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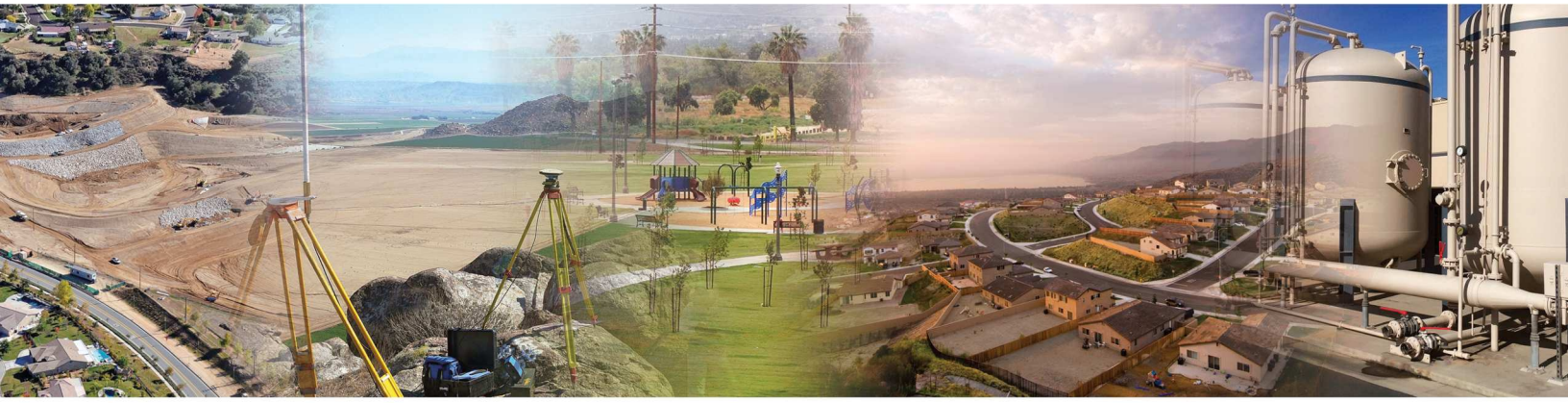

REVISED TRAFFIC IMPACT ANALYSIS

JPN HAUN AND HOLLAND ROAD COMMERCIAL CENTER PROJECT

Prepared For:

MENIFEE
New. Better. Best.

May 2020

www.webbassociates.com

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May 2, 2020

Mr. Jim P. Nelson
JPN CORPORATION
11225 W. Bernardo Court
San Diego, CA 92127

RE: Revised Traffic Impact Analysis Report for the proposed JPN Haun and Holland Commercial Center Project in the City of Menifee, CA.

Dear Jim,

We are pleased to submit herewith our Revised Traffic Impact Analysis Report for the proposed JPN Haun and Holland Commercial Center Project, which we have prepared at your request.

If you have any questions regarding this report, please call the undersigned for clarification.

Sincerely

ALBERT A. WEBB ASSOCIATES

Nicholas R. Lowe, M.S., P.E.
Senior Engineer

The comment letter and responses are provided in Appendix G.

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EXECUTIVE SUMMARY

Purpose of Report and Study Objectives

The purpose of this study is to evaluate the effects on traffic circulation produced from the proposed JPN Haun and Holland Commercial Center Project in the City of Menifee (City).

The objectives of this study include the following:

- Document existing (2017) traffic conditions in the vicinity of the proposed development;
- Determine the traffic generated from the proposed development;
- Evaluate existing plus project (2017) traffic conditions;
- Evaluate existing plus ambient growth plus cumulative conditions without Holland overpass traffic conditions;
- Evaluate existing plus ambient growth plus cumulative projects plus project (2021) without overpass traffic conditions;
- Evaluate existing plus ambient growth plus cumulative conditions with Holland overpass traffic conditions;
- Evaluate existing plus ambient growth plus cumulative projects plus project (2021) with overpass traffic conditions;
- Determine if the level of service (LOS) required by the City and California Department of Transportation (Caltrans) will be maintained within the study area, and if not, determine the improvement measures that will be necessary in order to maintain the required LOS;
- Determine if peak hour traffic signal warrants are met for any of the unsignalized study area intersections;
- Evaluate the adequacy of on-site circulation for the proposed development; and
- Determine if safety and/or operational improvements are necessary due to the proposed development.

Site Location and Study Area

The proposed JPN Haun and Holland Commercial Center Project is located on the northeast corner of Haun Road and Holland Road in the City of Menifee. This study considers a study area within a three miles radius of the project.

Development Description

Project Size

The project site encompasses approximately 32.71 acres. Based on discussions with the project applicant, the following land uses are anticipated: the project is currently proposed for development of 7.5 TSF shopping center, 13.3 TSF high-turn over restaurant, 39 TSF supermarket, gasoline/service station with 16 vehicle fueling positions (VFPs) with convenience market and a car wash, 4.5 TSF day care center, 4.8 TSF fast food restaurant with drive thru, 47.2 TSF industrial park, 105 TSF automobile sales, and 79 TSF of general office building.

JPN Haun & Holland has planned the project layout around the consideration to make 4.35 acres of land available for the City to purchase or come to an agreement regarding existing right-of way as follows:

- 1 Acre (Dedication of Haun Road)
- 1.71 Acres (Public Street A)
- 1.64 Acres (Dedication of Holland)

Project Trip Generation

The proposed project is anticipated to generate approximately 10,827 daily trip-ends, including 904 trip-ends during the AM peak hour and 1,083 trip-ends during the PM peak hour.

Project Site Circulation

JPN Haun and Holland Commercial Center Project will have access to Haun Road on west of the project. Access to the project will be provided via two driveways on Haun Road. One right-in right-out driveway (Haun Road/Driveway 1) and One signalized full-acess driveway (Haun Road/Driveway 2) that connects the interior project Street A to Haun Road.

Project Zoning and Land Use

The existing and proposed zoning and land use designations are as follows:

Existing Zoning: ECD (Community Core)
Proposed Zoning: ECD (Community Core)
Existing Land Use: Vacant
Proposed Land Use: Commercial Center

Principal Findings

Prior to the preparation of this report, the City of Menifee was solicited for input and approval of key assumptions used in the analysis of this traffic impact analysis. The approved scoping agreement or correspondence with the city is included in Appendix A.

Acceptable Level of Service

According to the City of Menifee General Plan, Policy C-1.2:

> *Require development to mitigate its traffic impacts and achieve a peak hour Level of Service (LOS) D or better at intersections, except at constrained intersections at close proximity to the I-215 where LOS E may be permitted.*

Per discussions with City staff and to be consistent with the City's GP Policy C-1.2 LOS "E" has been considered acceptable for the following study area intersections as they are considered "a constrained intersections" due to their proximity to the I-215 freeway:

3. Haun Road (NS) / Newport Road (EW)
6. Antelope Road (NS) / Newport Road (EW)
16. Haun Road (NS) / Scott Road (EW)
19. Antelope Road (NS) / Scott Road (EW)

All other study area intersections would be required to meet acceptable LOS D or better in accordance with the City's guidelines and General Plan goals.

Region-wide goal for acceptable LOS on all Caltrans facilities is D. The acceptable LOS for Caltrans facilities is based on the Caltrans' *Guide for the Preparation of Traffic Impact Studies* Section II:

> *Caltrans endeavors to maintain a target LOS at the transition between LOS "C" and LOS "D" on State highway facilities, however, Caltrans acknowledges that this may not always be feasible and recommends that the lead agency consults with Caltrans to determine the appropriate target LOS. If an existing State highway facility is operating*

at less than the appropriate target LOS, the existing measures of effectiveness (MOE) should be maintained.

Roadway Segments

Roadway segments are evaluated based on a roadway daily volume and its capacity. Roadway segment analysis compares the daily volume with the capacity to arrive at a volume to capacity ratio (v/c). This study follows the "v/c" ratio stipulated by the City of Menifee TIA roadway segment thresholds, shown in Table 3-3. Capacities for two-lane roads classified as Secondary, Major and Urban Arterial were linearly interpolated respectively. The target LOS for roadway segments will be considered "D" for consistency with the City of Menifee TIA guidelines.

Levels of Service – Existing (2017) Conditions

The existing (2017) conditions levels of service for the study area intersections vary from LOS A to F. The intersection of Sherman Road/Holland Road is impacted by school traffic generated by Paloma Valley High School and Santa Rosa Academy under the a.m. peak hour period causing the intersection to operate at an unacceptable levels of service under existing conditions. The following study area intersection operates at an unacceptable LOS:

11. Sherman Road (NS) / Holland Road (EW)

And the following study area roadway segments operates at an unacceptable LOS.

1. Bradley Road from Park Avenue to Newport Road
13. Scott Road from Haun Road to I-215 Southbound Ramps
14. Scott Road from I-215 Northbound Ramps to Antelope Road

With the recommended improvements presented in Table 6-1, Table 6-2 and Figure 6-A, levels of service at the study area impacted roadway segments and intersection would be improved to meet the required level of service.

Levels of Service – Existing Plus Project (2017) Conditions

For existing plus project (2017) traffic conditions without off-site improvements, the study area intersections are expected to operate at levels of service that vary from LOS A to F. The following study area intersections would operate at an unacceptable LOS:

11. Sherman Road (NS) / Holland Road (EW)
15. Haun Road (NS) / Holland Road (EW)

And the following study area roadway segments would operate at an unacceptable LOS.

1. Bradley Road from Park Avenue to Newport Road
4. Haun Road from Newport Road to La Piedra Road
13. Scott Road from Haun Road to I-215 Southbound Ramps
14. Scott Road from I-215 Northbound Ramps to Antelope Road

With the recommended improvements presented in Table 6-1, Table 6-2 and Figure 6-A, levels of service at the study area impacted roadway segments and intersections would be improved to meet the required level of service.

Levels of Service – Existing Plus Ambient Growth Plus Cumulative Projects (2021) Without Overpass Conditions

For existing plus ambient growth plus other cumulative projects (2021) without overpass traffic conditions without off-site improvements, the study area intersections are expected to operate at levels of service that vary from LOS B to F. The following study area intersections would operate at an unacceptable LOS:

6. Antelope Road (NS) /Newport Road (EW)
7. Menifee Road (NS) / Newport Road (EW)
9. Bradley Road (NS) / Holland Road (EW)
11. Sherman Road (NS) / Holland Road (EW)
15. Haun Road (NS) / Holland Road (EW)
16. Haun Road (NS) / Scott Road (EW)

And the following study area roadway segments would operate at an unacceptable LOS.

1. Bradley Road from Park Avenue to Newport Road
8. Newport Road from Bradley Road Haun Road
14. Scott Road from I-215 Northbound Ramps to Antelope Road

With the recommended improvements presented in Table 6-3, Table 6-4 and Figure 6-B, levels of service at the study area impacted roadway segments and intersections would be improved to meet the required level of service.

Levels of Service – Existing Plus Ambient Growth Plus Cumulative Projects Plus Project (2021) Without Overpass Conditions

For existing plus ambient growth plus other cumulative projects plus project (2021) without overpass traffic conditions without off-site improvements, the study area intersections are expected to operate at levels of service that vary from LOS B to F. The following study area intersections would operate at an unacceptable LOS:

6. Antelope Road (NS) /Newport Road (EW)
7. Menifee Road (NS) / Newport Road (EW)
9. Bradley Road (NS) / Holland Road (EW)
11. Sherman Road (NS) / Holland Road (EW)
15. Haun Road (NS) / Holland Road (EW)
16. Haun Road (NS) / Scott Road (EW)

And the following study area roadway segments would operate at an unacceptable LOS.

1. Bradley Road from Park Avenue to Newport Road
4. Haun Road from Newport Road to La Piedra Road
5. Haun Road from La Piedra Road to Holland Road
6. Haun Road from Holland Road to Scott Road
8. Newport Road from Bradley Road to Haun Road
14. Scott Road from I-215 Northbound Ramps to Antelope Road

With the recommended improvements presented in Table 6-3, Table 6-4 and Figure 6-B, levels of service at the study area impacted roadway segments and intersections would be improved to meet the required level of service.

Levels of Service – Existing Plus Ambient Growth Plus Cumulative Projects (2021) With Overpass Conditions

For existing plus ambient growth plus other cumulative projects (2021) with overpass traffic conditions without off-site improvements, the study area intersections are expected to operate at levels of service that vary from LOS B to F. The following study area intersections would operate at an unacceptable LOS:

7. Menifee Road (NS) / Newport Road (EW)
9. Bradley Road (NS) / Holland Road (EW)
11. Sherman Road (NS) / Holland Road (EW)
15. Haun Road (NS) / Holland Road (EW)
22. Antelope Road (NS) / Albion Lane (EW)
24. Palomar Road (NS) / Holland Road (EW)

And the following study area roadway segments would operate at an unacceptable LOS.

1. Bradley Road from Park Avenue to Newport Road
6. Haun Road from Holland Road to Scott Road
8. Newport Road from Bradley Road to Haun Road
14. Scott Road from I-215 Northbound Ramps to Antelope Road

With the recommended improvements presented in Table 6-5, Table 6-6 and Figure 6-C, levels of service at the study area impacted roadway segments and intersections would be improved to meet the required level of service.

Levels of Service – Existing Plus Ambient Growth Plus Cumulative Projects Plus Project (2021) With Overpass Conditions

For existing plus ambient growth plus other cumulative projects plus project (2021) with overpass traffic conditions without off-site improvements, the study area intersections are expected to operate at levels of service that vary from LOS B to F. The following study area intersections would operate at an unacceptable LOS:

7. Menifee Road (NS) / Newport Road (EW)
9. Bradley Road (NS) / Holland Road (EW)
11. Sherman Road (NS) / Holland Road (EW)
15. Haun Road (NS) / Holland Road (EW)
16. Haun Road (NS) / Scott Road (EW)
22. Antelope Road (NS) / Albion Lane (EW)
24. Palomar Road (NS) / Holland Road (EW)

And the following study area roadway segments would operate at an unacceptable LOS.

1. Bradley Road from Park Avenue to Newport Road
4. Haun Road from Newport Road to La Piedra Road
5. Haun Road from La Piedra Road to Holland Road
6. Haun Road from Holland Road to Scott Road
14. Scott Road from I-215 Northbound Ramps to Antelope Road

With the recommended improvements presented in Table 6-5, Table 6-6 and Figure 6-C, levels of service at the study area impacted roadway segments and intersections could be improved to meet the required level of service.

Traffic Signal Warrants

The California Manual on Uniform Traffic Control Devices (MUTCD) states that the satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal. Peak hour traffic signal warrant analysis should only be considered as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal. Intersections that exceed the peak hour warrant are more likely to meet one or more of the other volume-based signal warrants. The Manual on Uniform Traffic Control Devices (MUTCD) also advises that a traffic control signal should not be installed unless:

- One or more of the traffic signal warrants are satisfied;
- An engineering study indicates that installing a traffic control signal will improve the overall safety and/or operation of the intersection; and
- It will not seriously disrupt progressive traffic flow.

For existing (2017) traffic conditions, the peak hour traffic control signal warrant is satisfied for the following study area unsignalized intersection (see Appendix D for technical calculations):

15. Haun Road (NS) / Holland Road (EW)

For existing plus project (2017) traffic conditions, the peak hour traffic control signal warrant is satisfied for the following study area unsignalized intersections (see Appendix D for technical calculations):

21. Haun Road (NS) / Driveway 2 (EW)

For existing plus ambient growth plus other cumulative projects (2021) without overpass traffic conditions, the peak hour traffic control signal warrant is satisfied for the following study area unsignalized intersection (see Appendix D for technical calculations):

11. Town Center Dr-Sherman Road (NS) / Holland Road (EW)

For existing plus ambient growth plus other cumulative projects plus project (2021) without overpass traffic conditions, no additional study area unsignalized intersections are expected to meet the peak hour traffic control signal warrant (see Appendix D for technical calculations).

For existing plus ambient growth plus other cumulative projects (2021) with overpass traffic conditions, the peak hour traffic control signal warrant is satisfied for the following study area unsignalized intersections (see Appendix D for technical calculations):

22. Antelope Road (NS) /Albion Lane (EW)
24. Palomar Road (NS)/Holland Road (EW)
25. Menifee Road (NS)/Holland Road (EW)

For existing plus ambient growth plus other cumulative projects plus project (2021) with overpass traffic conditions, no additional study area unsignalized intersections are expected to meet the peak hour traffic control signal warrant (see Appendix D for technical calculations).

The following study area unsignalized intersection does not satisfy the peak hour traffic signal warrant in any study scenario (see Appendix D for technical calculations):

10. Town Center-Sherman Road (NS) / La Piedra Road (EW)

▪ Circulation Recommendations for Project Design Features and Mitigation Measures

This traffic impact analysis demonstrates that the direct traffic impacts generated by JPN Haun and Holland Project can be mitigated to meet the required level of service if the following recommended improvements are adopted. Project design features are improvements that the project had anticipated and is 100 percent the project's responsibility because the improvements are proposed to provide access and improve safety for the proposed project. Mitigation measures are proposed as a result of intersection and/or roadway segment impact due to the addition of project traffic. A fair share percentage responsibility or a project responsibility is determined based on the impacts.

Roadway Segment Recommendations

Project Design Features

- Construct full-width improvements on all internal roadways.
- Construct half width improvements on the easterly side of Haun Road at its ultimate cross-section as a Major Road adjacent to project boundary line. All roadways designated as major under the general plan are required to have a median constructed. The project would contribute toward the construction of the median on Haun Road at the project frontage.
- Dual left-turn lanes would be provided at the main project acess (Haun Road and Driveway 2), the standard cross-section of Haun Road is proposed as 90' (which incudes two 8 feet bike lanes, four 12 feet through lanes, two 11 feet left-turn lanes, and one 4 feet median). The cross-section of a roadway classified as Major is expected to be 76 feet curb-to-curb (which incudes two 8 feet bike lanes, four 12 feet through lanes, and one 12 feet median) in accordance with the City's General Plan. A conceptual striping exhibit has been provided on Appendix I. The conceptual striping exhibit shows the right-of-way that the project will be dedicating to accommodate Haun's Road ultimate cross-section of 90 feet along the project frontage. Also, further north Haun Road's cross-section ranges from 90 feet to 105 feet curb to curb between la Piedra Road and Newport Road.

Mitigation Measures

Project contribution towards mitigation measure is indicated *"italicized"* next to the roadway segment.

1. Bradley Road – Park Avenue to Newport Road – *Fair Share Contribution*
5. Haun Road – La Piedra Road to Holland Road – *Fair Share Contribution*
    - Construction of one additional northbound through lane.
6. Haun Road – Holland Road to Scott Road – *Fair Share Contribution*
    - Construction of one additional northbound through lane and one additional southbound through lane including a TWTL.
8. Newport Road[A] – Bradley Road to Haun Road – *Fair Share Contribution*
    - Restripe of the eastbound approach to accommodate one additional eastbound through lane from the Paloma Wash frontage to the I-215 Southbound On-Ramp.
17. Holland Road[B] – Haun Road to Hanover Lane – *Fair Share Contribution*
    - Construction of Overpass.

[A] Newport Road is built to ultimate conditions and although the roadway segments are operating at unacceptable levels of service the intersections along this segments operate at acceptable level of service of D or better and the intersections are the driving factor for the true operation of a roadway segment. Therefore; given the right of way restrictions along Newport Road and as agreed upon with City staff restripe of the eastbound approach would be implemented to improve conditions.

[B] Holland Road Overpass: In addition to the Transportation Uniform Mitigation Fee (TUMF) program Fees the project would be anticipated to contribute to the gap between the cost of the overpass and the funding allocated by the TUMF program. The Holland Overpass project as of 2018, was estimated to cost 24 million dollars and the TUMF program estimates to contribute 21.5 million dollars. The proposed JPN Haun project would be anticipated to contribute the indicated fair share percentage toward the 2.5 million gap.

Intersection Recommendations

Intersection improvements have been presented using "**bold**" text below. Project contribution towards mitigation measure is indicated *"italicized"* next to the intersection.

Project Design Features with Overpass

Based on the traffic impact analysis the following improvements are recommended to improve access at the project driveways. On-site improvements are the project developer's responsibility.

- Construct the intersection of Haun Road (NS) and Driveway 1 (#20) as a right-in right-out intersection (RIRO) with the following geometrics:
  Northbound: One through lane. One shared through and right-turn lane.
  Southbound: Two through lanes.
  Eastbound: Not applicable.
  Westbound: One right-turn lane. Stop controlled.

- Install a **signal** at the intersection Haun Road (NS) and Driveway 2 (#21) with the following geometrics:
  Northbound: One through lane. **One shared through and right-turn lane.**
  Southbound: Two left-turn lanes. Two through lanes.
  Eastbound: Not applicable.
  Westbound: One left-turn lane. One right-turn overlap.

Mitigation Measures

- Intersection of Menifee Road and Newport Road (#7) – *Fair Share Contribution*
  Northbound: Two left-turn lanes. Two through lanes. One right-turn lane.
  Southbound: One left-turn lane. Two through lanes. **Install one right-turn overlap.**
  Eastbound: One left-turn lane. Two through lanes. One through and right-turn lane.
  Westbound: One left-turn lane. Three through lanes. One right-turn lane.

- Intersection of Bradley Road and Holland Road (#9) – *Fair Share Contribution*
  Northbound: One left-turn lane. One shared through and right-turn lane.
  Southbound: One left-turn lane. One through lane. One right-turn lane.
  Eastbound: Restripe to provide one left-turn lane. One through lane. One right-turn lane.
  Westbound: One left-turn lane. One through lane. One right-turn lane.

- **Installation of a traffic signal** at the intersection of Sherman Road and Holland Road (#11) – [C] – *Project Responsibility*
  Northbound: Construct one left-turn lane. One shared through and right-turn lane.
  Southbound: Construct one left-turn lane. One shared through and right-turn lane.
  Eastbound: Restripe to provide one left-turn lane. One through lane. One right-turn lane.
  Westbound: Restripe to provide one left-turn lane. One through lane. One right-turn lane.

[C] The project will pay 100 percent of the improvements at Sherman Road and Holland Road.

- **Installation of a traffic signal** at the intersection of Haun Road and Holland Road (#15) – [D] – *Project Responsibility*
  Northbound: One left-turn lane. One through lane. One shared through and right-turn lane.
  Southbound: One left-turn lane. Two through lanes. One right-turn lane with overlap.
  Eastbound: One left-turn lane. One through lane. One right-turn lane.
  Westbound: One left-turn lane. One through lane. One shared through and right-turn lane.

  [D] The project will pay 100 percent of the improvements at Haun Road and Holland Road.

- **Installation of a traffic signal** at the intersection of Antelope Road and Albion Lane (#22) – *Fair Share Contribution*
  Northbound: One through lane. One shared through and right-turn lane.
  Southbound: One left-turn lane. One through lane.
  Eastbound: Not applicable.
  Westbound: One left-turn lane. One right-turn lane.

- **Installation of a traffic signal** at the intersection of Palomar Road and Holland Road (#24) – *Fair Share Contribution*
  Northbound: One shared left-through and right-turn lane.
  Southbound: One shared left-through and right-turn lane.
  Eastbound: **Construct one left-turn lane**. One shared through and right-turn lane.
  Westbound: **Construct one left-turn lane.** One shared through and right-turn lane.

Safety and Operational Improvements

- Sight distance at the project entrance roadway will be reviewed with respect to standard City of Menifee sight distance standards at the time of preparation of final grading, landscape, site development, and street improvement plans.
- Participate in the phased construction of off-site traffic signals through payment of project's fair share of traffic signal improvement fees.
- Signing/striping should be implemented in conjunction with detailed construction plans for the project site.

Regional Funding Mechanisms

The project will participate in the cost of off-site improvements through the payment of "fair share" improvement fees, including the following:

- Transportation Uniform Mitigation Fee (TUMF), current at the time of construction.
- Menifee Valley Road & Bridge Benefit District (RBBD) Fee, Zone C, current at the time of construction.
- City of Menifee Development Impact Fee (DIF), current at the time of construction.

These fees will be collected and utilized as needed by the City of Menifee City to construct the improvements necessary to assist in maintaining the required level of service.

Table 1-1 and Table 1-2 summarize the proposed improvement measures and associated funding mechanism for the project with and without the Holland Overpass. The traffic study determined the percentage fair share that is the responsibility of the project for improvements proposed at the study area intersections and roadway segments.

Table 1-1 – Intersections – Project Improvement Summary

No.	Intersection	Scenario Impacted	Impact Type	Improvement Measure	Funding Mechanism	Existing Volume		Project Volume		EACP Volume		Net New Volume		AM	PM	% Fair Share
						AM	PM	AM	PM	AM	PM	AM	PM	Fair Share	Fair Share	
6	Antelope Road (NS) / Newport Road (EW)	EACP No Overpass	Cumulative	Improve intersection geometrics to include: • Eastbound: Restripe one right-turn lane.	Fair Share	5,236	5,335	199	238	6,849	7,017	1,613	1,682	12.3%	14.2%	14.2%
7	Menifee Road (NS) / Newport Road (EW)	EACP No Overpass	Cumulative	Improve intersection geometrics to include: • Southbound: Add a right-turn overlap.	Fair Share	4,387	4,040	126	151	5,556	4,940	1,169	900	10.8%	16.8%	16.8%
		EACP With Overpass				4,354	3,989	81	97	5,322	4,940	968	951	8.4%	10.2%	
9	Bradley Road (NS) / Holland Road (EW)	EACP No Overpass	Cumulative	Improve intersection geometrics to include: • Eastbound: restripe to add one right-turn lane.	Fair Share	2,200	1,903	90	108	2,862	2,506	662	603	13.6%	17.9%	17.9%
		EACP With Overpass				2,222	1,935	90	108	3,021	2,711	798	776	11.3%	13.9%	
11	Sherman Road (NS) / Holland Road (EW)	Existing Plus Project	Direct	Improve intersection geometrics to include: Intersection Control: Install a traffic signal. • Northbound: Construct a left-turn lane. • Southbound: Construct a left-turn lane • Eastbound: Restripe to provide one left-turn lane, one through lane and one right-turn lane. • Westbound: Restripe to provide one left-turn lane, one through lane and one right-turn lane.	Project Responsibility	--										100%
		EACP No Overpass														
		EACP With Overpass														
15	Haun Road (NS) / Holland Road (EW)	Existing Plus Project	Direct	Improve intersection geometrics to include: Intersection Control: Install a traffic signal. • Northbound: Construct one left turn lane and two through lanes. • Southbound: Construct one left turn lane, two through lanes, and one right turn lane with overlap • Westbound: Construct one left-turn lane and two through lanes.	Project Responsibility	--										100%
		EACP No Overpass														
		EACP With Overpass														
16	Haun-Zeiders Road (NS) / Scott Road (EW)	EACP No Overpass	Cumulative	Improve intersection geometrics to include: • Westbound: Add a right-turn overlap.	TUMF Fees	2,148	1,954	109	129	4,430	4,289	2,282	2,335	4.8%	5.5%	5.5%
22	Antelope Road (NS) / Albion Lane (EW)	EACP With Overpass	Cumulative	Improve intersection geometrics to include: Intersection Control: Install a traffic signal.	Fair Share	1,163	1,282	45	54	1,524	1,745	360	463	12.5%	11.7%	11.7%
24	Palomar Road (NS) / Holland Road (EW)	EACP With Overpass	Cumulative	Improve intersection geometrics to include: Intersection Control: Install a traffic signal. • Eastbound: Construct a left-turn lane. • Westbound: Restripe a left-turn lane.	Fair Share	773	623	45	54	1,276	1,275	503	652	9.0%	8.3%	8.3%
Project Design Features						Project Design Features										
20	Haun Road (NS) / Driveway 1 (EW)	Project Developer	N/A	Improve intersection geometrics to include: Intersection Control: Install a stop sign. • Northbound: Construct a second through lane. • Westbound: Construct a right-turn lane. Stop controlled.	Project Responsibility	--										100%
21	Haun Road (NS) / Driveway 2 (EW)	Project Developer	N/A	Improve intersection geometrics to include: Intersection Control: Install a traffic signal. • Northbound: Construct a second through lane. •Southbound: Construct two left-turn lanes. • Westbound: Construct one left-turn lane. Construct one right-turn overlap.	Project Responsibility	--										100%

Table 1-2 – Roadway Segments–Project Improvement Summary

Roadway Segment	Scenario Impacted	Impact Type	Recommended Improvement	Funding Mechanism	Existing Volume	Project Volume	EACP + Overpass ADT	EACP No Overpass ADT	Net ADT	% Fair Share
Bradley Road										
1. Park Avenue to Newport Road	EACP w/o Overpass	Cumulative	Construct one additional through lane in each direction. For a total of 4 through lanes with one TWLTL.	Fair Share	14,984	520	--	19,933	4,949	10.51%
	EACP with Overpass				14,984	520	19,633	--	4,549	**11.43%**
Haun Road										
4. Newport Road to La Piedra Road	Existing Plus Project	Direct	Roadway has reached its ultimate conditions, project's fair share percent contribution is provided. Roadway segment mitigated by the construction of the Holland Overpass.	Fair Share to be applied toward the construction of the Overpass	22,821	8,826				**27.89%**
	EACP without Overpass				22,821	8,826		31,647		27.89%
	EACP with Overpass				21,457	7,786	34,582			22.51%
5. La Piedra Road to Holland Road	EACP w/o Overpass	Cumulative	Construct one additional through lane in each direction for a total of 4 through lanes and install a raised median.	Fair Share	12,141	9,346	--	24,411	12,270	76.17%
	EACP with Overpass				14,005	8,306	24,470	--	10,465	**79.37%**
6. Holland Road to Scott Road	EACP w/o Overpass	Cumulative	Construct one additional through lane in each direction for a total of 4 through lanes and install a raised median.	Fair Share	10,858	1,248	--	15,881	5,023	**24.85%**
	EACP with Overpass				10,464	1,040	16,609	--	6,145	16.92%
Newport Road										
8. Bradley Road to Haun Road	EACP w/o Overpass	Cumulative	Roadway has reached its ultimate conditions, project's fair share percent contribution is provided. Roadway segment mitigated by the construction of the Holland Overpass.	Fair Share to be applied toward the construction of the Overpass	43,696	1,560	--	56,501	--	2.76%
	EACP with Overpass				42,271	1,560	53,528	--	--	**2.91%**
Scott Road										
13. Haun Road to I-215 SB Ramps	EACP w/o Overpass	Cumulative	Construct two additional through lane in each direction. For a total of 6 through lanes.	TUMF Fees	--					
	EACP with Overpass									
14. I-215 NB Ramps to Antelope Road	EACP w/o Overpass	Cumulative	Construct two additional through lane in each direction. For a total of 6 through lanes.	TUMF Fees	--					
	EACP with Overpass									

XX= *Highest Fair Share percentage would be applied toward mitigation improvement.*

INTRODUCTION

Purpose of Report and Study Objectives

The purpose of this study is to evaluate the effects on traffic circulation produced from the proposed development of JPN Haun and Holland Commercial Center Project.

The objectives of this study include the following:

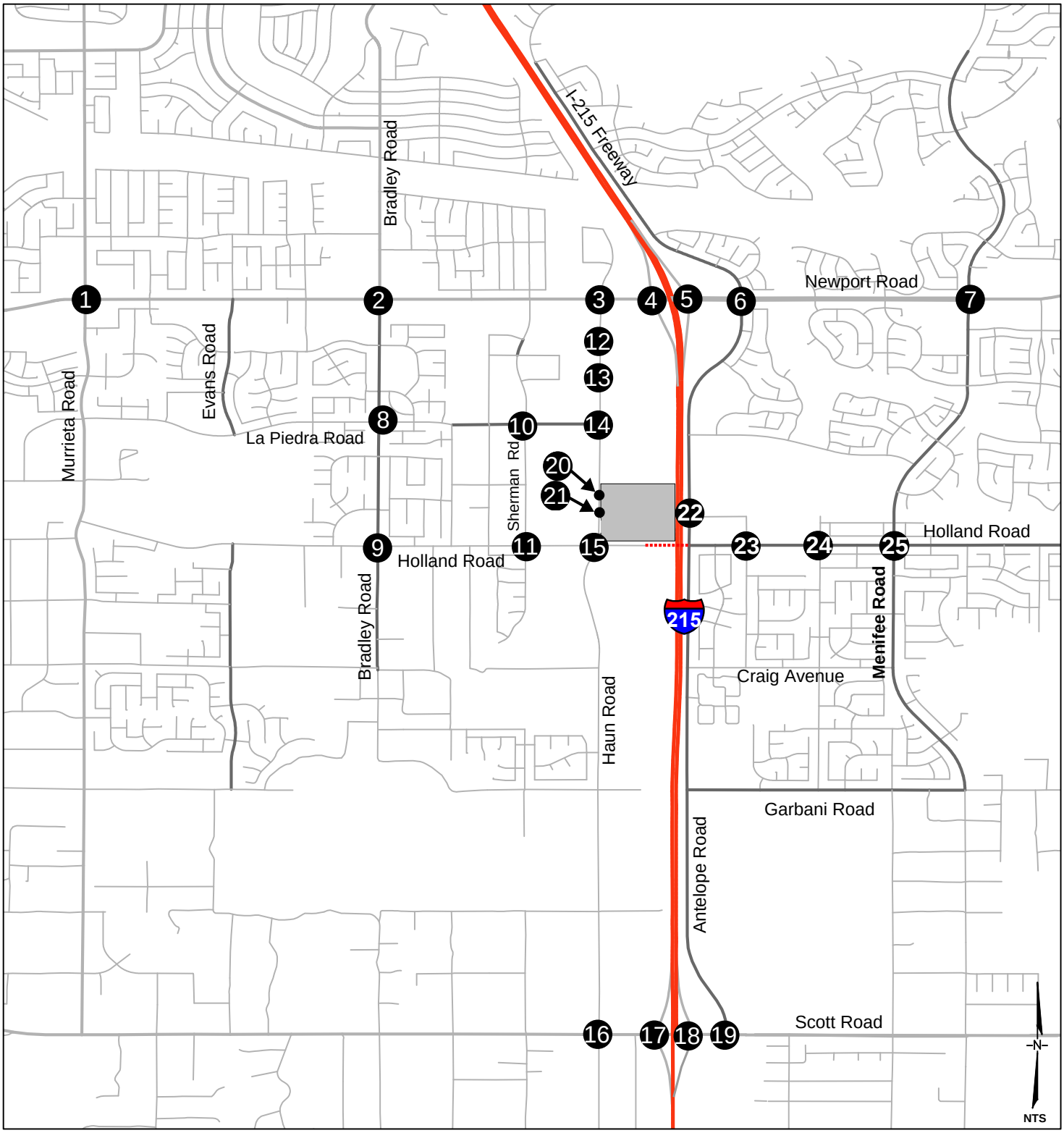
- Document existing (2017) traffic conditions in the vicinity of the proposed development;
- Determine the traffic generated from the proposed development;
- Evaluate existing plus project (2017) traffic conditions;
- Evaluate existing plus ambient growth plus cumulative conditions without Holland overpass traffic conditions;
- Evaluate existing plus ambient growth plus cumulative projects plus project (2021) without overpass traffic conditions;
- Evaluate existing plus ambient growth plus cumulative conditions with Holland overpass traffic conditions;
- Evaluate existing plus ambient growth plus cumulative projects plus project (2021) with overpass traffic conditions;
- Determine if the level of service (LOS) required by the City and California Department of Transportation (Caltrans) will be maintained within the study area, and if not, determine the improvement measures that will be necessary in order to maintain the required LOS;
- Determine if peak hour traffic signal warrants are met for any of the unsignalized study area intersections;
- Evaluate the adequacy of on-site circulation for the proposed development;
- Determine if safety and/or operational improvements are necessary due to the proposed development.

