3	3	11	18	6	9	4
Total Analysis Volume [veh/h]	55	41	11	12	73	11	11	43	72	23	35	16
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	791	803	692	819	660	744
Degree of Utilization, x	0.14	0.12	0.08	0.09	0.06	0.05

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.47	0.41	0.25	0.29	0.18	0.16
95th-Percentile Queue Length [ft]	11.68	10.14	6.33	7.21	4.44	3.92
Approach Delay [s/veh]	8.27	8.09	7.87		8.13	
Approach LOS	A	A	A		A	
Intersection Delay [s/veh]	8.08					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 10: Menifee Road at Holland Road

Control Type:	All-way stop	Delay (sec / veh):	14.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.553

Intersection Setup

Name	Menifee Road			Menifee Road			Holland Road			Holland Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T 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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	45.00			45.00			45.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			Yes		

Volumes

Name	Menifee Road			Menifee Road			Holland Road			Holland Road		
Base Volume Input [veh/h]	87	513	60	87	365	125	85	108	131	42	59	69
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	87	513	60	87	365	125	85	108	131	42	59	69
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	23	135	16	23	96	33	22	28	34	11	16	18
Total Analysis Volume [veh/h]	92	540	63	92	384	132	89	114	138	44	62	73
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	511	546	557	501	534	562	477	506	555	523	555	606
Degree of Utilization, x	0.18	0.55	0.54	0.18	0.48	0.46	0.19	0.23	0.25	0.08	0.11	0.12

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.65	3.34	3.22	0.67	2.61	2.40	0.68	0.86	0.98	0.27	0.37	0.41
95th-Percentile Queue Length [ft]	16.28	83.51	80.48	16.67	65.13	60.00	16.96	21.40	24.38	6.85	9.37	10.20
Approach Delay [s/veh]	16.11			14.48			11.67			9.83		
Approach LOS	C			B			B			A		
Intersection Delay [s/veh]	14.12											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 11: Briggs Road at Holland Road

Control Type:	Two-way stop	Delay (sec / veh):	11.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.021

Intersection Setup

Name	Briggs Road			Briggs Road			Holland Road			Holland 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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Briggs Road			Briggs Road			Holland Road			Holland Road		
Base Volume Input [veh/h]	14	28	22	15	28	24	27	64	40	13	75	10
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	14	28	22	15	28	24	27	64	40	13	75	10
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
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	7	6	4	7	6	7	17	11	3	20	3
Total Analysis Volume [veh/h]	15	29	23	16	29	25	28	67	42	14	79	11
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	0.01	0.00	0.00	0.04	0.09	0.04	0.02	0.11	0.01
d_M, Delay for Movement [s/veh]	7.34	0.00	0.00	7.34	0.00	0.00	11.20	10.96	9.46	11.20	10.80	9.30
Movement LOS	A	A	A	A	A	A	B	B	A	B	B	A
95th-Percentile Queue Length [veh/ln]	0.03	0.03	0.03	0.03	0.03	0.03	0.63	0.63	0.63	0.49	0.49	0.49
95th-Percentile Queue Length [ft/ln]	0.68	0.68	0.68	0.73	0.73	0.73	15.72	15.72	15.72	12.27	12.27	12.27
d_A, Approach Delay [s/veh]	1.64			1.68			10.55			10.70		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	7.37											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 39: Briggs Road at Old Newport Road

Control Type:	All-way stop	Delay (sec / veh):	7.6
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.132

Intersection Setup

Name	Briggs Road			Briggs Road			Old Newport Road			Old Newport 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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Briggs Road			Briggs Road			Old Newport Road			Old Newport Road		
Base Volume Input [veh/h]	60	43	1	1	37	11	12	1	99	1	2	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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	60	43	1	1	37	11	12	1	99	1	2	1
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
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]	16	11	0	0	10	3	3	0	26	0	1	0
Total Analysis Volume [veh/h]	63	45	1	1	39	12	13	1	104	1	2	1
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	829	865	948	834
Degree of Utilization, x	0.13	0.06	0.12	0.00

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.45	0.19	0.42	0.01
95th-Percentile Queue Length [ft]	11.31	4.79	10.61	0.36
Approach Delay [s/veh]	8.00	7.43	7.33	7.33
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	7.61			
Intersection LOS	A			

Intersection Level Of Service Report

Intersection 40: Briggs Road at Tres Lagos Road/Gold Crest Drive

Control Type:	Two-way stop	Delay (sec / veh):	10.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.006

Intersection Setup

Name	Briggs Road			Briggs Road			Tres Lagos Drive			Gold Crest Drive		
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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Briggs Road			Briggs Road			Tres Lagos Drive			Gold Crest Drive		
Base Volume Input [veh/h]	3	75	1	1	91	0	5	4	5	1	5	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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	3	75	1	1	91	0	5	4	5	1	5	1
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	1.0000	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
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	20	0	0	24	0	1	1	1	0	1	0
Total Analysis Volume [veh/h]	3	79	1	1	96	0	5	4	5	1	5	1
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	0.01	0.01	0.01	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	7.41	0.00	0.00	7.37	0.00	0.00	9.77	10.16	8.83	9.76	10.13	8.72
Movement LOS	A	A	A	A	A		A	B	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.01	0.00	0.00	0.00	0.05	0.05	0.05	0.03	0.03	0.03
95th-Percentile Queue Length [ft/ln]	0.15	0.15	0.15	0.05	0.05	0.00	1.32	1.32	1.32	0.71	0.71	0.71
d_A, Approach Delay [s/veh]	0.27			0.08			9.55			9.87		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	1.16											
Intersection LOS	B											

APPENDIX F-II

**EXISTING WITH AMBIENT GROWTH YEAR 2020
WITH CUMULATIVE WITH PROJECT
WITH IMPROVEMENTS TRAFFIC CONDITIONS**

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APPENDIX F-III

**EXISTING WITH AMBIENT GROWTH YEAR 2040
WITH CUMULATIVE WITH PROJECT
TRAFFIC CONDITIONS**

Intersection Level Of Service Report
Intersection 1: I-215 SB Ramps at Newport Road

Control Type:	Signalized	Delay (sec / veh):	21.2
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.727

Intersection Setup

Name	I-215 SB Ramps			I-215 SB Ramps			Newport Road			Newport 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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			No		

Volumes

Name	I-215 SB Ramps			I-215 SB Ramps			Newport Road			Newport Road		
Base Volume Input [veh/h]	0	0	0	388	0	984	0	1619	513	0	1786	717
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	0	0	0	388	0	984	0	1619	513	0	1786	717
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	0.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	0	0	0	97	0	246	0	405	0	0	447	0
Total Analysis Volume [veh/h]	0	0	0	388	0	984	0	1619	0	0	1786	0
Presence of On-Street Parking				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
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	1 - Newport Rd Ramps
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Split	Permiss	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	0	0	4	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lag	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	5	0	0	0	5	0	0	5	0
Maximum Green [s]	0	0	0	30	0	0	0	30	0	0	30	0
Amber [s]	0.0	0.0	0.0	4.5	0.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
All red [s]	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	42	0	0	0	48	0	0	48	0
Vehicle Extension [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	0	0	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	15	0
Rest In Walk				No				No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	3.5	0.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
Minimum Recall				No				No			No	
Maximum Recall				No				No			No	
Pedestrian Recall				No				No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	C	R	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	5.50	5.50	5.50	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.50	3.50	3.50	4.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	30	30	30	48	48	48	48
g / C, Green / Cycle	0.34	0.34	0.34	0.54	0.54	0.54	0.54
(v / s)_i Volume / Saturation Flow Rate	0.22	0.31	0.31	0.24	0.00	0.35	0.00
s, saturation flow rate [veh/h]	1774	1583	1583	6765	1583	5074	1583
c, Capacity [veh/h]	597	533	533	3624	848	2718	848
d1, Uniform Delay [s]	25.32	28.71	28.71	12.74	0.00	14.95	0.00
k, delay calibration	0.04	0.22	0.22	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.45	13.16	13.16	0.40	0.00	1.26	0.00
d3, Initial Queue Delay [s]	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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

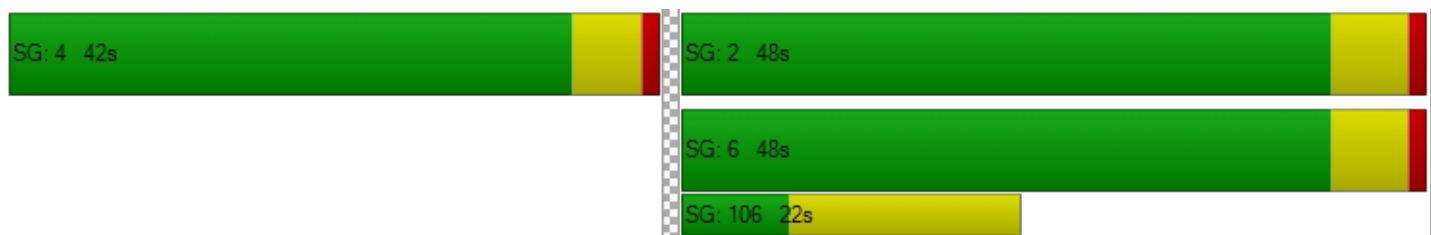
X, volume / capacity	0.65	0.92	0.92	0.45	0.00	0.66	0.00
d, Delay for Lane Group [s/veh]	25.77	41.86	41.86	13.14	0.00	16.21	0.00
Lane Group LOS	C	D	D	B	A	B	A
Critical Lane Group	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	6.87	11.71	11.71	4.74	0.00	8.33	0.00
50th-Percentile Queue Length [ft/ln]	171.71	292.80	292.80	118.58	0.00	208.32	0.00
95th-Percentile Queue Length [veh/ln]	11.17	17.32	17.32	8.32	0.00	13.07	0.00
95th-Percentile Queue Length [ft/ln]	279.16	433.12	433.12	207.88	0.00	326.67	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	25.77	0.00	41.86	0.00	13.14	0.00	0.00	16.21	0.00
Movement LOS				C		D		B	A		B	A
d_A, Approach Delay [s/veh]	0.00			37.31			13.14			16.21		
Approach LOS	A			D			B			B		
d_I, Intersection Delay [s/veh]	21.23											
Intersection LOS	C											
Intersection V/C	0.727											

Sequence

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



Intersection Level Of Service Report
Intersection 2: I-215 NB Ramps at Newport Road

Control Type:	Signalized	Delay (sec / veh):	20.0
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.677

Intersection Setup

Name	I-215 NB Ramps			I-215 NB Ramps			Newport Road			Newport 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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			No			No		

Volumes

Name	I-215 NB Ramps			I-215 NB Ramps			Newport Road			Newport Road		
Base Volume Input [veh/h]	700	0	715	0	0	0	0	1617	295	0	1745	745
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	700	0	715	0	0	0	0	1617	295	0	1745	745
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	0.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	175	0	179	0	0	0	0	404	0	0	436	0
Total Analysis Volume [veh/h]	700	0	715	0	0	0	0	1617	0	0	1745	0
Presence of On-Street Parking	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
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	1 - Newport Rd Ramps
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	14.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Split	Permiss	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	8	0	0	0	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	5	0	0	0	0	0	0	5	0	0	5	0
Maximum Green [s]	30	0	0	0	0	0	0	30	0	0	30	0
Amber [s]	4.5	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
All red [s]	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	43	0	0	0	0	0	0	47	0	0	47	0
Vehicle Extension [s]	2.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	0	0	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	15	0	0	0	0
Rest In Walk	No							No			No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	3.5	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
Minimum Recall	No							No			No	
Maximum Recall	No							No			No	
Pedestrian Recall	No							No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R		C	R	C	R
C, Cycle Length [s]	90	90	90		90	90	90	90
L, Total Lost Time per Cycle [s]	5.50	5.50	5.50		6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.50	3.50	3.50		4.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	29	29	29		49	49	49	49
g / C, Green / Cycle	0.33	0.33	0.33		0.55	0.55	0.55	0.55
(v / s)_i Volume / Saturation Flow Rate	0.27	0.28	0.30		0.32	0.00	0.26	0.00
s, saturation flow rate [veh/h]	1774	1670	1583		5074	1583	6765	1583
c, Capacity [veh/h]	576	542	514		2777	866	3702	866
d1, Uniform Delay [s]	27.90	28.54	29.17		13.52	0.00	12.41	0.00
k, delay calibration	0.12	0.15	0.18		0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.15	5.99	10.85		0.90	0.00	0.43	0.00
d3, Initial Queue Delay [s]	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
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

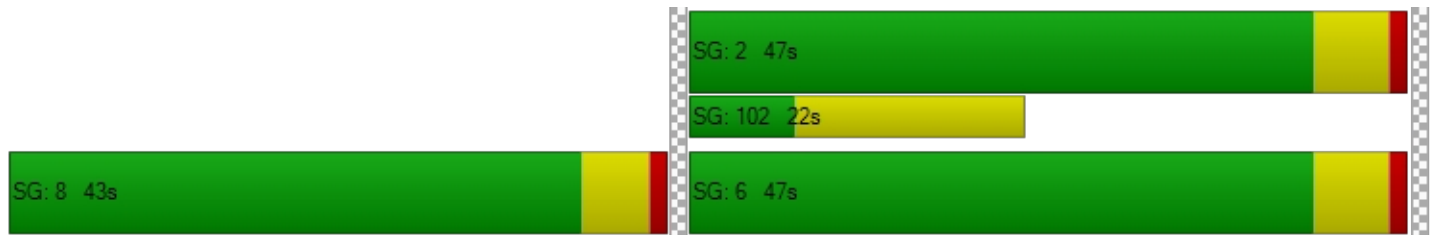
X, volume / capacity	0.82	0.87	0.92		0.58	0.00	0.47	0.00
d, Delay for Lane Group [s/veh]	31.05	34.54	40.02		14.42	0.00	12.84	0.00
Lane Group LOS	C	C	D		B	A	B	A
Critical Lane Group	No	No	Yes		Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	9.48	10.09	10.93		6.91	0.00	5.07	0.00
50th-Percentile Queue Length [ft/ln]	237.00	252.13	273.37		172.63	0.00	126.77	0.00
95th-Percentile Queue Length [veh/ln]	14.53	15.29	16.36		11.21	0.00	8.76	0.00
95th-Percentile Queue Length [ft/ln]	363.24	382.34	408.95		280.37	0.00	219.09	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	32.19	0.00	38.16	0.00	0.00	0.00	0.00	14.42	0.00	0.00	12.84	0.00
Movement LOS	C		D					B	A		B	A
d_A, Approach Delay [s/veh]	35.20			0.00			14.42			12.84		
Approach LOS	D			A			B			B		
d_I, Intersection Delay [s/veh]	20.00											
Intersection LOS	C											
Intersection V/C	0.677											

Sequence

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



Intersection Level Of Service Report
Intersection 3: Antelope Road at Newport Road

Control Type:	Signalized	Delay (sec / veh):	25.7
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.808