Site Location and Study Area

The proposed JPN Haun and Holland Commercial Center Project is located on the northeast corner of Haun Road and Holland Road in the City of Menifee. This study considers a study area within a three mile radius of the project.

The project site location is presented in Figure 2-A.

Figure 2-A – Project Site Location Map



LEGEND

- # Study Area Intersection
- Planned Holland Overpass
- Project Site

Development Project Description

Project Size and Description

The project site encompasses approximately 32.71 acres. Based on discussions with the project applicant, the following land uses are anticipated: the project is currently proposed for development of 7.5 TSF shopping center, 13.3 TSF high-turn over restaurant, 39 TSF supermarket, gasoline/service station with 16 vehicle fueling positions (VFPs) with convenience market and a car wash, 4.5 TSF day care center, 4.8 TSF fast food restaurant with drive thru, 47.2 TSF industrial park, 105 TSF automobile sales, and 79 TSF of general office building.

JPN Haun & Holland has planned the project layout around the consideration to make 4.35 acres of land available for the City to purchase or come to an agreement regarding existing right-of way as follows:

- 1 Acre (Dedication of Haun Road)
- Acres (Public Street A)
- Acres (Dedication of Holland)

Existing Land Use and Zoning

Existing land use and zoning designations are as follows:

Existing Zoning: ECD (Community Core)
Existing Land Use: Vacant

Proposed Land Use and Zoning

Proposed land use and zoning designations are as follows:

Proposed Zoning: ECD (Community Core)
Proposed Land Use: Commercial Center

Site Plan of Proposed Project

The current proposed project layout is shown in Figure 2-B. Project frontage conceptual striping has been provided in Appendix I.

Site Access

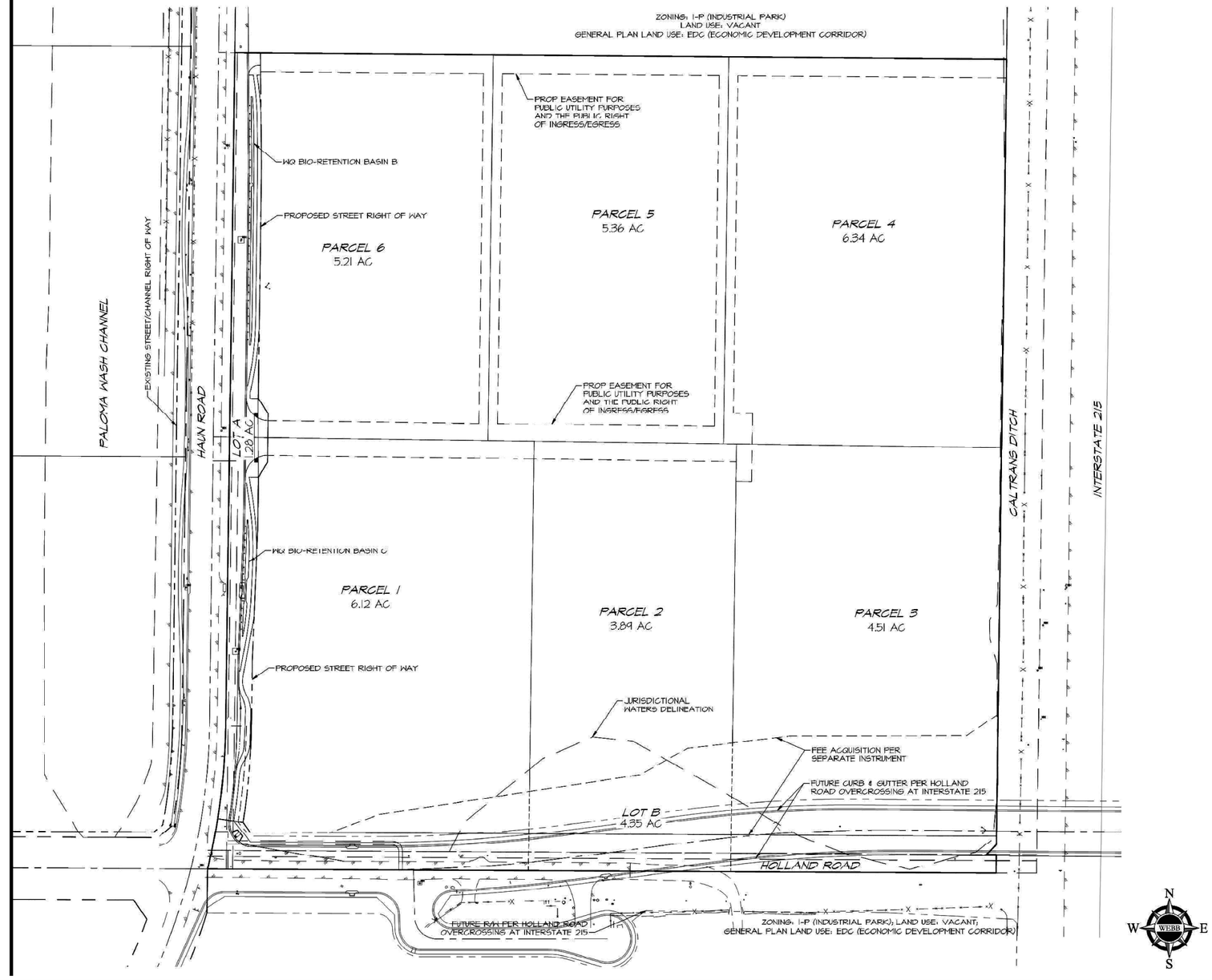
As indicated in Figure 2-B, JPN Haun and Holland Commercial Center Project will have access to Haun Road on west of the project. Access to the project will be provided via two driveways on Haun Road. One right-in right-out driveway (Haun Road/Driveway 1) and One signalized full-acess driveway (Haun Road/Driveway 2) that connects the interior project Street A to Haun Road.

Proposed Project Opening Year and Proposed Project Phasing

For analysis purposes, it is assumed that JPN Haun and Holland Commercial Center Project will be developed in a single phase and full development is anticipated by 2021.

Sphere of Influence

JPN Haun and Holland Commercial Center Project is not within the sphere of influence or within one mile of the border of any other city.



VICINITY MAP
NTS

PARCEL USE SUMMARY
ZONE: EDC-CC (COMMUNITY CORE)

PARCEL 1	RETAIL	
	SITE AREA	6.12 ACRES
	TOTAL BUILDING AREA	28,600 SF
PARCEL 2	INDUSTRIAL	
	SITE AREA	3.89 ACRES
	TOTAL BUILDING AREA	47,200 SF
PARCEL 3	AUTOMOBILE SALES	
	SITE AREA	4.51 ACRES
	TOTAL BUILDING AREA	40,000 SF
PARCEL 4	AUTOMOBILE SALES	
	SITE AREA	6.34 ACRES
	TOTAL BUILDING AREA	65,000 SF
PARCEL 5	OFFICE	
	SITE AREA	5.36 ACRES
	TOTAL BUILDING AREA	79,000 SF
PARCEL 6	RETAIL	
	SITE AREA	5.21 ACRES
	TOTAL BUILDING AREA	44,500 SF
LOT A	DEDICATION OF HAUN ROAD	
LOT B	DEDICATION OF HOLLAND ROAD AND FEE ACQUISITION AREA PER SEPARATE INSTRUMENT	

G:\2017\17-0196\GIS\ConceptualSitePlan.mxd; Map revised 17 Sep 2019

Not to Scale

Figure 2-B - Project Site Plan
Haun and Holland Mixed Use Center

ALBERT A. WEBB ASSOCIATES

AREA CONDITIONS

Existing Roadway Descriptions

- Murrieta Road is an undivided 4-lane north-south roadway in the project area. It is classified as a major road in the City of Menifee General Plan Circulation Element. Street parking is not allowed. There are existing sidewalks on both sides of the street, but designated bike lanes do not exist within the study area.
- Bradley Road is an undivided 4-lane north-south roadway in the project area. It is classified as a major road in the City of Menifee General Plan Circulation Element. Street parking is not allowed. There are existing sidewalks on both sides of the street, but designated bike lanes do not exist within the study area.
- Newport Road is a divided 6-lane east-west roadway in the project area. It is classified as an urban arterial in the City of Menifee General Plan Circulation Element and provides connectivity to the I-215 freeway. Street parking is not allowed. There are existing sidewalks in some areas on both sides of the street. Designated bike lanes exist within the study area.
- Town Center Drive/Sherman Road is a divided 2-lane north-south collector in the project area. It is classified as a collector in the City of Menifee General Plan Circulation Element. Street parking is not allowed. There will be sidewalks on both sides of the street, but no designated bike lanes within the study area.
- Haun Road is a divided 2-lane to 4-lane north-south in the project area. It is classified as a major road in the City of Menifee General Plan Circulation Element. Street parking is not allowed. There are some areas with existing sidewalks on both sides of the street, but designated bike lanes do not exist within the study area.
- Holland Road is an undivided 2-lane to 3-lane east-west roadway in the project area. It is classified as a major road in the City of Menifee General Plan Circulation Element and is planned to provide connectivity across the I-215 freeway with a planned overpass. Street parking is not allowed. There are some areas with existing sidewalks on both sides of the street, but designated bike lanes do not exist within the study area.
- Antelope Road is a divided 2-lane to 4-lane north-south in the project area. It is classified as a major road in the City of Menifee General Plan Circulation Element. Street parking is not allowed. There are existing sidewalks on both sides of the street between Newport Road and Holland Road, but designated bike lanes do not exist within the study area.
- Menifee Road is partly divided and partly undivided 2-lane to 4-lane north-south in the project area. It is classified as major road in the City of Menifee General Plan Circulation Element. Street parking is not allowed. There are existing sidewalks on both sides of the street between Newport Road and Holland Road, but designated bike lanes do not exist within the study area.
- La Piedra Road is a divided and undivided 4-lane east-west road in the project area. It is classified as a secondary roadway in City of Menifee General Plan Circulation Element. Street parking is not allowed in some areas and allowed in others. There are some areas with existing sidewalks on both sides of the street, but designated bike lanes do not exist within the study area.
- Scott Road is an undivided 2-lane east-west arterial in the project area. It is classified as an urban arterial in the City of Menifee General Plan Circulation Element and provides connectivity to the I-215 freeway. Street parking is not allowed. There are no existing sidewalks on either sides of the street and designated bike lanes do not exist within the study area.

Study Intersections

The study area includes the following intersections:

1. Murrieta Road (NS) / Newport Road (EW)
2. Bradley Road (NS) / Newport Road (EW)
3. Haun Road (NS) / Newport Road (EW)
4. I-215 SB Ramps (NS) / Newport Road (EW)
5. I-215 NB Ramps (NS) / Newport Road (EW)
6. Antelope Road (NS) / Newport Road (EW)
7. Menifee Road (NS) / Newport Road (EW)
8. Bradley Road (NS) / La Piedra Road (EW)
9. Bradley Road (NS) / Holland Road (EW)
10. Sherman Road (NS) / La Piedra Road (EW)
11. Sherman Road (NS) / Holland Road (EW)
12. Haun Road (NS) / Village-Market Drive (EW)
13. Haun Road (NS) / Countryside Market Place (EW)
14. Haun Road (NS) / La Piedra Road (EW)
15. Haun Road (NS) / Holland Road (EW)
16. Haun Road (NS) / Scott Road (EW)
17. I-215 SB Ramps / Scott Road (EW)
18. I-215 NB Ramps / Scott Road (EW)
19. Antelope Road (NS) / Scott Road (EW)
20. Haun Road (NS) / Driveway 1 (RIRO)
21. Haun Road (NS) / Driveway 2 (Proposed Signal)
22. Antelope Road (NS) / Albion Lane (EW) **
23. Holland Road (NS) / Hanover Lane (EW) **
24. Holland Road (NS) / Palomar Road (EW) **
25. Holland Road (NS) / Menifee Road (EW) **

**Future intersection only analyzed in scenarios that have considered the Holland Overpass.

Study Roadway Segments

The study area includes the following Roadway Segments:

1. Bradley Road from Park Avenue to Newport Road
2. Bradley Road from Newport Road to La Piedra Road
3. Bradley Road from La Piedra Road to Holland Road
4. Haun Road from Newport Road to La Piedra Road
5. Haun Road from La Piedra Road to Holland Road
6. Haun Road from Holland Road to Scott Road
7. Newport Road from Murrieta Road to Bradley Road
8. Newport Road from Bradley Road to Haun Road
9. Newport Road from Haun Road to I-215 Southbound Ramps
10. Newport Road from I-215 Northbound Ramps to Antelope Road
11. Newport Road from Antelope Road to Menifee Road
12. La Piedra Road from Sherman Road to Haun Road
13. Scott Road from Haun Road to I-215 Southbound Ramps
14. Scott Road from I-215 Northbound Ramps to Antelope Road
15. Holland Road from Bradley to Sherman Road
16. Holland Road from Sherman Road to Haun Road
17. Holland Road from Haun Road to Hanover Lane **
18. Holland Road from Hanover Lane to Palomar Road **
19. Holland Road from Palomar Road to Menifee

**Future roadway segments only analyzed in scenarios that have considered the Holland Overpass.

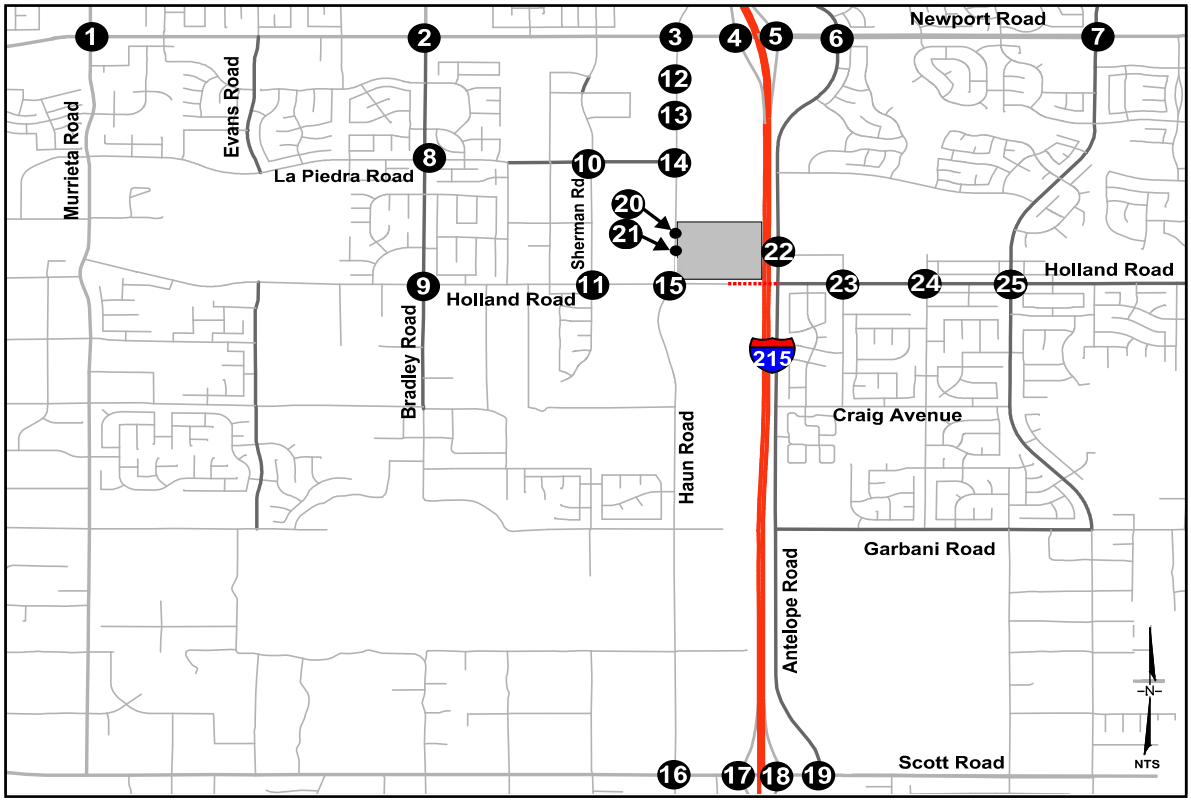
▪ Existing Traffic Controls and Intersection Geometrics

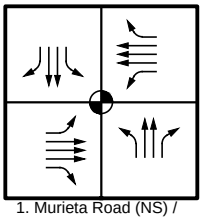
The existing roadway system is shown in Figure 3-A. It identifies the existing intersection traffic controls (i.e. signals and signage), intersection geometrics, and the number of through traffic lanes within the study area.

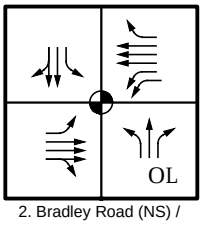
▪ Existing Traffic Volumes

The existing AM peak period and PM peak period intersection turning movement counts were conducted by Counts Unlimited, Inc. on August 29, 2017. Average daily traffic (ADT) counts were collected on March 13, 2018 (Segments #3, #4, #5, #6, #10, #12, #15, #16, #18 & #19). In addition, the City provided counts that were collected on November 16, 2016 (#1, #2, #4, #7 and #11), January 26, 2017 (#8 and #9) , February 9, 2017 (#14) and February 16, 2017 (#13). The Traffic Count Data has been provided in Appendix C. The AM and PM peak hour intersection turning movement volumes are presented in Figure 3-B and Figure 3-C, respectively.

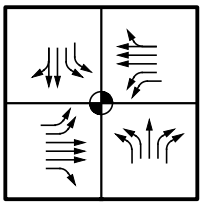
Figure 3-A – Existing Roadway System

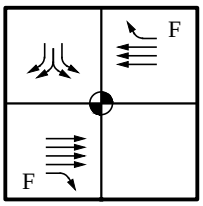



1. Murieta Road (NS) / Newport Road (EW)

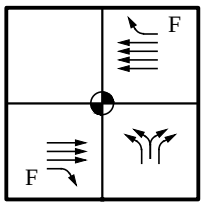


2. Bradley Road (NS) / Newport Road (EW)

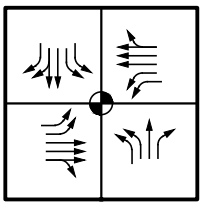

3. Haun Road (NS) / Newport Road (EW)

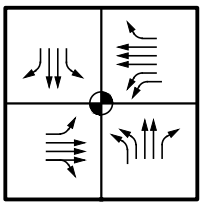


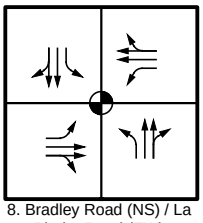
4. I-215 SB Ramps (NS) / Newport Road (EW)

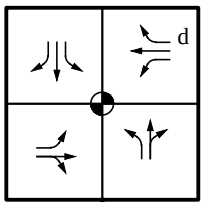


5. I-215 NB Ramps (NS) / Newport Road (EW)

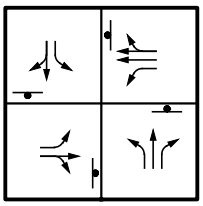

6. Antelope Road (NS) / Newport Road (EW)

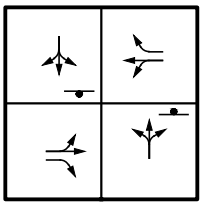

7. Menifee Road (NS) / Newport Road (EW)

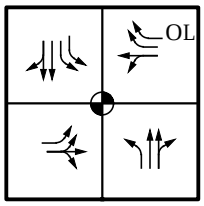

8. Bradley Road (NS) / La Piedra Road (EW)



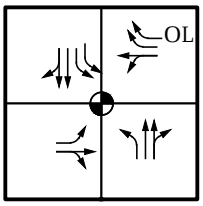
9. Bradley Road (NS) / Holland Road (EW)


10. Sherman Road (NS) / La Piedra Road (EW)

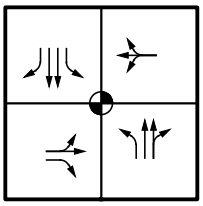

11. Sherman Road (NS) / Holland Road (EW)

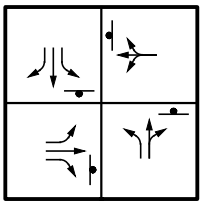


12. Haun Road (NS) / Village Market Drive (EW)



13. Haun Road (NS) / Countryside Marketplace (EW)


14. Haun Road (NS) / La Piedra Road (EW)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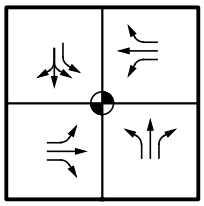
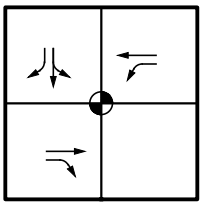
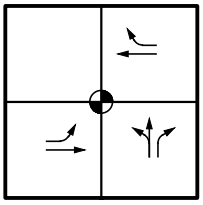
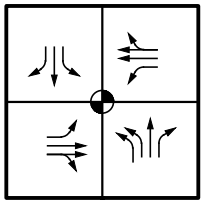
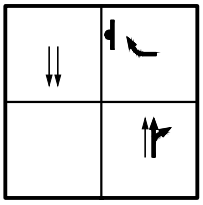
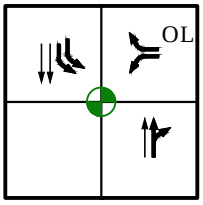

16. Haun Road (NS) / Scott Road (EW)


17. I-215 SB Ramps (NS) / Scott Road (EW)

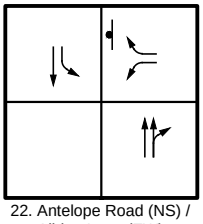

18. I-215 NB Ramps (NS) / Scott Road (EW)

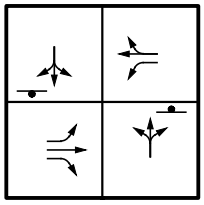

19. Antelope Road (NS) / Scott Road (EW)

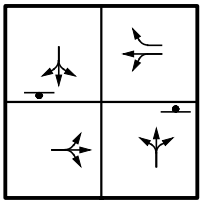

20. Haun Road / Driveway 1 (EW)

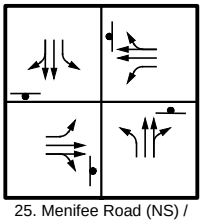


21. Haun Road / Driveway 2 (EW)


22. Antelope Road (NS) / Albion Lane (EW)


23. Hanover Lane (NS) / Holland Road (EW)

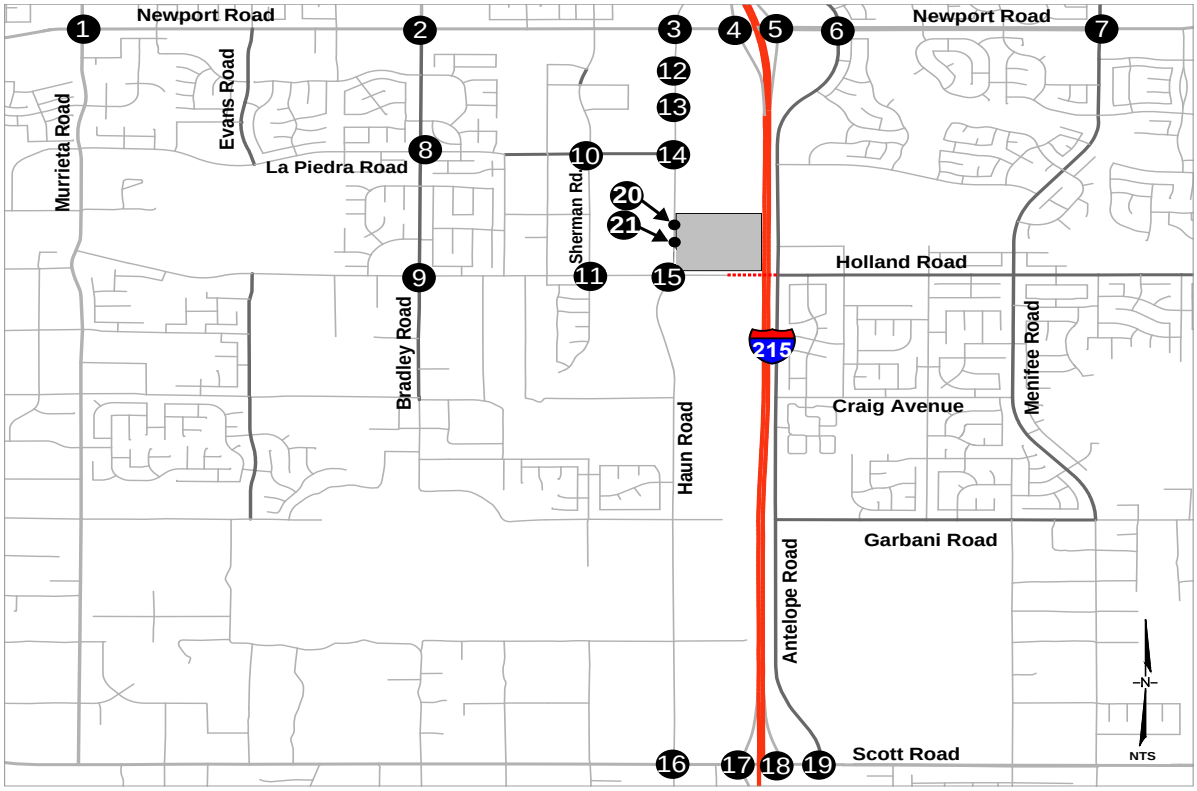

24. Palomar Road (NS) / Holland Road (EW)

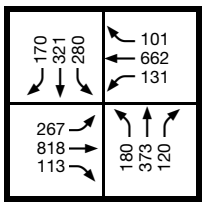

25. Menifee Road (NS) / Holland Road (EW)

LEGEND

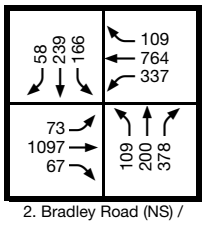
- Existing Traffic Signal
- Existing Stop Sign
- Existing Lane Geometrics
- d Existing Defacto Right Turn
- F Existing Free Right Turn Lane
- OL Existing Overlap Right Turn
- Proposed Traffic Signal
- Proposed Stop Sign
- OL Proposed Overlap Right Turn
- Proposed Lane Geometrics

Figure 3-B – Existing (2017) AM Peak Hour Intersection Volumes

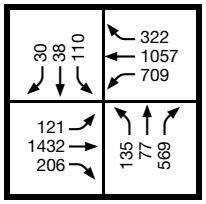




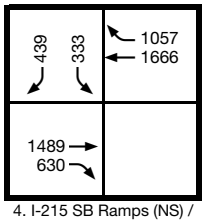
1. Murrieta Road (NS) / Newport Road (EW)



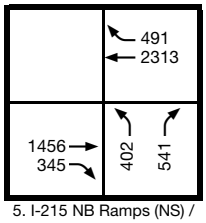
2. Bradley Road (NS) / Newport Road (EW)



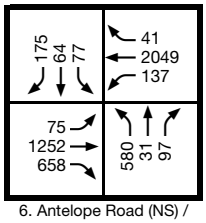
3. Haun Road (NS) / Newport Road (EW)



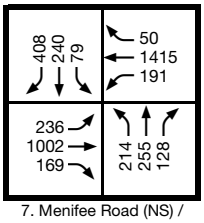
4. I-215 SB Ramps (NS) / Newport Road (EW)



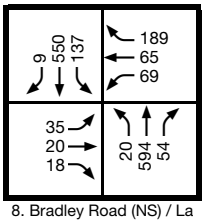
5. I-215 NB Ramps (NS) / Newport Road (EW)



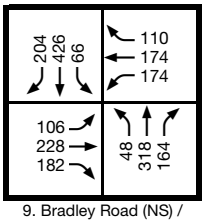
6. Antelope Road (NS) / Newport Road (EW)



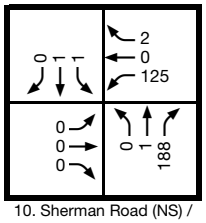
7. Menifee Road (NS) / Newport Road (EW)



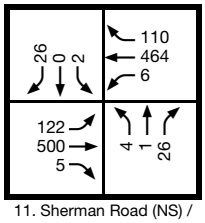
8. Bradley Road (NS) / La Piedra Road (EW)



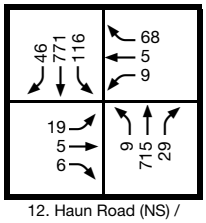
9. Bradley Road (NS) / Holland Road (EW)



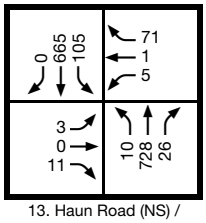
10. Sherman Road (NS) / La Piedra Road (EW)



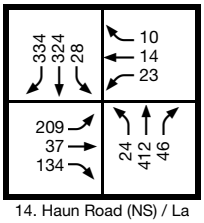
11. Sherman Road (NS) / Holland Road (EW)



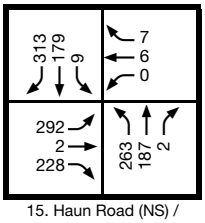
12. Haun Road (NS) / Village-Market Drive (EW)



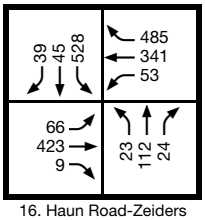
13. Haun Road (NS) / Countryside Market Place (EW)



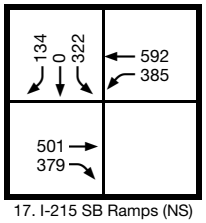
14. Haun Road (NS) / La Piedra Road (EW)



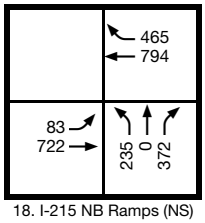
15. Haun Road (NS) / Holland Road (EW)



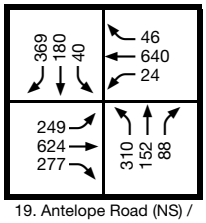
16. Haun Road-Zeiders Road (NS) / Scott Road (EW)



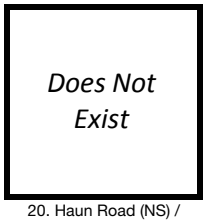
17. I-215 SB Ramps (NS) / Scott Road (EW)



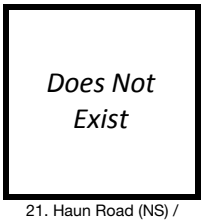
18. I-215 NB Ramps (NS) / Scott Road (EW)



19. Antelope Road (NS) / Scott Road (EW)

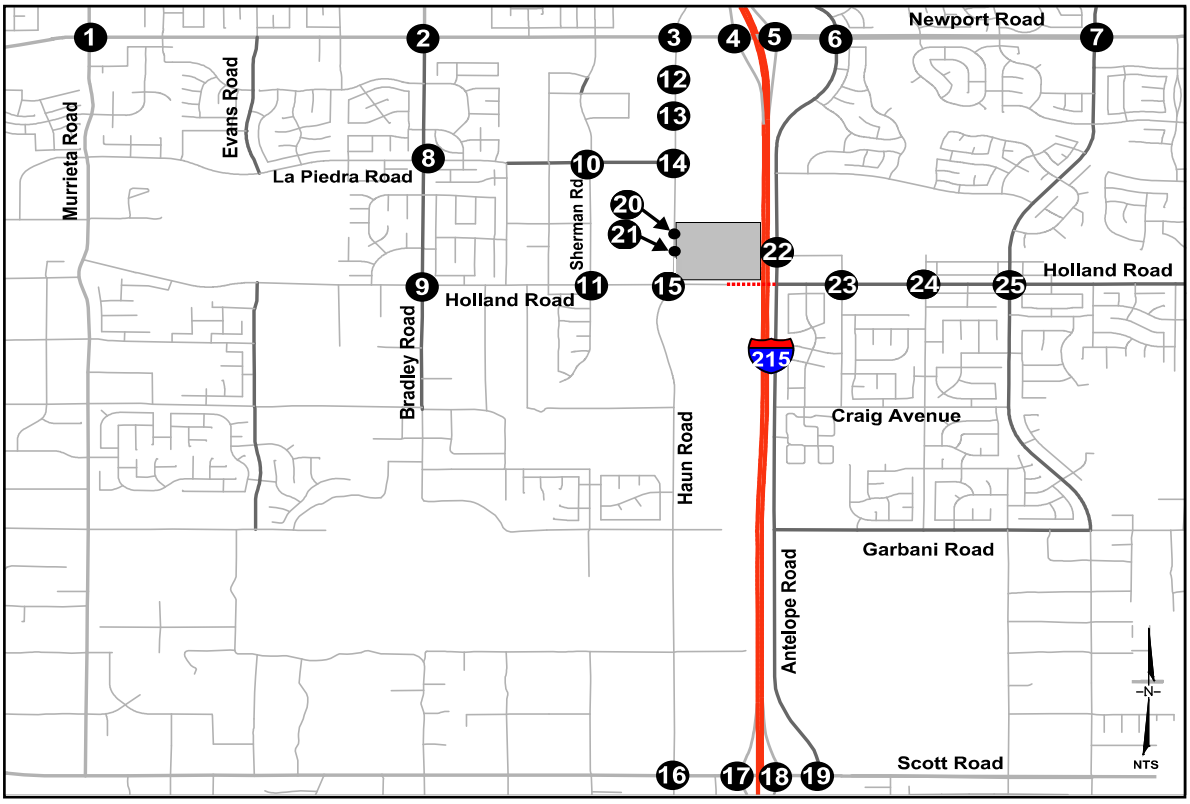


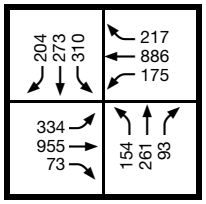
20. Haun Road (NS) / Driveway 1 (EW)



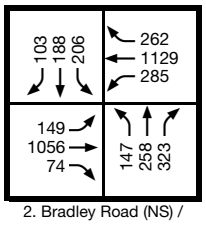
21. Haun Road (NS) / Driveway 2 (EW)

Figure 3-C – Existing (2017) PM Peak Hour Intersection Volumes

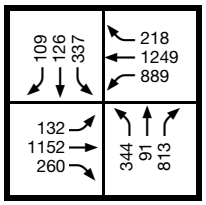




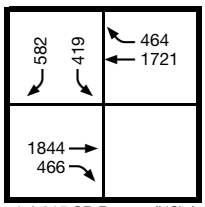
1. Murrieta Road (NS) / Newport Road (EW)



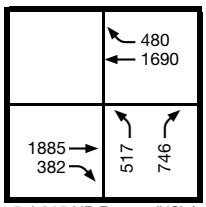
2. Bradley Road (NS) / Newport Road (EW)



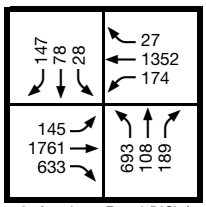
3. Haun Road (NS) / Newport Road (EW)



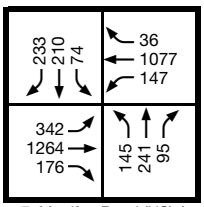
4. I-215 SB Ramps (NS) / Newport Road (EW)



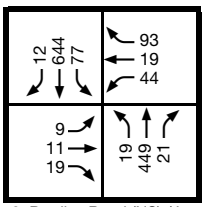
5. I-215 NB Ramps (NS) / Newport Road (EW)



6. Antelope Road (NS) / Newport Road (EW)



7. Menifee Road (NS) / Newport Road (EW)



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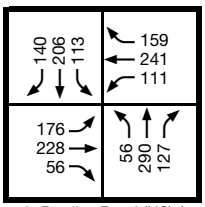

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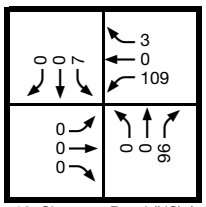

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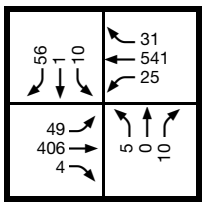

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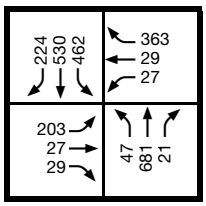
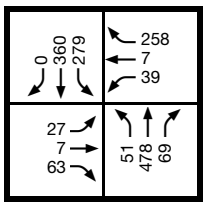
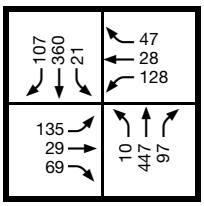


12. Haun Road (NS) / Village-Market Drive (EW)



13. Haun Road (NS) / Countryside Market Place (EW)



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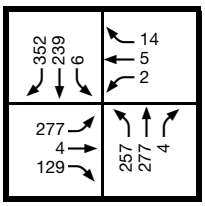
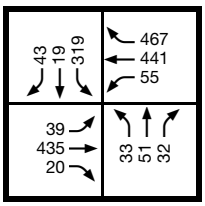
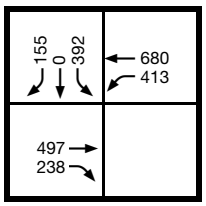


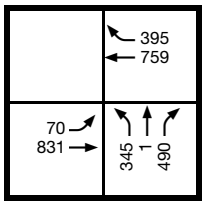
15. Haun Road (NS) / Holland Road (EW)



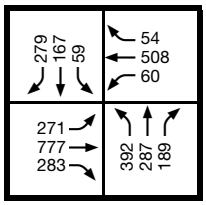
16. Haun Road-Zeiders Road (NS) / Scott Road (EW)



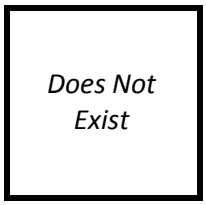
17. I-215 SB Ramps (NS) / Scott Road (EW)



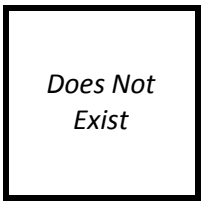
18. I-215 NB Ramps (NS) / Scott Road (EW)



19. Antelope Road (NS) / Scott Road (EW)



20. Haun Road (NS) / Driveway 1 (EW)



21. Haun Road (NS) / Driveway 2 (EW)

Level of Service Methodology

The City of Menifee requires that the Transportation Research Board Highway Capacity Manual 2010 (HCM 2010) be used to analyze Level of Service (LOS).

Quality of service describes how well a transportation facility or service operates from the traveler's perspective. Level of service (LOS) is a quantitative stratification of a performance measure or measures that represent the quality of service. LOS is measured on a familiar A to F scale where LOS A represents the best conditions from a traveler's perspective and LOS F the worst. A simple LOS letter system is used to hide much of the complexity of transportation facility performance in order to simplify decision making on whether facility performance is generally acceptable and whether a future change in performance is likely to be perceived as significant by the general public. One reason for the widespread adoption of the LOS concept by agencies is the concept's ability to communicate roadway performance to nontechnical decision makers.

The HCM 2010 evaluates the LOS of intersections based upon the control delay per vehicle. Control delay is defined as 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. The methodology used to evaluate the intersection level of service differs on whether the intersection is signalized or unsignalized. Levels of service at signalized and unsignalized intersections have been evaluated using PTV Vistro 5.00, which is based on HCM 2010 methodologies.

Signalized Intersections

Signalized intersections have been evaluated using the Operational Method as described in Chapter 18 of the HCM 2010. According to this methodology, the level of service for signalized intersections is based upon the weighted average control delay, in seconds per vehicle, of all vehicles passing through the intersection. Table 3-1 shows the criteria used to determine the level of service for signalized intersections.

Table 3-1 – Level of Service for Signalized Intersections

Level of Service	Control Delay (sec/vehicle)	Description
A	≤ 10	Minimal delay and primarily free-flow operation. Most vehicles do not stop because they arrive during the green indication or only stop for a brief amount of time as the signal changes.
B	> 10 – 20	Short delay and reasonably unimpeded operation. Many vehicles do not stop because they arrive during the green indication or only stop for a short amount of time as the signal changes. More vehicles stop than with LOS A.
C	> 20 – 35	Moderate delay and stable operation. Individual cycle failures (i.e. when queued vehicles do not clear the signal during the next green indication) may begin to appear. The number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.
D	> 35 – 55	Less stable operation in which small increases in vehicles may cause substantial increases in delay. Many vehicles stop and individual cycle failures are noticeable.
E	> 55 – 80	Significant delay and unstable operation. Most vehicles stop and individual cycle failures are frequent.
F	> 80	Considerable delay and extensive queuing. Almost all vehicles stop and most cycles fail to clear the queue.

Unsignalized Intersections

Unsignalized intersections have been evaluated using Chapters 19-20 of the HCM 2010. According to this methodology, the level of service for all-way stop intersections is based upon the weighted average control

delay, in seconds per vehicle, of all vehicles passing through the intersection. For two-way stop-controlled intersections, the level of service is based on the highest control delay of all controlled movements for the intersection. Table 3-2 shows the criteria used to determine the level of service for unsignalized intersections.

Table 3-2 – Level of Service for Unsignalized Intersections

Level of Service	Control Delay (sec/vehicle)	Description
A	≤ 10	Minimal delay. Usually no conflicting traffic.
B	> 10 – 15	Short delay. Occasionally some conflicting traffic.
C	> 15 – 25	Noticeable delay, but not inconveniencing. Usually some conflicting traffic.
D	> 25 – 35	Noticeable delay and irritating. A significant amount of conflicting traffic. Increased likelihood of risk taking.
E	> 35 – 50	Significant delay approaching tolerance level. Lots of conflicting traffic, but with some gaps of suitable size. Risk taking behavior likely.
F	> 50	Considerable delay exceeding tolerance level. Lots of conflicting traffic, with not enough gaps of suitable size. High likelihood of risk taking.

▪ Acceptable Level of Service

According to the City of Menifee General Plan, Policy C-1.2:

> *Require development to mitigate its traffic impacts and achieve a peak hour Level of Service (LOS) D or better at intersections, except at constrained intersections at close proximity to the I-215 where LOS E may be permitted.*

Per discussions with City Staff and to be consistent with the City's GP Policy C-1.2 LOS "E" has been considered acceptable for the following intersections as they are considered "constrained intersections" due to their proximity to the I-215 freeway:

3. Haun Road (NS) / Newport Road (EW)
6. Antelope Road (NS) / Newport Road (EW)
16. Haun Road (NS) / Scott Road (EW)
19. Antelope Road (NS) / Scott Road (EW)

All other study area intersections would be required to meet acceptable LOS D or better in accordance with the City's guidelines and General Plan goals.

Region-wide goal for acceptable LOS on all Caltrans facilities is D. The acceptable LOS for Caltrans facilities is based on the Caltrans' Guide for the Preparation of Traffic Impact Studies Section II:

> *Caltrans endeavors to maintain a target LOS at the transition between LOS "C" and LOS "D" on State highway facilities, however, Caltrans acknowledges that this may not always be feasible and recommends that the lead agency consults with Caltrans to determine the appropriate target LOS. If an existing State highway facility is operating at less than the appropriate target LOS, the existing measures of effectiveness (MOE) should be maintained.*

Roadway Segments

Roadway segments are evaluated based on a roadway daily volume and its capacity. Roadway segment analysis compares the daily volume with the capacity to arrive at a volume to capacity ratio (v/c). This study follows the "v/c" ratio stipulated by the City of Menifee TIA roadway segment thresholds, shown in Table 3-3. Capacities for two-lane roads classified as Secondary, Major and Urban Arterial were linearly interpolated

respectively. The target LOS for roadway segments will be considered "D" for consistency with the City of Menifee TIA guidelines.

Table 3-3 – Level of Service for Roadway Segments

Roadway Classification	Number of Through Lanes			Two-Way Traffic Volume (ADT)		
		Service Level A	Service Level B	Service Level C	Service Level D	Service Level E
Collector	2	7,300	8,800	10,400	11,700	13,000
Secondary	2	7,300	8,700	10,350	11,650	12,900
Arterial	2	10,500	12,500	14,800	16,700	18,500
Major	2	9,500	11,500	13,650	15,350	17,050
Urban Arterial	2	10,500	12,600	15,000	16,870	18,770
Major	3	14,500	17,300	20,500	23,000	25,500
Secondary	4	14,500	17,500	20,700	23,300	25,900
Major	4	19,000	23,000	27,300	30,700	34,100
Arterial	4	21,000	25,000	29,600	33,400	37,000
Urban Arterial	4	21,200	25,300	30,000	33,730	37,530
Urban Arterial	6	31,500	37,900	45,000	50,600	56,300
Urban Arterial	8	48,700	58,500	69,000	78,000	87,000

Source: City of Menifee Traffic Impact Analysis Guidelines

▪ Levels of Service – Existing (2017) Conditions

The intersection levels of service for existing (2017) conditions shown in Table 3-4 and Table 3-5 are based on the existing roadway system shown in Figure 3-A and the existing AM and PM peak hour intersection volumes shown in Figure 3-B and Figure 3-C, respectively. The intersection of Sherman Road/Holland Road (#11) is impacted by school traffic generated by Paloma Valley High School and Santa Rosa Academy under the AM peak hour period causing the intersection to operate at an unacceptable levels of service under existing conditions. The level of service calculation worksheets is provided in Appendix E.

Table 3-4 – Intersection Levels of Service – Existing (2017) Conditions

Intersection	Jurisdiction	LOS Standard	Peak Hour	Traffic Control	Delay (sec)	LOS
1. Murrieta Road (NS) / Newport Road (E/W)	City of Menifee	D	AM PM	Signal	37.6 38.3	D D
2. Bradley Road (N/S) / Newport Road (E/W)	City of Menifee	D	AM PM	Signal	31.4 32.4	C C
3. Haun Road (NS) / Newport Road (EW)	City of Menifee	E	AM PM	Signal	43.0 39.2	D D
4. I-215 SB Ramps (NS) / Newport Road (EW)	Caltrans	D	AM PM	Signal	12.9 17.1	B B
5. I-215 NB Ramps (NS) / Newport Road (EW)	Caltrans	D	AM PM	Signal	16.4 20.1	B C
6. Antelope Road (NS) / Newport Road (EW)	City of Menifee	E	AM PM	Signal	34.4 41.2	C D
7. Menifee Road (NS) / Newport Road (EW)	City of Menifee	D	AM PM	Signal	40.4 29.1	D C
8. Bradley Road (NS) / La Piedra Road (EW)	City of Menifee	D	AM PM	Signal	25.2 12.9	C B
9. Bradley Road (NS) / Holland Road (EW)	City of Menifee	D	AM PM	Signal	43.4 31.0	D C
10. Town Center-Sherman Road (NS) / La Piedra Road (EW)	City of Menifee	D	AM PM	AWSC	10.0 8.3	B A
11. Sherman Road (NS) / Holland Road (EW)	City of Menifee	D	AM PM	TWSC	***57.6*** 32.4	***F*** D
12. Haun Road (NS) / Village-Market Drive (EW)	City of Menifee	D	AM PM	Signal	13.6 19.5	B B
13. Haun Road (NS) / Countryside Market Place (EW)	City of Menifee	D	AM PM	Signal	8.8 25.5	A C
14. Haun Road (NS) / La Piedra Road (EW)	City of Menifee	D	AM PM	Signal	19.8 18.3	B B
15. Haun Road (NS) / Holland Road (EW)	City of Menifee	D	AM PM	AWSC	29.1 25.5	D D
16. Haun-Zeiders Road (NS) / Scott Road (EW)	City of Menifee	E	AM PM	Signal	36.3 23.9	D C
17. I-215 SB Ramps (NS) / Scott Road (EW)	Caltrans	D	AM PM	Signal	30.6 27.7	C C
18. I-215 NB Ramps (NS) / Scott Road (EW)	Caltrans	D	AM PM	Signal	27.6 40.0	C D
19. Antelope Road (NS) / Scott Road (EW)	City of Menifee	E	AM PM	Signal	37.5 34.7	D C
20. Haun Road (NS) / Driveway 1 (EW)	City of Menifee	D	AM PM	*Does Not Exist*		
21. Haun Road (NS) / Driveway 2 (EW)	City of Menifee	D	AM PM	*Does Not Exist*		

TWSC = Two Way Stop Controlled; AWSC = All Way Stop Controlled.
* Classified as a "constraint intersection". Acceptable LOS E in consistency with the City's GP Policy C-1.2.
XXX = Exceeds LOS Standard

Table 3-5 – Roadway Segments Levels of Service – Existing (2017) Conditions

Roadway Segment[1]	Roadway Classification	Existing without Project				
		Lns[2]	Roadway Capacity[3]	Total ADT	Volume/ Capacity Ratio	LOS
Bradley Road						
1. Park Avenue to Newport Road	Secondary	2	12,950	14,980	1.16	***F***
2. Newport Road to La Piedra Road	Major	4	34,100	12,390	0.36	A
3. La Piedra Road to Holland Road	Major	4	34,100	8,470	0.25	A
Haun Road						
4. Newport Road to La Piedra Road	Major	4	34,100	22,820	0.67	B
5. La Piedra Road to Holland Road	Major	3	25,575	12,140	0.47	A
6. Holland Road to Scott Road	Major	2	17,050	10,860	0.64	B
Newport Road						
7. Murrieta Road to Bradley Road	Urban Arterial	6	56,300	34,450	0.61	B
8. Bradley Road to Haun Road	Urban Arterial	6	56,300	43,700	0.78	C
9. Haun Road to I-215 SB Ramps	Urban Arterial	8	87,000	55,820	0.64	B
10. I-215 NB Ramps to Antelope Road	Urban Arterial	8	87,000	66,580	0.77	C
11. Antelope Road to Menifee Road	Urban Arterial	6	56,300	38,570	0.69	B
La Piedra Road						
12. Sherman Road to Haun Road	Secondary	4	25,900	2,410	0.09	A
Scott Road						
13. Haun Road to I-215 SB Ramps	Urban Arterial	2	18,770	26,110	1.39	***F***
14. I-215 NB Ramps to Antelope Road	Urban Arterial	2	18,770	40,170	2.14	***F***
Holland Road						
15. Bradley Road to Sherman Road	Major	2	17,050	12,360	0.72	C
16. Sherman Road to Haun Road	Major	3	25,575	11,630	0.45	A

[1] Roadway segment is in City of Menifee.

[2] Lns = Number of through lanes based on the City of Menifee General Plan Circulation Element Traffic Study.

[3] Source: City of Menifee Traffic Impact Analysis Guidelines.

Roadway segment is expected to exceed its capacity based on the General Plan Roadway Classification.

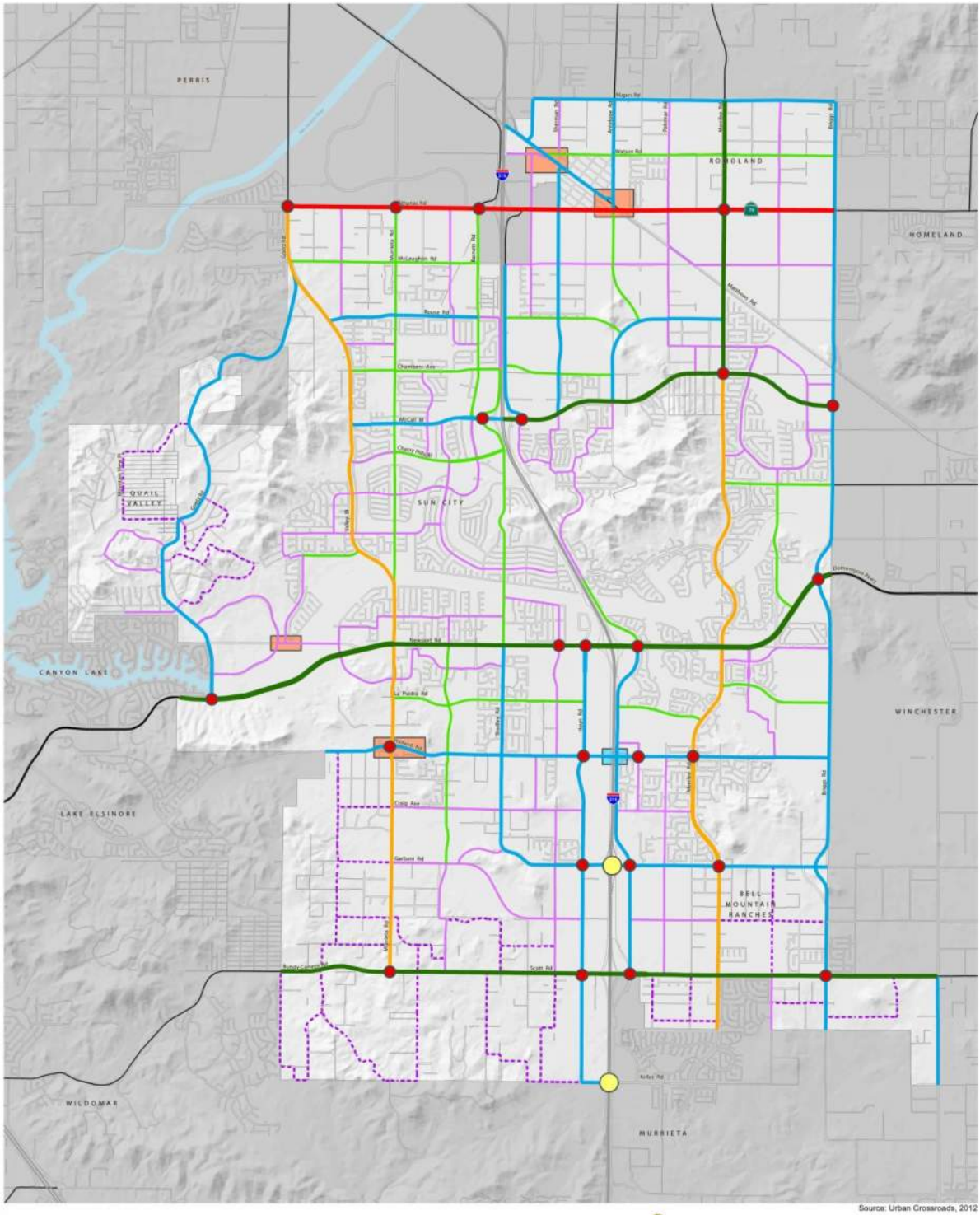
▪ General Plan Circulation

The current City of Menifee General Plan circulation element is shown in Figure 3-D.

▪ Transit Service

The project area is served by Riverside Transit Agency (RTA) route 40 (Lake Elsinore to Sun City), route 61 (South Perris Metrolink Station, Sun City – Menifee – Murrieta – Temecula), and route 71 (San Jacinto – Hemet – Sun City – Perris). The nearest bus stop is located on Newport Road at Town Center Drive and Bradley Road at La Piedra Road. A future bus stop is planned on the southwest corner of Haun Road and La Piedra Road.

Figure 3-D – City of Menifee General Plan Circulation Element



PROJECTED FUTURE TRAFFIC

Method of Projection

The method of traffic projection is based on the following criteria:

- Existing traffic conditions (2017);
- Ambient growth projections;
- Project generated traffic; and
- The cumulative project-generated traffic.

This report uses a project buildout year of 2021 for analysis purposes.

Ambient Growth

In order to evaluate traffic conditions for the study year, area-wide growth on existing roadways must be projected. The majority of the anticipated growth within the study area is accounted for with other cumulative project traffic. Per discussion with City of Menifee staff, this study will utilize a 2 percent per year growth rate.

Project Generated Traffic

Project Trip Generation

Trip Generation Rates

Trip generation represents the amount of traffic traveling to and from the proposed project. The traffic generation figures used in this study are based upon the development of 7.5 TSF High-Turn Over Restaurant, 39 TSF Supermarket, 16 VFP Gasoline/Service station with convenience market and a car wash, 4.5 TSF Day Care Center, 4.8 TSF Fast Food Restaurant with Drive Thru, 47.2 TSF Industrial Park, 105 TSF Automobile Sales, and 79 TSF of General Office Building. Table 4-1 shows the peak hour and daily trip generation rates for the proposed project.

The trip generation rates for the project's land uses are based on the weighted average trip generation rates except for Land Use (LU) 820, Shopping Center; LU 820 trip generation rates are derived from the fitted curve equation in the *Trip Generation Manual (9th Edition)* by the Institute of Transportation Engineers (ITE), 2012. The inbound and outbound peak hour trip generation rates are calculated by multiplying the total peak hour generation rate by the directional distribution provided in the *Trip Generation Manual*.

In addition, the proposed Industrial Park land use generates truck trips that are coverted to passanger equivalent trips for purpose of analyzing its affect on the roadways. PCE is defined as the number of passenger cars that will result in the same operational conditions as a single heavy vehicle of a particular type. Riverside County does not have Passenger Car Equivalent (PCE) factors; therefore, the City of Menifee allows the use of PCE factors established by the San Bernardino County Congestion Management Program (CMP), 2005 Update. PCE factors have been used to convert heavy truck trips (large 2-axles, 3-axles and 4+-axles) to passenger equivalent trips. A factor of 1.5 was applied to large 2-axle trucks, a factor of 2.0 was applied to 3-axle trucks and a factor of 3.0 was applied to 4+-axle trucks.

Table 4-1 – Trip Generation Rates

Land Use	Unit	AM Peak Hour			PM Peak Hour			Daily
		Total	In	Out	Total	In	Out	
Shopping Center [1] Land Use Category: 820	TSF	4.27	2.65	1.62	14.13	6.78	7.35	168.13
High-Turnover (Sit-Down) Restaurant Land Use Category: 932	TSF	10.81	5.95	4.86	9.85	5.91	3.94	127.15
Supermarket Land Use Category: 850	TSF	3.40	2.11	1.29	9.48	4.83	4.65	102.24
Gasoline/Service Station with Convenience Market and Car Wash Land Use Category: 946	VFP	11.84	6.04	5.80	13.86	7.07	6.79	152.84
Day Care Center Land Use Category: 565	TSF	12.18	6.46	5.72	12.34	5.80	6.54	74.06
Fast-Food Restaurant with Drive-Through Window Land Use Category: 934	TSF	45.42	23.16	22.26	32.65	16.98	15.67	496.12
Automobile Sales Land Use Category: 841	TSF	1.92	1.44	0.48	2.62	1.05	1.57	32.30
General Office Building [1] Land Use Category: 710	TSF	2.00	1.76	0.24	2.11	0.36	1.75	13.89
Industrial Park [1 & 2] Land Use Category: 130	TSF	--	--	--	--	--	--	--
	Passenger Cars	0.65	0.53	0.12	0.71	0.15	0.56	3.61
	Trucks (2 Axle)	0.04	0.03	0.03	0.06	0.01	0.05	0.38
	Trucks (3 Axle)	0.03	0.02	0.03	0.05	0.01	0.04	0.46
	Trucks (4+ Axle)	0.38	0.31	0.31	0.60	0.13	0.47	8.22
		1.10	0.90	0.20	1.42	0.30	1.12	12.67

TSF = 1,000 Square Feet Gross Floor Area, VFP = Vehicle Fueling Positions.
Average trip generation rates from *Trip Generation Manual, ITE, 9th Edition* (2012) except as noted.
[1] Trip generation rates derived from fitted curve equation in *Trip Generation Manual, ITE, 9th Edition* (2012).
[2] Passenger car / 2 axle / 3 axle / 4+ axle truck split from Truck Trip Generation Study by the City of Fontana, 2003.

Project Trip Generation

Table 4-2 presents the daily and peak hour trip generation for the proposed project. As shown, the proposed project is anticipated to generate approximately 10,827 daily trip-ends, including 904 trip-ends during the AM peak hour and 1,083 trip-ends during the PM peak hour.

Internal Trips

A key characteristic of a commercial center is that trips among the various land uses can be made on-site. These internal trips can be made either by walking or by vehicle entirely on internal pathways or internal roadways without using a street external to the site. A ten percent internal capture was utilized in this study to represent these internal trips. The driveway volume is the volume that enters or exits the site at the project driveways as shown on Table 4-2.

Pass-by Trips

Pass-by trips are trips made as intermediate stops on the way from an origin to a primary trip destination without a route diversion. Pass-by trips are attracted from traffic passing the site on an adjacent street or roadway that offers direct access to the site. Pass-by trips do not add new traffic to the adjacent street system. Pass-by trips are only applicable to trips that enter or exit the site. Primary trips are trips made for the specific purpose of visiting the site. Pass-by rates have been obtained from the ITE Trip Generation Manual.

Table 4-2 – Project Trip Generation

Land Use	Qty	Unit	AM Peak Hour			PM Peak Hour			Daily
			Total	In	Out	Total	In	Out	
Shopping Center	7.5	TSF	32	20	12	106	51	55	1,261
Pass-by Trips (PM: 34%)			--	--	--	(32)	(16)	(16)	(386)
High-Turnover (Sit-Down) Restaurant	13.3	TSF	144	79	65	131	79	52	1,691
Pass-by Trips (PM: 43%)			--	--	--	(50)	(25)	(25)	(654)
Supermarket	39	TSF	133	82	51	370	189	181	3,987
Pass-by Trips (PM: 36%)			--	--	--	(120)	(60)	(60)	(1,292)
Gasoline/Service Station with Convenience Market and Car Wash	16	VFP	189	96	93	222	113	109	2,445
Pass-by Trips (AM: 62%, PM: 59%)			(104)	(52)	(52)	(118)	(59)	(59)	(1,298)
Day Care Center	4.5	TSF	55	29	26	56	26	30	333
Fast-Food Restaurant with Drive-Through Window	4.8	TSF	218	111	107	157	82	75	2,381
Pass-by Trips (AM: 49%, PM: 50%)			(97)	(49)	(49)	(56)	(28)	(28)	(1,071)
Automobile Sales	105	TSF	202	151	51	275	110	165	3,392
General Office Building	79	TSF	158	139	19	167	28	139	1,097
Industrial Park [1]	47.2	TSF	--	--	--	--	--	--	--
Passenger Cars (PCE = 1.0)			31	25	6	34	7	26	170
Trucks (2 Axle, PCE = 1.5)			3	2	1	4	1	3	18
Trucks (3 Axle, PCE = 2.0)			3	2	1	5	1	4	22
Trucks (4+ Axle, PCE = 3.0)			54	44	10	85	18	67	388
Industrial Park Net PCE Trips			90	74	17	127	27	101	598
Trip Generation			*1,221*	*781*	*441*	*1,611*	*705*	*907*	*17,187*
*Internal Trips**			*(116)*	*(73)*	*(43)*	*(152)*	*(69)*	*(84)*	*(1,659)*
*Driveway Volume***			*1105*	*708*	*398*	*1459*	*636*	*823*	*15,529*
*Pass-by Trips****			*(201)*	*(101)*	*(101)*	*(376)*	*(188)*	*(188)*	*(4,702)*
PROJECT TOTAL			904	607	297	1,083	448	635	10,827

TSF = 1,000 Square Feet Gross Floor Area, VFP = Vehicle Fueling Positions.

* Internal trip capture of 10 percent was applied.

** Driveway Volume = Trip Generation - Internal Trips.

*** Pass-by trips are only applicable to trips that enter or exit the site, not internal trips.

**** Net Total Trip Generation = Trip Generation - Internal Trips - Pass-by Trips.

[1] PCE Factor per San Bernardino County CMP, 2005 Update.

Project Trip Distribution

The trip distribution represents the directional orientation of traffic to and from the project site. Trip distribution is influenced by the geographical location of the site, type of land use in the study area, such as shopping centers and recreational sites, and proximity to the regional freeway system.

The trip directional orientation of traffic for the proposed project was determined based upon the existing roadway system, existing traffic patterns, and existing and future land uses. The directional distribution for the proposed project traffic assumed in this study is shown in Figure 4-A and Figure 4-B, without the proposed Holland overpass and with the Holland overpass. Per discussion with the City of Menifee, the Holland overpass was considered as a cumulative project, rerouting traffic in the cumulative project scenarios of the TIA.

Project Modal Split

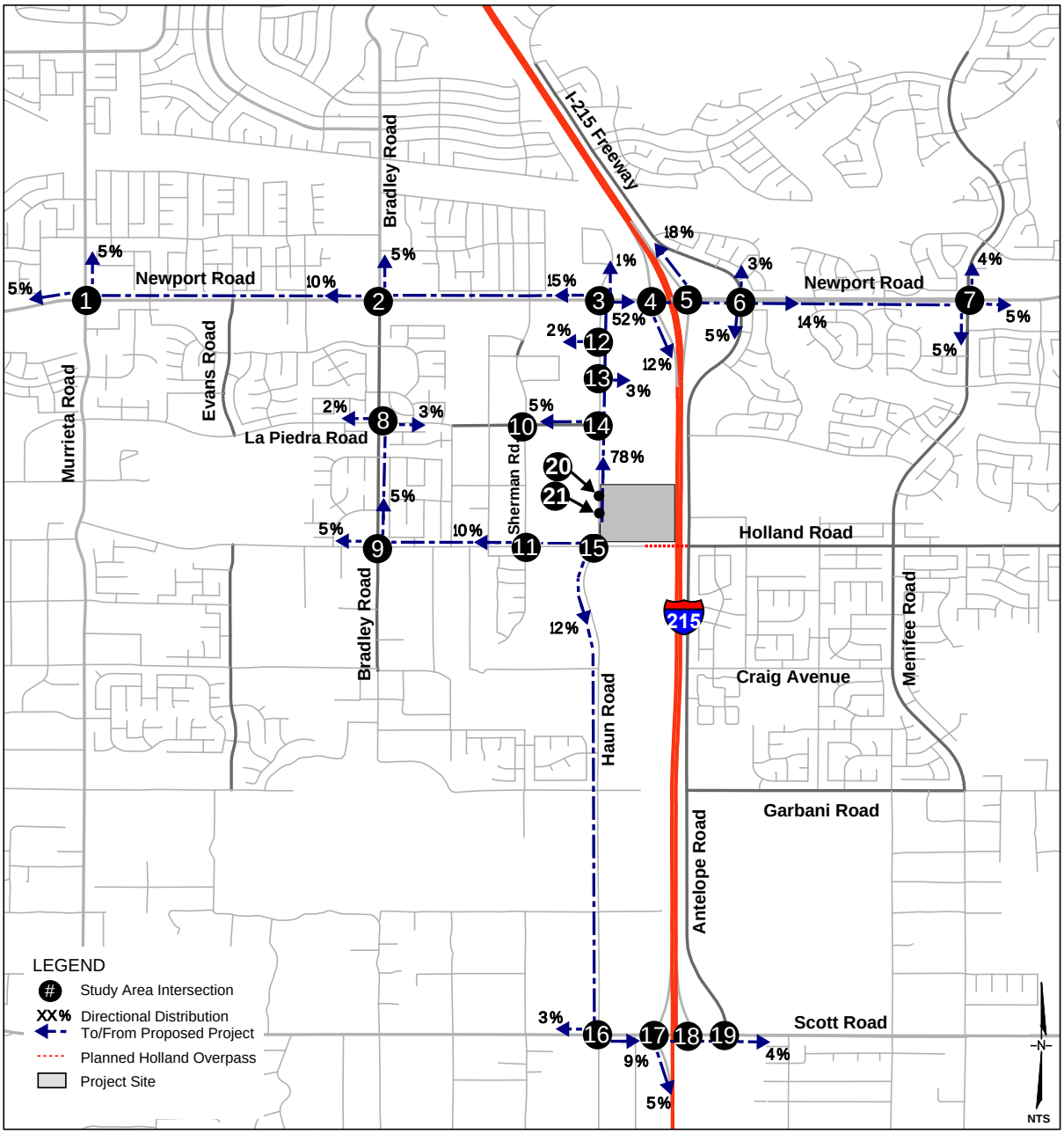
The traffic-reducing potential of public transit has not been considered in this study. Therefore, the traffic projections provided in this report are considered conservative since public transit could reduce traffic volumes in the project area.