Intersection Setup

Name	Antelope Road			Antelope Road			Newport Road			Newport Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	[Diagram]			[Diagram]			[Diagram]			[Diagram]		
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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name	Antelope Road			Antelope Road			Newport Road			Newport Road		
Base Volume Input [veh/h]	408	43	110	100	84	166	58	1423	545	116	2000	70
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	408	43	110	100	84	166	58	1423	545	116	2000	70
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]	102	11	28	25	21	42	15	356	136	29	500	18
Total Analysis Volume [veh/h]	408	43	110	100	84	166	58	1423	545	116	2000	70
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
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	29.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	8	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	4	5	0	4	5	0	4	6	6	4	6	0
Maximum Green [s]	30	30	0	30	30	0	30	30	30	30	30	0
Amber [s]	3.5	3.9	0.0	3.5	3.9	0.0	3.5	4.7	4.7	3.5	4.7	0.0
All red [s]	0.5	1.0	0.0	0.5	1.0	0.0	0.5	2.0	2.0	0.5	2.0	0.0
Split [s]	35	43	0	8	16	0	10	51	51	8	49	0
Vehicle Extension [s]	2.0	3.0	0.0	2.0	3.0	0.0	2.0	4.0	4.0	2.0	4.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	5	0	5	0
Pedestrian Clearance [s]	0	33	0	0	33	0	0	26	26	0	26	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	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.9	0.0	2.0	2.9	0.0	2.0	4.7	4.7	2.0	4.7	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	74	74	74	74	74	74	74	74	74	74	74	74
L, Total Lost Time per Cycle [s]	4.00	4.90	4.90	4.00	4.90	4.90	4.00	6.70	6.70	4.00	6.70	6.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.90	2.90	2.00	2.90	2.90	2.00	4.70	4.70	2.00	4.70	4.70
g_i, Effective Green Time [s]	11	17	17	4	10	10	3	29	29	4	31	31
g / C, Green / Cycle	0.15	0.23	0.23	0.05	0.14	0.14	0.04	0.40	0.40	0.06	0.41	0.41
(v / s)_i Volume / Saturation Flow Rate	0.12	0.01	0.07	0.03	0.02	0.10	0.02	0.28	0.34	0.03	0.39	0.04
s, saturation flow rate [veh/h]	3445	3547	1583	3445	3547	1583	3445	5074	1583	3445	5074	1583
c, Capacity [veh/h]	515	834	373	173	482	215	131	2004	625	195	2099	655
d1, Uniform Delay [s]	30.57	22.06	23.42	34.62	28.50	31.09	35.08	18.96	20.80	34.32	21.15	13.41
k, delay calibration	0.04	0.11	0.11	0.04	0.11	0.11	0.04	0.15	0.32	0.04	0.15	0.15
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.05	0.03	0.44	1.14	0.17	5.78	0.88	0.67	10.55	1.08	4.42	0.10
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

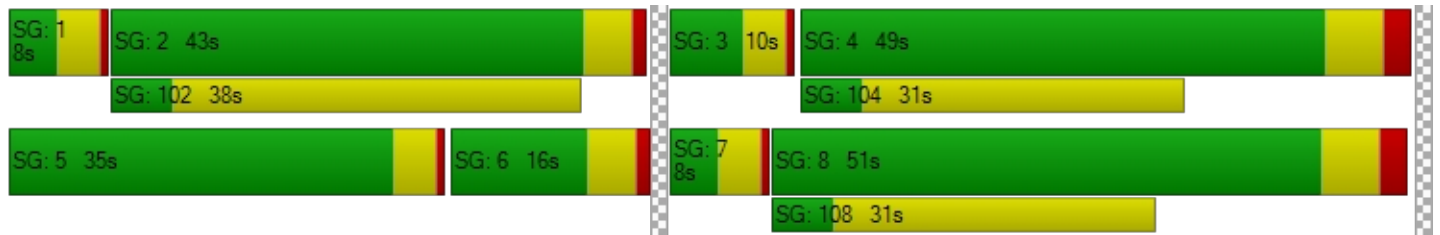
X, volume / capacity	0.79	0.05	0.30	0.58	0.17	0.77	0.44	0.71	0.87	0.59	0.95	0.11
d, Delay for Lane Group [s/veh]	31.62	22.09	23.86	35.76	28.67	36.87	35.96	19.63	31.36	35.40	25.57	13.51
Lane Group LOS	C	C	C	D	C	D	D	B	C	D	C	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	3.48	0.28	1.57	0.89	0.66	3.12	0.52	6.46	9.82	1.03	11.01	0.69
50th-Percentile Queue Length [ft/ln]	86.89	7.11	39.33	22.24	16.39	78.08	12.93	161.53	245.53	25.66	275.32	17.36
95th-Percentile Queue Length [veh/ln]	6.26	0.51	2.83	1.60	1.18	5.62	0.93	10.63	14.96	1.85	16.46	1.25
95th-Percentile Queue Length [ft/ln]	156.41	12.79	70.80	40.03	29.51	140.54	23.28	265.75	374.02	46.19	411.38	31.24

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	31.62	22.09	23.86	35.76	28.67	36.87	35.96	19.63	31.36	35.40	25.57	13.51
Movement LOS	C	C	C	D	C	D	D	B	C	D	C	B
d_A, Approach Delay [s/veh]	29.37			34.59			23.25			25.71		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	25.74											
Intersection LOS	C											
Intersection V/C	0.808											

Sequence

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



Intersection Level Of Service Report
Intersection 4: Menifee Road at Newport Road

Control Type:	Signalized	Delay (sec / veh):	65.9
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.984

Intersection Setup

Name	Menifee Road			Menifee Road			Newport Road			Newport Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	[Diagram]			[Diagram]			[Diagram]			[Diagram]		
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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Menifee Road			Menifee Road			Newport Road			Newport Road		
Base Volume Input [veh/h]	258	497	133	57	606	619	571	891	233	275	1082	55
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	258	497	133	57	606	619	571	891	233	275	1082	55
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]	65	124	33	14	152	155	143	223	58	69	271	14
Total Analysis Volume [veh/h]	258	497	133	57	606	619	571	891	233	275	1082	55
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
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]	105
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	6	0	5	6	0	5	8	0	5	8	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.2	4.3	0.0	3.2	4.3	0.0	3.2	5.0	0.0	3.2	5.0	0.0
All red [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
Split [s]	11	45	0	11	45	0	11	38	0	11	38	0
Vehicle Extension [s]	1.5	3.0	0.0	1.5	3.0	0.0	1.5	4.0	0.0	1.5	4.0	0.0
Walk [s]	0	10	0	0	10	0	0	10	0	0	10	0
Pedestrian Clearance [s]	0	28	0	0	28	0	0	21	0	0	21	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]	3.2	4.3	0.0	3.2	4.3	0.0	3.2	5.0	0.0	3.2	5.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	113	113	113	113	113	113	113	113	113	113	113	113
L, Total Lost Time per Cycle [s]	5.20	6.30	6.30	5.20	6.30	6.30	5.20	7.00	7.00	5.20	7.00	7.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.20	4.30	4.30	3.20	4.30	4.30	3.20	5.00	5.00	3.20	5.00	5.00
g_i, Effective Green Time [s]	11	36	36	4	30	30	21	38	38	11	28	28
g / C, Green / Cycle	0.09	0.32	0.32	0.04	0.27	0.27	0.18	0.33	0.33	0.10	0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.07	0.14	0.08	0.02	0.17	0.39	0.17	0.18	0.15	0.08	0.21	0.03
s, saturation flow rate [veh/h]	3445	3547	1583	3445	3547	1583	3445	5074	1583	3445	5074	1583
c, Capacity [veh/h]	322	1139	508	130	941	420	635	1689	527	339	1254	391
d1, Uniform Delay [s]	50.20	30.29	28.44	53.21	36.79	41.52	45.08	30.51	29.49	49.92	40.72	33.19
k, delay calibration	0.04	0.11	0.11	0.04	0.11	0.50	0.04	0.15	0.15	0.04	0.15	0.15
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.76	0.26	0.27	0.86	0.74	225.48	1.94	0.37	0.83	1.78	2.67	0.23
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

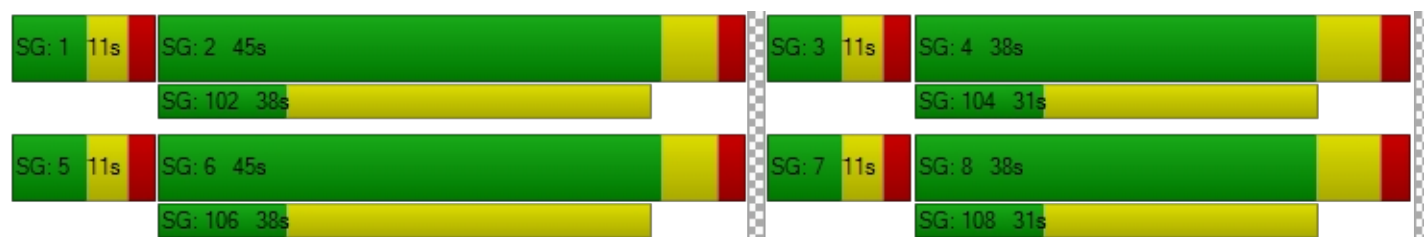
X, volume / capacity	0.80	0.44	0.26	0.44	0.64	1.47	0.90	0.53	0.44	0.81	0.86	0.14
d, Delay for Lane Group [s/veh]	51.96	30.56	28.71	54.06	37.53	267.00	47.02	30.88	30.32	51.70	43.39	33.42
Lane Group LOS	D	C	C	D	D	F	D	C	C	D	D	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	3.64	5.36	2.71	0.81	7.46	37.84	7.94	6.56	5.05	3.88	9.81	1.21
50th-Percentile Queue Length [ft/ln]	91.06	133.95	67.73	20.17	186.50	946.10	198.55	163.90	126.25	96.98	245.35	30.16
95th-Percentile Queue Length [veh/ln]	6.56	9.15	4.88	1.45	11.94	58.03	12.56	10.76	8.74	6.98	14.95	2.17
95th-Percentile Queue Length [ft/ln]	163.90	228.85	121.91	36.31	298.49	1450.83	314.09	268.88	218.38	174.57	373.80	54.29

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	51.96	30.56	28.71	54.06	37.53	267.00	47.02	30.88	30.32	51.70	43.39	33.42
Movement LOS	D	C	C	D	D	F	D	C	C	D	D	C
d_A, Approach Delay [s/veh]	36.50			149.06			36.24			44.62		
Approach LOS	D			F			D			D		
d_I, Intersection Delay [s/veh]	65.93											
Intersection LOS	E											
Intersection V/C	0.984											

Sequence

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



Intersection Level Of Service Report
Intersection 5: Laguna Vista Drive at Newport Road

Control Type:	Signalized	Delay (sec / veh):	11.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.568

Intersection Setup

Name	Laguna Vista Drive		Newport Road		Newport Road	
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 Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		Yes	

Volumes

Name	Laguna Vista Drive		Newport Road		Newport Road	
Base Volume Input [veh/h]	266	112	975	104	103	1206
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
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
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	266	112	975	104	103	1206
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]	67	28	244	26	26	302
Total Analysis Volume [veh/h]	266	112	975	104	103	1206
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Split	Split	Permissive	Permissive	Protected	Permissive
Signal group	5	0	8	0	7	4
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	6	0	6	0	5	6
Maximum Green [s]	30	0	30	0	30	30
Amber [s]	4.0	0.0	4.7	0.0	4.0	4.7
All red [s]	1.0	0.0	2.0	0.0	1.0	2.0
Split [s]	44	0	56	0	20	76
Vehicle Extension [s]	2.0	0.0	4.0	0.0	1.5	4.0
Walk [s]	7	0	7	0	0	0
Pedestrian Clearance [s]	28	0	24	0	0	0
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	3.0	0.0	4.7	0.0	3.0	4.7
Minimum Recall	No		No		No	No
Maximum Recall	No		No		No	No
Pedestrian Recall	No		No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	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

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	R	C	C	L	C
C, Cycle Length [s]	43	43	43	43	43	43
L, Total Lost Time per Cycle [s]	5.00	5.00	6.70	6.70	5.00	6.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	4.70	4.70	3.00	4.70
g_i, Effective Green Time [s]	9	9	15	15	4	23
g / C, Green / Cycle	0.20	0.20	0.34	0.34	0.08	0.53
(v / s)_i Volume / Saturation Flow Rate	0.15	0.07	0.20	0.20	0.06	0.24
s, saturation flow rate [veh/h]	1774	1583	3547	1772	1774	5074
c, Capacity [veh/h]	349	312	1195	597	147	2712
d1, Uniform Delay [s]	16.52	15.11	12.01	12.01	19.44	6.19
k, delay calibration	0.04	0.04	0.15	0.15	0.04	0.15
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.31	0.26	0.70	1.40	2.27	0.16
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	0.76	0.36	0.60	0.60	0.70	0.44
d, Delay for Lane Group [s/veh]	17.82	15.37	12.71	13.41	21.71	6.35
Lane Group LOS	B	B	B	B	C	A
Critical Lane Group	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	2.26	0.84	2.42	2.54	0.99	1.48
50th-Percentile Queue Length [ft/ln]	56.41	21.07	60.61	63.50	24.67	37.05
95th-Percentile Queue Length [veh/ln]	4.06	1.52	4.36	4.57	1.78	2.67
95th-Percentile Queue Length [ft/ln]	101.54	37.93	109.09	114.31	44.40	66.68

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	17.82	15.37	12.89	13.41	21.71	6.35
Movement LOS	B	B	B	B	C	A
d_A, Approach Delay [s/veh]	17.10		12.94		7.56	
Approach LOS	B		B		A	
d_I, Intersection Delay [s/veh]	10.96					
Intersection LOS	B					
Intersection V/C	0.568					

Sequence

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



Intersection Level Of Service Report
Intersection 6: Menifee Road at Rockport Road

Control Type:	Signalized	Delay (sec / veh):	7.1
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.616

Intersection Setup

Name	Menifee Road		Menifee Road		Rockport Road	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		Yes		Yes	

Volumes

Name	Menifee Road		Menifee Road		Rockport Road	
Base Volume Input [veh/h]	746	20	24	1052	38	64
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
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
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	746	20	24	1052	38	64
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]	187	5	6	263	10	16
Total Analysis Volume [veh/h]	746	20	24	1052	38	64
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	115
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Split	Split
Signal group	2	0	1	6	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	6	0	5	6	6	0
Maximum Green [s]	30	0	30	30	30	0
Amber [s]	4.3	0.0	4.0	4.3	4.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	41	0	37	78	37	0
Vehicle Extension [s]	3.0	0.0	1.5	3.0	2.5	0.0
Walk [s]	10	0	0	0	10	0
Pedestrian Clearance [s]	15	0	0	0	22	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.3	0.0	3.0	3.3	3.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	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