Project Trip Assignment

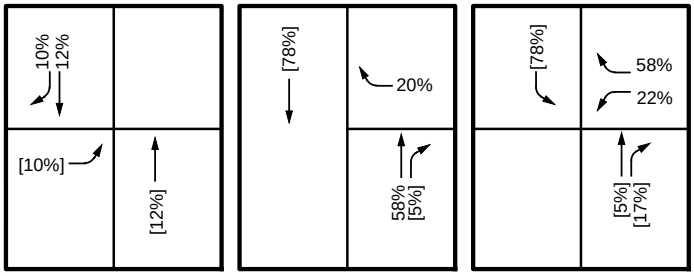
The trip assignment is the result of assigning the previously-discussed trip generation numbers to the circulation system using the previously-discussed trip distribution.

The project related AM peak hour and PM peak hour intersection turning movement volumes for scenarios where the overpass was not considered are shown in Figure 4-C and Figure 4-D, respectively. Figure 4-E and Figure 4-F show AM peak hour and PM peak hour intersection turning movement volumes for scenarios where the overpass was considered.

Figure 4-A – Directional Distribution of Project Traffic (Without Overpass)



Project Frontage Directional Distribution
[XX%]/XX%: [Inbound]/Outbound

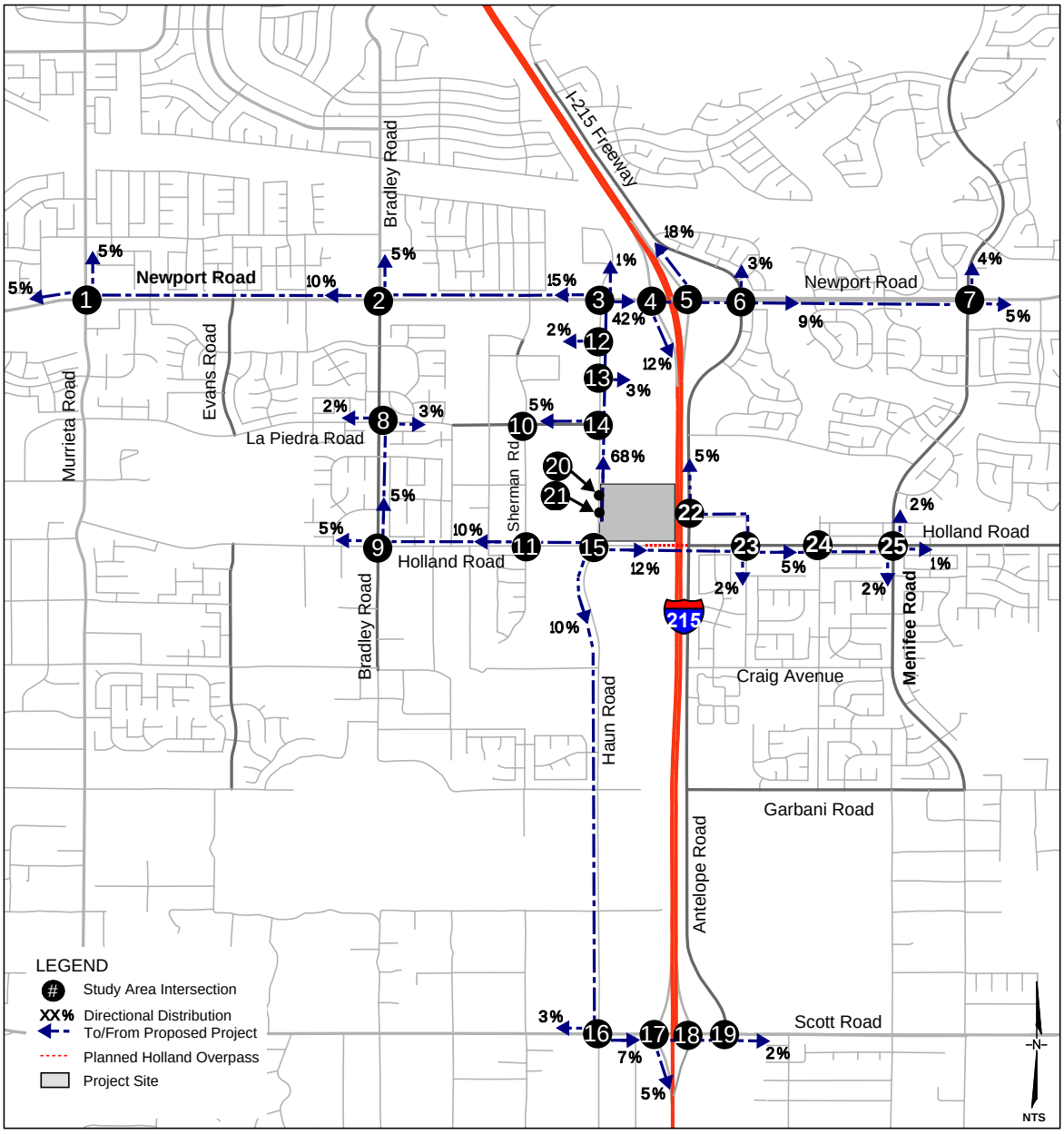


15. Haun Road (NS) / Holland Road (EW)

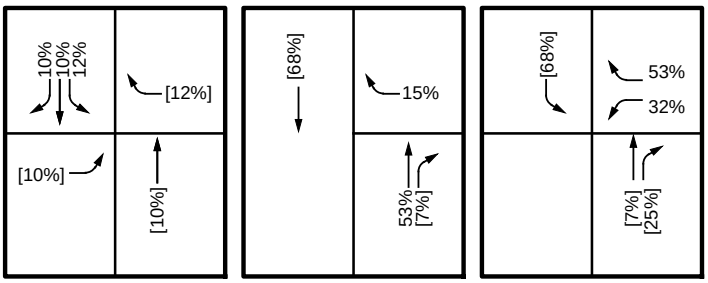
20. Haun Road (NS) / Driveway 1 (EW)

21. Haun Road (NS) / Driveway 2 (EW)

Figure 4-B – Directional Distribution of Project Traffic (With Overpass)



Project Frontage Directional Distribution
[XX%]/XX%: [Inbound]/Outbound

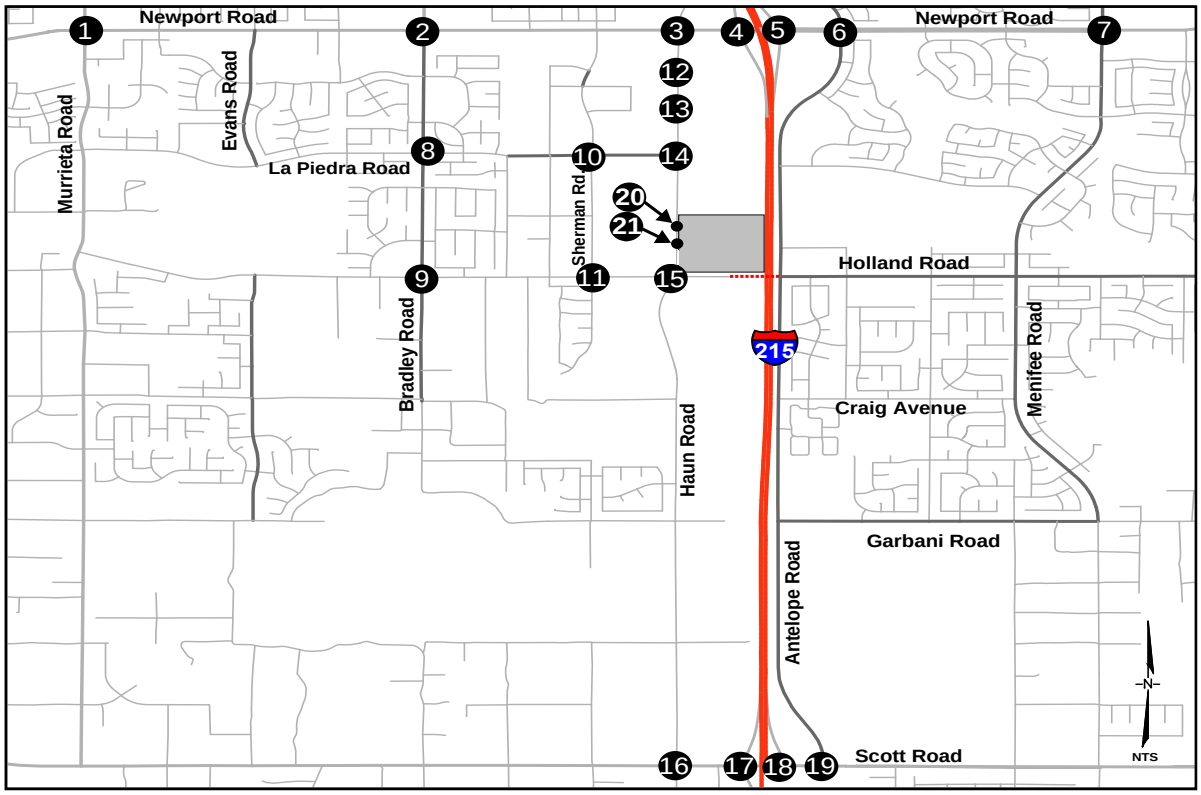


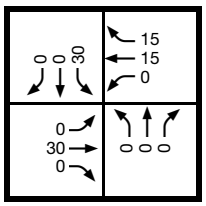
15. Haun Road (NS) / Holland Road (EW)

20. Haun Road (NS) / Driveway 1 (EW)

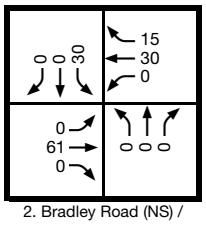
21. Haun Road (NS) / Driveway 2 (EW)

Figure 4-C – Projects Only Without Overpass AM Peak Hour Intersection Volumes

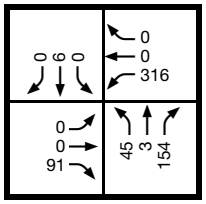




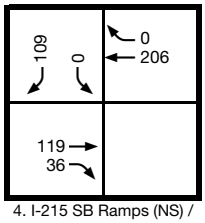
1. Murrieta Road (NS) / Newport Road (EW)



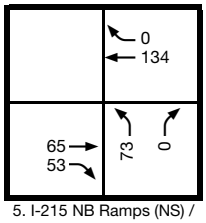
2. Bradley Road (NS) / Newport Road (EW)



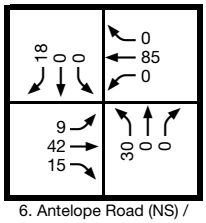
3. Haun Road (NS) / Newport Road (EW)



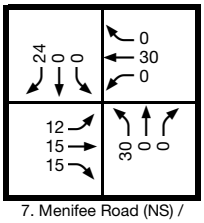
4. I-215 SB Ramps (NS) / Newport Road (EW)



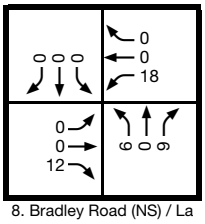
5. I-215 NB Ramps (NS) / Newport Road (EW)



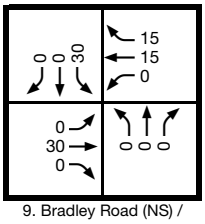
6. Antelope Road (NS) / Newport Road (EW)



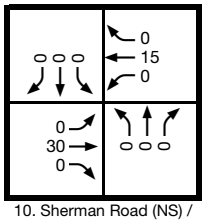
7. Menifee Road (NS) / Newport Road (EW)



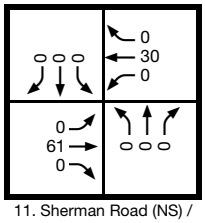
8. Bradley Road (NS) / La Piedra Road (EW)



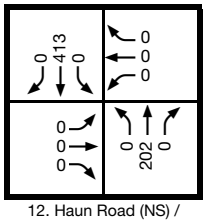
9. Bradley Road (NS) / Holland Road (EW)



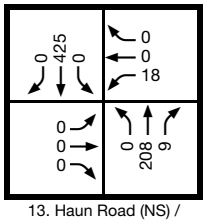
10. Sherman Road (NS) / La Piedra Road (EW)



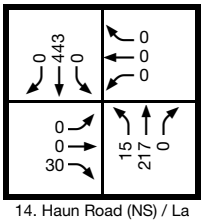
11. Sherman Road (NS) / Holland Road (EW)



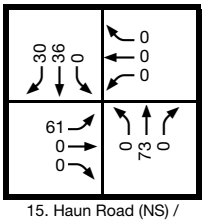
12. Haun Road (NS) / Village-Market Drive (EW)



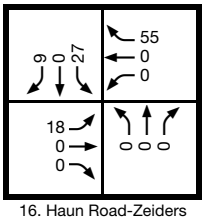
13. Haun Road (NS) / Countryside Market Place (EW)



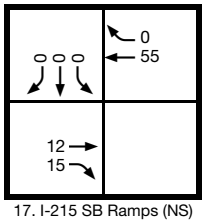
14. Haun Road (NS) / La Piedra Road (EW)



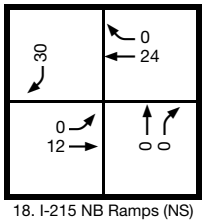
15. Haun Road (NS) / Holland Road (EW)



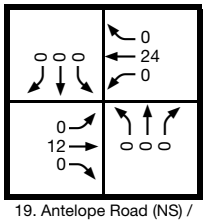
16. Haun Road-Zeiders Road (NS) / Scott Road (EW)



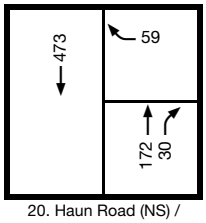
17. I-215 SB Ramps (NS) / Scott Road (EW)



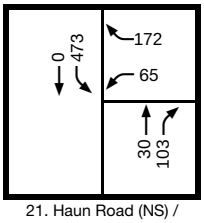
18. I-215 NB Ramps (NS) / Scott Road (EW)



19. Antelope Road (NS) / Scott Road (EW)

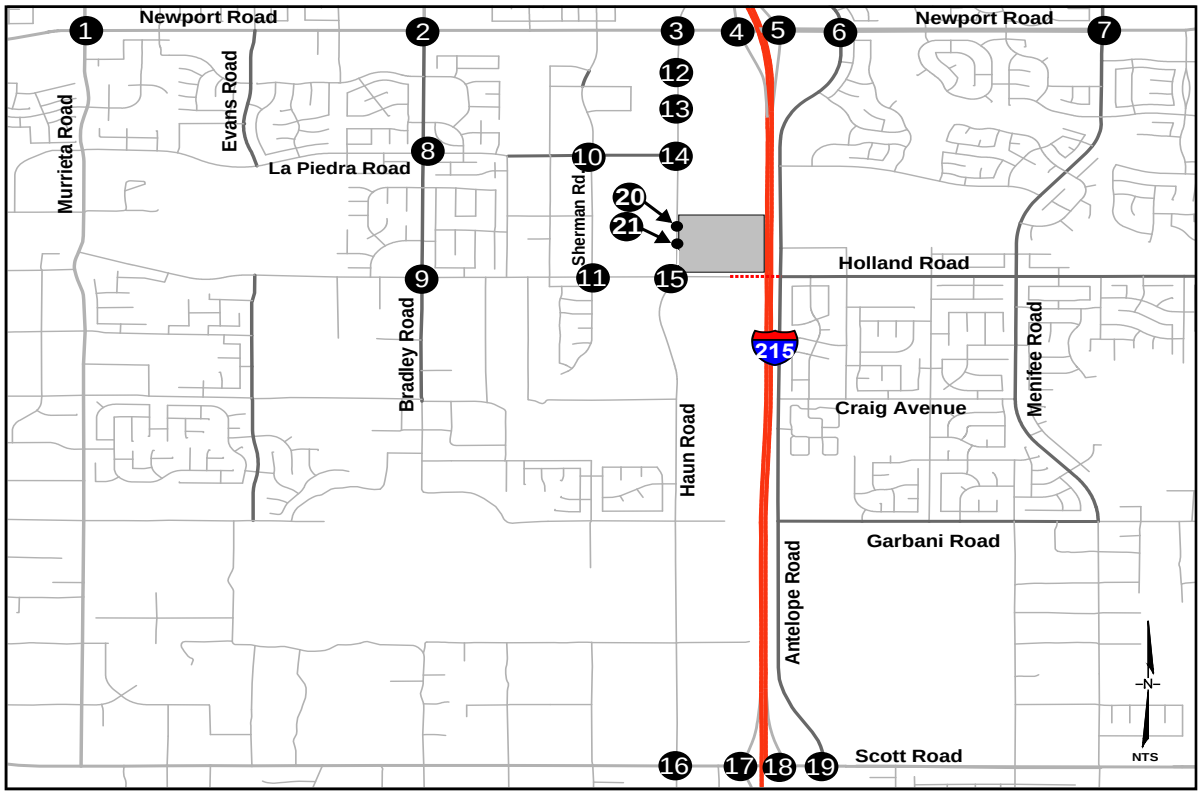


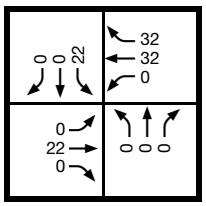
20. Haun Road (NS) / Driveway 1 (EW)



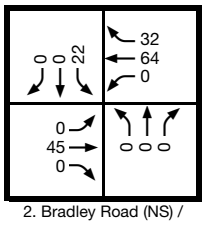
21. Haun Road (NS) / Driveway 2 (EW)

Figure 4-D – Projects Only Without Overpass PM Peak Hour Intersection Volumes

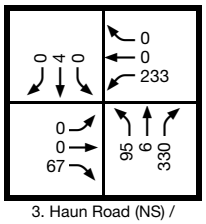




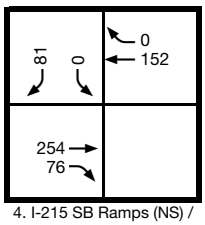
1. Murrieta Road (NS) / Newport Road (EW)



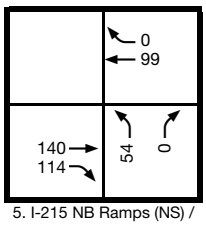
2. Bradley Road (NS) / Newport Road (EW)



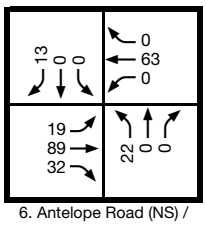
3. Haun Road (NS) / Newport Road (EW)



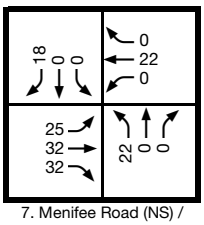
4. I-215 SB Ramps (NS) / Newport Road (EW)



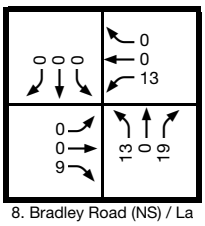
5. I-215 NB Ramps (NS) / Newport Road (EW)



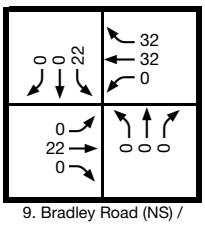
6. Antelope Road (NS) / Newport Road (EW)



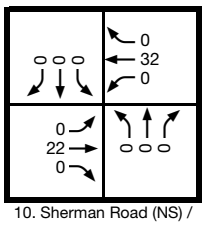
7. Menifee Road (NS) / Newport Road (EW)



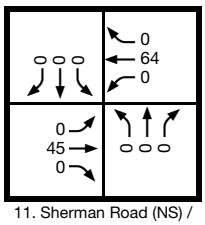
8. Bradley Road (NS) / La Piedra Road (EW)



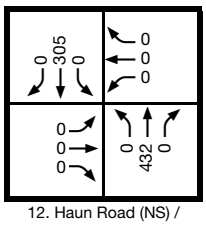
9. Bradley Road (NS) / Holland Road (EW)



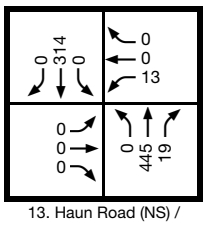
10. Sherman Road (NS) / La Piedra Road (EW)



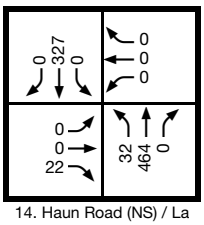
11. Sherman Road (NS) / Holland Road (EW)



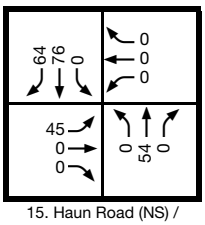
12. Haun Road (NS) / Village-Market Drive (EW)



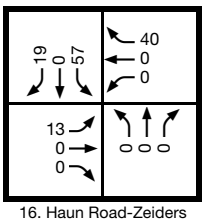
13. Haun Road (NS) / Countryside Market Place (EW)



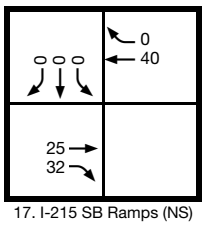
14. Haun Road (NS) / La Piedra Road (EW)



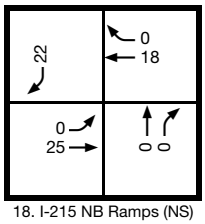
15. Haun Road (NS) / Holland Road (EW)



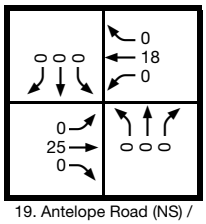
16. Haun Road-Zeiders Road (NS) / Scott Road (EW)



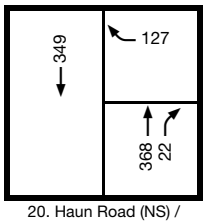
17. I-215 SB Ramps (NS) / Scott Road (EW)



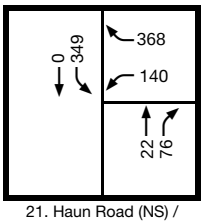
18. I-215 NB Ramps (NS) / Scott Road (EW)



19. Antelope Road (NS) / Scott Road (EW)

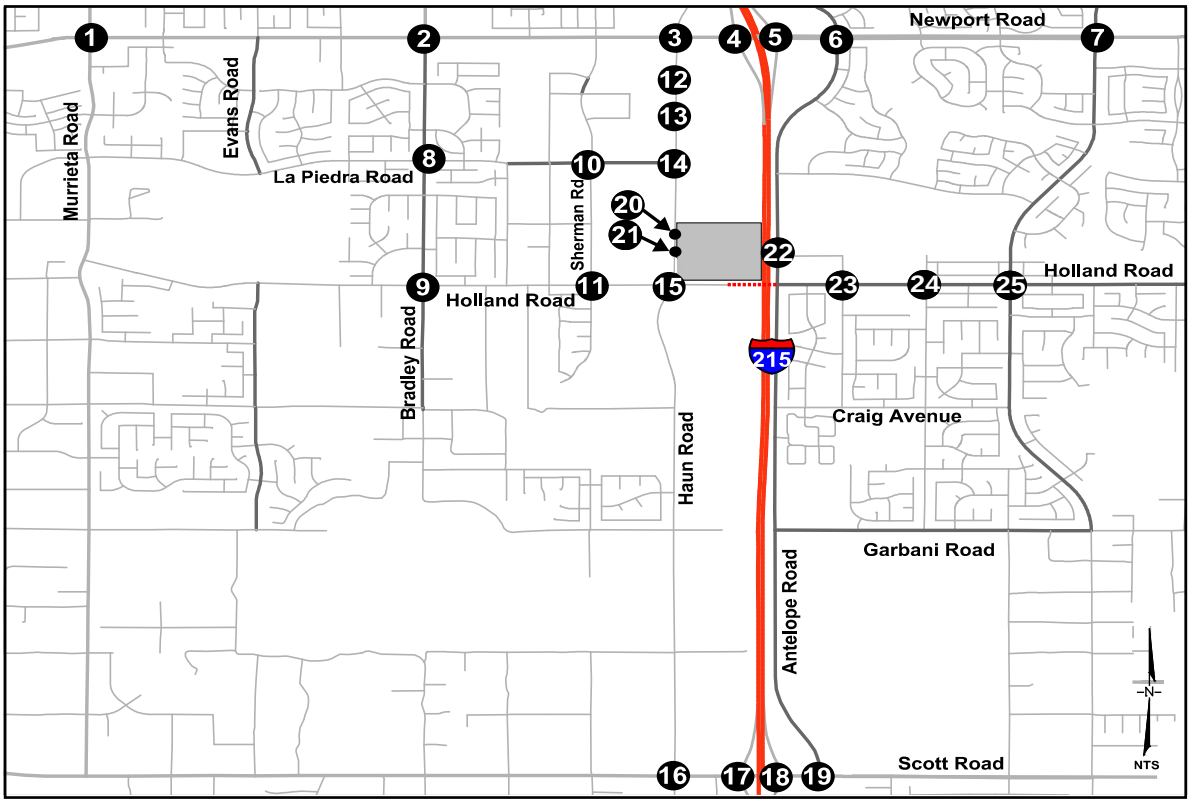


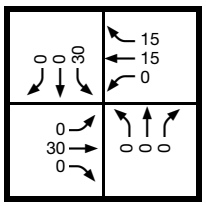
20. Haun Road (NS) / Driveway 1 (EW)



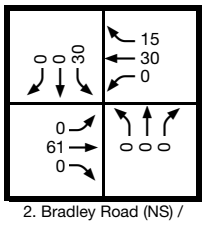
21. Haun Road (NS) / Driveway 2 (EW)

Figure 4-E – Projects Only With Overpass AM Peak Hour Intersection Volumes

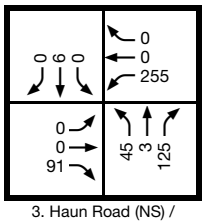




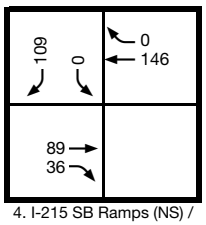
1. Murrieta Road (NS) / Newport Road (EW)



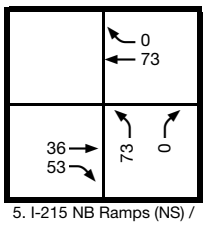
2. Bradley Road (NS) / Newport Road (EW)



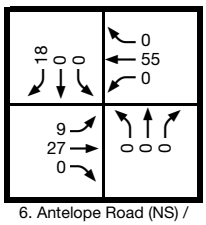
3. Haun Road (NS) / Newport Road (EW)



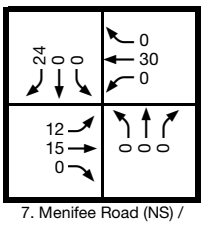
4. I-215 SB Ramps (NS) / Newport Road (EW)



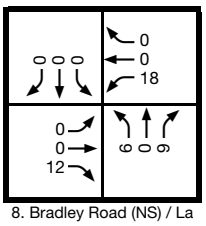
5. I-215 NB Ramps (NS) / Newport Road (EW)



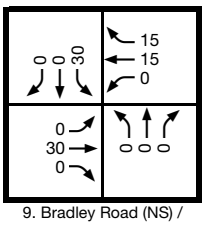
6. Antelope Road (NS) / Newport Road (EW)



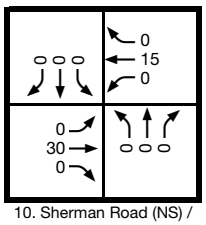
7. Menifee Road (NS) / Newport Road (EW)



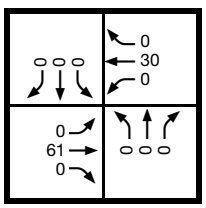
8. Bradley Road (NS) / La Piedra Road (EW)



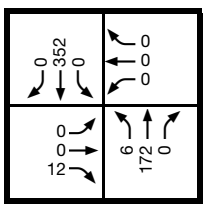
9. Bradley Road (NS) / Holland Road (EW)



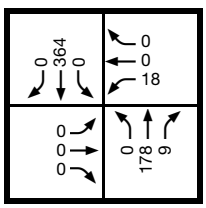
10. Sherman Road (NS) / La Piedra Road (EW)



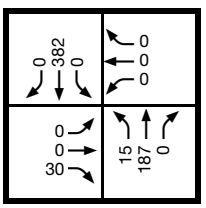
11. Sherman Road (NS) / Holland Road (EW)



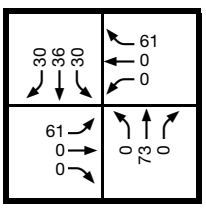
12. Haun Road (NS) / Village-Market Drive (EW)



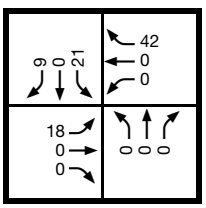
13. Haun Road (NS) / Countryside Market Place (EW)



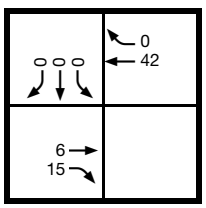
14. Haun Road (NS) / La Piedra Road (EW)



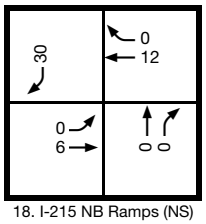
15. Haun Road (NS) / Holland Road (EW)



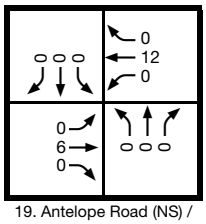
16. Haun Road-Zeiders Road (NS) / Scott Road (EW)



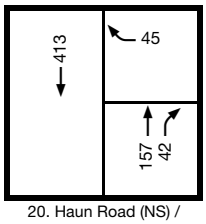
17. I-215 SB Ramps (NS) / Scott Road (EW)



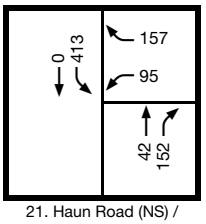
18. I-215 NB Ramps (NS) / Scott Road (EW)



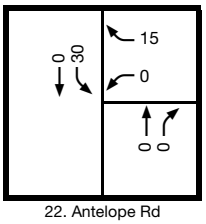
19. Antelope Road (NS) / Scott Road (EW)



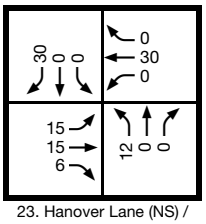
20. Haun Road (NS) / Driveway 1 (EW)



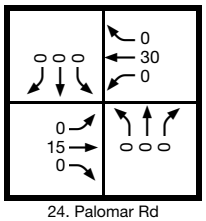
21. Haun Road (NS) / Driveway 2 (EW)



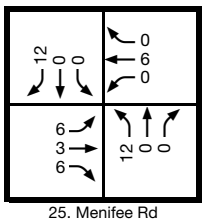
22. Antelope Rd (NS)/Albion Ln (EW)