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	R
C, Cycle Length [s]	26	26	26	26	26	26
L, Total Lost Time per Cycle [s]	5.30	5.30	5.00	5.30	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.30	3.30	3.00	3.30	3.00	3.00
g_i, Effective Green Time [s]	7	7	1	13	3	3
g / C, Green / Cycle	0.27	0.27	0.03	0.49	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.14	0.14	0.01	0.30	0.02	0.04
s, saturation flow rate [veh/h]	3547	1837	1774	3547	1774	1583
c, Capacity [veh/h]	954	494	59	1736	220	196
d1, Uniform Delay [s]	8.32	8.27	12.63	4.94	10.45	10.66
k, delay calibration	0.11	0.11	0.04	0.11	0.08	0.08
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.47	0.84	1.69	0.34	0.27	0.71
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

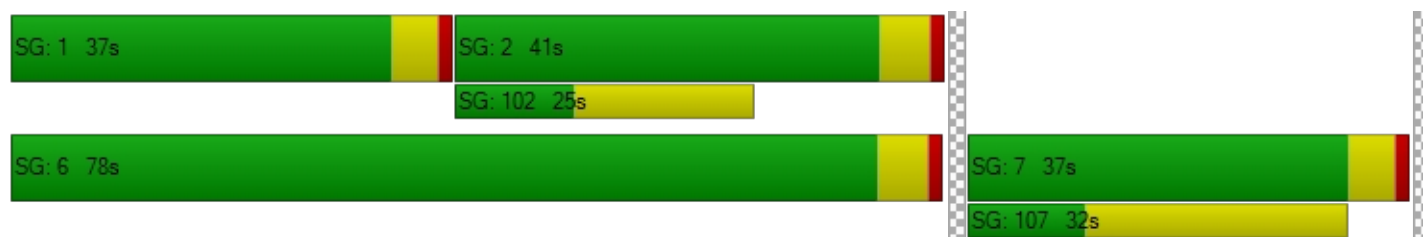
X, volume / capacity	0.54	0.52	0.41	0.61	0.17	0.33
d, Delay for Lane Group [s/veh]	8.79	9.11	14.32	5.28	10.72	11.36
Lane Group LOS	A	A	B	A	B	B
Critical Lane Group	No	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	0.81	0.86	0.13	0.74	0.16	0.28
50th-Percentile Queue Length [ft/ln]	20.22	21.43	3.26	18.49	3.88	6.92
95th-Percentile Queue Length [veh/ln]	1.46	1.54	0.23	1.33	0.28	0.50
95th-Percentile Queue Length [ft/ln]	36.39	38.58	5.87	33.28	6.99	12.45

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	8.89	9.11	14.32	5.28	10.72	11.36
Movement LOS	A	A	B	A	B	B
d_A, Approach Delay [s/veh]	8.90		5.48		11.13	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	7.13					
Intersection LOS	A					
Intersection V/C	0.616					

Sequence

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



Intersection Level Of Service Report
Intersection 7: Laguna Vista Drive at Rockport Road

Control Type:	All-way stop	Delay (sec / veh):	10.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.437

Intersection Setup

Name	Laguna Vista Drive			Laguna Vista Drive			Rockport Road			Old Newport 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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Laguna Vista Drive			Laguna Vista Drive			Rockport Road			Old Newport Road		
Base Volume Input [veh/h]	10	113	10	122	65	15	12	33	10	14	58	261
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	113	10	122	65	15	12	33	10	14	58	261
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	28	3	31	16	4	3	8	3	4	15	65
Total Analysis Volume [veh/h]	10	113	10	122	65	15	12	33	10	14	58	261
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	696	697	568	636	598	730
Degree of Utilization, x	0.19	0.29	0.02	0.07	0.02	0.44

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.70	1.20	0.06	0.22	0.07	2.23
95th-Percentile Queue Length [ft]	17.54	30.06	1.62	5.43	1.79	55.79
Approach Delay [s/veh]	9.39	10.27	8.86		11.30	
Approach LOS	A	B	A		B	
Intersection Delay [s/veh]	10.47					
Intersection LOS	B					

Intersection Level Of Service Report

Intersection 8: Menifee Road at Loire Valley Lane/Tres Lagos Drive

Control Type:	Signalized	Delay (sec / veh):	26.6
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.847

Intersection Setup

Name	Menifee Road			Menifee Road			Loire Valley Lane			Tres Lagos Drive		
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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Menifee Road			Menifee Road			Loire Valley Lane			Tres Lagos Drive		
Base Volume Input [veh/h]	57	663	32	100	959	28	30	10	93	175	11	103
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	57	663	32	100	959	28	30	10	93	175	11	103
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	166	8	25	240	7	8	3	23	44	3	26
Total Analysis Volume [veh/h]	57	663	32	100	959	28	30	10	93	175	11	103
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
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]	105
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	4.0	4.3	0.0	4.0	4.3	0.0	0.0	4.0	0.0	0.0	4.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	12	42	0	21	51	0	0	42	0	0	42	0
Vehicle Extension [s]	1.5	3.0	0.0	1.5	3.0	0.0	0.0	2.5	0.0	0.0	2.5	0.0
Walk [s]	0	10	0	0	10	0	0	10	0	0	10	0
Pedestrian Clearance [s]	0	22	0	0	14	0	0	25	0	0	25	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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.3	0.0	3.0	3.3	0.0	0.0	3.0	0.0	0.0	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	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C	R
C, Cycle Length [s]	72	72	72	72	72	72	72	72	72
L, Total Lost Time per Cycle [s]	5.00	5.30	5.30	5.00	5.30	5.30	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	3.00	3.30	3.30	3.00	3.30	3.30	3.00	3.00	3.00
g_i, Effective Green Time [s]	5	21	21	6	22	22	30	30	30
g / C, Green / Cycle	0.07	0.29	0.29	0.08	0.31	0.31	0.42	0.42	0.42
(v / s)_i Volume / Saturation Flow Rate	0.03	0.13	0.13	0.06	0.27	0.27	0.36	0.41	0.07
s, saturation flow rate [veh/h]	1774	3547	1819	1774	1863	1844	372	456	1583
c, Capacity [veh/h]	117	1021	524	149	570	564	216	287	659
d1, Uniform Delay [s]	32.46	20.97	20.99	32.03	23.64	23.64	17.10	20.55	13.14
k, delay calibration	0.04	0.11	0.11	0.04	0.17	0.17	0.32	0.41	0.08
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.17	0.31	0.61	1.96	6.41	6.47	8.06	8.94	0.08
d3, Initial Queue Delay [s]	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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.49	0.45	0.45	0.67	0.87	0.87	0.62	0.65	0.16
d, Delay for Lane Group [s/veh]	33.64	21.28	21.60	33.99	30.05	30.12	25.16	29.49	13.22
Lane Group LOS	C	C	C	C	C	C	C	C	B
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.97	3.04	3.18	1.72	8.46	8.38	1.76	3.47	0.99
50th-Percentile Queue Length [ft/ln]	24.25	75.94	79.49	43.00	211.40	209.59	43.96	86.82	24.66
95th-Percentile Queue Length [veh/ln]	1.75	5.47	5.72	3.10	13.22	13.13	3.17	6.25	1.78
95th-Percentile Queue Length [ft/ln]	43.65	136.70	143.08	77.41	330.62	328.30	79.13	156.28	44.39

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	33.64	21.38	21.60	33.99	30.08	30.12	25.16	25.16	25.16	29.49	29.49	13.22
Movement LOS	C	C	C	C	C	C	C	C	C	C	C	B
d_A, Approach Delay [s/veh]	22.32			30.44			25.16			23.69		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	26.57											
Intersection LOS	C											
Intersection V/C	0.847											

Sequence

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



Intersection Level Of Service Report
Intersection 9: Laguna Vista Drive at Tres Lagos Drive

Control Type:	All-way stop	Delay (sec / veh):	10.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.484

Intersection Setup

Name	Laguna Vista Drive			Laguna Vista Drive			Tres Lagos Drive			Tres Lagos Drive		
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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Laguna Vista Drive			Laguna Vista Drive			Tres Lagos Drive			Tres Lagos Drive		
Base Volume Input [veh/h]	182	127	58	10	57	10	10	20	91	57	71	19
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	182	127	58	10	57	10	10	20	91	57	71	19
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]	46	32	15	3	14	3	3	5	23	14	18	5
Total Analysis Volume [veh/h]	182	127	58	10	57	10	10	20	91	57	71	19
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	758	709	595	696	578	638
Degree of Utilization, x	0.48	0.11	0.05	0.13	0.13	0.12

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	2.67	0.36	0.16	0.45	0.43	0.39
95th-Percentile Queue Length [ft]	66.73	9.10	3.97	11.21	10.83	9.71
Approach Delay [s/veh]	12.12	8.70	8.75		9.45	
Approach LOS	B	A	A		A	
Intersection Delay [s/veh]	10.63					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 10: Menifee Road at Holland Road

Control Type:	Signalized	Delay (sec / veh):	19.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.638

Intersection Setup

Name	Menifee Road			Menifee Road			Holland Road			Holland 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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Menifee Road			Menifee Road			Holland Road			Holland Road		
Base Volume Input [veh/h]	121	355	202	63	515	323	214	291	88	150	523	135
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	121	355	202	63	515	323	214	291	88	150	523	135
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]	30	89	51	16	129	81	54	73	22	38	131	34
Total Analysis Volume [veh/h]	121	355	202	63	515	323	214	291	88	150	523	135
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
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	12	52	0	11	51	0	19	35	0	22	38	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	24	0	0	24	0	0	24	0	0	24	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	54	54	54	54	54	54	54	54	54	54	54	54
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	16	16	4	14	14	7	11	11	6	11	11
g / C, Green / Cycle	0.11	0.29	0.29	0.08	0.27	0.27	0.12	0.21	0.21	0.12	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.04	0.10	0.13	0.02	0.15	0.20	0.06	0.08	0.06	0.04	0.15	0.09
s, saturation flow rate [veh/h]	3445	3547	1583	3445	3547	1583	3445	3547	1583	3445	3547	1583
c, Capacity [veh/h]	376	1045	467	276	942	421	429	756	337	401	727	324
d1, Uniform Delay [s]	22.26	14.96	15.43	23.32	17.07	18.33	22.11	18.25	17.74	22.09	20.06	18.70
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	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	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.49	0.19	0.63	0.42	0.50	2.97	0.90	0.32	0.41	0.58	1.36	0.85
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.32	0.34	0.43	0.23	0.55	0.77	0.50	0.39	0.26	0.37	0.72	0.42
d, Delay for Lane Group [s/veh]	22.75	15.15	16.06	23.74	17.57	21.30	23.01	18.58	18.15	22.67	21.42	19.55
Lane Group LOS	C	B	B	C	B	C	C	B	B	C	C	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.68	1.54	1.86	0.37	2.51	3.65	1.22	1.45	0.87	0.84	2.91	1.41
50th-Percentile Queue Length [ft/ln]	17.05	38.62	46.58	9.15	62.84	91.14	30.52	36.17	21.72	21.11	72.73	35.26
95th-Percentile Queue Length [veh/ln]	1.23	2.78	3.35	0.66	4.52	6.56	2.20	2.60	1.56	1.52	5.24	2.54
95th-Percentile Queue Length [ft/ln]	30.68	69.52	83.84	16.46	113.11	164.05	54.94	65.10	39.09	37.99	130.92	63.48

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	22.75	15.15	16.06	23.74	17.57	21.30	23.01	18.58	18.15	22.67	21.42	19.55
Movement LOS	C	B	B	C	B	C	C	B	B	C	C	B
d_A, Approach Delay [s/veh]	16.78			19.34			20.11			21.34		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	19.45											
Intersection LOS	B											
Intersection V/C	0.638											

Sequence

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



Intersection Level Of Service Report
Intersection 11: Briggs Road at Holland Road

Control Type:	Two-way stop	Delay (sec / veh):	50.8
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.238

Intersection Setup

Name	Briggs Road			Briggs Road			Holland Road			Holland 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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Briggs Road			Briggs Road			Holland Road			Holland Road		
Base Volume Input [veh/h]	140	22	40	17	50	79	59	234	72	47	183	67
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	140	22	40	17	50	79	59	234	72	47	183	67
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]	35	6	10	4	13	20	15	59	18	12	46	17
Total Analysis Volume [veh/h]	140	22	40	17	50	79	59	234	72	47	183	67
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	0.10	0.00	0.00	0.01	0.00	0.00	0.24	0.53	0.07	0.23	0.43	0.07
d_M, Delay for Movement [s/veh]	7.73	0.00	0.00	7.36	0.00	0.00	50.77	44.44	39.97	42.12	32.96	28.06
Movement LOS	A	A	A	A	A	A	F	E	E	E	D	D
95th-Percentile Queue Length [veh/ln]	0.32	0.32	0.32	0.03	0.03	0.03	8.23	8.23	8.23	5.59	5.59	5.59
95th-Percentile Queue Length [ft/ln]	7.96	7.96	7.96	0.84	0.84	0.84	205.72	205.72	205.72	139.66	139.66	139.66
d_A, Approach Delay [s/veh]	5.36			0.86			44.58			33.31		
Approach LOS	A			A			E			D		
d_I, Intersection Delay [s/veh]	27.10											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 39: Briggs Road at Old Newport Road

Control Type:	All-way stop	Delay (sec / veh):	8.4
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.254

Intersection Setup

Name	Briggs Road			Briggs Road			Old Newport Road			Old Newport 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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Briggs Road			Briggs Road			Old Newport Road			Old Newport Road		
Base Volume Input [veh/h]	64	145	1	1	125	21	11	2	72	1	2	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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	64	145	1	1	125	21	11	2	72	1	2	1
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]	16	36	0	0	31	5	3	1	18	0	1	0
Total Analysis Volume [veh/h]	64	145	1	1	125	21	11	2	72	1	2	1
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	828	843	847	760
Degree of Utilization, x	0.25	0.17	0.10	0.01

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	1.01	0.63	0.33	0.02
95th-Percentile Queue Length [ft]	25.16	15.74	8.34	0.40
Approach Delay [s/veh]	8.82	8.17	7.73	7.76
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	8.39			
Intersection LOS	A			

Intersection Level Of Service Report

Intersection 40: Briggs Road at Tres Lagos Road/Gold Crest Drive

Control Type:	Two-way stop	Delay (sec / veh):	11.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.054

Intersection Setup

Name	Briggs Road			Briggs Road			Tres Lagos Drive			Gold Crest Drive		
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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Briggs Road			Briggs Road			Tres Lagos Drive			Gold Crest Drive		
Base Volume Input [veh/h]	8	133	1	1	121	0	34	14	16	1	31	8
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	8	133	1	1	121	0	34	14	16	1	31	8
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	33	0	0	30	0	9	4	4	0	8	2
Total Analysis Volume [veh/h]	8	133	1	1	121	0	34	14	16	1	31	8
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	0.05	0.02	0.02	0.00	0.05	0.01
d_M, Delay for Movement [s/veh]	7.47	0.00	0.00	7.48	0.00	0.00	11.29	11.26	9.41	10.97	11.05	9.27
Movement LOS	A	A	A	A	A		B	B	A	B	B	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.02	0.00	0.00	0.00	0.31	0.31	0.31	0.19	0.19	0.19
95th-Percentile Queue Length [ft/ln]	0.41	0.41	0.41	0.05	0.05	0.00	7.72	7.72	7.72	4.73	4.73	4.73
d_A, Approach Delay [s/veh]	0.42			0.06			10.81			10.69		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	3.23											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 1: I-215 SB Ramps at Newport Road

Control Type:	Signalized	Delay (sec / veh):	20.7
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.804

Intersection Setup

Name	I-215 SB Ramps			I-215 SB Ramps			Newport Road			Newport 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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			No		

Volumes

Name	I-215 SB Ramps			I-215 SB Ramps			Newport Road			Newport Road		
Base Volume Input [veh/h]	0	0	0	728	0	579	0	2080	1101	0	2319	498
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	0	0	0	728	0	579	0	2080	1101	0	2319	498
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	0.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	0	0	0	182	0	145	0	520	0	0	580	0
Total Analysis Volume [veh/h]	0	0	0	728	0	579	0	2080	0	0	2319	0
Presence of On-Street Parking				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
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	1 - Newport Rd Ramps
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Split	Permiss	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	0	0	4	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lag	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	5	0	0	0	5	0	0	5	0
Maximum Green [s]	0	0	0	30	0	0	0	30	0	0	30	0
Amber [s]	0.0	0.0	0.0	4.5	0.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
All red [s]	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	35	0	0	0	55	0	0	55	0
Vehicle Extension [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	0	0	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	15	0
Rest In Walk				No				No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	3.5	0.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
Minimum Recall				No				No			No	
Maximum Recall				No				No			No	
Pedestrian Recall				No				No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	C	R	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	5.50	5.50	5.50	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.50	3.50	3.50	4.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	27	27	27	52	52	52	52
g / C, Green / Cycle	0.30	0.30	0.30	0.57	0.57	0.57	0.57
(v / s)_i Volume / Saturation Flow Rate	0.25	0.26	0.28	0.31	0.00	0.46	0.00
s, saturation flow rate [veh/h]	1774	1706	1583	6765	1583	5074	1583
c, Capacity [veh/h]	528	508	471	3887	910	2915	910
d1, Uniform Delay [s]	29.39	29.78	30.59	11.74	0.00	14.98	0.00
k, delay calibration	0.19	0.21	0.26	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.61	8.02	16.43	0.53	0.00	2.34	0.00
d3, Initial Queue Delay [s]	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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

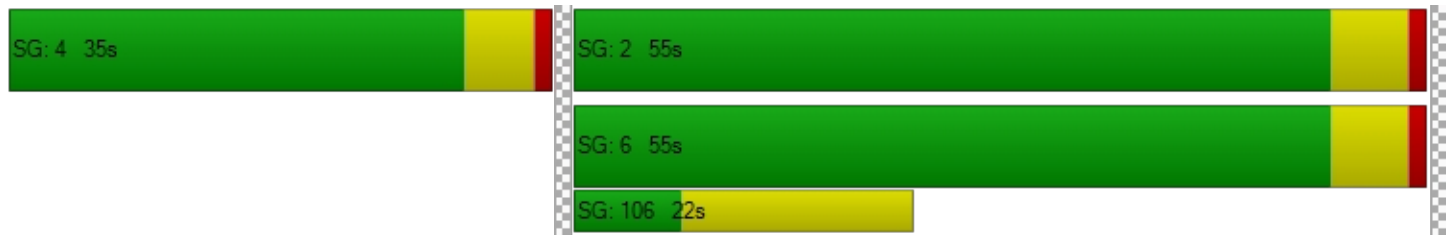
X, volume / capacity	0.83	0.86	0.93	0.54	0.00	0.80	0.00
d, Delay for Lane Group [s/veh]	35.00	37.79	47.02	12.27	0.00	17.32	0.00
Lane Group LOS	D	D	D	B	A	B	A
Critical Lane Group	No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	9.28	9.70	10.96	5.96	0.00	11.67	0.00
50th-Percentile Queue Length [ft/ln]	232.11	242.58	273.92	149.10	0.00	291.71	0.00
95th-Percentile Queue Length [veh/ln]	14.28	14.81	16.39	9.97	0.00	17.27	0.00
95th-Percentile Queue Length [ft/ln]	357.04	370.30	409.64	249.23	0.00	431.76	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	36.12	0.00	44.74	0.00	12.27	0.00	0.00	17.32	0.00
Movement LOS				D		D		B	A		B	A
d_A, Approach Delay [s/veh]	0.00			39.94			12.27			17.32		
Approach LOS	A			D			B			B		
d_I, Intersection Delay [s/veh]	20.66											
Intersection LOS	C											
Intersection V/C	0.804											

Sequence

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



Intersection Level Of Service Report
Intersection 2: I-215 NB Ramps at Newport Road

Control Type:	Signalized	Delay (sec / veh):	27.7
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.884

Intersection Setup

Name	I-215 NB Ramps			I-215 NB Ramps			Newport Road			Newport 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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			No			No		

Volumes

Name	I-215 NB Ramps			I-215 NB Ramps			Newport Road			Newport Road		
Base Volume Input [veh/h]	1063	0	759	0	0	0	0	2141	470	0	1823	940
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	1063	0	759	0	0	0	0	2141	470	0	1823	940
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	0.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	266	0	190	0	0	0	0	535	0	0	456	0
Total Analysis Volume [veh/h]	1063	0	759	0	0	0	0	2141	0	0	1823	0
Presence of On-Street Parking	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
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	1 - Newport Rd Ramps
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	23.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Split	Permiss	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	8	0	0	0	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	5	0	0	0	0	0	0	5	0	0	5	0
Maximum Green [s]	30	0	0	0	0	0	0	30	0	0	30	0
Amber [s]	4.5	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
All red [s]	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	43	0	0	0	0	0	0	47	0	0	47	0
Vehicle Extension [s]	2.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	0	0	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	15	0	0	0	0
Rest In Walk	No							No			No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	3.5	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
Minimum Recall	No							No			No	
Maximum Recall	No							No			No	
Pedestrian Recall	No							No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R		C	R	C	R
C, Cycle Length [s]	90	90	90		90	90	90	90
L, Total Lost Time per Cycle [s]	5.50	5.50	5.50		6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.50	3.50	3.50		4.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	36	36	36		42	42	42	42
g / C, Green / Cycle	0.40	0.40	0.40		0.47	0.47	0.47	0.47
(v / s)_i Volume / Saturation Flow Rate	0.34	0.35	0.38		0.42	0.00	0.27	0.00
s, saturation flow rate [veh/h]	1774	1722	1583		5074	1583	6765	1583
c, Capacity [veh/h]	714	693	637		2383	744	3178	744
d1, Uniform Delay [s]	24.40	24.79	26.03		21.86	0.00	17.30	0.00
k, delay calibration	0.27	0.29	0.35		0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.04	9.21	20.61		5.91	0.00	0.76	0.00
d3, Initial Queue Delay [s]	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
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

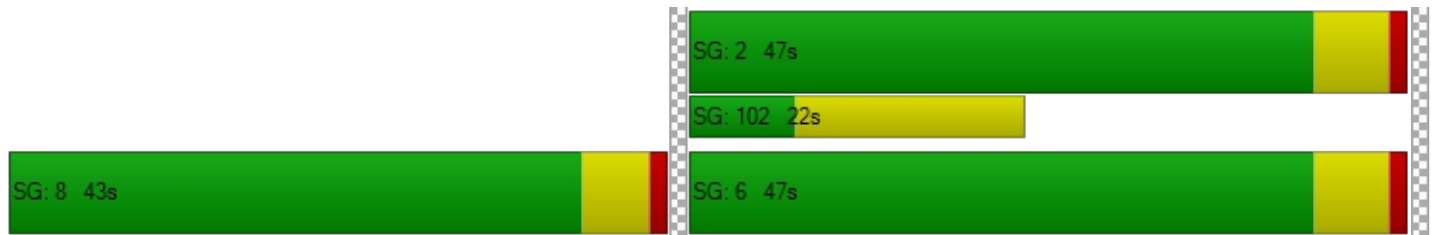
X, volume / capacity	0.85	0.88	0.95		0.90	0.00	0.57	0.00
d, Delay for Lane Group [s/veh]	31.44	34.00	46.64		27.77	0.00	18.06	0.00
Lane Group LOS	C	C	D		C	A	B	A
Critical Lane Group	No	No	Yes		Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	12.51	13.06	15.50		14.11	0.00	6.64	0.00
50th-Percentile Queue Length [ft/ln]	312.73	326.55	387.57		352.75	0.00	165.95	0.00
95th-Percentile Queue Length [veh/ln]	18.31	18.99	21.96		20.27	0.00	10.86	0.00
95th-Percentile Queue Length [ft/ln]	457.74	474.73	549.00		506.76	0.00	271.59	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	32.54	0.00	44.11	0.00	0.00	0.00	0.00	27.77	0.00	0.00	18.06	0.00
Movement LOS	C		D					C	A		B	A
d_A, Approach Delay [s/veh]	37.36			0.00			27.77			18.06		
Approach LOS	D			A			C			B		
d_I, Intersection Delay [s/veh]	27.73											
Intersection LOS	C											
Intersection V/C	0.884											

Sequence

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



Intersection Level Of Service Report
Intersection 3: Antelope Road at Newport Road

Control Type:	Signalized	Delay (sec / veh):	31.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.854

Intersection Setup

Name	Antelope Road			Antelope Road			Newport Road			Newport Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	[Diagram]			[Diagram]			[Diagram]			[Diagram]		
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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name	Antelope Road			Antelope Road			Newport Road			Newport Road		
Base Volume Input [veh/h]	489	147	379	22	89	127	186	1736	464	174	1932	44
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	489	147	379	22	89	127	186	1736	464	174	1932	44
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]	122	37	95	6	22	32	47	434	116	44	483	11
Total Analysis Volume [veh/h]	489	147	379	22	89	127	186	1736	464	174	1932	44
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
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
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	31.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	8	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	4	5	0	4	5	0	4	6	6	4	6	0
Maximum Green [s]	30	30	0	30	30	0	30	30	30	30	30	0
Amber [s]	3.5	3.9	0.0	3.5	3.9	0.0	3.5	4.7	4.7	3.5	4.7	0.0
All red [s]	0.5	1.0	0.0	0.5	1.0	0.0	0.5	2.0	2.0	0.5	2.0	0.0
Split [s]	17	43	0	8	34	0	8	41	41	8	41	0
Vehicle Extension [s]	2.0	3.0	0.0	2.0	3.0	0.0	2.0	4.0	4.0	2.0	4.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	5	0	5	0
Pedestrian Clearance [s]	0	33	0	0	33	0	0	26	26	0	26	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	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.9	0.0	2.0	2.9	0.0	2.0	4.7	4.7	2.0	4.7	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	79	79	79	79	79	79	79	79	79	79	79	79
L, Total Lost Time per Cycle [s]	4.00	4.90	4.90	4.00	4.90	4.90	4.00	6.70	6.70	4.00	6.70	6.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.90	2.90	2.00	2.90	2.90	2.00	4.70	4.70	2.00	4.70	4.70
g_i, Effective Green Time [s]	14	21	21	2	9	9	6	30	30	6	30	30
g / C, Green / Cycle	0.17	0.27	0.27	0.02	0.12	0.12	0.08	0.38	0.38	0.08	0.38	0.38
(v / s)_i Volume / Saturation Flow Rate	0.14	0.04	0.24	0.01	0.03	0.08	0.05	0.34	0.29	0.05	0.38	0.03
s, saturation flow rate [veh/h]	3445	3547	1583	3445	3547	1583	3445	5074	1583	3445	5074	1583
c, Capacity [veh/h]	594	960	429	69	420	188	277	1950	608	263	1930	602
d1, Uniform Delay [s]	31.49	21.88	27.57	38.12	31.44	33.32	35.26	22.73	21.15	35.43	24.44	15.58
k, delay calibration	0.04	0.11	0.17	0.04	0.11	0.11	0.04	0.15	0.27	0.04	0.15	0.15
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.12	0.07	9.04	0.98	0.25	4.22	1.06	2.21	4.89	1.06	11.61	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	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.82	0.15	0.88	0.32	0.21	0.68	0.67	0.89	0.76	0.66	1.00	0.07
d, Delay for Lane Group [s/veh]	32.61	21.95	36.61	39.11	31.68	37.54	36.31	24.93	26.04	36.49	36.05	15.65
Lane Group LOS	C	C	D	D	C	D	D	C	C	D	F	B
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	4.43	1.01	7.59	0.21	0.76	2.48	1.73	9.69	7.76	1.63	13.13	0.49
50th-Percentile Queue Length [ft/ln]	110.79	25.31	189.80	5.37	19.08	62.12	43.37	242.30	194.01	40.64	328.33	12.35
95th-Percentile Queue Length [veh/ln]	7.88	1.82	12.11	0.39	1.37	4.47	3.12	14.80	12.33	2.93	19.09	0.89
95th-Percentile Queue Length [ft/ln]	197.09	45.56	302.77	9.67	34.34	111.81	78.07	369.94	308.23	73.16	477.26	22.24

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	32.61	21.95	36.61	39.11	31.68	37.54	36.31	24.93	26.04	36.49	36.05	15.65
Movement LOS	C	C	D	D	C	D	D	C	C	D	F	B
d_A, Approach Delay [s/veh]	32.56			35.50			26.04			35.67		
Approach LOS	C			D			C			D		
d_I, Intersection Delay [s/veh]	31.15											
Intersection LOS	C											
Intersection V/C	0.854											

Sequence

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



Intersection Level Of Service Report
Intersection 4: Menifee Road at Newport Road

Control Type:	Signalized	Delay (sec / veh):	80.4
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.051