23. Hanover Lane (NS) / Holland Road (EW)

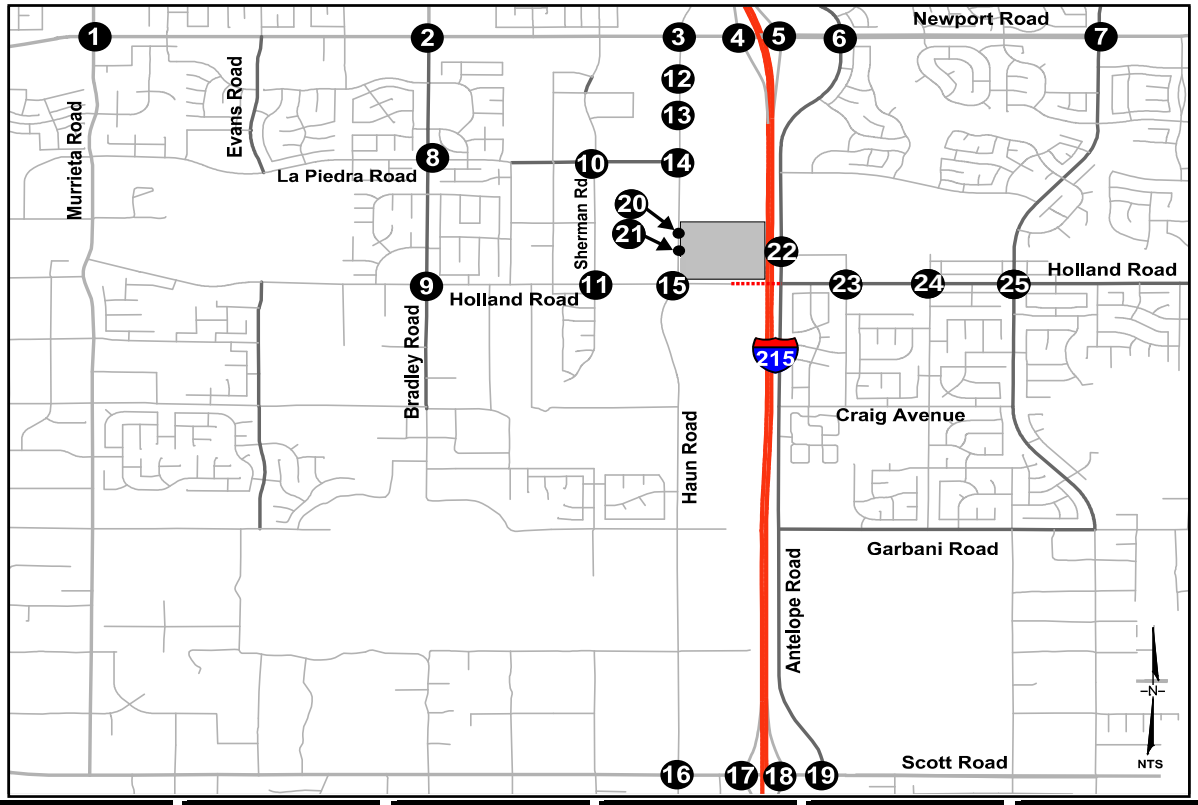


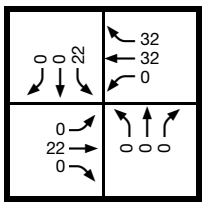
24. Palomar Rd (NS)/Holland Rd (EW)



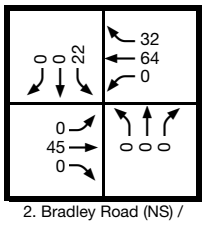
25. Menifee Rd (NS)/Holland Rd (EW)

Figure 4-F – Projects Only With Overpass PM Peak Hour Intersection Volumes

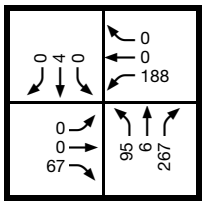




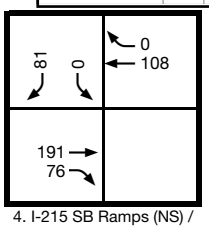
1. Murrieta Road (NS) / Newport Road (EW)



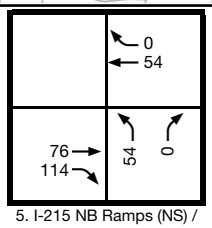
2. Bradley Road (NS) / Newport Road (EW)



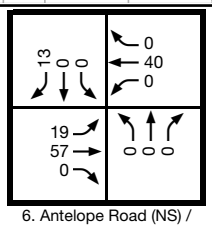
3. Haun Road (NS) / Newport Road (EW)



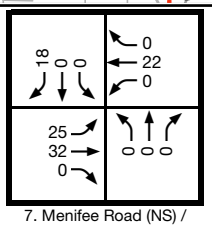
4. I-215 SB Ramps (NS) / Newport Road (EW)



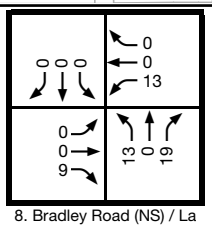
5. I-215 NB Ramps (NS) / Newport Road (EW)



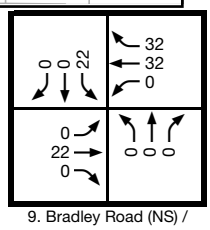
6. Antelope Road (NS) / Newport Road (EW)



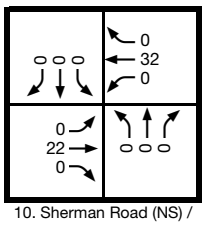
7. Menifee Road (NS) / Newport Road (EW)



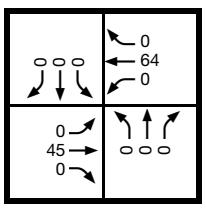
8. Bradley Road (NS) / La Piedra Road (EW)



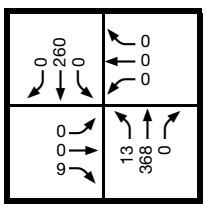
9. Bradley Road (NS) / Holland Road (EW)



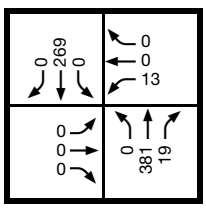
10. Sherman Road (NS) / La Piedra Road (EW)



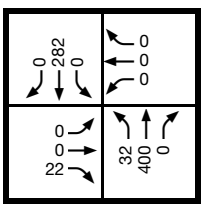
11. Sherman Road (NS) / Holland Road (EW)



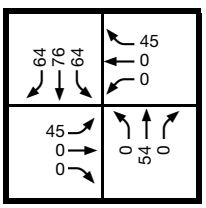
12. Haun Road (NS) / Village-Market Drive (EW)



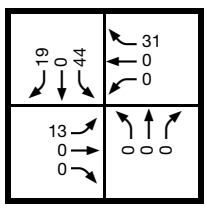
13. Haun Road (NS) / Countryside Market Place (EW)



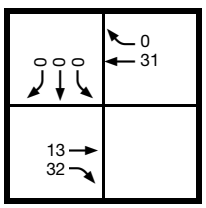
14. Haun Road (NS) / La Piedra Road (EW)



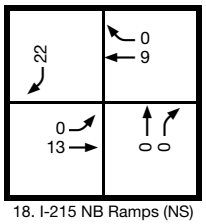
15. Haun Road (NS) / Holland Road (EW)



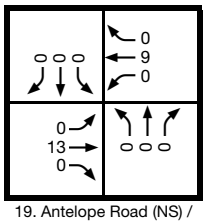
16. Haun Road-Zeiders Road (NS) / Scott Road (EW)



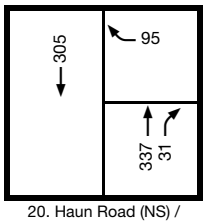
17. I-215 SB Ramps (NS) / Scott Road (EW)



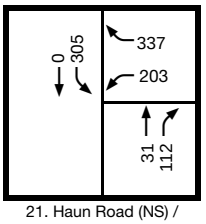
18. I-215 NB Ramps (NS) / Scott Road (EW)



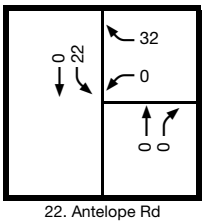
19. Antelope Road (NS) / Scott Road (EW)



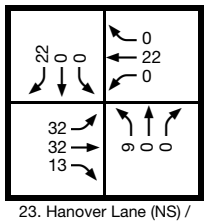
20. Haun Road (NS) / Driveway 1 (EW)



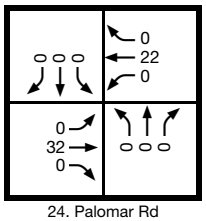
21. Haun Road (NS) / Driveway 2 (EW)



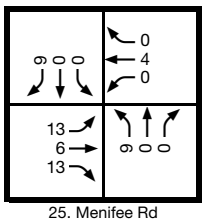
22. Antelope Rd (NS)/Albion Ln (EW)



23. Hanover Lane (NS) / Holland Road (EW)



24. Palomar Rd (NS)/Holland Rd (EW)



25. Menifee Rd (NS)/Holland Rd (EW)

▪ Cumulative Project Generated Traffic

Cumulative project traffic from within the study area is expected to have an impact on levels of service. The cumulative projects within the study area are listed in Table 4-3. These projects were included as per discussion with City of Menifee staff. The location of these projects is shown in Figure 4-G. The AM and PM peak hour intersection turning movement volumes for cumulative projects without overpass conditions are shown in Figure 4-H and Figure 4-I respectively. The AM and PM peak hour intersection turning movement volumes for cumulative projects without overpass conditions are shown in Figure 4-J and Figure 4-K respectively.

▪ Existing Plus Ambient Plus Cumulative Projects Plus Project Without Overpass Traffic Controls and Intersection Geometrics

The existing plus ambient plus cumulative projects plus project without overpass roadway system is shown in Figure 4-L. It identifies the study area intersection traffic controls (i.e. signals and signage), intersection geometrics, and the number of through traffic lanes within the study area.

Holland Overpass

Per discussion with the City of Menifee, the I-215 Holland Overpass project will be considered as a cumulative project. The project is assumed to not generate traffic but will reroute the existing, cumulative and project traffic from surrounding streets such as Newport Road and Scott Road to use the overpass instead. The report analyzes the traffic conditions with and without the Holland Overpass. This report was conducted in accordance the Holland Road/I-215 bridge Overcrossing Project conducted by Iteris, submitted September 23, 2014. Cumulative project traffic from within the study area is expected to have an impact on levels of service. The cumulative projects within the study area are listed in Table 4-3.

▪ Existing Plus Ambient Plus Cumulative Projects Plus Project With Overpass Traffic Controls and Intersection Geometrics

The existing plus ambient plus cumulative projects plus project with overpass roadway system is shown in Figure 4-M. It identifies the study area intersection traffic controls (i.e. signals and signage), intersection geometrics, and the number of through traffic lanes within the study area.

Table 4-3 – Cumulative Projects within the Study Area

Project/Map ID	Land Use	Qty	Unit	AM Peak Hour	PM Peak Hour	Daily
City of Menifee						
102. CUP 2016-1302 (1)	Bowling Alley	22	Lanes	--	--	--
	Movie Theater	1800	Seats	--	--	--
	Gaming Area	7.2	TSF	--	--	--
	Bar	9.32	TSF	--	--	--
	Shopping Center	12.5	TSF	--	--	--
	High-Turnover (Sit-Down) Restaurant	22.6	TSF	--	--	--
	Trip Generation			58	471	6,195
45. TTM 32628	Residential Condominium/Townhouse	327	DU	144	170	1,900
19. PA 2014-218	Single-Family Detached Housing	80	DU	60	80	762
26. SP 209	Single-Family Detached Housing	2157	DU	1,618	2,157	20,535
110. 2016-164 PP	Fast-Food Restaurant with Drive-Through Window	2.7	TSF	123	88	1,340
	Pass-by Trips (AM: 49% PM: 50% Fast Food)			*(59)*	*(45)*	*(670)*
	Trip Generation			*64*	*43*	*670*
27. TR 32025	Single-Family Detached Housing	198	DU	149	198	1,885
28. TR 30812	Single-Family Detached Housing	29	DU	22	29	276
38. TTM 32277	Single-Family Detached Housing	359	DU	269	359	3,418
94. PAR2015-195	Residential Condominium/Townhouse	207	DU	91	108	1,203
108. PP2016-135	Medical-Dental Office Building	25.698	TSF	61	92	928
57 & 109. PAR 2016-154/PP2017-021	Supermarket	29.632	TSF	100	180	2,929
	Health/Fitness Club	17.01	TSF	24	60	561
	High-Turnover (Sit-Down) Restaurant	8.65	TSF	93	49	1,063
	Internal Trips (10%)			*(12)*	*(11)*	*(162)*
	Pass-by Trips (PM: 36% Supermarket)			*0*	*(58)*	*(949)*
	Pass-by Trips (PM: 43% Restaurant)				*(19)*	*(411)*
	Trip Generation			*217*	*289*	*4,553*
88. PP2015-115	High-Turnover (Sit-Down) Restaurant	7.5	TSF	81	74	954
	Pharmacy/Drugstore with Drive-Through Window	15.2	TSF	52	151	1,473
	Drive-in Bank	3.6	TSF	43	87	533
	Shopping Center	102.65	TSF	99	381	4,383
	Internal Trips (10%)			*(28)*	*(69)*	*(734)*
	Pass-by Trips (PM: 49% Restaurant)				*(67)*	*(650)*
	Pass-by Trips (PM: 43% Restaurant)				*(29)*	*(369)*
	Pass-by Trips (PM: 34% Retail Only)				*(117)*	*(1,341)*
	Trip Generation			*248*	*412*	*4,249*
32. PP2014-113 & CUP 2016-289	Shopping Center	22.771	TSF	22	84	972
	Hotel	70	Rooms	37	42	572
	Gasoline/Service Station with Convenience Market and Car Wash	12	VFP	142	166	1,834
	Health/Fitness Club	38	TSF	54	134	1,251
	Supermarket	10.1	TSF	34	96	1,033
	Internal Trips (10%)			*(29)*	*(52)*	*(566)*
	Pass-by Trips (PM: 34% Retail Only)				*(26)*	*(297)*
	Pass-by Trips (AM: 62% PM: 59% Gas Station)			*(79)*	*(71)*	*(664)*
	Pass-by Trips (PM: 36% Supermarket)				*(31)*	*(335)*
	Trip Generation			*181*	*373*	*4,134*
29. PP2014-091	Supermarket	45.112	TSF	153	428	4,612
	Shopping Center	26.658	TSF	26	99	1,138
	Subtotal Trip Generation			179	527	5,750
	Internal Trips (10%)			*(18)*	*(53)*	*(575)*
	Pass-by Trips (PM: 36% Supermarket)				*(139)*	*(1,494)*
	Pass-by Trips (PM: 34% Retail Only)				*(30)*	*(348)*
	Trip Generation			*161*	*305*	*3,332*

TSF = 1,000 Square Feet Gross Floor Area, DU = Dwelling Units, WS = Wash Stalls, VFP = Vehicle Fueling Positions.

(1) CUP 2016-130 Trip Generation taken from the Menifee Town Center Cinema TIA, Linscott, Law & Greenspan, engineers, 2017.

Table 4-3 (Continued) – Cumulative Projects within the Study Area

Project/Map ID	Land Use	Qty	Unit	AM Peak Hour	PM Peak Hour	Daily
36. TR30422	Single-Family Detached Housing	298	DU	224	298	2,837
37. TTM31229	Single-Family Detached Housing	239	DU	179	239	2,275
120. 2016-286 SP -287 GPA	Single-Family Detached Housing	305	DU	229	305	2,904
33. TTM32101	Single-Family Detached Housing	197	DU	148	197	1,875
23. TR32100/TR32102	Single-Family Detached Housing	442	DU	332	442	4,208
65. TTM31582	Single-Family Detached Housing	136	DU	102	136	1,295
35. TR 28786	Single-Family Detached Housing	72	DU	54	72	685
55. Junction at Menifee (2)	Shopping Center		TSF	393	1,517	17,464
40. TR 30142	Single-Family Detached Housing	523	DU	392	523	4,979
41. TR 30664	Single-Family Detached Housing	34	DU	26	34	324
42. TTM 31194	Single-Family Detached Housing	474	DU	356	474	4,512
	Apartments	556	DU	284	345	3,697
	Elementary School	1050	Stu	473	158	1,355
	General Light Industrial	163	TSF	150	158	1,136
	Trip Generation			1,263	1,135	10,700
87. PP 2015-099	Fast-Food Restaurant with Drive-Through Window	2.2	TSF	100	72	1,091
	Shopping Center	4.06	TSF	4	15	173
	General Office Building	3.49	TSF	5	5	38
	Subtotal Trip Generation			109	92	1,302
	Internal Trips (10%)			*(11)*	*(9)*	*(130)*
	Pass-by Trips (AM: 49% PM: 50% Fast Food)			*(44)*	*(32)*	*(491)*
	Pass-by Trips (PM: 34% Retail Only)				*(5)*	*(53)*
	Trip Generation			*54*	*46*	*628*
20. PP19469	Senior Adult Housing - Attached	221	DU	44	55	760
105. 2016-078 CUP	Warehousing	14	TSF	4	4	50
84. TR 2014-073	Single-Family Detached Housing	30	DU	23	30	286
53. PDS CP	General Light Industrial	827	TSF	761	802	5,764
51. CUP 2015-157	Self-Service Car Wash	4.3	WS	24	34	464
	Tire Store	6.1	TSF	18	25	152
	Trip Generation			*42*	*59*	*616*
46. TTM 28206	Single-Family Detached Housing	277	DU	208	277	2,637
47. TTM 33732	Single-Family Detached Housing	296	DU	222	296	2,818
70. TM 28789	Single-Family Detached Housing	131	DU	98	131	1,247
71. TM 28790	Single-Family Detached Housing	156	DU	117	156	1,485
125. PP2017-042	Assisted Living	118	Beds	17	26	314
79. PP 2015-164	Single-Family Detached Housing	68	DU	51	68	647
86. PAR 2015-053/TR 36684	Single-Family Detached Housing	10	DU	8	10	95
93. TTM 2015-165	Single-Family Detached Housing	68	DU	51	68	647
100. 2016-061	Single-Family Detached Housing	54	DU	41	54	514
103. MC 2016-107	Single-Family Detached Housing	80	DU	60	80	762
69. TM 28787	Single-Family Detached Housing	82	DU	62	82	781
85. PP 22946	Shopping Center	48	TSF	46	178	2,050
	Interal Trips (10%)			*(5)*	(18)	*(205)*
	Pass-by Trips (PM: 34% Retail Only)				*(54)*	*(923)*
	Trip Generation			41	106	923
72. 2016-057 PP; -058 CZ	Shopping Center	26.9	TSF	26	100	1,149
	Apartments	196	DU	100	122	1,303
	Interal Trips (10%)			*(13)*	*(22)*	*(245)*
	Pass-by Trips (PM: 34% Retail Only)				*(31)*	*(517)*
	Trip Generation			139	169	1,690

TSF = 1,000 Square Feet Gross Floor Area, DU = Dwelling Units, WS = Wash Stalls, VFP = Vehicle Fueling Positions, Stu = Students.

(2) Trip generation based on "The Junction Traffic Impact Study Supplement" prepared by RK Engineering (March 2010)

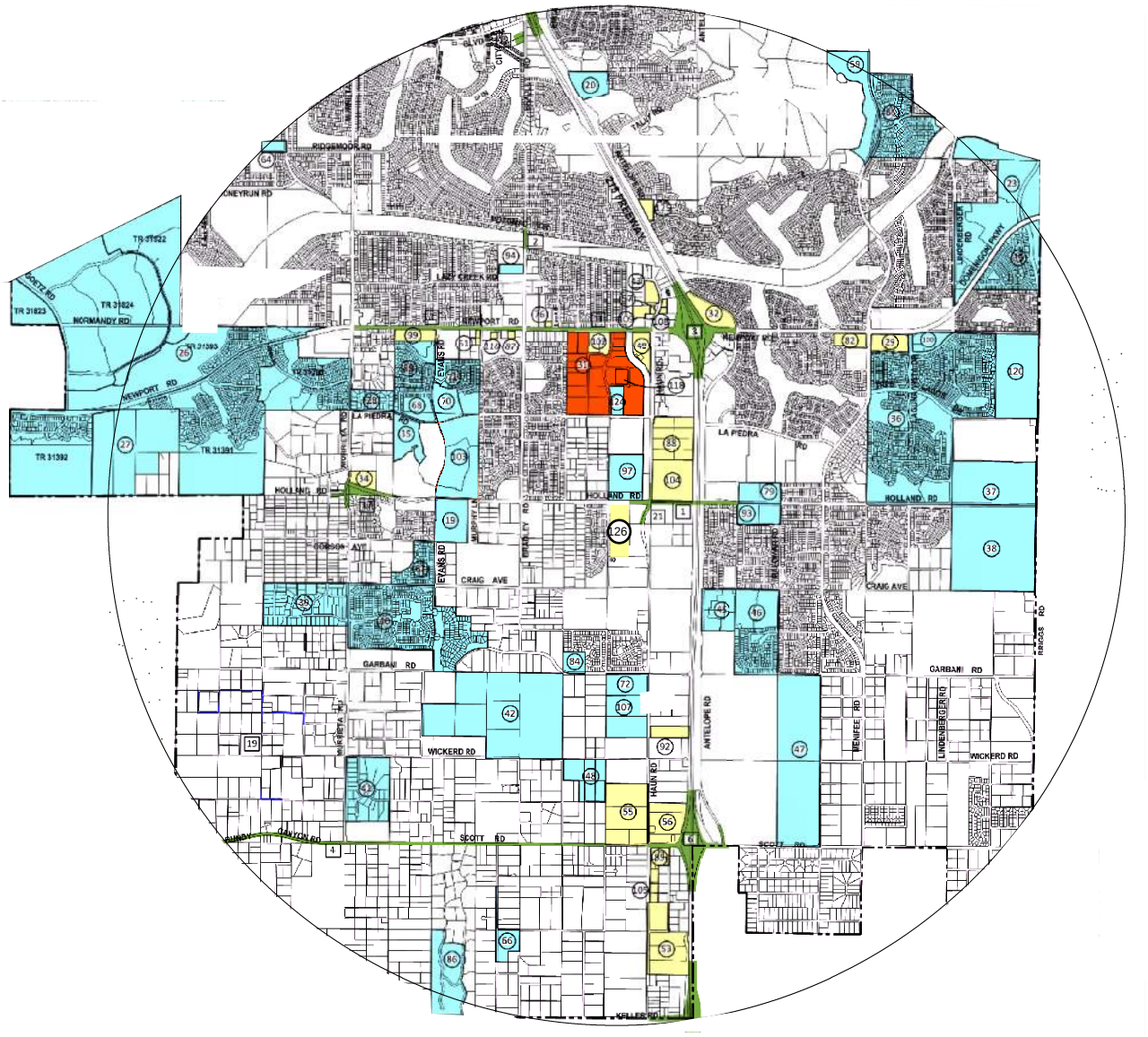
Table 4-3 (Continued) – Cumulative Projects within the Study Area

Project/Map ID	Land Use	Qty	Unit	AM Peak Hour	PM Peak Hour	Daily
107. 2016-246 PA	High-Rise Residential Condominium/Townhouse	196	DU	67	74	819
	Shopping Center	29.302	TSF	28	109	1,251
	Industrial Park	33.288	TSF	27	28	227
	Internal Trips (10%)			*(12)*	*(21)*	*(230)*
	Pass-by Trips (PM: 34% Retail Only)				*(33)*	*(383)*
	Trip Generation			110	157	1,684
118. PP 2016-239	Multipurpose Recreational Facility	5	Acres	61	18	452
124. PP 2017-005	Apartments	330	DU	168	205	2,195
48. PP 2014-009	Shopping Center	33	TSF	32	122	1,409
	Internal Trips (10%)			*(3)*	*(12)*	*(141)*
	Pass-by Trips (PM: 34% Retail Only)				*(37)*	*(431)*
	Trip Generation			29	110	1,268
97. TTM 36303	Single-Family Detached Housing	155	DU	116	155	1,476
2017-039	Assisted Living	181	OB	31	52	496
	Medical-Dental Office Building	119.3	TSF	285	426	4,310
	Trip Generation			316	478	4,806
56. Menifee Shopping Center (3)	Shopping Center			578	1,335	15,702
64. TR 2016-038	Single-Family Detached Housing	18	DU	14	18	171
31. Town Center Regent	Single-Family Detached Housing	452	DU	339	452	4,303

TSF = 1,000 Square Feet Gross Floor Area, DU = Dwelling Units, WS = Wash Stalls, VFP = Vehicle Fueling Positions, Stu = Students.

(3) Trip generation based on 'The Menifee Shoping Center Traffic Impact Study Supplement' prepared by LSA Asscoiates.

Figure 4-G – Cumulative Projects within the Study Area

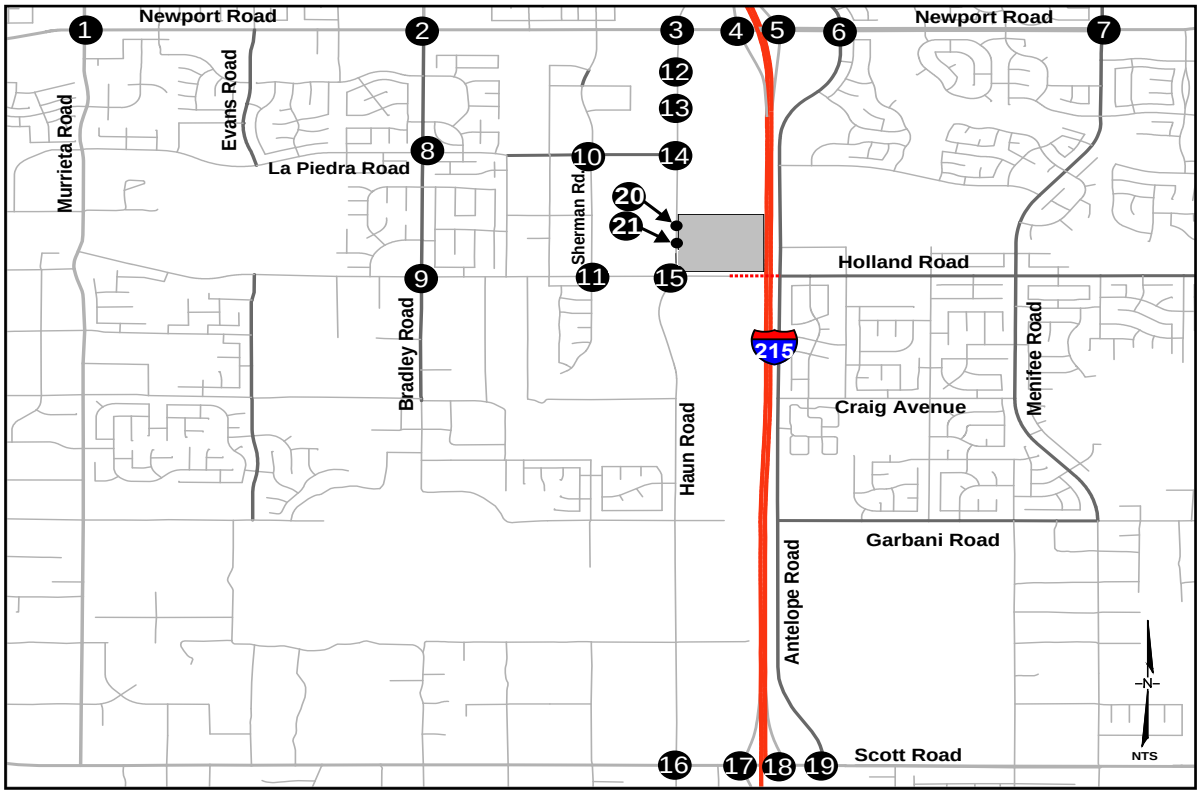


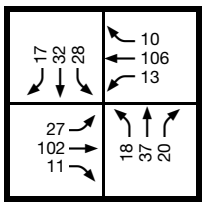
104. PM 2016-202 **(Project)**
97. TTM 36303
126. 2017-041
102. CUP 2016-1302
45. TTM 32628
19. PA 2014-218
26. SP 209
110. 2016-164 PP
27. TR 32025
28. TR 30812
38. TTM 32277
94. PAR2015-195
108. PP2016-135
57 & 109. PAR 2016-154/PP2017-029
88. PP2015-124
32. PP2014-113 & CUP 2016-289
29. PP2014-097
36. TR30422
37. TTM31229
120. 2016-286 SP -287 GPA

33. TTM32101
23. TR32100/TR32102
65. TTM31582
35. TR 28786
55. Junction at Menifee
40. TR 30142
41. TR 30664
42. TTM 31198
87. PP 2015-107
20. PP19469
105. 2016-078 CUP
84. TR 2014-073
53. PDS CP
51. CUP 2015-157
46. TTM 28206
47. TTM 33732
70. TM 28789
71. TM 28790
125. PP2017-042
79. PP 2015-164

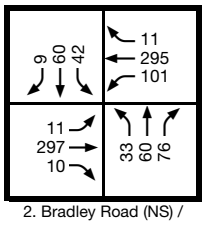
86. PAR 2015-053/TR 36684
93. TTM 2015-165
100. 2016-061
103. MC 2016-107
69. TM 28787
85. PP 22949
72. 2016-057 PP; -058 CZ
107. 2016-246 PA
118. PP 2016-239
124. PP 2017-005
48. PP 2014-012
56. Menifee Shopping Center
64. TR 2016-038
31. Town Center Regent

Figure 4-H – Cumulative Projects Only Without Overpass AM Peak Hour Intersection Volumes

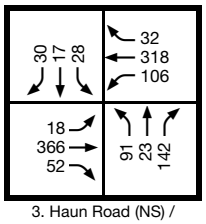




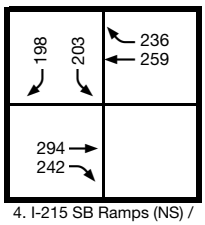
1. Murrieta Road (NS) / Newport Road (EW)



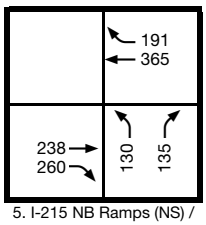
2. Bradley Road (NS) / Newport Road (EW)



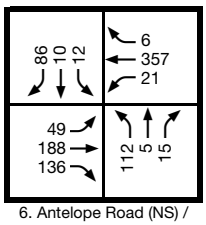
3. Haun Road (NS) / Newport Road (EW)



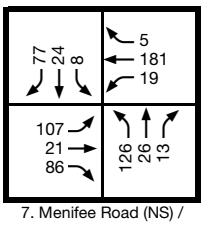
4. I-215 SB Ramps (NS) / Newport Road (EW)



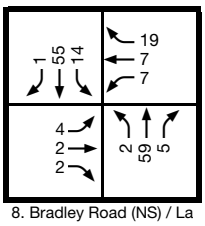
5. I-215 NB Ramps (NS) / Newport Road (EW)



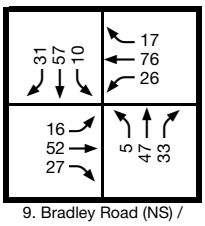
6. Antelope Road (NS) / Newport Road (EW)



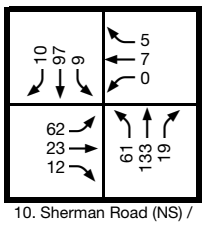
7. Menifee Road (NS) / Newport Road (EW)



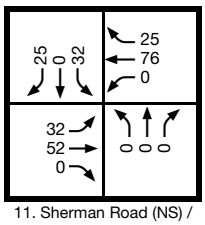
8. Bradley Road (NS) / La Piedra Road (EW)



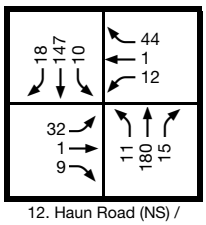
9. Bradley Road (NS) / Holland Road (EW)



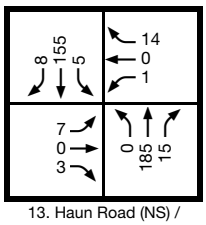
10. Sherman Road (NS) / La Piedra Road (EW)



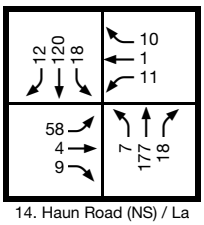
11. Sherman Road (NS) / Holland Road (EW)



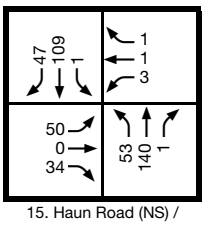
12. Haun Road (NS) / Village-Market Drive (EW)



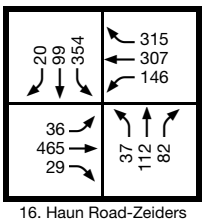
13. Haun Road (NS) / Countryside Market Place (EW)



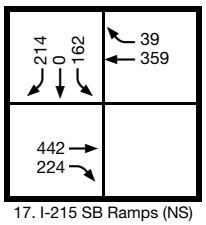
14. Haun Road (NS) / La Piedra Road (EW)



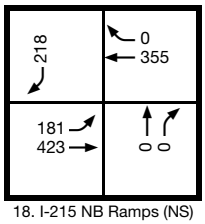
15. Haun Road (NS) / Holland Road (EW)



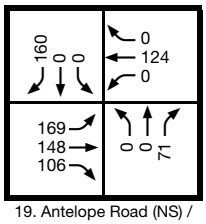
16. Haun Road-Zeiders Road (NS) / Scott Road (EW)



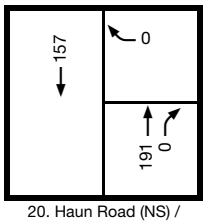
17. I-215 SB Ramps (NS) / Scott Road (EW)



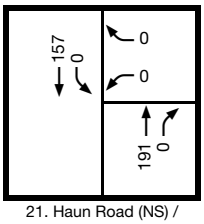
18. I-215 NB Ramps (NS) / Scott Road (EW)