Intersection Setup

Name	Menifee Road			Menifee Road			Newport Road			Newport Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	[Diagram]			[Diagram]			[Diagram]			[Diagram]		
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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Menifee Road			Menifee Road			Newport Road			Newport Road		
Base Volume Input [veh/h]	319	707	193	110	716	729	569	1153	178	187	924	61
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	319	707	193	110	716	729	569	1153	178	187	924	61
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	80	177	48	28	179	182	142	288	45	47	231	15
Total Analysis Volume [veh/h]	319	707	193	110	716	729	569	1153	178	187	924	61
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	6	0	5	6	0	5	8	0	5	8	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.2	4.3	0.0	3.2	4.3	0.0	3.2	5.0	0.0	3.2	5.0	0.0
All red [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
Split [s]	11	45	0	17	51	0	20	38	0	20	38	0
Vehicle Extension [s]	1.5	3.0	0.0	1.5	3.0	0.0	1.5	4.0	0.0	1.5	4.0	0.0
Walk [s]	0	10	0	0	10	0	0	10	0	0	10	0
Pedestrian Clearance [s]	0	28	0	0	28	0	0	21	0	0	21	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]	3.2	4.3	0.0	3.2	4.3	0.0	3.2	5.0	0.0	3.2	5.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	112	112	112	112	112	112	112	112	112	112	112	112
L, Total Lost Time per Cycle [s]	5.20	6.30	6.30	5.20	6.30	6.30	5.20	7.00	7.00	5.20	7.00	7.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.20	4.30	4.30	3.20	4.30	4.30	3.20	5.00	5.00	3.20	5.00	5.00
g_i, Effective Green Time [s]	12	37	37	5	30	30	21	37	37	8	25	25
g / C, Green / Cycle	0.11	0.33	0.33	0.05	0.27	0.27	0.18	0.33	0.33	0.07	0.22	0.22
(v / s)_i Volume / Saturation Flow Rate	0.09	0.20	0.12	0.03	0.20	0.46	0.17	0.23	0.11	0.05	0.18	0.04
s, saturation flow rate [veh/h]	3445	3547	1583	3445	3547	1583	3445	5074	1583	3445	5074	1583
c, Capacity [veh/h]	384	1174	524	169	952	425	634	1700	530	251	1135	354
d1, Uniform Delay [s]	48.59	31.21	28.46	52.19	37.44	40.85	44.53	31.96	27.83	50.77	41.16	35.02
k, delay calibration	0.04	0.11	0.11	0.04	0.11	0.50	0.04	0.15	0.15	0.04	0.15	0.15
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.79	0.50	0.43	1.59	1.22	331.34	1.89	0.68	0.53	1.66	2.09	0.33
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

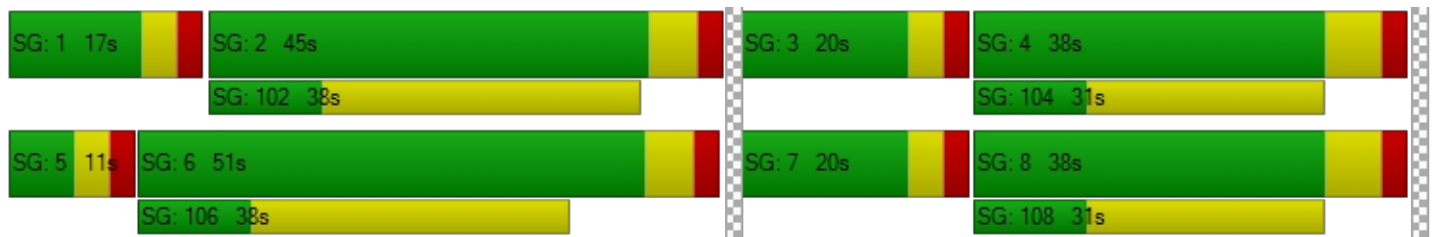
X, volume / capacity	0.83	0.60	0.37	0.65	0.75	1.71	0.90	0.68	0.34	0.75	0.81	0.17
d, Delay for Lane Group [s/veh]	50.39	31.71	28.89	53.78	38.66	372.19	46.42	32.65	28.36	52.43	43.25	35.34
Lane Group LOS	D	C	C	D	D	F	D	C	C	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	4.43	7.95	3.98	1.55	9.03	50.63	7.80	8.93	3.63	2.61	8.20	1.38
50th-Percentile Queue Length [ft/ln]	110.74	198.86	99.55	38.71	225.76	1265.76	195.06	223.14	90.83	65.35	204.89	34.39
95th-Percentile Queue Length [veh/ln]	7.88	12.58	7.17	2.79	13.96	79.16	12.38	13.83	6.54	4.71	12.89	2.48
95th-Percentile Queue Length [ft/ln]	197.03	314.49	179.19	69.67	348.96	1979.08	309.59	345.63	163.50	117.63	322.26	61.91

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	50.39	31.71	28.89	53.78	38.66	372.19	46.42	32.65	28.36	52.43	43.25	35.34
Movement LOS	D	C	C	D	D	F	D	C	C	D	D	D
d_A, Approach Delay [s/veh]	36.15			196.09			36.37			44.31		
Approach LOS	D			F			D			D		
d_I, Intersection Delay [s/veh]	80.40											
Intersection LOS	F											
Intersection V/C	1.051											

Sequence

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



Intersection Level Of Service Report
Intersection 5: Laguna Vista Drive at Newport Road

Control Type:	Signalized	Delay (sec / veh):	9.5
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.591

Intersection Setup

Name	Laguna Vista Drive		Newport Road		Newport Road	
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 Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		Yes	

Volumes

Name	Laguna Vista Drive		Newport Road		Newport Road	
Base Volume Input [veh/h]	153	49	1383	247	77	1099
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
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
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	153	49	1383	247	77	1099
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]	38	12	346	62	19	275
Total Analysis Volume [veh/h]	153	49	1383	247	77	1099
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Split	Split	Permissive	Permissive	Protected	Permissive
Signal group	5	0	8	0	7	4
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	6	0	6	0	5	6
Maximum Green [s]	30	0	30	0	30	30
Amber [s]	4.0	0.0	4.7	0.0	4.0	4.7
All red [s]	1.0	0.0	2.0	0.0	1.0	2.0
Split [s]	40	0	66	0	14	80
Vehicle Extension [s]	2.0	0.0	4.0	0.0	1.5	4.0
Walk [s]	7	0	7	0	0	0
Pedestrian Clearance [s]	28	0	24	0	0	0
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	3.0	0.0	4.7	0.0	3.0	4.7
Minimum Recall	No		No		No	No
Maximum Recall	No		No		No	No
Pedestrian Recall	No		No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	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

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	R	C	C	L	C
C, Cycle Length [s]	48	48	48	48	48	48
L, Total Lost Time per Cycle [s]	5.00	5.00	6.70	6.70	5.00	6.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	4.70	4.70	3.00	4.70
g_i, Effective Green Time [s]	6	6	23	23	3	31
g / C, Green / Cycle	0.12	0.12	0.47	0.47	0.07	0.64
(v / s)_i Volume / Saturation Flow Rate	0.09	0.03	0.31	0.32	0.04	0.22
s, saturation flow rate [veh/h]	1774	1583	3547	1724	1774	5074
c, Capacity [veh/h]	216	193	1656	805	120	3235
d1, Uniform Delay [s]	20.51	19.34	9.95	10.07	22.08	4.07
k, delay calibration	0.04	0.04	0.15	0.15	0.04	0.15
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.61	0.26	0.64	1.41	2.13	0.09
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

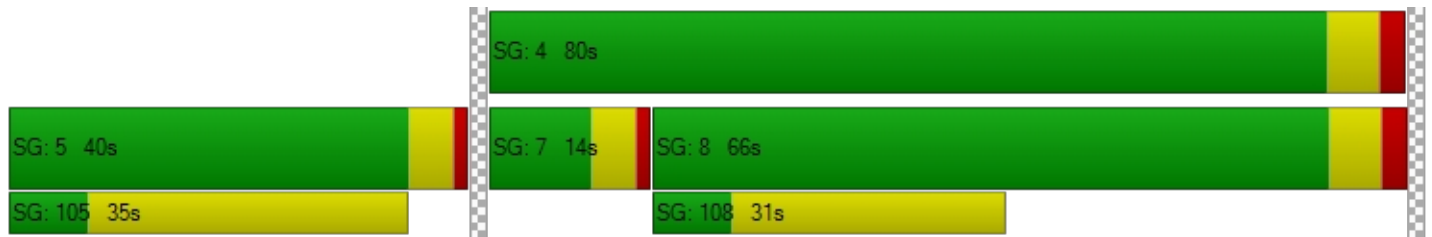
X, volume / capacity	0.71	0.25	0.66	0.67	0.64	0.34
d, Delay for Lane Group [s/veh]	22.12	19.59	10.58	11.49	24.21	4.16
Lane Group LOS	C	B	B	B	C	A
Critical Lane Group	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	1.59	0.47	3.50	3.72	0.85	0.96
50th-Percentile Queue Length [ft/ln]	39.83	11.64	87.62	92.93	21.22	23.97
95th-Percentile Queue Length [veh/ln]	2.87	0.84	6.31	6.69	1.53	1.73
95th-Percentile Queue Length [ft/ln]	71.70	20.95	157.71	167.28	38.19	43.15

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	22.12	19.59	10.78	11.49	24.21	4.16
Movement LOS	C	B	B	B	C	A
d_A, Approach Delay [s/veh]	21.51		10.88		5.47	
Approach LOS	C		B		A	
d_I, Intersection Delay [s/veh]	9.48					
Intersection LOS	A					
Intersection V/C	0.591					

Sequence

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



Intersection Level Of Service Report
Intersection 6: Menifee Road at Rockport Road

Control Type:	Signalized	Delay (sec / veh):	7.5
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.481

Intersection Setup

Name	Menifee Road		Menifee Road		Rockport Road	
Approach	Northbound		Southbound		Westbound	
Lane Configuration	III		II		II	
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		Yes		Yes	

Volumes

Name	Menifee Road		Menifee Road		Rockport Road	
Base Volume Input [veh/h]	1161	48	72	944	26	54
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
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
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1161	48	72	944	26	54
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]	290	12	18	236	7	14
Total Analysis Volume [veh/h]	1161	48	72	944	26	54
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Split	Split
Signal group	2	0	1	6	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	6	0	5	6	6	0
Maximum Green [s]	30	0	30	30	30	0
Amber [s]	4.3	0.0	4.0	4.3	4.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	67	0	16	83	37	0
Vehicle Extension [s]	3.0	0.0	1.5	3.0	2.5	0.0
Walk [s]	10	0	0	0	10	0
Pedestrian Clearance [s]	15	0	0	0	22	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.3	0.0	3.0	3.3	3.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	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

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	R
C, Cycle Length [s]	32	32	32	32	32	32
L, Total Lost Time per Cycle [s]	5.30	5.30	5.00	5.30	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.30	3.30	3.00	3.30	3.00	3.00
g_i, Effective Green Time [s]	11	11	2	19	3	3
g / C, Green / Cycle	0.35	0.35	0.07	0.58	0.10	0.10
(v / s)_i Volume / Saturation Flow Rate	0.23	0.22	0.04	0.27	0.01	0.03
s, saturation flow rate [veh/h]	3547	1824	1774	3547	1774	1583
c, Capacity [veh/h]	1259	648	133	2074	171	153
d1, Uniform Delay [s]	8.70	8.63	14.41	3.80	13.38	13.65
k, delay calibration	0.11	0.11	0.04	0.11	0.08	0.08
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.55	0.98	1.27	0.16	0.30	1.02
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	0.64	0.62	0.54	0.46	0.15	0.35
d, Delay for Lane Group [s/veh]	9.25	9.61	15.68	3.96	13.68	14.68
Lane Group LOS	A	A	B	A	B	B
Critical Lane Group	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.60	1.67	0.45	0.58	0.15	0.33
50th-Percentile Queue Length [ft/ln]	40.12	41.84	11.30	14.60	3.79	8.36
95th-Percentile Queue Length [veh/ln]	2.89	3.01	0.81	1.05	0.27	0.60
95th-Percentile Queue Length [ft/ln]	72.22	75.32	20.35	26.28	6.83	15.06

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	9.36	9.61	15.68	3.96	13.68	14.68
Movement LOS	A	A	B	A	B	B
d_A, Approach Delay [s/veh]	9.37		4.79		14.35	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	7.52					
Intersection LOS	A					
Intersection V/C	0.481					

Sequence

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



Intersection Level Of Service Report
Intersection 7: Laguna Vista Drive at Rockport Road

Control Type:	All-way stop	Delay (sec / veh):	10.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.449

Intersection Setup

Name	Laguna Vista Drive			Laguna Vista Drive			Rockport Road			Old Newport 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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Laguna Vista Drive			Laguna Vista Drive			Rockport Road			Old Newport Road		
Base Volume Input [veh/h]	9	47	10	242	68	10	10	102	10	10	55	148
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	9	47	10	242	68	10	10	102	10	10	55	148
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	12	3	61	17	3	3	26	3	3	14	37
Total Analysis Volume [veh/h]	9	47	10	242	68	10	10	102	10	10	55	148
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	685	712	565	620	575	686
Degree of Utilization, x	0.10	0.45	0.02	0.18	0.02	0.30

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.32	2.34	0.05	0.65	0.05	1.23
95th-Percentile Queue Length [ft]	7.96	58.40	1.35	16.36	1.33	30.87
Approach Delay [s/veh]	8.81	12.11	9.73		10.08	
Approach LOS	A	B	A		B	
Intersection Delay [s/veh]	10.81					
Intersection LOS	B					

Intersection Level Of Service Report

Intersection 8: Menifee Road at Loire Valley Lane/Tres Lagos Drive

Control Type:	Signalized	Delay (sec / veh):	14.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.639

Intersection Setup

Name	Menifee Road			Menifee Road			Loire Valley Lane			Tres Lagos Drive		
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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Menifee Road			Menifee Road			Loire Valley Lane			Tres Lagos Drive		
Base Volume Input [veh/h]	43	915	91	152	640	74	79	114	42	40	80	175
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	43	915	91	152	640	74	79	114	42	40	80	175
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	229	23	38	160	19	20	29	11	10	20	44
Total Analysis Volume [veh/h]	43	915	91	152	640	74	79	114	42	40	80	175
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
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]	95
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	4.0	4.3	0.0	4.0	4.3	0.0	0.0	4.0	0.0	0.0	4.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	12	38	0	17	43	0	0	40	0	0	40	0
Vehicle Extension [s]	1.5	3.0	0.0	1.5	3.0	0.0	0.0	2.5	0.0	0.0	2.5	0.0
Walk [s]	0	10	0	0	10	0	0	10	0	0	10	0
Pedestrian Clearance [s]	0	22	0	0	14	0	0	25	0	0	25	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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.3	0.0	3.0	3.3	0.0	0.0	3.0	0.0	0.0	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	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C	R
C, Cycle Length [s]	43	43	43	43	43	43	43	43	43
L, Total Lost Time per Cycle [s]	5.00	5.30	5.30	5.00	5.30	5.30	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	3.00	3.30	3.30	3.00	3.30	3.30	3.00	3.00	3.00
g_i, Effective Green Time [s]	3	12	12	6	15	15	10	10	10
g / C, Green / Cycle	0.07	0.28	0.28	0.14	0.35	0.35	0.22	0.22	0.22
(v / s)_i Volume / Saturation Flow Rate	0.02	0.19	0.19	0.09	0.20	0.20	0.18	0.08	0.11
s, saturation flow rate [veh/h]	1774	3547	1778	1774	1863	1796	1277	1554	1583
c, Capacity [veh/h]	122	988	495	248	652	628	397	458	352
d1, Uniform Delay [s]	18.94	13.66	13.68	17.23	11.18	11.18	16.08	13.77	14.48
k, delay calibration	0.04	0.11	0.11	0.04	0.11	0.11	0.08	0.08	0.08
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.65	0.82	1.65	0.91	0.75	0.78	1.05	0.22	0.81
d3, Initial Queue Delay [s]	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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.35	0.68	0.68	0.61	0.56	0.56	0.59	0.26	0.50
d, Delay for Lane Group [s/veh]	19.59	14.49	15.32	18.14	11.93	11.96	17.13	13.99	15.29
Lane Group LOS	B	B	B	B	B	B	B	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.38	2.45	2.58	1.28	2.31	2.23	1.99	0.83	1.31
50th-Percentile Queue Length [ft/ln]	9.51	61.21	64.47	31.88	57.76	55.84	49.72	20.83	32.84
95th-Percentile Queue Length [veh/ln]	0.68	4.41	4.64	2.30	4.16	4.02	3.58	1.50	2.36
95th-Percentile Queue Length [ft/ln]	17.12	110.17	116.04	57.39	103.97	100.51	89.50	37.50	59.11