19. Antelope Road (NS) / Scott Road (EW)

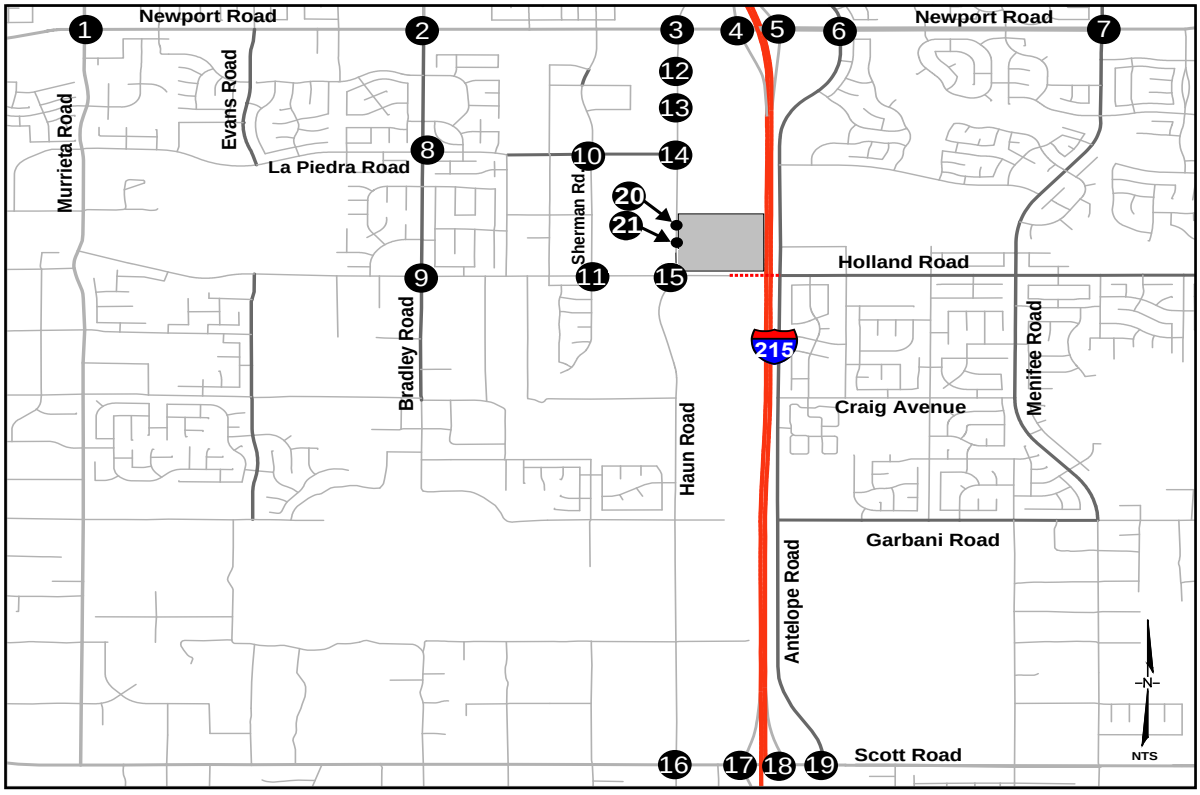


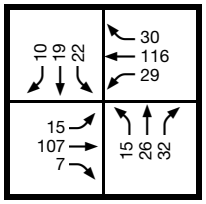
20. Haun Road (NS) / Driveway 1 (EW)



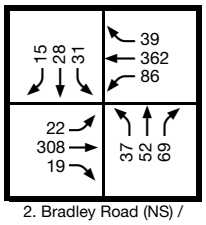
21. Haun Road (NS) / Driveway 2 (EW)

Figure 4-I – Cumulative Projects Only Without Overpass PM Peak Hour Intersection Volumes

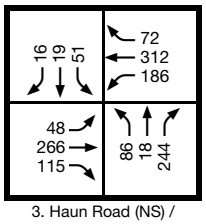




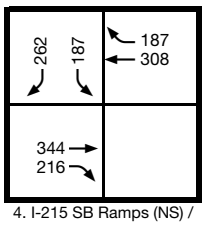
1. Murrieta Road (NS) / Newport Road (EW)



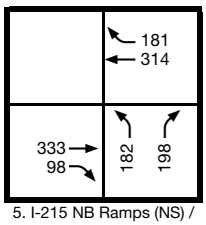
2. Bradley Road (NS) / Newport Road (EW)



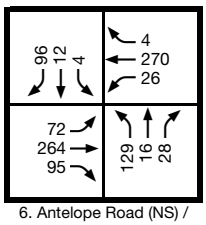
3. Haun Road (NS) / Newport Road (EW)



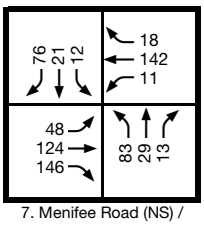
4. I-215 SB Ramps (NS) / Newport Road (EW)



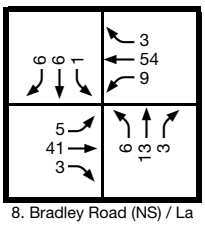
5. I-215 NB Ramps (NS) / Newport Road (EW)



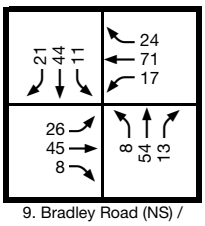
6. Antelope Road (NS) / Newport Road (EW)



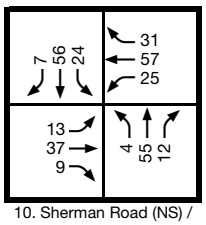
7. Menifee Road (NS) / Newport Road (EW)



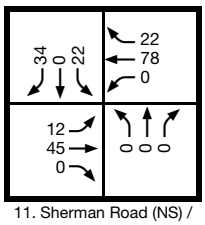
8. Bradley Road (NS) / La Piedra Road (EW)



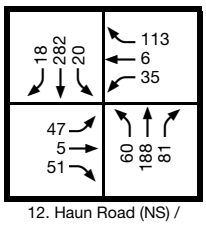
9. Bradley Road (NS) / Holland Road (EW)



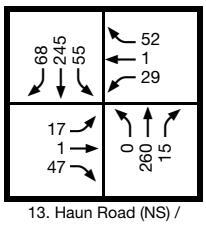
10. Sherman Road (NS) / La Piedra Road (EW)



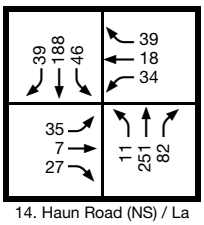
11. Sherman Road (NS) / Holland Road (EW)



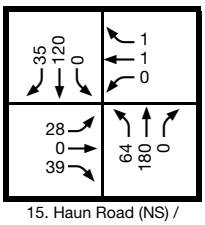
12. Haun Road (NS) / Village-Market Drive (EW)



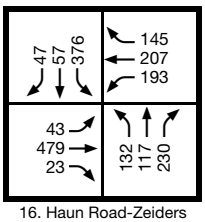
13. Haun Road (NS) / Countryside Market Place (EW)



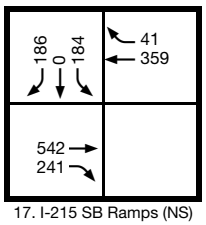
14. Haun Road (NS) / La Piedra Road (EW)



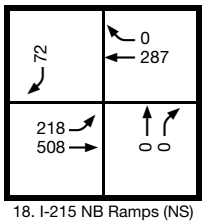
15. Haun Road (NS) / Holland Road (EW)



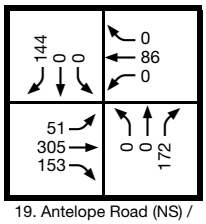
16. Haun Road-Zeiders Road (NS) / Scott Road (EW)



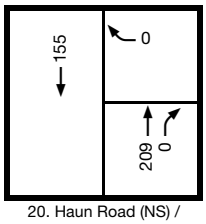
17. I-215 SB Ramps (NS) / Scott Road (EW)



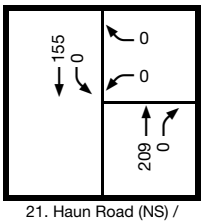
18. I-215 NB Ramps (NS) / Scott Road (EW)



19. Antelope Road (NS) / Scott Road (EW)

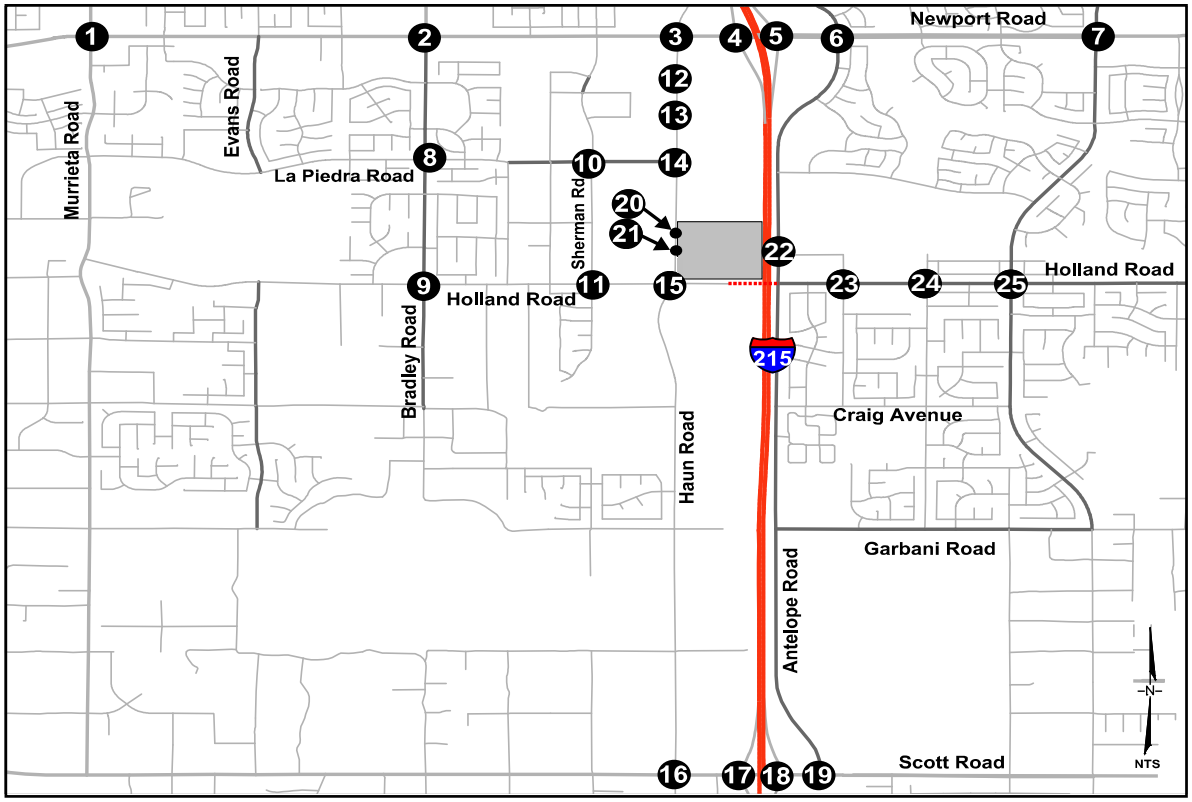


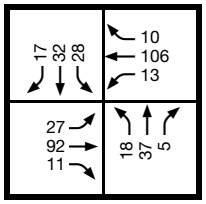
20. Haun Road (NS) / Driveway 1 (EW)



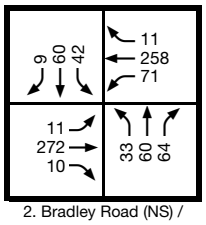
21. Haun Road (NS) / Driveway 2 (EW)

Figure 4-J – Cumulative Projects Only With Overpass AM Peak Hour Intersection Volumes

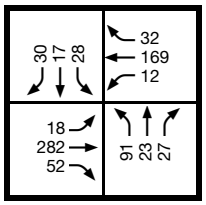




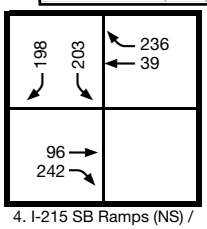
1. Murrieta Road (NS) / Newport Road (EW)



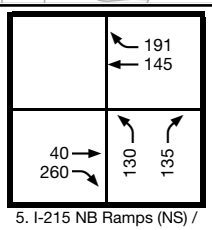
2. Bradley Road (NS) / Newport Road (EW)



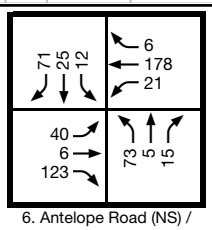
3. Haun Road (NS) / Newport Road (EW)



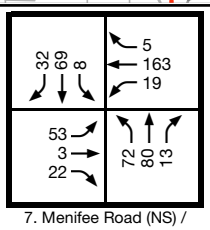
4. I-215 SB Ramps (NS) / Newport Road (EW)



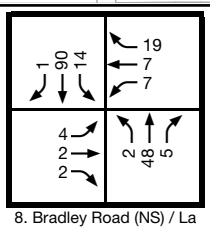
5. I-215 NB Ramps (NS) / Newport Road (EW)



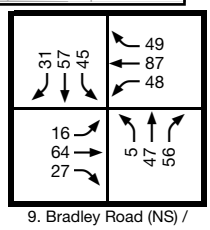
6. Antelope Road (NS) / Newport Road (EW)



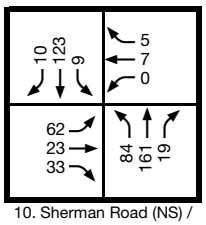
7. Menifee Road (NS) / Newport Road (EW)



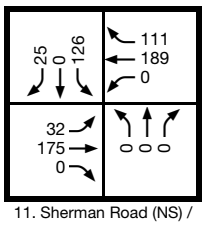
8. Bradley Road (NS) / La Piedra Road (EW)



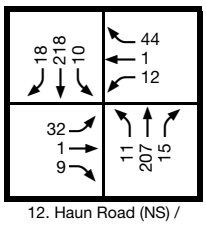
9. Bradley Road (NS) / Holland Road (EW)



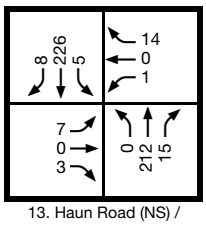
10. Sherman Road (NS) / La Piedra Road (EW)



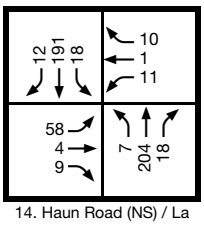
11. Sherman Road (NS) / Holland Road (EW)



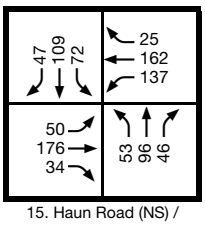
12. Haun Road (NS) / Village-Market Drive (EW)



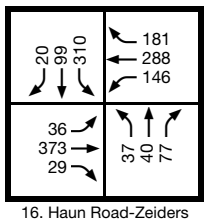
13. Haun Road (NS) / Countryside Market Place (EW)



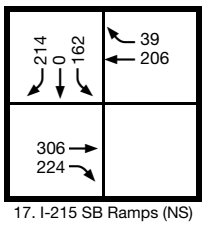
14. Haun Road (NS) / La Piedra Road (EW)



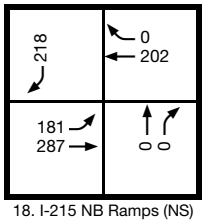
15. Haun Road (NS) / Holland Road (EW)



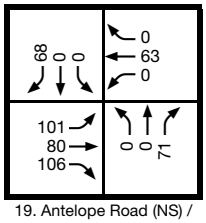
16. Haun Road-Zeiders Road (NS) / Scott Road (EW)



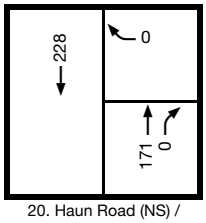
17. I-215 SB Ramps (NS) / Scott Road (EW)



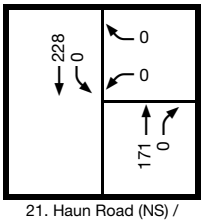
18. I-215 NB Ramps (NS) / Scott Road (EW)



19. Antelope Road (NS) / Scott Road (EW)



20. Haun Road (NS) / Driveway 1 (EW)



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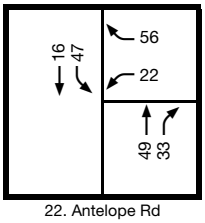
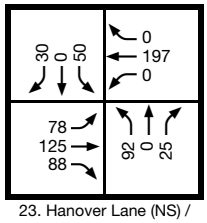
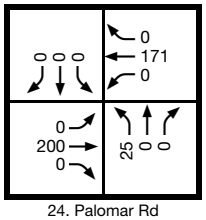


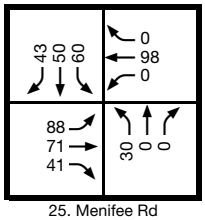
22. Antelope Rd (NS)/Albion Ln (EW)



23. Hanover Lane (NS) / Holland Road (EW)



24. Palomar Rd (NS)/Holland Rd (EW)



25. Menifee Rd (NS)/Holland Rd (EW)

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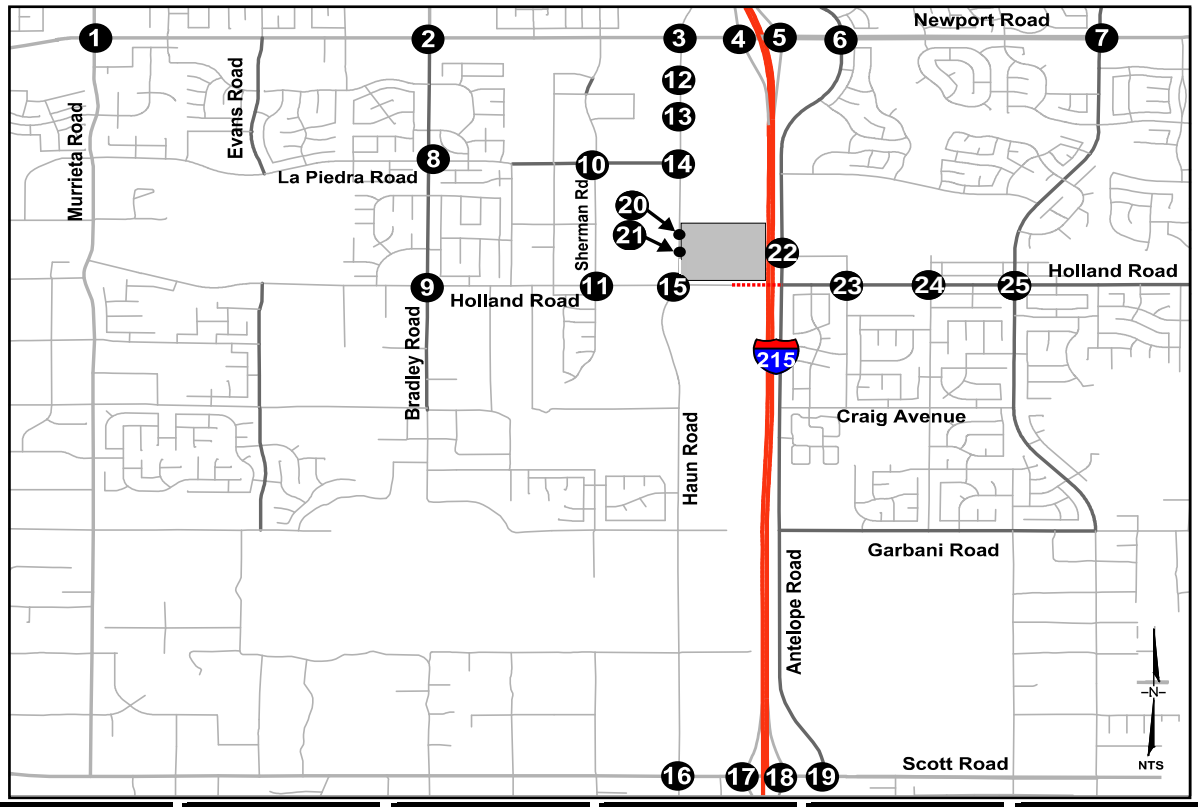
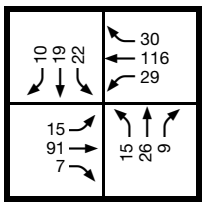
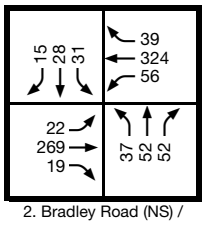
Figure 4-K – Cumulative Projects Only With Overpass PM Peak Hour Intersection Volumes

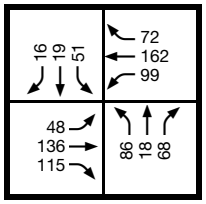




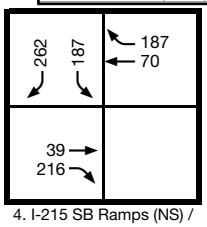
1. Murrieta Road (NS) / Newport Road (EW)



2. Bradley Road (NS) / Newport Road (EW)



3. Haun Road (NS) / Newport Road (EW)



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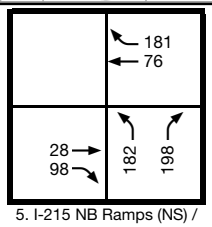

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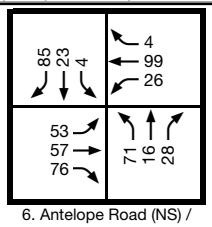
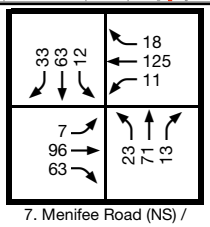
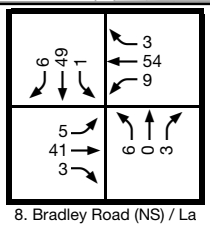


6. Antelope Road (NS) / Newport Road (EW)



7. Menifee Road (NS) / Newport Road (EW)



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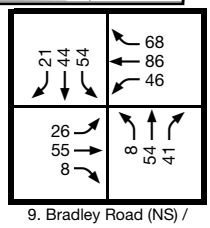

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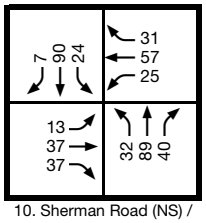
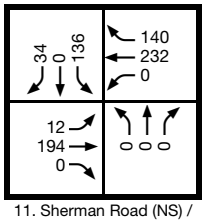
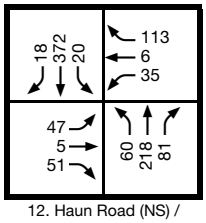


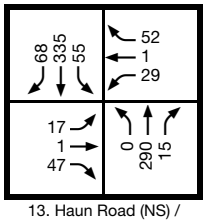
10. Sherman Road (NS) / La Piedra Road (EW)



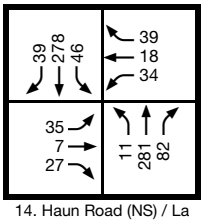
11. Sherman Road (NS) / Holland Road (EW)



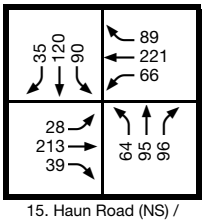
12. Haun Road (NS) / Village-Market Drive (EW)



13. Haun Road (NS) / Countryside Market Place (EW)



14. Haun Road (NS) / La Piedra Road (EW)



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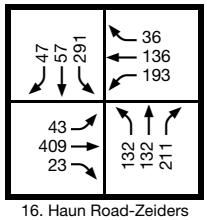
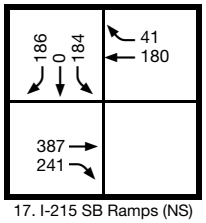
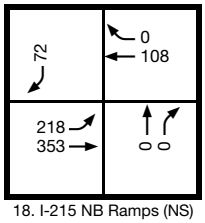


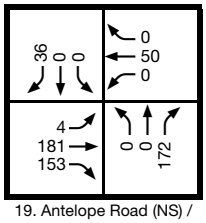
16. Haun Road-Zeiders Road (NS) / Scott Road (EW)



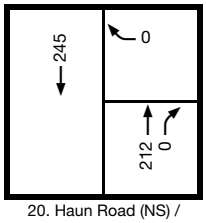
17. I-215 SB Ramps (NS) / Scott Road (EW)



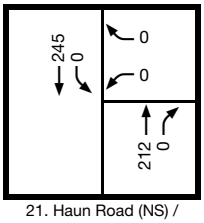
18. I-215 NB Ramps (NS) / Scott Road (EW)



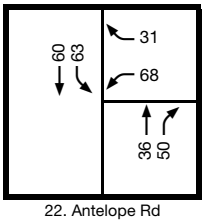
19. Antelope Road (NS) / Scott Road (EW)



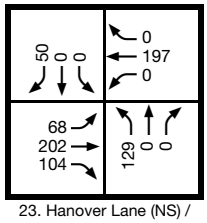
20. Haun Road (NS) / Driveway 1 (EW)



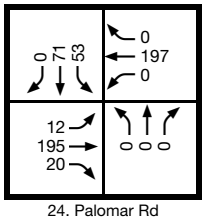
21. Haun Road (NS) / Driveway 2 (EW)



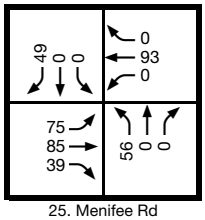
22. Antelope Rd (NS)/Albion Ln (EW)



23. Hanover Lane (NS) / Holland Road (EW)

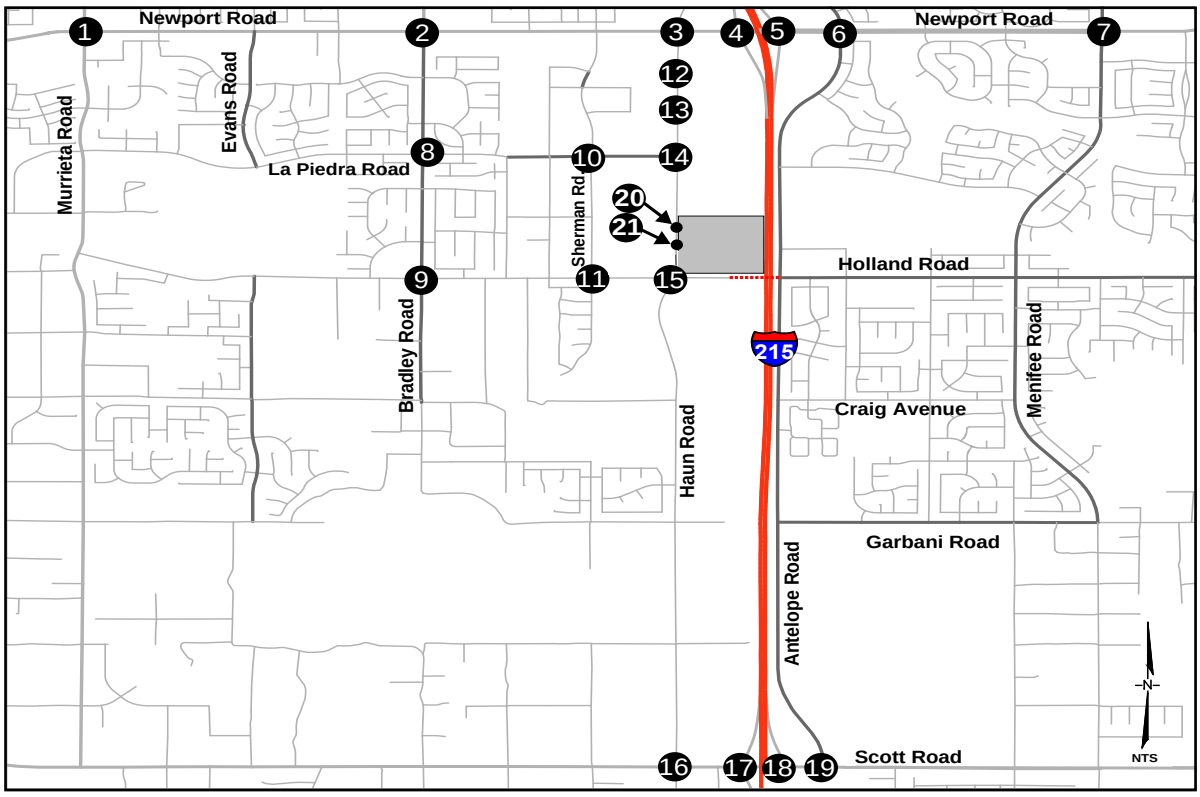


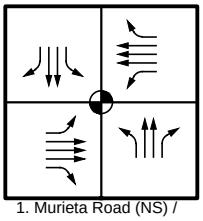
24. Palomar Rd (NS)/Holland Rd (EW)

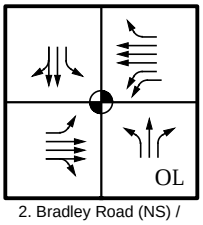


25. Menifee Rd (NS)/Holland Rd (EW)

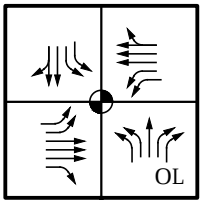
Figure 4-L –Existing Plus Ambient Plus Cumulative Projects Plus Project Without Overpass Roadway System



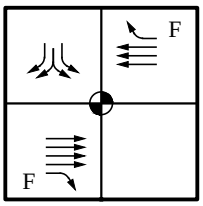

1. Murieta Road (NS) / Newport Road (EW)



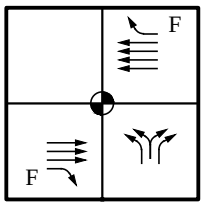
2. Bradley Road (NS) / Newport Road (EW)



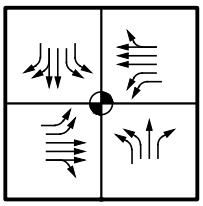
3. Haun Road (NS) / Newport Road (EW)

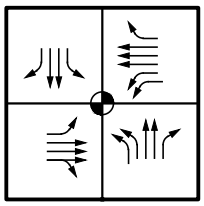


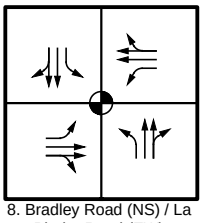
4. I-215 SB Ramps (NS) / Newport Road (EW)

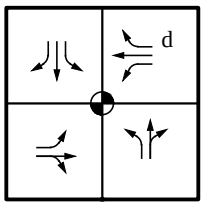


5. I-215 NB Ramps (NS) / Newport Road (EW)

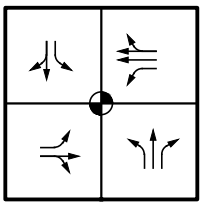

6. Antelope Road (NS) / Newport Road (EW)

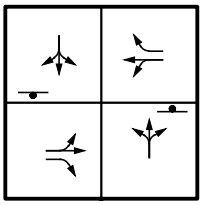

7. Menifee Road (NS) / Newport Road (EW)

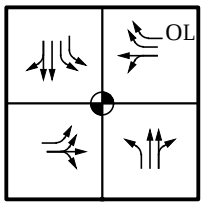

8. Bradley Road (NS) / La Piedra Road (EW)



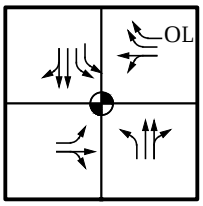
9. Bradley Road (NS) / Holland Road (EW)


10. Sherman Road (NS) / La Piedra Road (EW)

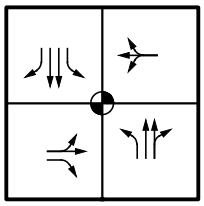

11. Sherman Road (NS) / Holland Road (EW)



12. Haun Road (NS) / Village Market Drive (EW)



13. Haun Road (NS) / Countryside Marketplace (EW)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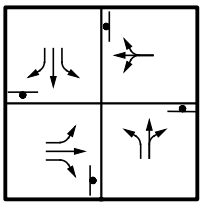
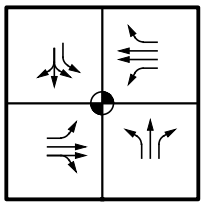

15. Haun Road (NS) / Holland Road (EW)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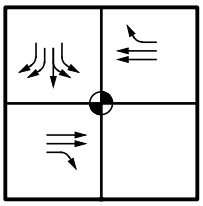
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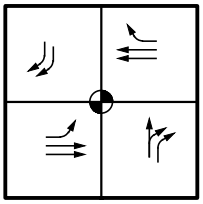
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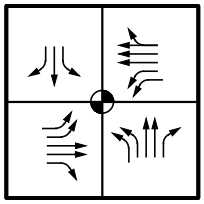
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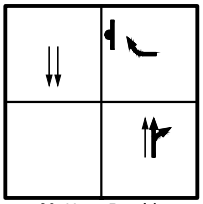
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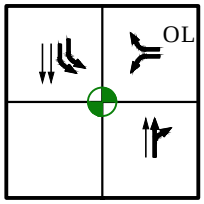
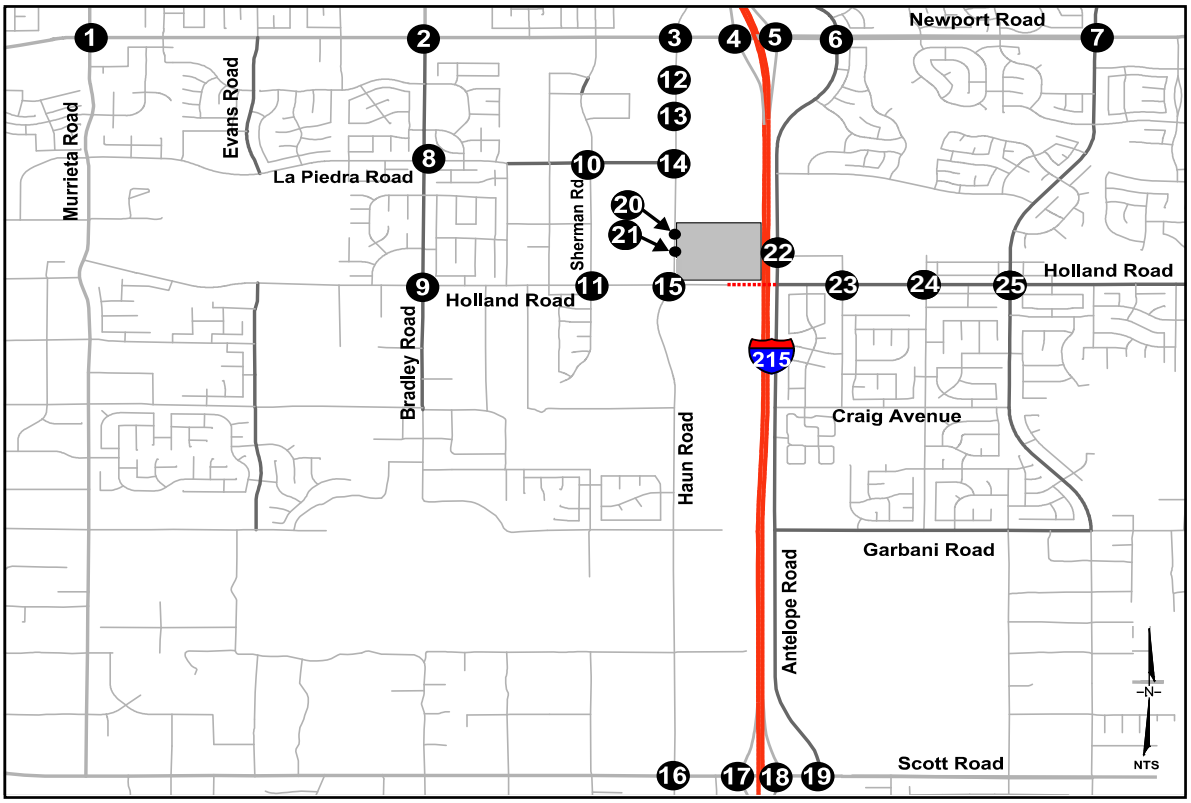