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	19.59	14.71	15.32	18.14	11.94	11.96	17.13	17.13	17.13	13.99	13.99	15.29
Movement LOS	B	B	B	B	B	B	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	14.96			13.03			17.13			14.76		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	14.46											
Intersection LOS	B											
Intersection V/C	0.639											

Sequence

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



Intersection Level Of Service Report
Intersection 9: Laguna Vista Drive at Tres Lagos Drive

Control Type:	All-way stop	Delay (sec / veh):	9.5
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.283

Intersection Setup

Name	Laguna Vista Drive			Laguna Vista Drive			Tres Lagos Drive			Tres Lagos Drive		
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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Laguna Vista Drive			Laguna Vista Drive			Tres Lagos Drive			Tres Lagos Drive		
Base Volume Input [veh/h]	146	39	10	11	69	10	10	96	184	100	33	15
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	146	39	10	11	69	10	10	96	184	100	33	15
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	37	10	3	3	17	3	3	24	46	25	8	4
Total Analysis Volume [veh/h]	146	39	10	11	69	10	10	96	184	100	33	15
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	688	687	648	749	585	664
Degree of Utilization, x	0.28	0.13	0.16	0.25	0.17	0.07

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	1.16	0.45	0.58	0.96	0.61	0.23
95th-Percentile Queue Length [ft]	29.12	11.25	14.56	24.09	15.30	5.83
Approach Delay [s/veh]	10.29	9.04	9.17		9.61	
Approach LOS	B	A	A		A	
Intersection Delay [s/veh]	9.54					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 10: Menifee Road at Holland Road

Control Type:	Signalized	Delay (sec / veh):	20.4
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.652

Intersection Setup

Name	Menifee Road			Menifee Road			Holland Road			Holland 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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Menifee Road			Menifee Road			Holland Road			Holland Road		
Base Volume Input [veh/h]	196	786	159	195	365	261	190	361	255	91	165	178
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	196	786	159	195	365	261	190	361	255	91	165	178
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]	49	197	40	49	91	65	48	90	64	23	41	45
Total Analysis Volume [veh/h]	196	786	159	195	365	261	190	361	255	91	165	178
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
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	29	52	0	17	40	0	16	40	0	11	35	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	24	0	0	24	0	0	24	0	0	24	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	56	56	56	56	56	56	56	56	56	56	56	56
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	7	16	16	7	16	16	7	12	12	5	11	11
g / C, Green / Cycle	0.12	0.28	0.28	0.12	0.28	0.28	0.12	0.21	0.21	0.10	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.06	0.22	0.10	0.06	0.10	0.16	0.06	0.10	0.16	0.03	0.05	0.11
s, saturation flow rate [veh/h]	3445	3547	1583	3445	3547	1583	3445	3547	1583	3445	3547	1583
c, Capacity [veh/h]	411	1013	452	411	1012	452	409	761	340	329	679	303
d1, Uniform Delay [s]	23.07	18.40	15.92	23.07	15.97	17.15	23.06	19.27	20.63	23.58	19.24	20.67
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	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	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.86	1.31	0.47	0.85	0.22	1.17	0.82	0.46	3.34	0.45	0.18	1.81
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

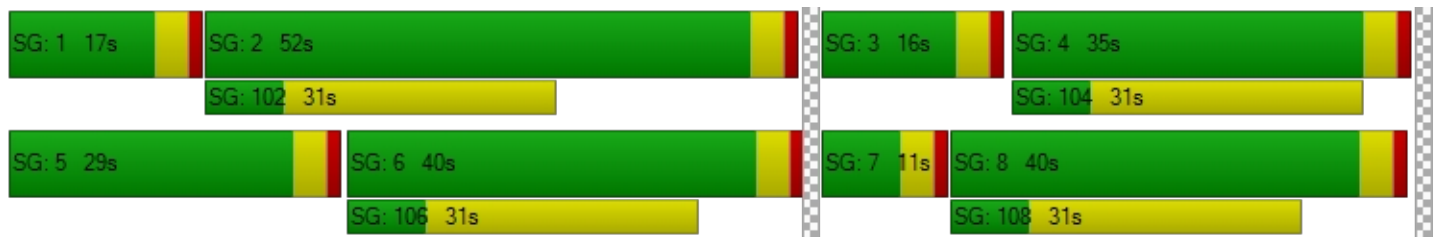
X, volume / capacity	0.48	0.78	0.35	0.47	0.36	0.58	0.46	0.47	0.75	0.28	0.24	0.59
d, Delay for Lane Group [s/veh]	23.93	19.71	16.39	23.92	16.19	18.32	23.88	19.73	23.97	24.03	19.43	22.48
Lane Group LOS	C	B	B	C	B	B	C	B	C	C	B	C
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.17	4.34	1.51	1.16	1.70	2.72	1.13	1.92	3.15	0.54	0.86	2.10
50th-Percentile Queue Length [ft/ln]	29.25	108.38	37.79	29.09	42.58	67.90	28.31	48.04	78.71	13.56	21.39	52.38
95th-Percentile Queue Length [veh/ln]	2.11	7.75	2.72	2.09	3.07	4.89	2.04	3.46	5.67	0.98	1.54	3.77
95th-Percentile Queue Length [ft/ln]	52.65	193.75	68.01	52.37	76.64	122.23	50.95	86.47	141.68	24.41	38.50	94.28

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	23.93	19.71	16.39	23.92	16.19	18.32	23.88	19.73	23.97	24.03	19.43	22.48
Movement LOS	C	B	B	C	B	B	C	B	C	C	B	C
d_A, Approach Delay [s/veh]	19.97			18.70			22.05			21.64		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	20.40											
Intersection LOS	C											
Intersection V/C	0.652											

Sequence

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



Intersection Level Of Service Report
Intersection 11: Briggs Road at Holland Road

Control Type:	Two-way stop	Delay (sec / veh):	59.1
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.400

Intersection Setup

Name	Briggs Road			Briggs Road			Holland Road			Holland 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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Briggs Road			Briggs Road			Holland Road			Holland Road		
Base Volume Input [veh/h]	29	58	114	56	73	26	46	214	140	96	227	45
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	29	58	114	56	73	26	46	214	140	96	227	45
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]	7	15	29	14	18	7	12	54	35	24	57	11
Total Analysis Volume [veh/h]	29	58	114	56	73	26	46	214	140	96	227	45
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	0.02	0.00	0.00	0.04	0.00	0.00	0.16	0.44	0.14	0.40	0.44	0.05
d_M, Delay for Movement [s/veh]	7.46	0.00	0.00	7.67	0.00	0.00	34.84	29.56	25.86	59.11	51.09	47.94
Movement LOS	A	A	A	A	A	A	D	D	D	F	F	E
95th-Percentile Queue Length [veh/ln]	0.06	0.06	0.06	0.12	0.12	0.12	6.40	6.40	6.40	9.22	9.22	9.22
95th-Percentile Queue Length [ft/ln]	1.48	1.48	1.48	3.11	3.11	3.11	160.11	160.11	160.11	230.60	230.60	230.60
d_A, Approach Delay [s/veh]	1.08			2.77			28.87			52.80		
Approach LOS	A			A			D			F		
d_I, Intersection Delay [s/veh]	28.13											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 39: Briggs Road at Old Newport Road

Control Type:	All-way stop	Delay (sec / veh):	9.3
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.326

Intersection Setup

Name	Briggs Road			Briggs Road			Old Newport Road			Old Newport 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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Briggs Road			Briggs Road			Old Newport Road			Old Newport Road		
Base Volume Input [veh/h]	60	199	1	1	223	9	12	1	99	1	2	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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	60	199	1	1	223	9	12	1	99	1	2	1
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]	15	50	0	0	56	2	3	0	25	0	1	0
Total Analysis Volume [veh/h]	60	199	1	1	223	9	12	1	99	1	2	1
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	797	803	791	702
Degree of Utilization, x	0.33	0.29	0.14	0.01

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	1.42	1.21	0.49	0.02
95th-Percentile Queue Length [ft]	35.57	30.15	12.31	0.43
Approach Delay [s/veh]	9.69	9.31	8.30	8.16
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	9.28			
Intersection LOS	A			

Intersection Level Of Service Report

Intersection 40: Briggs Road at Tres Lagos Road/Gold Crest Drive

Control Type:	Two-way stop	Delay (sec / veh):	12.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.076

Intersection Setup

Name	Briggs Road			Briggs Road			Tres Lagos Drive			Gold Crest Drive		
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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Briggs Road			Briggs Road			Tres Lagos Drive			Gold Crest Drive		
Base Volume Input [veh/h]	7	157	1	6	176	0	42	23	8	1	27	6
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	157	1	6	176	0	42	23	8	1	27	6
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	39	0	2	44	0	11	6	2	0	7	2
Total Analysis Volume [veh/h]	7	157	1	6	176	0	42	23	8	1	27	6
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	0.08	0.04	0.01	0.00	0.05	0.01
d_M, Delay for Movement [s/veh]	7.58	0.00	0.00	7.54	0.00	0.00	12.42	12.31	10.05	11.85	11.77	9.41
Movement LOS	A	A	A	A	A		B	B	B	B	B	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.02	0.01	0.01	0.00	0.43	0.43	0.43	0.18	0.18	0.18
95th-Percentile Queue Length [ft/ln]	0.38	0.38	0.38	0.32	0.32	0.00	10.77	10.77	10.77	4.49	4.49	4.49
d_A, Approach Delay [s/veh]	0.32			0.25			12.13			11.36		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	3.02											
Intersection LOS	B											

APPENDIX F-IV

**EXISTING WITH AMBIENT GROWTH YEAR 2040
WITH CUMULATIVE WITH PROJECT
WITH IMPROVEMENTS TRAFFIC CONDITIONS**

Intersection Level Of Service Report
Intersection 4: Menifee Road at Newport Road

Control Type:	Signalized	Delay (sec / veh):	38.1
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.822

Intersection Setup

Name	Menifee Road			Menifee Road			Newport Road			Newport Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	[Diagram]			[Diagram]			[Diagram]			[Diagram]		
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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Menifee Road			Menifee Road			Newport Road			Newport Road		
Base Volume Input [veh/h]	258	497	133	57	606	619	571	891	233	275	1082	55
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	258	497	133	57	606	619	571	891	233	275	1082	55
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]	65	124	33	14	152	155	143	223	58	69	271	14
Total Analysis Volume [veh/h]	258	497	133	57	606	619	571	891	233	275	1082	55
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
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]	105
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	6	3	8	0	7	4	0
Auxiliary Signal Groups						3,6						
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	6	0	5	6	6	5	8	0	5	8	0
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	0
Amber [s]	3.2	4.3	0.0	3.2	4.3	4.3	3.2	5.0	0.0	3.2	5.0	0.0
All red [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
Split [s]	11	45	0	11	45	45	11	38	0	11	38	0
Vehicle Extension [s]	1.5	3.0	0.0	1.5	3.0	3.0	1.5	4.0	0.0	1.5	4.0	0.0
Walk [s]	0	10	0	0	10	10	0	10	0	0	10	0
Pedestrian Clearance [s]	0	28	0	0	28	28	0	21	0	0	21	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.2	4.3	0.0	3.2	4.3	4.3	3.2	5.0	0.0	3.2	5.0	0.0
Minimum Recall	No	No		No	No	No	No	No		No	No	
Maximum Recall	No	No		No	No	No	No	No		No	No	
Pedestrian Recall	No	No		No	No	No	No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	114	114	114	114	114	114	114	114	114	114	114	114
L, Total Lost Time per Cycle [s]	5.20	6.30	6.30	5.20	6.30	5.20	5.20	7.00	7.00	5.20	7.00	7.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.20	4.30	4.30	3.20	4.30	0.00	3.20	5.00	5.00	3.20	5.00	5.00
g_i, Effective Green Time [s]	11	29	29	4	23	58	29	46	46	11	28	28
g / C, Green / Cycle	0.09	0.25	0.25	0.04	0.20	0.51	0.26	0.40	0.40	0.10	0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.07	0.14	0.08	0.02	0.17	0.39	0.17	0.18	0.15	0.08	0.21	0.03
s, saturation flow rate [veh/h]	3445	3547	1583	3445	3547	1583	3445	5074	1583	3445	5074	1583
c, Capacity [veh/h]	321	901	402	127	701	806	883	2050	640	338	1247	389
d1, Uniform Delay [s]	50.85	37.02	34.75	53.96	44.41	22.63	37.92	24.64	23.82	50.56	41.36	33.71
k, delay calibration	0.04	0.11	0.11	0.04	0.11	0.50	0.04	0.15	0.15	0.04	0.15	0.15
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.81	0.53	0.48	0.93	3.35	6.93	0.30	0.21	0.50	1.82	2.79	0.23
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.80	0.55	0.33	0.45	0.86	0.77	0.65	0.43	0.36	0.81	0.87	0.14
d, Delay for Lane Group [s/veh]	52.66	37.55	35.23	54.89	47.76	29.57	38.21	24.85	24.32	52.39	44.14	33.94
Lane Group LOS	D	D	D	D	D	C	D	C	C	D	D	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	3.69	6.07	3.07	0.82	8.57	14.46	7.12	5.81	4.47	3.93	9.97	1.22
50th-Percentile Queue Length [ft/ln]	92.25	151.82	76.78	20.45	214.36	361.39	178.12	145.30	111.64	98.25	249.16	30.60
95th-Percentile Queue Length [veh/ln]	6.64	10.11	5.53	1.47	13.38	20.69	11.50	9.77	7.93	7.07	15.14	2.20
95th-Percentile Queue Length [ft/ln]	166.06	252.86	138.20	36.82	334.42	517.27	287.55	244.14	198.28	176.85	378.59	55.08

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	52.66	37.55	35.23	54.89	47.76	29.57	38.21	24.85	24.32	52.39	44.14	33.94
Movement LOS	D	D	D	D	D	C	D	C	C	D	D	C
d_A, Approach Delay [s/veh]	41.59			39.29			29.28			45.35		
Approach LOS	D			D			C			D		
d_I, Intersection Delay [s/veh]	38.08											
Intersection LOS	D											
Intersection V/C	0.822											

Sequence

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



Intersection Level Of Service Report
Intersection 11: Briggs Road at Holland Road

Control Type:	Two-way stop	Delay (sec / veh):	27.7
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.229

Intersection Setup

Name	Briggs Road			Briggs Road			Holland Road			Holland 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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Briggs Road			Briggs Road			Holland Road			Holland Road		
Base Volume Input [veh/h]	140	22	40	17	50	79	59	234	72	47	183	67
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	140	22	40	17	50	79	59	234	72	47	183	67
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]	35	6	10	4	13	20	15	59	18	12	46	17
Total Analysis Volume [veh/h]	140	22	40	17	50	79	59	234	72	47	183	67
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	0.10	0.00	0.00	0.01	0.00	0.00	0.24	0.53	0.07	0.23	0.43	0.07
d_M, Delay for Movement [s/veh]	7.73	0.00	0.00	7.36	0.00	0.00	23.98	23.58	19.11	27.69	20.07	15.17
Movement LOS	A	A	A	A	A	A	C	C	C	D	C	C
95th-Percentile Queue Length [veh/ln]	0.32	0.32	0.32	0.03	0.03	0.03	0.90	3.99	3.99	0.85	2.68	2.68
95th-Percentile Queue Length [ft/ln]	7.96	7.96	7.96	0.84	0.84	0.84	22.54	99.64	99.64	21.37	67.08	67.08
d_A, Approach Delay [s/veh]	5.36			0.86			22.76			20.17		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	15.35											
Intersection LOS	D											

Intersection Level Of Service Report
Intersection 4: Menifee Road at Newport Road

Control Type:	Signalized	Delay (sec / veh):	40.7
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.637

Intersection Setup

Name	Menifee Road			Menifee Road			Newport Road			Newport Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	[Diagram]			[Diagram]			[Diagram]			[Diagram]		
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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Menifee Road			Menifee Road			Newport Road			Newport Road		
Base Volume Input [veh/h]	319	707	193	110	716	729	569	1153	178	187	924	61
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	319	707	193	110	716	729	569	1153	178	187	924	61
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	80	177	48	28	179	182	142	288	45	47	231	15
Total Analysis Volume [veh/h]	319	707	193	110	716	729	569	1153	178	187	924	61
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	6	3	8	0	7	4	0
Auxiliary Signal Groups						3,6						
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	6	0	5	6	6	5	8	0	5	8	0
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	0
Amber [s]	3.2	4.3	0.0	3.2	4.3	4.3	3.2	5.0	0.0	3.2	5.0	0.0
All red [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
Split [s]	15	45	0	15	45	45	22	49	0	11	38	0
Vehicle Extension [s]	1.5	3.0	0.0	1.5	3.0	3.0	1.5	4.0	0.0	1.5	4.0	0.0
Walk [s]	0	10	0	0	10	10	0	10	0	0	10	0
Pedestrian Clearance [s]	0	28	0	0	28	28	0	21	0	0	21	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.2	4.3	0.0	3.2	4.3	4.3	3.2	5.0	0.0	3.2	5.0	0.0
Minimum Recall	No	No		No	No	No	No	No		No	No	
Maximum Recall	No	No		No	No	No	No	No		No	No	
Pedestrian Recall	No	No		No	No	No	No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.20	6.30	6.30	5.20	6.30	5.20	5.20	7.00	7.00	5.20	7.00	7.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.20	4.30	4.30	3.20	4.30	0.00	3.20	5.00	5.00	3.20	5.00	5.00
g_i, Effective Green Time [s]	13	35	35	6	27	63	30	48	48	9	26	26
g / C, Green / Cycle	0.11	0.29	0.29	0.05	0.23	0.53	0.25	0.40	0.40	0.07	0.22	0.22
(v / s)_i Volume / Saturation Flow Rate	0.09	0.20	0.12	0.03	0.20	0.46	0.17	0.23	0.11	0.05	0.18	0.04
s, saturation flow rate [veh/h]	3445	3547	1583	3445	3547	1583	3445	5074	1583	3445	5074	1583
c, Capacity [veh/h]	381	1020	455	167	800	835	859	2005	626	248	1105	345
d1, Uniform Delay [s]	52.46	38.13	34.77	56.28	45.22	24.92	40.61	28.49	24.80	54.80	45.02	38.30
k, delay calibration	0.04	0.11	0.11	0.04	0.11	0.50	0.04	0.15	0.15	0.04	0.15	0.15
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.90	0.86	0.63	1.66	3.84	12.24	0.33	0.37	0.35	1.76	2.48	0.35
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.84	0.69	0.42	0.66	0.90	0.87	0.66	0.58	0.28	0.75	0.84	0.18
d, Delay for Lane Group [s/veh]	54.36	38.99	35.39	57.93	49.06	37.16	40.94	28.86	25.15	56.56	47.50	38.64
Lane Group LOS	D	D	D	E	D	D	D	C	C	E	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	4.81	9.34	4.67	1.68	10.73	20.24	7.59	8.66	3.53	2.84	9.00	1.51
50th-Percentile Queue Length [ft/ln]	120.30	233.61	116.77	41.97	268.18	506.02	189.64	216.52	88.14	70.95	224.97	37.66
95th-Percentile Queue Length [veh/ln]	8.41	14.36	8.21	3.02	16.10	27.62	12.10	13.49	6.35	5.11	13.92	2.71
95th-Percentile Queue Length [ft/ln]	210.23	358.94	205.37	75.55	402.47	690.48	302.56	337.18	158.65	127.71	347.96	67.79

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	54.36	38.99	35.39	57.93	49.06	37.16	40.94	28.86	25.15	56.56	47.50	38.64
Movement LOS	D	D	D	E	D	D	D	C	C	E	D	D
d_A, Approach Delay [s/veh]	42.44			44.11			32.13			48.49		
Approach LOS	D			D			C			D		
d_I, Intersection Delay [s/veh]	40.75											
Intersection LOS	D											
Intersection V/C	0.637											

Sequence

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



Intersection Level Of Service Report
Intersection 11: Briggs Road at Holland Road

Control Type:	Two-way stop	Delay (sec / veh):	29.7
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.400

Intersection Setup

Name	Briggs Road			Briggs Road			Holland Road			Holland 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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Briggs Road			Briggs Road			Holland Road			Holland Road		
Base Volume Input [veh/h]	29	58	114	56	73	26	46	214	140	96	227	45
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	29	58	114	56	73	26	46	214	140	96	227	45
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]	7	15	29	14	18	7	12	54	35	24	57	11
Total Analysis Volume [veh/h]	29	58	114	56	73	26	46	214	140	96	227	45
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	0.02	0.00	0.00	0.04	0.00	0.00	0.16	0.44	0.14	0.40	0.44	0.05
d_M, Delay for Movement [s/veh]	7.46	0.00	0.00	7.67	0.00	0.00	20.13	20.40	16.70	29.67	18.02	14.87
Movement LOS	A	A	A	A	A	A	C	C	C	D	C	B
95th-Percentile Queue Length [veh/ln]	0.06	0.06	0.06	0.12	0.12	0.12	0.57	3.76	3.76	1.82	2.67	2.67
95th-Percentile Queue Length [ft/ln]	1.48	1.48	1.48	3.11	3.11	3.11	14.24	94.05	94.05	45.45	66.74	66.74
d_A, Approach Delay [s/veh]	1.08			2.77			19.07			20.68		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	14.13											
Intersection LOS	D											

APPENDIX G

PROJECT DRIVEWAY LEVEL OF SERVICE CALCULATION WORKSHEETS

APPENDIX G-1

EXISTING WITH PROJECT TRAFFIC CONDITIONS

Intersection Level Of Service Report
Intersection 30: Project Driveway 1 at Old Newport Road

Control Type:	Two-way stop	Delay (sec / veh):	11.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.277

Intersection Setup

Name	Project Driveway 1		Old Newport Road		Old Newport Road	
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 Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Project Driveway 1		Old Newport Road		Old Newport Road	
Base Volume Input [veh/h]	136	0	71	46	1	80
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
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]	136	0	71	46	1	80
Peak Hour Factor	0.6730	0.6730	0.6730	0.6730	0.6730	0.6730
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	51	0	26	17	0	30
Total Analysis Volume [veh/h]	202	0	105	68	1	119
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.28	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	11.83	10.85	0.00	0.00	7.57	0.00
Movement LOS	B	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	1.13	1.13	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	28.30	28.30	0.00	0.00	0.05	0.05
d_A, Approach Delay [s/veh]	11.83		0.00		0.06	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	4.84					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 31: Briggs Road at Project Driveway 2

Control Type:	Two-way stop	Delay (sec / veh):	8.9
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.003

Intersection Setup

Name	Briggs Road		Briggs Road		Project Driveway 2	
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 Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Briggs Road		Briggs Road		Project Driveway 2	
Base Volume Input [veh/h]	0	84	77	11	0	2
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
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	84	77	11	0	2
Peak Hour Factor	1.0000	0.6560	0.6560	0.6560	1.0000	0.6560
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	32	29	4	0	1
Total Analysis Volume [veh/h]	0	128	117	17	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	8.90
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	0.24
d_A, Approach Delay [s/veh]	0.00		0.00		8.90	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.10					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 32: Project Driveway 3 at Tres Lagos Drive

Control Type:	Two-way stop	Delay (sec / veh):	8.6
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.002

Intersection Setup

Name	Project Driveway 3		Tres Lagos Drive		Tres Lagos Drive	
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 Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Project Driveway 3		Tres Lagos Drive		Tres Lagos Drive	
Base Volume Input [veh/h]	2	33	11	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
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	33	11	0	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	9	3	0	0	0
Total Analysis Volume [veh/h]	2	35	12	0	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.03	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.64	8.44	0.00	0.00	0.00	0.00
Movement LOS	A	A		A	A	
95th-Percentile Queue Length [veh/ln]	0.11	0.11	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	2.65	2.65	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.45		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	8.45					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 30: Project Driveway 1 at Old Newport Road

Control Type:	Two-way stop	Delay (sec / veh):	11.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.169

Intersection Setup

Name	Project Driveway 1		Old Newport Road		Old Newport Road	
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 Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Project Driveway 1		Old Newport Road		Old Newport Road	
Base Volume Input [veh/h]	90	0	99	152	4	52
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
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]	90	0	99	152	4	52
Peak Hour Factor	0.7770	0.7770	0.7770	0.7770	0.7770	0.7770
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	29	0	32	49	1	17
Total Analysis Volume [veh/h]	116	0	127	196	5	67
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.17	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	11.30	10.48	0.00	0.00	7.92	0.00
Movement LOS	B	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.60	0.60	0.00	0.00	0.01	0.01
95th-Percentile Queue Length [ft/ln]	15.12	15.12	0.00	0.00	0.24	0.24
d_A, Approach Delay [s/veh]	11.30		0.00		0.55	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	2.64					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 31: Briggs Road at Project Driveway 2

Control Type:	Two-way stop	Delay (sec / veh):	8.7
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

Intersection Setup

Name	Briggs Road		Briggs Road		Project Driveway 2	
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 Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Briggs Road		Briggs Road		Project Driveway 2	
Base Volume Input [veh/h]	0	47	51	36	0	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
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	47	51	36	0	1
Peak Hour Factor	1.0000	0.8100	0.8100	0.8100	1.0000	0.8100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	15	16	11	0	0
Total Analysis Volume [veh/h]	0	58	63	44	0	1
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	8.70
Movement LOS		A	A	A		A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.08
d_A, Approach Delay [s/veh]	0.00		0.00		8.70	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.05					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 32: Project Driveway 3 at Tres Lagos Drive

Control Type:	Two-way stop	Delay (sec / veh):	8.6
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

Intersection Setup

Name	Project Driveway 3		Tres Lagos Drive		Tres Lagos Drive	
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 Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Project Driveway 3		Tres Lagos Drive		Tres Lagos Drive	
Base Volume Input [veh/h]	1	21	38	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
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]	1	21	38	0	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	6	10	0	0	0
Total Analysis Volume [veh/h]	1	22	40	0	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.02	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.59	8.39	0.00	0.00	0.00	0.00
Movement LOS	A	A		A	A	
95th-Percentile Queue Length [veh/ln]	0.07	0.07	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	1.63	1.63	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.40		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	8.40					
Intersection LOS	A					

APPENDIX G-II

**EXISTING WITH AMBIENT GROWTH YEAR 2020
WITH PROJECT TRAFFIC CONDITIONS**

Intersection Level Of Service Report
Intersection 30: Project Driveway 1 at Old Newport Road

Control Type:	Two-way stop	Delay (sec / veh):	11.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.251

Intersection Setup

Name	Project Driveway 1		Old Newport Road		Old Newport Road	
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 Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Project Driveway 1		Old Newport Road		Old Newport Road	
Base Volume Input [veh/h]	119	0	73	46	4	86
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
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]	119	0	73	46	4	86
Peak Hour Factor	0.6730	0.6730	0.6730	0.6730	0.6730	0.6730
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	44	0	27	17	1	32
Total Analysis Volume [veh/h]	177	0	108	68	6	128
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.25	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	11.81	10.68	0.00	0.00	7.58	0.00
Movement LOS	B	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.99	0.99	0.00	0.00	0.01	0.01
95th-Percentile Queue Length [ft/ln]	24.78	24.78	0.00	0.00	0.21	0.21
d_A, Approach Delay [s/veh]	11.81		0.00		0.34	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	4.39					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 31: Briggs Road at Project Driveway 2

Control Type:	Two-way stop	Delay (sec / veh):	9.2
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.013

Intersection Setup

Name	Briggs Road		Briggs Road		Project Driveway 2	
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 Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Briggs Road		Briggs Road		Project Driveway 2	
Base Volume Input [veh/h]	0	134	108	8	0	7
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
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	134	108	8	0	7
Peak Hour Factor	1.0000	0.6560	0.6560	0.6560	1.0000	0.6560
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	51	41	3	0	3
Total Analysis Volume [veh/h]	0	204	165	12	0	11
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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




Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	9.18
Movement LOS		A	A	A		A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.04
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.96
d_A, Approach Delay [s/veh]	0.00		0.00		9.18	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.26					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 32: Project Driveway 3 at Tres Lagos Drive

Control Type:	Two-way stop	Delay (sec / veh):	8.9
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.005

Intersection Setup

Name	Project Driveway 3		Tres Lagos Drive		Tres Lagos Drive	
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 Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Project Driveway 3		Tres Lagos Drive		Tres Lagos Drive	
Base Volume Input [veh/h]	5	41	14	26	25	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
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]	5	41	14	26	25	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	11	4	7	7	0
Total Analysis Volume [veh/h]	5	43	15	27	26	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.04	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.94	8.60	0.00	0.00	0.00	0.00
Movement LOS	A	A		A	A	
95th-Percentile Queue Length [veh/ln]	0.15	0.15	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	3.63	3.63	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.63		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	4.10					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 30: Project Driveway 1 at Old Newport Road

Control Type:	Two-way stop	Delay (sec / veh):	11.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.152