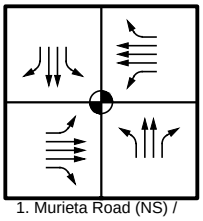
21. Haun Road / Driveway 2 (EW)

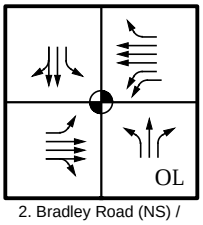
LEGEND

- Existing Traffic Signal
- Existing Stop Sign
- Existing Lane Geometrics
- d Existing Defacto Right Turn
- F Existing Free Right Turn Lane
- OL Existing Overlap Right Turn
- Proposed Traffic Signal
- Proposed Stop Sign
- OL Proposed Overlap Right Turn
- Proposed Lane Geometrics

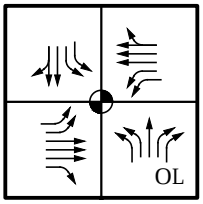
Figure 4-M –Existing Plus Ambient Plus Cumulative Projects Plus Project With Overpass Roadway System



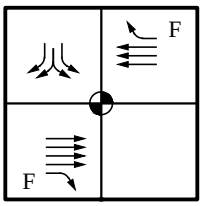

1. Murieta Road (NS) / Newport Road (EW)



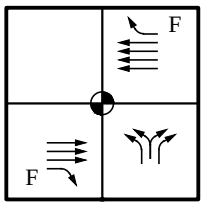
2. Bradley Road (NS) / Newport Road (EW)



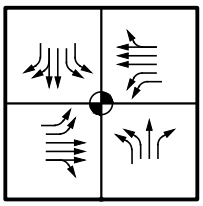
3. Haun Road (NS) / Newport Road (EW)

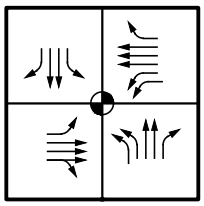


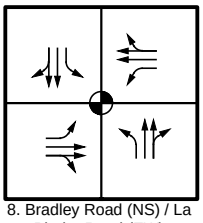
4. I-215 SB Ramps (NS) / Newport Road (EW)

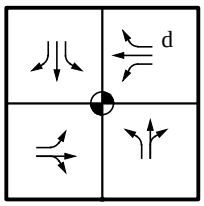


5. I-215 NB Ramps (NS) / Newport Road (EW)

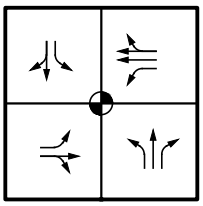

6. Antelope Road (NS) / Newport Road (EW)

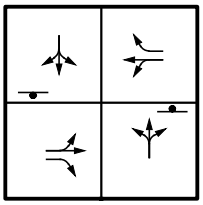

7. Menifee Road (NS) / Newport Road (EW)

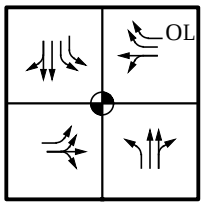

8. Bradley Road (NS) / La Piedra Road (EW)



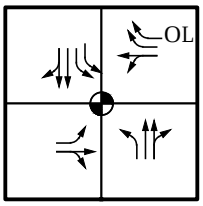
9. Bradley Road (NS) / Holland Road (EW)


10. Sherman Road (NS) / La Piedra Road (EW)

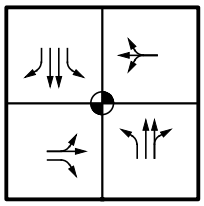

11. Sherman Road (NS) / Holland Road (EW)

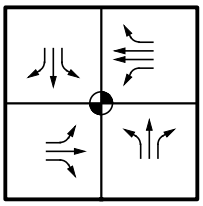


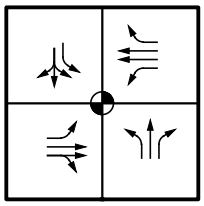
12. Haun Road (NS) / Village Market Drive (EW)

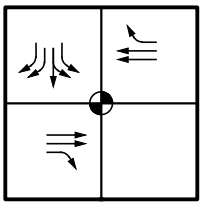


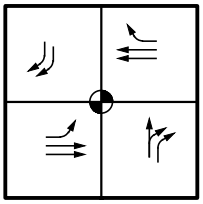
13. Haun Road (NS) / Countryside Marketplace (EW)

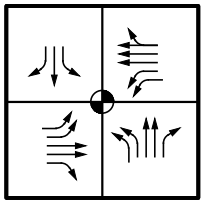

14. Haun Road (NS) / La Piedra Road (EW)

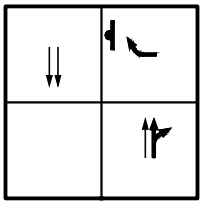

15. Haun Road (NS) / Holland Road (EW)

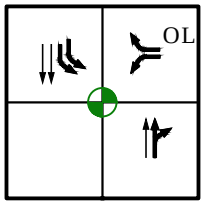

16. Haun Road (NS) / Scott Road (EW)


17. I-215 SB Ramps (NS) / Scott Road (EW)

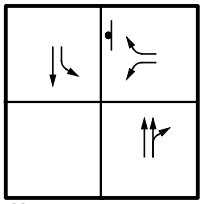

18. I-215 NB Ramps (NS) / Scott Road (EW)

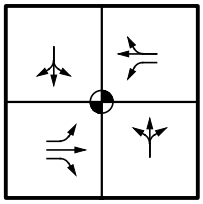

19. Antelope Road (NS) / Scott Road (EW)

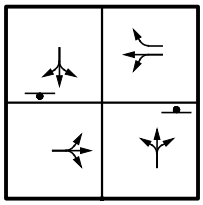

20. Haun Road / Driveway 1 (EW)

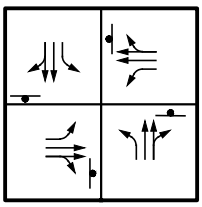


21. Haun Road / Driveway 2 (EW)


22. Antelope Road (NS) / Albion Lane (EW)


23. Hanover Lane (NS) / Holland Road (EW)


24. Palomar Road (NS) / Holland Road (EW)


25. Menifee Road (NS) / Holland Road (EW)

LEGEND

- Existing Traffic Signal
- Existing Stop Sign
- Existing Lane Geometrics
- d Existing Defacto Right Turn
- F Existing Free Right Turn Lane
- OL Existing Overlap Right Turn
- Proposed Traffic Signal
- Proposed Stop Sign
- OL Proposed Overlap Right Turn
- Proposed Lane Geometrics

Capacity and Level of Service and Improvement Analysis

Levels of Service – Existing Plus Project (2017) Conditions

The existing plus project (2017) scenario includes existing traffic and project traffic. Table 5-1 and Table 5-2 provide the projected delay and levels of service at the study intersections and roadways under existing plus project conditions without off-site improvements. These levels of service vary from LOS A to F. The existing plus project AM and PM peak hour intersection turning movement volumes are shown in Figure 5-A and Figure 5-B, respectively. The levels of service are based on the existing geometrics for the study intersections. The level of service calculation worksheets are provided in Appendix E. The following study intersections are expected to operate at an unacceptable level of service:

11. Sherman Road (NS) / Holland Road (EW)
15. Haun Road (NS) / Holland Road (EW)

The JPN Haun and Holland Road Commercial Center Project causes a direct project impact at the intersections of Sherman Road (NS) / Holland Road (EW) and Haun Road (NS) / Holland Road (EW). Both intersections will be mitigated by the installation of traffic signals.

And the following study area roadway segments operate at unacceptable LOS.

1. Bradley Road from Park Avenue to Newport Road
4. Haun Road from Newport Road to La Piedra Road
13. Scott Road from Haun Road to I-215 Southbound Ramps
14. Scott Road from I-215 Northbound Ramps to Antelope Road

Table 5-1 – Intersection Levels of Service – Existing Plus Project (2017) Conditions

Intersection	Peak Hour	Without Project			With Project		
		Traffic Control	Delay (sec)	LOS	Traffic Control	Delay (sec)	LOS
1. Murrieta Road (NS) / Newport Road (E/W)	AM PM	Signal	37.6 38.3	D D	Signal	38.2 39.3	D D
2. Bradley Road (N/S) / Newport Road (E/W)	AM PM	Signal	31.5 32.4	C C	Signal	33.0 33.5	C C
3. Haun Road (NS) / Newport Road (EW)	AM PM	Signal	43.0 39.2	D D	Signal	53.7 43.5	D D
4. I-215 SB Ramps (NS) / Newport Road (EW)	AM PM	Signal	12.9 17.1	B B	Signal	14.6 18.2	B B
5. I-215 NB Ramps (NS) / Newport Road (EW)	AM PM	Signal	16.4 20.1	B C	Signal	17.4 20.7	B C
6. Antelope Road (NS) / Newport Road (EW)	AM PM	Signal	34.4 41.2	C D	Signal	36.4 45.6	D D
7. Menifee Road (NS) / Newport Road (EW)	AM PM	Signal	40.4 29.1	D C	Signal	45.6 30.2	D C
8. Bradley Road (NS) / La Piedra Road (EW)	AM PM	Signal	25.2 12.9	C B	Signal	25.8 14.0	C B
9. Bradley Road (NS) / Holland Road (EW)	AM PM	Signal	43.4 31.0	D C	Signal	48.3 32.0	D C
10. Town Center-Sherman Road (NS) / La Piedra Road (EW)	AM PM	AWSC	10.0 8.3	B A	AWSC	10.2 8.3	B A
11. Sherman Road (NS) / Holland Road (EW)	AM PM	TWSC	***57.6*** 32.4	***F*** D	TWSC	***70.0*** ***38.8***	***F*** ***E***
12. Haun Road (NS) / Village-Market Drive (EW)	AM PM	Signal	13.6 19.5	B B	Signal	15.0 23.1	B C
13. Haun Road (NS) / Countryside Market Place (EW)	AM PM	Signal	8.8 25.5	A C	Signal	9.4 20.9	A C
14. Haun Road (NS) / La Piedra Road (EW)	AM PM	Signal	19.8 18.3	B B	Signal	21.8 21.6	C C
15. Haun Road (NS) / Holland Road (EW)	AM PM	AWSC	29.1 25.5	D D	AWSC	***45.8*** ***49.6***	***E*** ***E***
16. Haun-Zeiders Road (NS) / Scott Road (EW)	AM PM	Signal	36.3 23.9	D C	Signal	46.0 26.0	D C
17. I-215 SB Ramps (NS) / Scott Road (EW)	AM PM	Signal	30.6 27.7	C C	Signal	30.6 28.0	C C
18. I-215 NB Ramps (NS) / Scott Road (EW)	AM PM	Signal	27.6 40.0	C D	Signal	27.9 40.0	C D
19. Antelope Road (NS) / Scott Road (EW)	AM PM	Signal	37.5 34.7	D C	Signal	37.8 34.8	D C
20. Haun Road (NS) / Driveway 1 (EW)	AM PM	*Does Not Exist*			OWSC	11.4 14.9	B B
21. Haun Road (NS) / Driveway 2 (EW)	AM PM	*Does Not Exist*			Signal	26.0 25.9	C C

OWSC= One Way Stop Controlled; TWSC = Two Way Stop Controlled; AWSC = All Way Stop Controll

* Classified as a "constraint intersection". Acceptable LOS E in consistency with the City's GP Policy C-1.2.

XXX = Exceeds LOS Standard

Table 5-2 – Roadway Levels of Service – Existing Plus Project (2017) Conditions

Roadway Segment[1]	Roadway Classification	Existing without Project					Existing with Project					
		Lns[2]	Roadway Capacity[3]	Total ADT	Volume/ Capacity Ratio	LOS	Lns[2]	Roadway Capacity[3]	Project Only ADT	Total ADT	Volume/ Capacity Ratio	LOS
Bradley Road												
1. Park Avenue to Newport Road	Secondary	2	12,950	14,980	1.16	***F***	2	12,950	520	15,500	1.20	***F***
2. Newport Road to La Piedra Road	Major	4	34,100	12,390	0.36	A	4	34,100	208	12,600	0.37	A
3. La Piedra Road to Holland Road	Major	4	34,100	8,470	0.25	A	4	34,100	520	8,990	0.26	A
Haun Road												
4. Newport Road to La Piedra Road	Major	4	34,100	22,820	0.67	B	4	34,100	8,826	31,650	0.93	***E***
5. La Piedra Road to Holland Road	Major	3	25,575	12,140	0.47	A	3	25,575	9,346	21,490	0.84	D
6. Holland Road to Scott Road	Major	2	17,050	10,860	0.64	B	2	17,050	1,248	12,110	0.71	C
Newport Road												
7. Murrieta Road to Bradley Road	Urban Arterial	6	56,300	34,450	0.61	B	6	56,300	1,040	35,490	0.63	B
8. Bradley Road to Haun Road	Urban Arterial	6	56,300	43,700	0.78	C	6	56,300	1,560	45,260	0.80	D
9. Haun Road to I-215 SB Ramps	Urban Arterial	8	87,000	55,820	0.64	B	8	87,000	6,642	62,470	0.72	C
10. I-215 NB Ramps to Antelope Road	Urban Arterial	8	87,000	66,580	0.77	C	8	87,000	2,288	68,870	0.79	C
11. Antelope Road to Menifee Road	Urban Arterial	6	56,300	38,570	0.69	B	6	56,300	1,456	40,020	0.71	C
La Piedra Road												
12. Sherman Road to Haun Road	Secondary	4	25,900	2,410	0.09	A	4	25,900	520	2,930	0.11	A
Scott Road												
13. Haun Road to I-215 SB Ramps	Urban Arterial	2	18,770	26,110	1.39	***F***	2	18,770	936	27,040	1.44	***F***
14. I-215 NB Ramps to Antelope Road	Urban Arterial	2	18,770	40,170	2.14	***F***	2	18,770	416	40,590	2.16	***F***
Holland Road												
15. Bradley Road to Sherman Road	Major	2	17,050	12,360	0.72	C	2	17,050	1,040	13,400	0.79	C
16. Sherman Road to Haun Road	Major	3	25,575	11,630	0.45	A	3	25,575	1,040	12,670	0.50	A

[1] Roadway segment is in City of Menifee.

[2] Lns = Number of through lanes based on the City of Menifee General Plan Circulation Element Traffic Study.

[3] Source: City of Menifee Traffic Impact Analysis Guidelines.

EAC = Existing Plus Ambient Growth Plus Cumulative Projects Conditions

Roadway segment is expected to exceed its capacity based on the City of Menifee's General Plan Roadway Classification.

** Classified as a "constraint roadway segment". Acceptable LOS E per discussion with City staff and in consistency with the City's GP Policy C-1.2.

Levels of Service – Existing Plus Project (2017) With Improvements

Table 5-3 and Table 5-4 provides the projected delay and levels of service at the study intersections under existing plus project (2017) conditions with off-site improvements. With the recommended off-site improvements, the study area intersections would operate at an acceptable LOS D or better. The level of service calculation worksheets is provided in Appendix E.

Table 5-3 – Intersection Levels of Service – Existing Plus Project (2017) With Improvements

Intersection	Peak Hour	Without			With Improvements		
		Traffic Control	Delay (sec)	LOS	Traffic Control	Delay (sec)	LOS
11. Sherman Road (NS) / Holland Road (EW)	AM	TWSC	***70.0***	***F***	Signal	13.9	B
	PM		***38.8***	***E***		12.5	B
15. Haun Road (NS) / Holland Road (EW)	AM	AWSC	***45.8***	***E***	Signal	41.7	D
	PM		***49.6***	***E***		36.8	D

TWSC = Two Way Stop Controlled; AWSC = All Way Stop Controlled.

XXX = Exceeds LOS Standard

Table 5-4 – Roadway Segment Levels of Service – Existing Plus Project (2017) With Improvements

Roadway Segment[1]	Roadway Classification	Existing with Project w/o Improvements					Existing with Project with Improvements					
		Lns[2]	Roadway Capacity[3]	Total ADT	Volume/ Capacity Ratio	LOS	Lns[2]	Roadway Capacity[3]	Project Only ADT	Total ADT	Volume/ Capacity Ratio	LOS
Bradley Road												
1. Park Avenue to Newport Road*	Secondary	2	12,950	15,500	1.20	*F*	4	25,900	520	15,500	0.60	B
Haun Road												
4. Newport Road to La Piedra Road**	Major	4	34,100	31,650	0.93	*E*	4	34,100	8,826	31,650	0.93	*E*
Scott Road												
13. Haun Road to I-215 SB Ramps***	Urban Arterial	2	18,770	27,040	1.44	*F*	4	36,530	936	27,040	0.74	C
14. I-215 NB Ramps to Antelope Road***	Urban Arterial	2	18,770	40,590	2.16	*F*	6	56,300	416	40,590	0.72	C

[1] Roadway segment is in City of Menifee.

[2] Lns = Number of through lanes based on the City of Menifee General Plan Circulation Element Traffic Study.

[3] Source: City of Menifee Traffic Impact Analysis Guidelines.

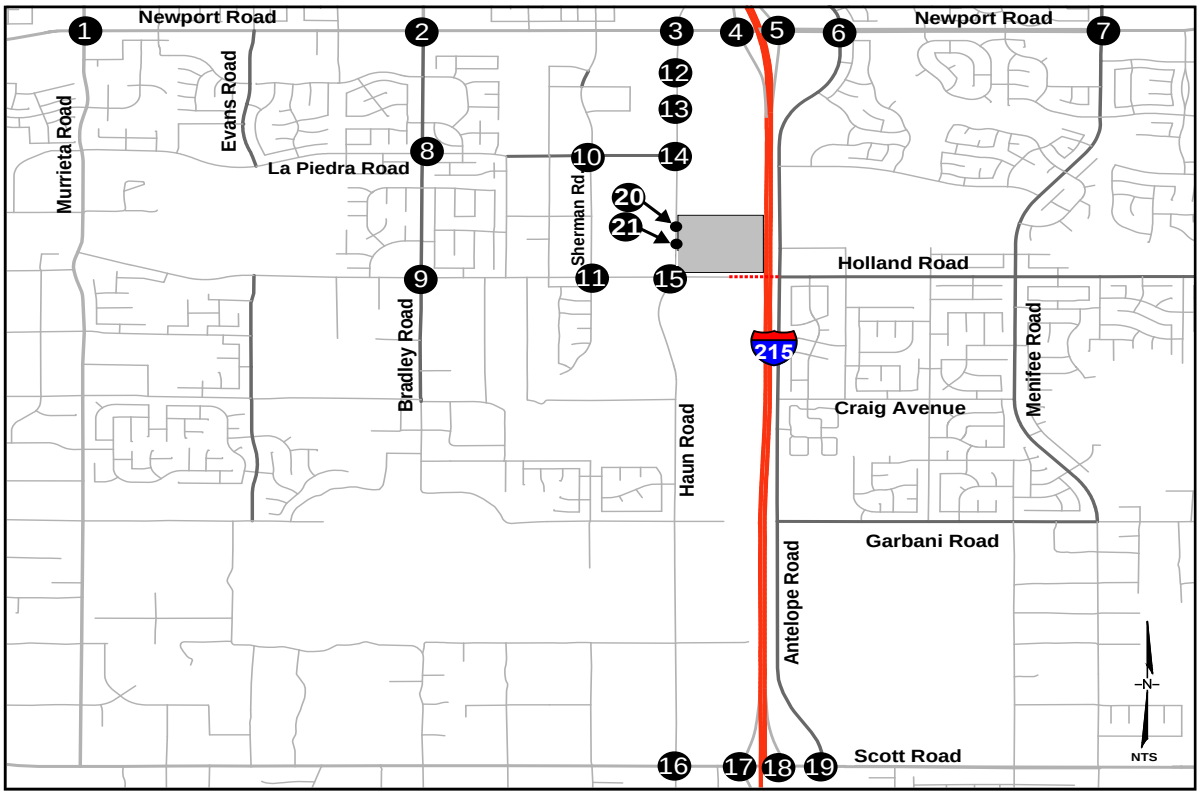
Roadway segment is expected to exceed its capacity based on the City of Menifee's General Plan Roadway Classification.

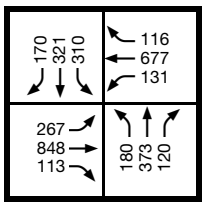
* Roadway is failing under existing conditions; however the intersections operate at acceptable levels of service; therefore, the roadway segments are also considered to be operating at acceptable conditions since the intersections in between are the driving factors of traffic flow. Project would contribute fair share toward future improvements.

** Roadway is built to its ultimate conditions; however the intersections operate at acceptable levels of service; therefore, the roadway segments are also considered to be operating at acceptable conditions since the intersections in between are the driving factors of traffic flow.

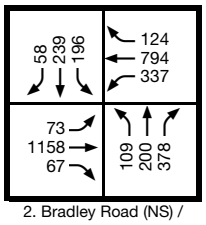
*** Future near-term improvement of the Scott Interchange prior to the project's opening year would result in the widening of this failing segment, which would improve conditions. Phase I of the Scott Road Interchange project improves the intersections operate at acceptable levels of service; therefore, the roadway segments are also considered to be operating at acceptable conditions since the intersections in between are the driving factors of traffic flow.

Figure 5-A – Existing Plus Project (2017) AM Peak Hour Intersection Volumes

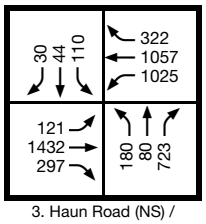




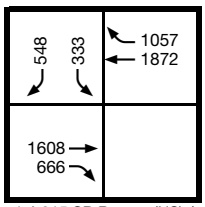
1. Murrieta Road (NS) / Newport Road (EW)



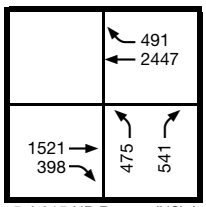
2. Bradley Road (NS) / Newport Road (EW)



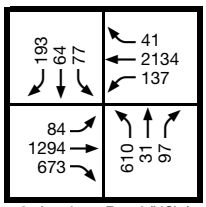
3. Haun Road (NS) / Newport Road (EW)



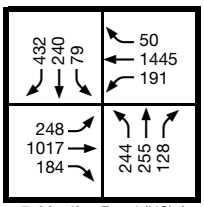
4. I-215 SB Ramps (NS) / Newport Road (EW)



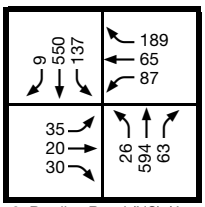
5. I-215 NB Ramps (NS) / Newport Road (EW)



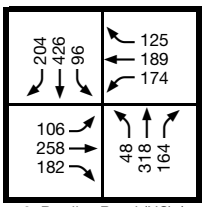
6. Antelope Road (NS) / Newport Road (EW)



7. Menifee Road (NS) / Newport Road (EW)



8. Bradley Road (NS) / La Piedra Road (EW)



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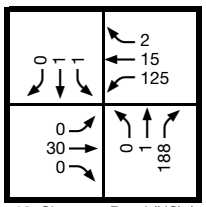
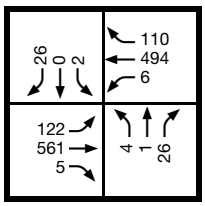


10. Sherman Road (NS) / La Piedra Road (EW)



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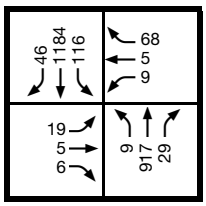
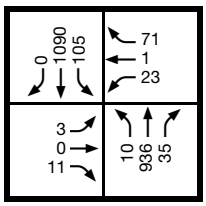
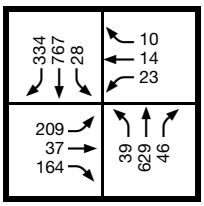


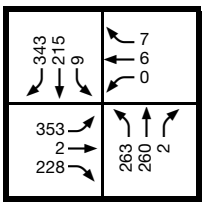
12. Haun Road (NS) / Village-Market Drive (EW)



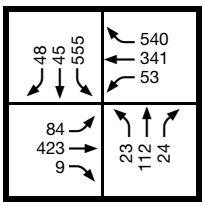
13. Haun Road (NS) / Countryside Market Place (EW)



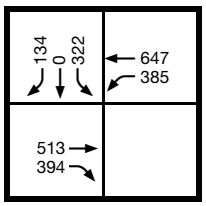
14. Haun Road (NS) / La Piedra Road (EW)



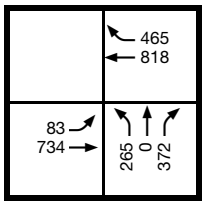
15. Haun Road (NS) / Holland Road (EW)



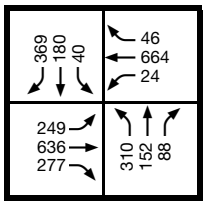
16. Haun Road-Zeiders Road (NS) / Scott Road (EW)



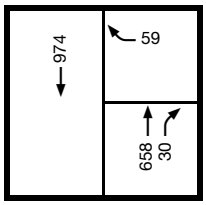
17. I-215 SB Ramps (NS) / Scott Road (EW)



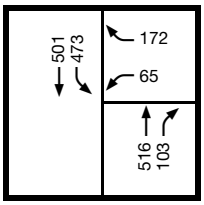
18. I-215 NB Ramps (NS) / Scott Road (EW)



19. Antelope Road (NS) / Scott Road (EW)

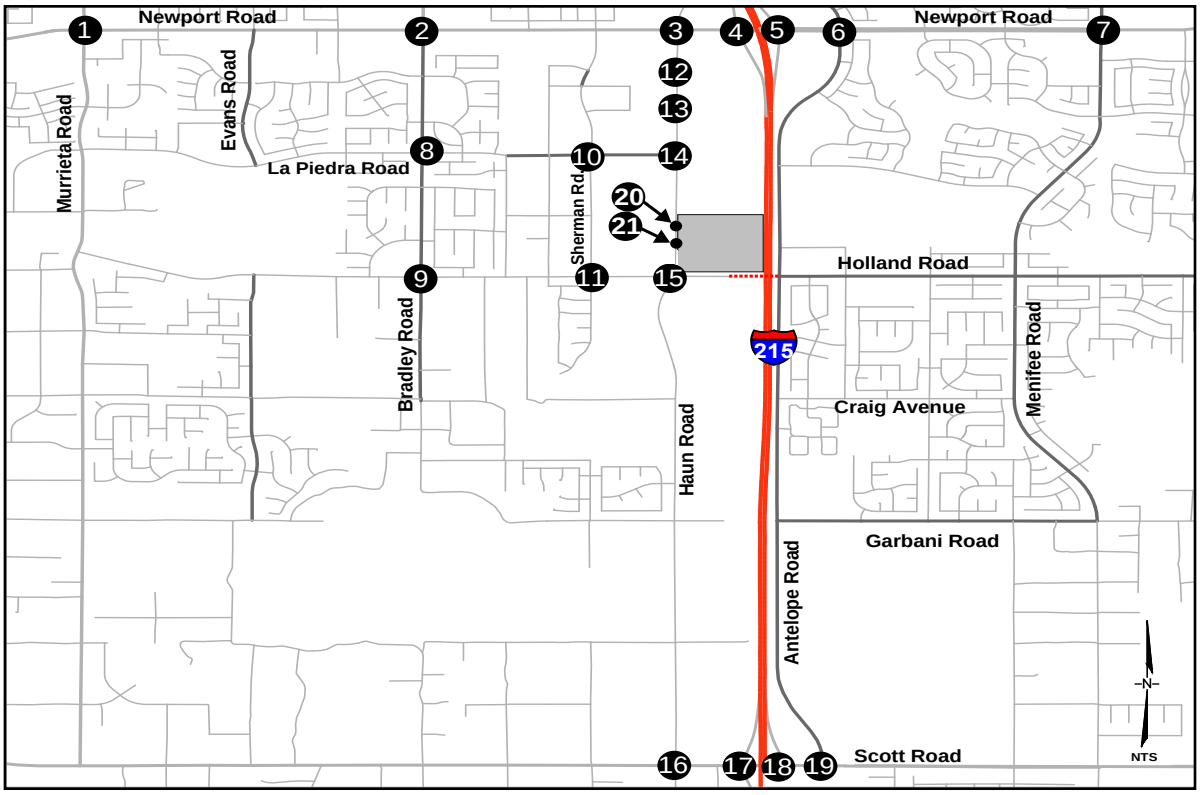


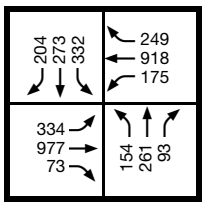
20. Haun Road (NS) / Driveway 1 (EW)



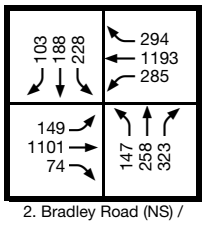
21. Haun Road (NS) / Driveway 2 (EW)

Figure 5-B – Existing Plus Project (2017) PM Peak Hour Intersection Volumes

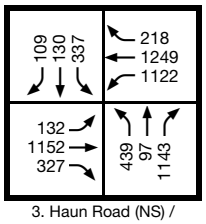




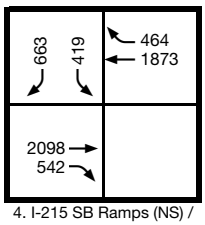
1. Murrieta Road (NS) / Newport Road (EW)



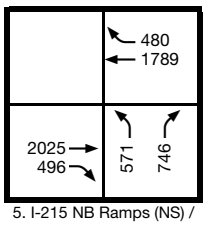
2. Bradley Road (NS) / Newport Road (EW)



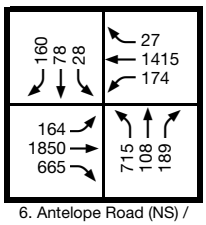
3. Haun Road (NS) / Newport Road (EW)



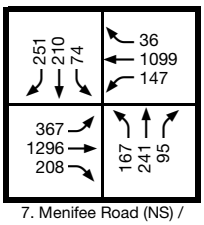
4. I-215 SB Ramps (NS) / Newport Road (EW)



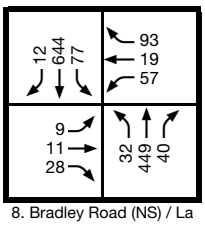
5. I-215 NB Ramps (NS) / Newport Road (EW)



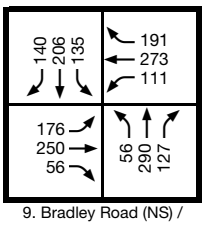
6. Antelope Road (NS) / Newport Road (EW)



7. Menifee Road (NS) / Newport Road (EW)



8. Bradley Road (NS) / La Piedra Road (EW)



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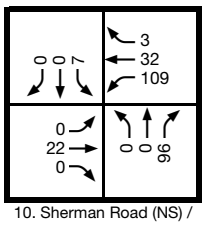
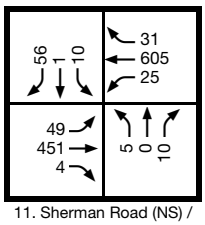
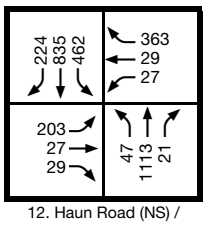


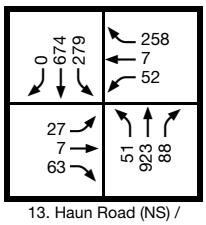
10. Sherman Road (NS) / La Piedra Road (EW)



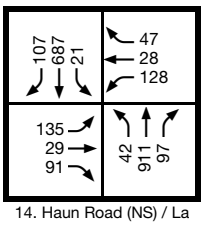
11. Sherman Road (NS) / Holland Road (EW)



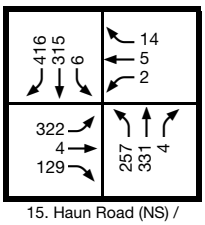
12. Haun Road (NS) / Village-Market Drive (EW)



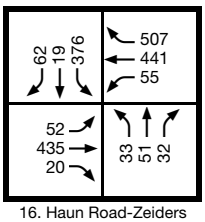
13. Haun Road (NS) / Countryside Market Place (EW)



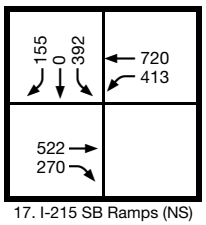
14. Haun Road (NS) / La Piedra Road (EW)



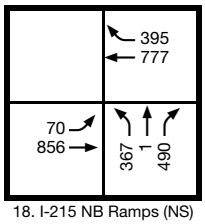
15. Haun Road (NS) / Holland Road (EW)



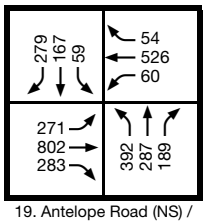
16. Haun Road-Zeiders Road (NS) / Scott Road (EW)



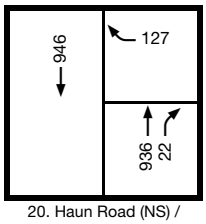
17. I-215 SB Ramps (NS) / Scott Road (EW)



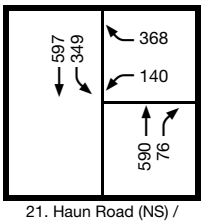
18. I-215 NB Ramps (NS) / Scott Road (EW)



19. Antelope Road (NS) / Scott Road (EW)



20. Haun Road (NS) / Driveway 1 (EW)



21. Haun Road (NS) / Driveway 2 (EW)

Levels of Service – Existing Plus Ambient Growth Plus Cumulative Projects (2021) Without Overpass Conditions

The existing plus ambient growth plus other cumulative projects (2021) scenario includes existing traffic, an ambient growth of two percent per year for four years to 2021 (eight percent total ambient growth) and other projects in the study area provided by the City of Menifee. The traffic assumes there is no overpass at Holland Road. Table 5-5 and Table 5-6 provide the projected delay and levels of service at the study intersections and roadways under existing plus ambient growth plus other cumulative projects conditions without off-site improvements. These levels of service vary from LOS B to F. The existing plus ambient growth plus other cumulative projects AM and PM peak hour intersection turning movement volumes are shown on Figure 5-C and Figure 5-D, respectively. The levels of service are based upon the existing geometrics for the study intersections. The level of service calculation worksheets are provided in Appendix E. The following study intersections are expected to operate at an unacceptable level of service:

6. Antelope Road (NS) /Newport Road (EW)
7. Menifee Road (NS) / Newport Road (EW)
9. Bradley Road (NS) / Holland Road (EW)
11. Sherman Road (NS) / Holland Road (EW)
15. Haun Road (NS) / Holland Road (EW)
16. Haun Road (NS) / Scott Road (EW)

And the following study area roadway segments would operate at an unacceptable LOS.