Intersection Setup

Name	Project Driveway 1		Old Newport Road		Old Newport Road	
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 Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Project Driveway 1		Old Newport Road		Old Newport Road	
Base Volume Input [veh/h]	78	0	95	152	13	56
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
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]	78	0	95	152	13	56
Peak Hour Factor	0.7770	0.7770	0.7770	0.7770	0.7770	0.7770
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	25	0	31	49	4	18
Total Analysis Volume [veh/h]	100	0	122	196	17	72
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.15	0.00	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	11.44	10.37	0.00	0.00	7.94	0.00
Movement LOS	B	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.53	0.53	0.00	0.00	0.03	0.03
95th-Percentile Queue Length [ft/ln]	13.32	13.32	0.00	0.00	0.79	0.79
d_A, Approach Delay [s/veh]	11.44		0.00		1.52	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	2.52					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 31: Briggs Road at Project Driveway 2

Control Type:	Two-way stop	Delay (sec / veh):	9.4
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.007

Intersection Setup

Name	Briggs Road		Briggs Road		Project Driveway 2	
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 Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Briggs Road		Briggs Road		Project Driveway 2	
Base Volume Input [veh/h]	0	148	158	27	0	5
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
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	148	158	27	0	5
Peak Hour Factor	1.0000	0.8100	0.8100	0.8100	1.0000	0.8100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	46	49	8	0	2
Total Analysis Volume [veh/h]	0	183	195	33	0	6
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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




Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	9.38
Movement LOS		A	A	A		A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.02
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.55
d_A, Approach Delay [s/veh]	0.00		0.00		9.38	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.13					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 32: Project Driveway 3 at Tres Lagos Drive

Control Type:	Two-way stop	Delay (sec / veh):	9.1
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.003

Intersection Setup

Name	Project Driveway 3		Tres Lagos Drive		Tres Lagos Drive	
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 Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Project Driveway 3		Tres Lagos Drive		Tres Lagos Drive	
Base Volume Input [veh/h]	3	27	48	40	50	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
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]	3	27	48	40	50	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	7	13	11	13	0
Total Analysis Volume [veh/h]	3	28	51	42	53	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.03	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	9.09	8.66	0.00	0.00	0.00	0.00
Movement LOS	A	A		A	A	
95th-Percentile Queue Length [veh/ln]	0.10	0.10	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	2.39	2.39	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.71		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	2.14					
Intersection LOS	A					

APPENDIX G-III

**EXISTING WITH AMBIENT GROWTH YEAR 2020
WITH CUMULATIVE WITH PROJECT
TRAFFIC CONDITIONS**

Intersection Level Of Service Report
Intersection 30: Project Driveway 1 at Old Newport Road

Control Type:	Two-way stop	Delay (sec / veh):	10.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.159

Intersection Setup

Name	Project Driveway 1		Old Newport Road		Old Newport Road	
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 Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Project Driveway 1		Old Newport Road		Old Newport Road	
Base Volume Input [veh/h]	119	0	73	46	4	86
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
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]	119	0	73	46	4	86
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	31	0	19	12	1	23
Total Analysis Volume [veh/h]	125	0	77	48	4	91
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.16	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	10.44	9.64	0.00	0.00	7.47	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.56	0.56	0.00	0.00	0.01	0.01
95th-Percentile Queue Length [ft/ln]	14.08	14.08	0.00	0.00	0.21	0.21
d_A, Approach Delay [s/veh]	10.44		0.00		0.31	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	3.87					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 31: Briggs Road at Project Driveway 2

Control Type:	Two-way stop	Delay (sec / veh):	8.9
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.007

Intersection Setup

Name	Briggs Road		Briggs Road		Project Driveway 2	
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 Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Briggs Road		Briggs Road		Project Driveway 2	
Base Volume Input [veh/h]	0	134	108	8	0	7
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
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	134	108	8	0	7
Peak Hour Factor	1.0000	0.9500	0.9500	0.9500	1.0000	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	35	28	2	0	2
Total Analysis Volume [veh/h]	0	141	114	8	0	7
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	8.88
Movement LOS		A	A	A		A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.02
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.57
d_A, Approach Delay [s/veh]	0.00		0.00		8.88	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.23					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 32: Project Driveway 3 at Tres Lagos Drive

Control Type:	Two-way stop	Delay (sec / veh):	8.9
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.005

Intersection Setup

Name	Project Driveway 3		Tres Lagos Drive		Tres Lagos Drive	
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 Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Project Driveway 3		Tres Lagos Drive		Tres Lagos Drive	
Base Volume Input [veh/h]	5	41	14	26	25	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
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]	5	41	14	26	25	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	11	4	7	7	0
Total Analysis Volume [veh/h]	5	43	15	27	26	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.04	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.94	8.60	0.00	0.00	0.00	0.00
Movement LOS	A	A		A	A	
95th-Percentile Queue Length [veh/ln]	0.15	0.15	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	3.63	3.63	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.63		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	4.10					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 30: Project Driveway 1 at Old Newport Road

Control Type:	Two-way stop	Delay (sec / veh):	10.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.115

Intersection Setup

Name	Project Driveway 1		Old Newport Road		Old Newport Road	
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 Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Project Driveway 1		Old Newport Road		Old Newport Road	
Base Volume Input [veh/h]	78	0	95	152	13	56
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
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]	78	0	95	152	13	56
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	21	0	25	40	3	15
Total Analysis Volume [veh/h]	82	0	100	160	14	59
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.11	0.00	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	10.69	9.83	0.00	0.00	7.79	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.39	0.39	0.00	0.00	0.03	0.03
95th-Percentile Queue Length [ft/ln]	9.68	9.68	0.00	0.00	0.75	0.75
d_A, Approach Delay [s/veh]	10.69		0.00		1.49	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	2.38					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 31: Briggs Road at Project Driveway 2

Control Type:	Two-way stop	Delay (sec / veh):	9.2
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.006

Intersection Setup

Name	Briggs Road		Briggs Road		Project Driveway 2	
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 Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Briggs Road		Briggs Road		Project Driveway 2	
Base Volume Input [veh/h]	0	148	158	27	0	5
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
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	148	158	27	0	5
Peak Hour Factor	1.0000	0.9500	0.9500	0.9500	1.0000	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	39	42	7	0	1
Total Analysis Volume [veh/h]	0	156	166	28	0	5
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	9.20
Movement LOS		A	A	A		A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.02
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.44
d_A, Approach Delay [s/veh]	0.00		0.00		9.20	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.13					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 32: Project Driveway 3 at Tres Lagos Drive

Control Type:	Two-way stop	Delay (sec / veh):	9.1
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.003

Intersection Setup

Name	Project Driveway 3		Tres Lagos Drive		Tres Lagos Drive	
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 Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Project Driveway 3		Tres Lagos Drive		Tres Lagos Drive	
Base Volume Input [veh/h]	3	27	48	40	50	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
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]	3	27	48	40	50	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	7	13	11	13	0
Total Analysis Volume [veh/h]	3	28	51	42	53	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.03	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	9.09	8.66	0.00	0.00	0.00	0.00
Movement LOS	A	A		A	A	
95th-Percentile Queue Length [veh/ln]	0.10	0.10	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	2.39	2.39	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.71		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	2.14					
Intersection LOS	A					

APPENDIX G-IV

**EXISTING WITH AMBIENT GROWTH YEAR 2040
WITH CUMULATIVE WITH PROJECT
TRAFFIC CONDITIONS**

Intersection Level Of Service Report
Intersection 30: Project Driveway 1 at Old Newport Road

Control Type:	Two-way stop	Delay (sec / veh):	10.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.161

Intersection Setup

Name	Project Driveway 1		Old Newport Road		Old Newport Road	
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 Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Project Driveway 1		Old Newport Road		Old Newport Road	
Base Volume Input [veh/h]	119	0	97	46	4	118
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
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]	119	0	97	46	4	118
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]	30	0	24	12	1	30
Total Analysis Volume [veh/h]	119	0	97	46	4	118
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.16	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	10.79	9.79	0.00	0.00	7.51	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.57	0.57	0.00	0.00	0.01	0.01
95th-Percentile Queue Length [ft/ln]	14.26	14.26	0.00	0.00	0.21	0.21
d_A, Approach Delay [s/veh]	10.79		0.00		0.25	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	3.42					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 31: Briggs Road at Project Driveway 2

Control Type:	Two-way stop	Delay (sec / veh):	9.7
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.009

Intersection Setup

Name	Briggs Road		Briggs Road		Project Driveway 2	
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 Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Briggs Road		Briggs Road		Project Driveway 2	
Base Volume Input [veh/h]	0	372	266	8	0	7
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
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	372	266	8	0	7
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	93	67	2	0	2
Total Analysis Volume [veh/h]	0	372	266	8	0	7
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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




Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	9.73
Movement LOS		A	A	A		A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.03
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.69
d_A, Approach Delay [s/veh]	0.00		0.00		9.73	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.10					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 32: Project Driveway 3 at Tres Lagos Drive

Control Type:	Two-way stop	Delay (sec / veh):	10.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.007

Intersection Setup

Name	Project Driveway 3		Tres Lagos Drive		Tres Lagos Drive	
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 Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Project Driveway 3		Tres Lagos Drive		Tres Lagos Drive	
Base Volume Input [veh/h]	5	41	14	156	147	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
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]	5	41	14	156	147	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	10	4	39	37	0
Total Analysis Volume [veh/h]	5	41	14	156	147	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.05	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	10.46	9.23	0.00	0.00	0.00	0.00
Movement LOS	B	A		A	A	
95th-Percentile Queue Length [veh/ln]	0.17	0.17	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	4.18	4.18	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	9.36		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.23					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 30: Project Driveway 1 at Old Newport Road

Control Type:	Two-way stop	Delay (sec / veh):	10.9
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.114

Intersection Setup

Name	Project Driveway 1		Old Newport Road		Old Newport Road	
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 Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Project Driveway 1		Old Newport Road		Old Newport Road	
Base Volume Input [veh/h]	78	0	120	152	13	77
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
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]	78	0	120	152	13	77
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]	20	0	30	38	3	19
Total Analysis Volume [veh/h]	78	0	120	152	13	77
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.11	0.00	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	10.93	9.93	0.00	0.00	7.82	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.38	0.38	0.00	0.00	0.03	0.03
95th-Percentile Queue Length [ft/ln]	9.59	9.59	0.00	0.00	0.76	0.76
d_A, Approach Delay [s/veh]	10.93		0.00		1.13	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	2.17					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 31: Briggs Road at Project Driveway 2

Control Type:	Two-way stop	Delay (sec / veh):	13.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.011

Intersection Setup

Name	Briggs Road		Briggs Road		Project Driveway 2	
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 Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Briggs Road		Briggs Road		Project Driveway 2	
Base Volume Input [veh/h]	0	608	693	27	0	5
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
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	608	693	27	0	5
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	152	173	7	0	1
Total Analysis Volume [veh/h]	0	608	693	27	0	5
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	0.01	0.01	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	13.36
Movement LOS		A	A	A		B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.03
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.87
d_A, Approach Delay [s/veh]	0.00		0.00		13.36	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.05					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 32: Project Driveway 3 at Tres Lagos Drive

Control Type:	Two-way stop	Delay (sec / veh):	12.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.006

Intersection Setup

Name	Project Driveway 3		Tres Lagos Drive		Tres Lagos Drive	
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 Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Project Driveway 3		Tres Lagos Drive		Tres Lagos Drive	
Base Volume Input [veh/h]	3	27	48	240	301	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
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]	3	27	48	240	301	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	7	12	60	75	0
Total Analysis Volume [veh/h]	3	27	48	240	301	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

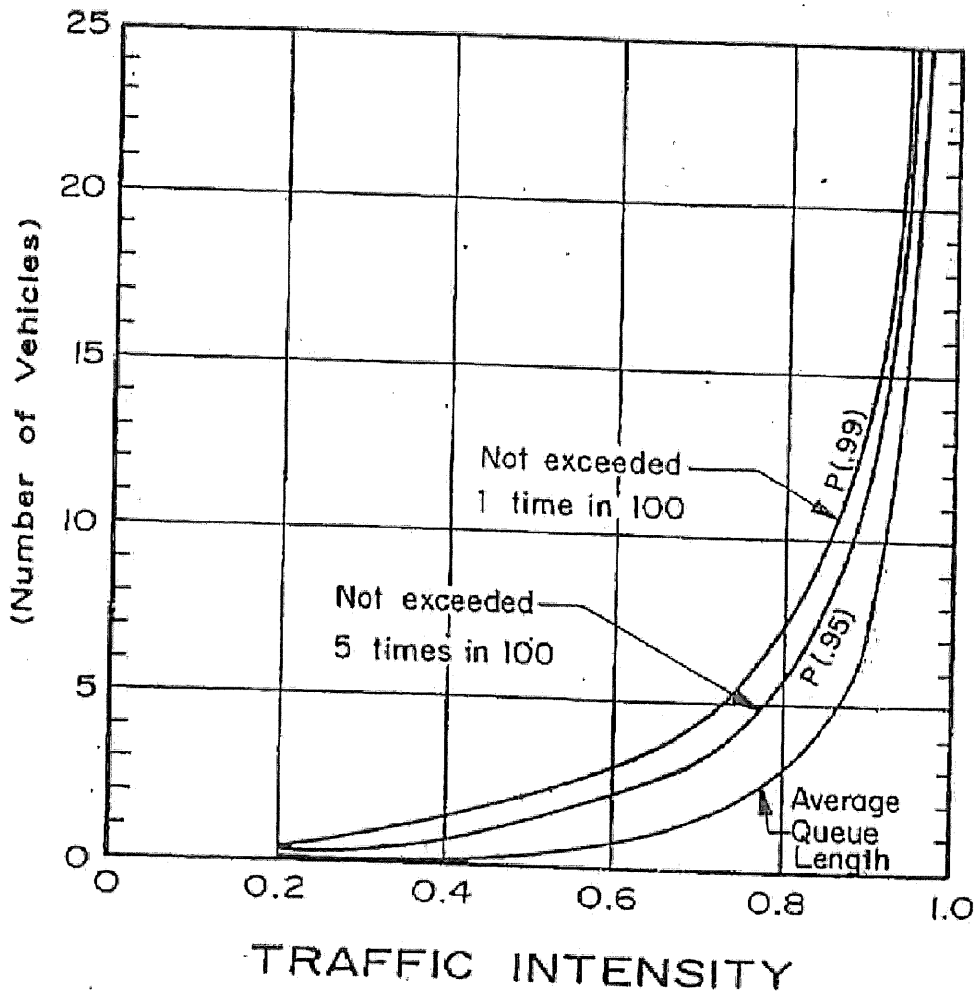
V/C, Movement V/C Ratio	0.01	0.04	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	12.40	10.10	0.00	0.00	0.00	0.00
Movement LOS	B	B		A	A	
95th-Percentile Queue Length [veh/ln]	0.13	0.13	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	3.33	3.33	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	10.33		0.00		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.54					
Intersection LOS	B					

APPENDIX G-V

CROMMELIN METHODOLOGY BACKUP DATA

RESERVOIR NEEDS VS TRAFFIC INTENSITY

RESERVOIR BEHIND SERVICE POSITION



Assumptions:

1. Arrivals follow a Poisson Distribution
2. Service rate can be represented by an exponential probability function.
3. Flow is equally divided between each lane if more than one is available.

Note: To obtain reservoir length, use 22 feet per vehicle.