1. Bradley Road from Park Avenue to Newport Road
8. Newport Road from Bradley Road Haun Road
14. Scott Road from I-215 Northbound Ramps to Antelope Road

Table 5-5 – Intersection Levels of Service – Existing Plus Ambient Growth Plus Cumulative Projects Without Overpass (2021) Conditions

Intersection	Jurisdiction	LOS Standard	Peak Hour	Traffic Control	Delay (sec)	LOS
1. Murrieta Road (NS) / Newport Road (E/W)	City of Menifee	D	AM PM	Signal	43.4 45.3	D D
2. Bradley Road (N/S) / Newport Road (E/W)	City of Menifee	D	AM PM	Signal	43.4 42.3	D D
3. Haun Road (NS) / Newport Road (EW)	City of Menifee	E	AM PM	Signal	37.9 50.2	D D
4. I-215 SB Ramps (NS) / Newport Road (EW)	Caltrans	D	AM PM	Signal	20.9 23.9	C C
5. I-215 NB Ramps (NS) / Newport Road (EW)	Caltrans	D	AM PM	Signal	22.4 29.2	C C
6. Antelope Road (NS) / Newport Road (EW)	City of Menifee	E	AM PM	Signal	57.5 ***91.9***	E* ***F***
7. Menifee Road (NS) / Newport Road (EW)	City of Menifee	D	AM PM	Signal	***97.2*** 43.1	***F*** D
8. Bradley Road (NS) / La Piedra Road (EW)	City of Menifee	D	AM PM	Signal	27.9 19.1	C B
9. Bradley Road (NS) / Holland Road (EW)	City of Menifee	D	AM PM	Signal	***62.6*** 46.5	***E*** D
10. Town Center-Sherman Road (NS) / La Piedra Road (EW)	City of Menifee	D	AM PM	Signal	26.6 30.9	C C
11. Sherman Road (NS) / Holland Road (EW)	City of Menifee	D	AM PM	TWSC	***OFL*** ***62.5***	***F*** ***F***
12. Haun Road (NS) / Village-Market Drive (EW)	City of Menifee	D	AM PM	Signal	15.4 27.0	B C
13. Haun Road (NS) / Countryside Market Place (EW)	City of Menifee	D	AM PM	Signal	9.7 21.3	A C
14. Haun Road (NS) / La Piedra Road (EW)	City of Menifee	D	AM PM	Signal	34.1 38.5	C D
15. Haun Road (NS) / Holland Road (EW)	City of Menifee	D	AM PM	AWSC	***92.6*** ***99.1***	***F*** ***F***
16. Haun-Zeiders Road (NS) / Scott Road (EW)	City of Menifee	E	AM PM	Signal	***147.5*** 73.1	***F*** E*
17. I-215 SB Ramps (NS) / Scott Road (EW)	Caltrans	D	AM PM	Signal	11.1 11.7	B B
18. I-215 NB Ramps (NS) / Scott Road (EW)	Caltrans	D	AM PM	Signal	20.3 20.1	C C
19. Antelope Road (NS) / Scott Road (EW)	City of Menifee	E	AM PM	Signal	44.4 41.0	D D
20. Haun Road (NS) / Driveway 1 (EW)	City of Menifee	D	AM PM	*Does Not Exist*		
21. Haun Road (NS) / Driveway 2 (EW)	City of Menifee	D	AM PM	*Does Not Exist*		

OWSC= One Way Stop Controlled; TWSC = Two Way Stop Controlled; AWSC = All Way Stop Controlled.
* Classified as a "constraint intersection". Acceptable LOS E in consistency with the City's GP Policy C-1.2.
OFL = Overflow conditions; Delay > 200 sec
XXX = Exceeds LOS Standard

Table 5-6 – Roadway Levels of Service – Existing Plus Ambient Growth Plus Cumulative Projects Without Overpass (2021) Conditions

Roadway Segment[1]	Roadway Classification	Lns[2]	Roadway Capacity[3]	Total ADT	Volume/ Capacity Ratio	LOS
Bradley Road						
1. Park Avenue to Newport Road	Secondary	2	12,950	19,410	1.50	***F***
2. Newport Road to La Piedra Road	Major	4	34,100	14,730	0.43	A
3. La Piedra Road to Holland Road	Major	4	34,100	10,120	0.30	A
Haun Road						
4. Newport Road to La Piedra Road	Major	4	34,100	25,760	0.76	C
5. La Piedra Road to Holland Road	Major	3	25,575	15,070	0.59	A
6. Holland Road to Scott Road	Major	2	17,050	14,630	0.86	D
Newport Road						
7. Murrieta Road to Bradley Road	Urban Arterial	6	56,300	44,040	0.78	C
8. Bradley Road to Haun Road	Urban Arterial	6	56,300	54,940	0.98	***E***
9. Haun Road to I-215 SB Ramps	Urban Arterial	8	87,000	64,050	0.74	C
10. I-215 NB Ramps to Antelope Road****	Urban Arterial	8	87,000	80,020	0.92	E
11. Antelope Road to Menifee Road	Urban Arterial	6	56,300	47,620	0.85	D
La Piedra Road						
12. Sherman Road to Haun Road	Secondary	4	25,900	5,450	0.21	A
Scott Road						
13. Haun Road to I-215 SB Ramps	Urban Arterial	4	36,530	32,360	0.86	D
14. I-215 NB Ramps to Antelope Road	Urban Arterial	4	36,530	49,000	1.31	***F***
Holland Road						
15. Bradley Road to Sherman Road	Major	2	17,050	14,070	0.83	D
16. Sherman Road to Haun Road	Major	3	25,575	15,260	0.60	B

[1] Roadway segment is in City of Menifee.

[2] Lns = Number of through lanes based on the City of Menifee General Plan Circulation Element Traffic Study.

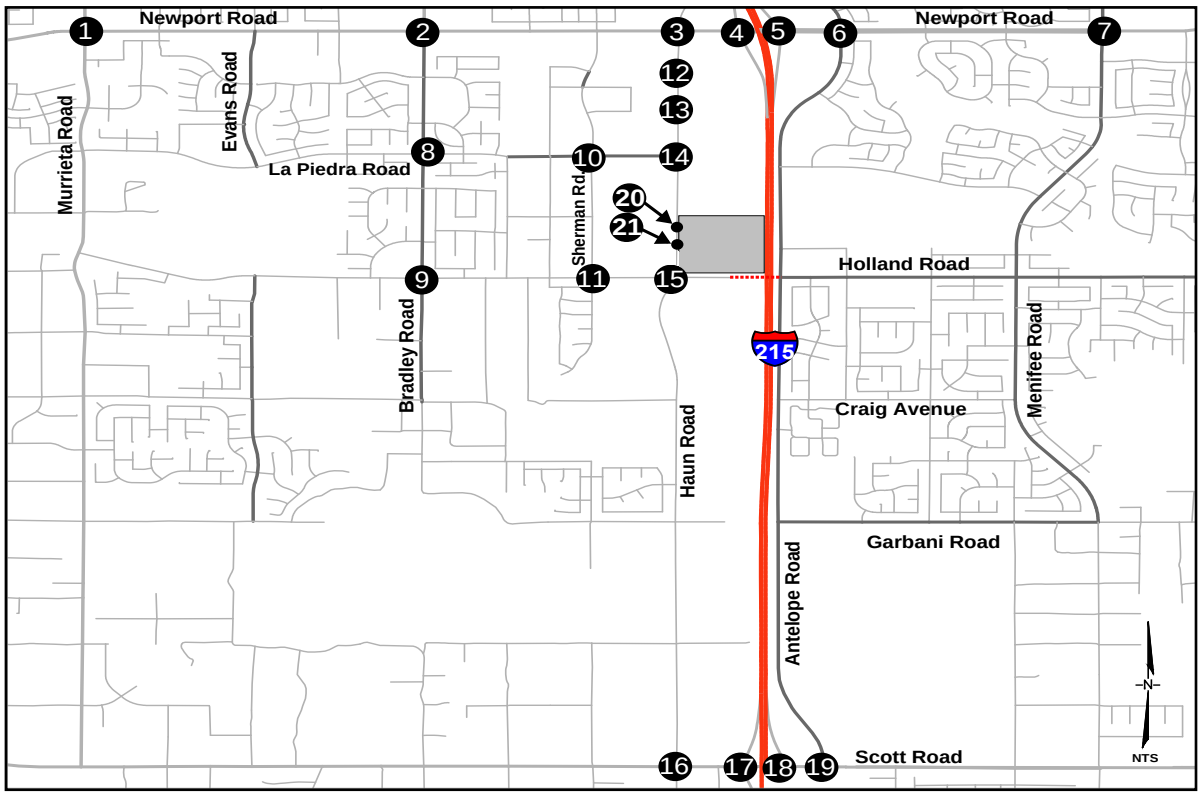
[3] Source: City of Menifee Traffic Impact Analysis Guidelines.

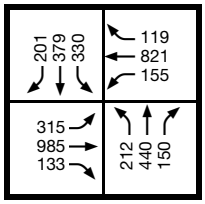
EAC = Existing Plus Ambient Growth Plus Cumulative Projects Conditions

Roadway segment is expected to exceed its capacity based on the General Plan Roadway Classification.

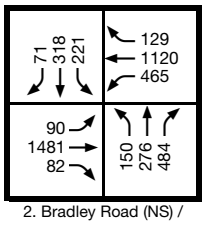
**** Classified as a "constraint roadway segment". Acceptable LOS E in consistency with the City's GP Policy C-1.2.

Figure 5-C – Existing Plus Ambient Growth Plus Cumulative Projects (2021) Without Overpass
AM Peak

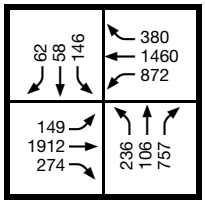




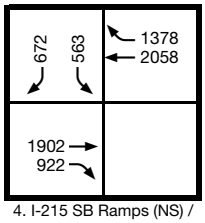
1. Murrieta Road (NS) / Newport Road (EW)



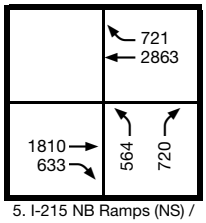
2. Bradley Road (NS) / Newport Road (EW)



3. Haun Road (NS) / Newport Road (EW)



4. I-215 SB Ramps (NS) / Newport Road (EW)



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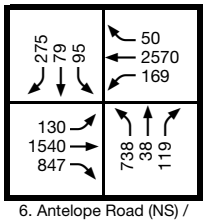
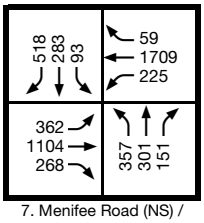
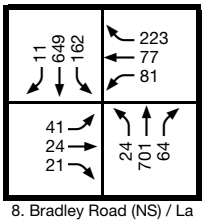


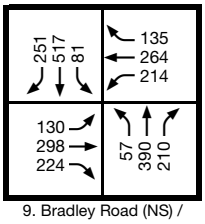
6. Antelope Road (NS) / Newport Road (EW)



7. Menifee Road (NS) / Newport Road (EW)



8. Bradley Road (NS) / La Piedra Road (EW)



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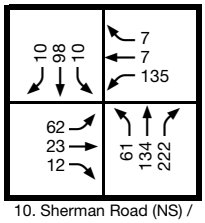
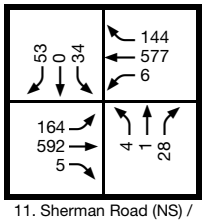
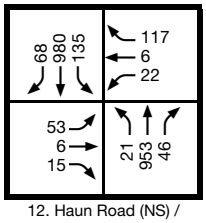


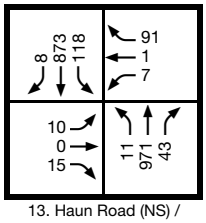
10. Sherman Road (NS) / La Piedra Road (EW)



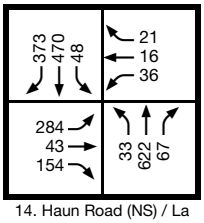
11. Sherman Road (NS) / Holland Road (EW)



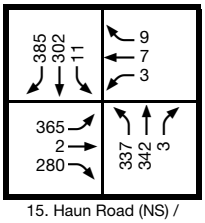
12. Haun Road (NS) / Village-Market Drive (EW)



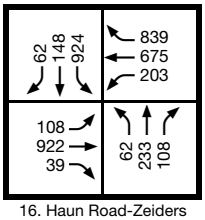
13. Haun Road (NS) / Countryside Market Place (EW)



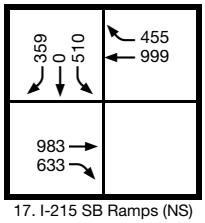
14. Haun Road (NS) / La Piedra Road (EW)



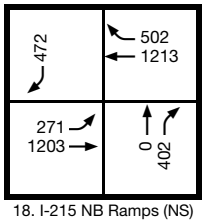
15. Haun Road (NS) / Holland Road (EW)



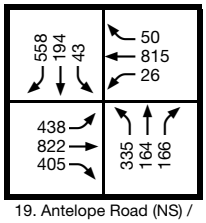
16. Haun Road-Zeiders Road (NS) / Scott Road (EW)



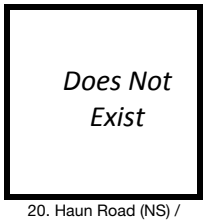
17. I-215 SB Ramps (NS) / Scott Road (EW)



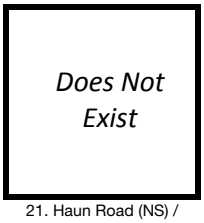
18. I-215 NB Ramps (NS) / Scott Road (EW)



19. Antelope Road (NS) / Scott Road (EW)

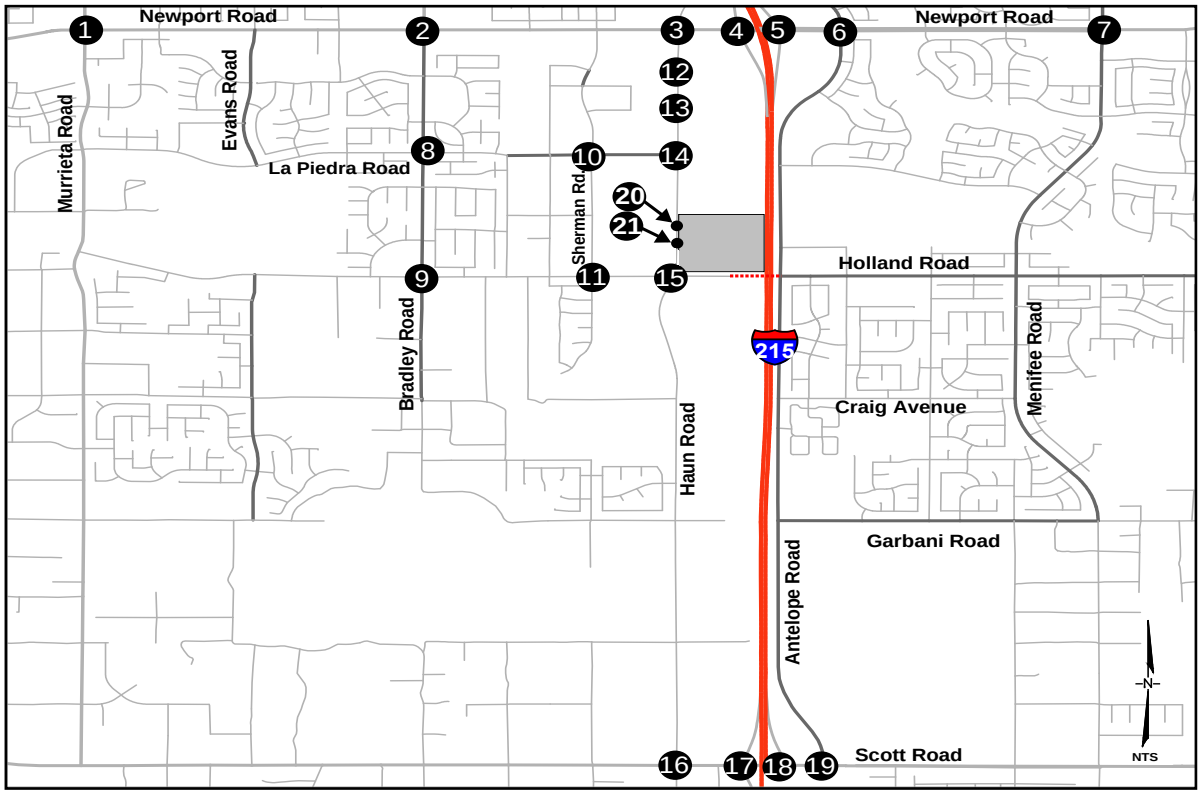


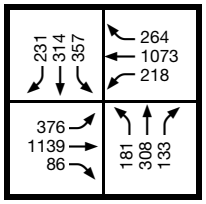
20. Haun Road (NS) / Driveway 1 (EW)



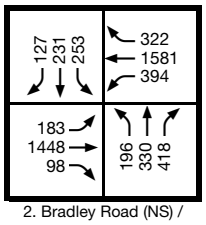
21. Haun Road (NS) / Driveway 2 (EW)

Figure 5-D – Existing Plus Ambient Growth Plus Cumulative Projects (2021) Without Overpass
PM Peak

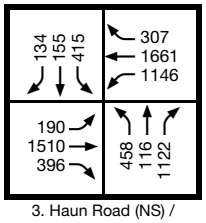




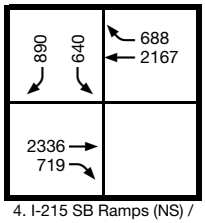
1. Murrieta Road (NS) / Newport Road (EW)



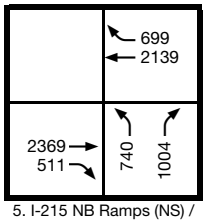
2. Bradley Road (NS) / Newport Road (EW)



3. Haun Road (NS) / Newport Road (EW)



4. I-215 SB Ramps (NS) / Newport Road (EW)



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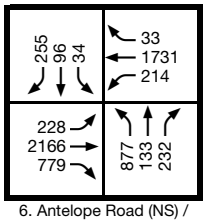
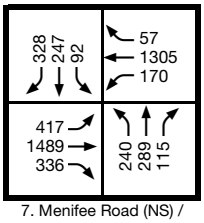
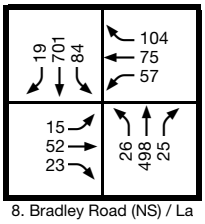


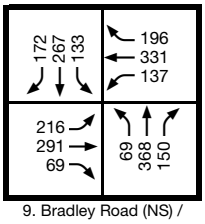
6. Antelope Road (NS) / Newport Road (EW)



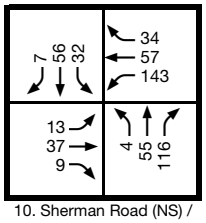
7. Menifee Road (NS) / Newport Road (EW)



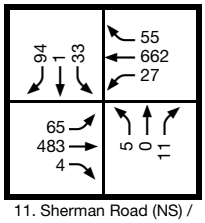
8. Bradley Road (NS) / La Piedra Road (EW)



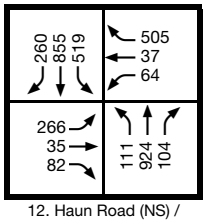
9. Bradley Road (NS) / Holland Road (EW)



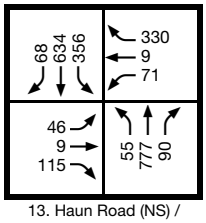
10. Sherman Road (NS) / La Piedra Road (EW)



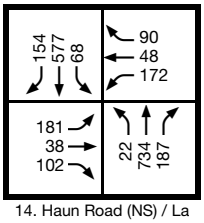
11. Sherman Road (NS) / Holland Road (EW)



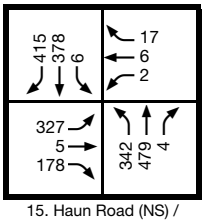
12. Haun Road (NS) / Village-Market Drive (EW)



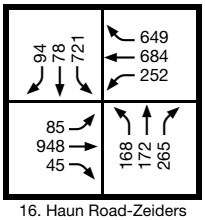
13. Haun Road (NS) / Countryside Market Place (EW)



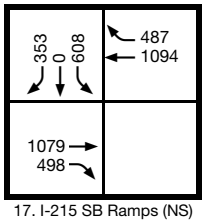
14. Haun Road (NS) / La Piedra Road (EW)



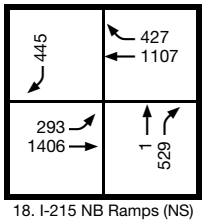
15. Haun Road (NS) / Holland Road (EW)



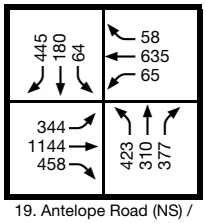
16. Haun Road-Zeiders Road (NS) / Scott Road (EW)



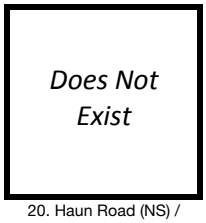
17. I-215 SB Ramps (NS) / Scott Road (EW)



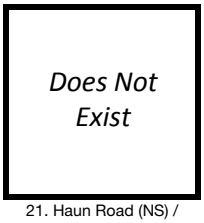
18. I-215 NB Ramps (NS) / Scott Road (EW)



19. Antelope Road (NS) / Scott Road (EW)



20. Haun Road (NS) / Driveway 1 (EW)



21. Haun Road (NS) / Driveway 2 (EW)

Levels of Service – Existing Plus Ambient Growth Plus Cumulative Projects Plus Project (2021) Without Overpass Conditions

The existing plus ambient growth plus other cumulative projects plus project (2021) scenario includes existing traffic, an ambient growth of two percent per year for four years to 2021 (eight percent total ambient growth), other projects in the study area provided by the City of Menifee and project traffic. The traffic assumes there is no overpass at Holland Road. Table 5-7 and Table 5-8 provide the projected delay and levels of service at the study intersections and roadways under existing plus ambient growth plus other cumulative projects conditions without off-site improvements. These levels of service vary from LOS B to F. The existing plus ambient growth plus other cumulative projects plus project AM and PM peak hour intersection turning movement volumes are shown on Figure 5-E and Figure 5-F, respectively. The levels of service are based upon the existing geometrics for the study intersections. The level of service calculation worksheets are provided in Appendix E. The following study intersections are expected to operate at an unacceptable level of service:

6. Antelope Road (NS) /Newport Road (EW)
7. Menifee Road (NS) / Newport Road (EW)
9. Bradley Road (NS) / Holland Road (EW)
11. Sherman Road (NS) / Holland Road (EW)
15. Haun Road (NS) / Holland Road (EW)
16. Haun Road (NS) / Scott Road (EW)

And the following study area roadway segments would operate at an unacceptable LOS.

1. Bradley Road from Park Avenue to Newport Road
4. Haun Road from Newport Road to La Piedra Road
5. Haun Road from La Piedra Road to Holland Road
6. Haun Road from Holland Road to Scott Road
8. Newport Road from Bradley Road to Haun Road
14. Scott Road from I-215 Northbound Ramps to Antelope Road

Table 5-7 – Intersection Levels of Service – Existing Plus Ambient Growth Plus Cumulative Projects Plus Project Without Overpass (2021) Conditions

Intersection	Peak Hour	Without Project			With Project		
		Traffic Control	Delay (sec)	LOS	Traffic Control	Delay (sec)	LOS
1. Murrieta Road (NS) / Newport Road (E/W)	AM PM	Signal	43.4 45.3	D D	Signal	44.2 47.0	D D
2. Bradley Road (N/S) / Newport Road (E/W)	AM PM	Signal	43.4 42.3	D D	Signal	47.3 44.8	D D
3. Haun Road (NS) / Newport Road (EW)	AM PM	Signal	37.9 50.2	D D	Signal	58.1 78.5	E* E*
4. I-215 SB Ramps (NS) / Newport Road (EW)	AM PM	Signal	20.9 23.9	C C	Signal	23.1 26.3	C C
5. I-215 NB Ramps (NS) / Newport Road (EW)	AM PM	Signal	22.4 29.2	C C	Signal	23.8 31.6	C C
6. Antelope Road (NS) / Newport Road (EW)	AM PM	Signal	57.5 ***91.9***	E* ***F***	Signal	66.7 ***104.0***	E* ***F***
7. Menifee Road (NS) / Newport Road (EW)	AM PM	Signal	***97.2*** 43.1	***F*** D	Signal	***109.4*** 47.6	***F*** D
8. Bradley Road (NS) / La Piedra Road (EW)	AM PM	Signal	27.9 19.1	C B	Signal	28.4 20.0	C C
9. Bradley Road (NS) / Holland Road (EW)	AM PM	Signal	***62.6*** 46.5	***E*** D	Signal	***68.5*** 48.8	***E*** D
10. Town Center-Sherman Road (NS) / La Piedra Road (EW)	AM PM	Signal	26.6 30.9	C C	Signal	28.4 32.2	C C
11. Sherman Road (NS) / Holland Road (EW)	AM PM	TWSC	***OFL*** ***62.5***	***F*** ***F***	TWSC	***OFL*** ***84.0***	***F*** ***F***
12. Haun Road (NS) / Village-Market Drive (EW)	AM PM	Signal	15.4 27.0	B C	Signal	16.9 31.3	B C
13. Haun Road (NS) / Countryside Market Place (EW)	AM PM	Signal	9.7 21.3	A C	Signal	10.1 21.0	B C
14. Haun Road (NS) / La Piedra Road (EW)	AM PM	Signal	34.1 38.5	C D	Signal	35.2 44.6	D D
15. Haun Road (NS) / Holland Road (EW)	AM PM	AWSC	***92.6*** ***99.1***	***F*** ***F***	AWSC	***136.2*** ***146.8***	***F*** ***F***
16. Haun-Zeiders Road (NS) / Scott Road (EW)	AM PM	Signal	***147.5*** 73.1	***F*** E*	Signal	***165.3*** ***83.1***	***F*** ***F***
17. I-215 SB Ramps (NS) / Scott Road (EW)	AM PM	Signal	11.1 11.7	B B	Signal	10.9 11.5	B B
18. I-215 NB Ramps (NS) / Scott Road (EW)	AM PM	Signal	20.3 20.1	C C	Signal	20.8 21.1	C C
19. Antelope Road (NS) / Scott Road (EW)	AM PM	Signal	44.4 41.0	D D	Signal	44.9 41.2	D D
20. Haun Road (NS) / Driveway 1 (EW)	AM PM	*Does Not Exist*			OWSC	13.6 21.8	B C
21. Haun Road (NS) / Driveway 2 (EW)	AM PM	*Does Not Exist*			Signal	25.5 29.7	C C

OWSC= One Way Stop Controlled; TWSC = Two Way Stop Controlled; AWSC = All Way Stop Contro
* Classified as a "constraint intersection". Acceptable LOS E in consistency with the City's GP Policy C-1.2.
OFL = Overflow conditions; Delay > 200 sec
XXX = Exceeds LOS Standard

Table 5-8 – Roadway Levels of Service – Existing Plus Ambient Growth Plus Cumulative Projects Plus Project Without Overpass (2021) Conditions

Roadway Segment[1]	Roadway Classification	EAC						EACP					
		Lns[2]	Roadway Capacity[3]	Cumulative Projects ADT	Total ADT	Volume/ Capacity Ratio	LOS	Lns[2]	Roadway Capacity[3]	Project Only ADT	Total ADT	Volume/ Capacity Ratio	LOS
Bradley Road													
1. Park Avenue to Newport Road	Secondary	2	12,950	3,230	19,410	1.50	***F***	2	12,950	520	19,930	1.54	***F***
2. Newport Road to La Piedra Road	Major	4	34,100	1,352	14,730	0.43	A	4	34,100	208	14,940	0.44	A
3. La Piedra Road to Holland Road	Major	4	34,100	970	10,120	0.30	A	4	34,100	520	10,640	0.31	A
Haun Road													
4. Newport Road to La Piedra Road	Major	4	34,100	1,109	25,760	0.76	C	4	34,100	8,826	34,580	0.99	***F***
5. La Piedra Road to Holland Road	Major	3	25,575	1,953	15,070	0.59	A	3	25,575	9,346	24,410	0.95	***E***
6. Holland Road to Scott Road	Major	2	17,050	2,906	14,630	0.86	D	2	17,050	1,248	15,880	0.93	***E***
Newport Road													
7. Murrieta Road to Bradley Road	Urban Arterial	6	56,300	6,839	44,040	0.78	C	6	56,300	1,040	45,080	0.80	D
8. Bradley Road to Haun Road	Urban Arterial	6	56,300	7,749	54,940	0.98	***E***	6	56,300	1,560	56,500	1.00	***F***
9. Haun Road to I-215 SB Ramps	Urban Arterial	8	87,000	3,756	64,050	0.74	C	8	87,000	6,642	70,690	0.81	D
10. I-215 NB Ramps to Antelope Road	Urban Arterial	8	87,000	8,110	80,020	0.92	E	8	87,000	2,288	82,310	0.95	E
11. Antelope Road to Menifee Road	Urban Arterial	6	56,300	5,969	47,620	0.85	D	6	56,300	1,456	49,080	0.87	D
La Piedra Road													
12. Sherman Road to Haun Road	Secondary	4	25,900	2,842	5,450	0.21	A	4	25,900	520	5,970	0.23	A
Scott Road													
13. Haun Road to I-215 SB Ramps	Urban Arterial	4	36,530	4,160	32,360	0.86	D	4	36,530	936	33,290	0.89	D
14. I-215 NB Ramps to Antelope Road	Urban Arterial	4	36,530	5,618	49,000	1.31	***F***	4	36,530	416	49,420	1.32	***F***
Holland Road													
15. Bradley Road to Sherman Road	Major	2	17,050	728	14,070	0.83	D	2	17,050	1,040	15,110	0.89	D
16. Sherman Road to Haun Road	Major	3	25,575	2,700	15,260	0.60	B	3	25,575	1,040	16,300	0.64	B

[1] Roadway segment is in City of Menifee.

[2] Lns = Number of through lanes based on the City of Menifee General Plan Circulation Element Traffic Study.

[3] Source: City of Menifee Traffic Impact Analysis Guidelines.

EAC = Existing Plus Ambient Growth Plus Cumulative Projects Conditions

EACP = Existing Plus Ambient Growth Plus Cumulative Projects Plus Project Conditions

Roadway segment is expected to exceed its capacity based on the City of Menifee's General Plan Roadway Classification.

*** Classified as a "constraint roadway segment". Acceptable LOS E per discussion with City staff and in consistency with the City's GP Policy C-1.2.

Levels of Service – Existing Plus Ambient Growth Plus Cumulative Projects Plus Project (2021) Without Overpass With Improvements

Table 5-9 and Table 5-10 provide the projected delay and levels of service at the study intersections and roadway segments under existing plus ambient growth plus other cumulative projects plus project (2021) with overpass conditions with off-site improvements. With the recommended off-site improvements, the study area intersections would operate at an acceptable LOS D or better. The level of service calculation worksheets are provided in Appendix E.

Table 5-9 – Intersection Levels of Service – Existing Plus Ambient Growth Plus Cumulative Projects Plus Project Without Overpass (2021) With Improvements

Intersection	Peak Hour	Without Improvements			With Improvements		
		Traffic Control	Delay (sec)	LOS	Traffic Control	Delay (sec)	LOS
6. Antelope Road (NS) / Newport Road (EW)	AM PM	Signal	66.7 ***104.0***	E* ***F***	Signal	64.8 61.1	E* E*
7. Menifee Road (NS) / Newport Road (EW)	AM PM	Signal	***109.4*** 47.6	***F*** D	Signal	46.1 33.2	D C
9. Bradley Road (NS) / Holland Road (EW)	AM PM	Signal	***68.5*** 48.8	***E*** D	Signal	44.4 47.3	D D
11. Sherman Road (NS) / Holland Road (EW)	AM PM	TWSC	***OFL*** ***84.0***	***F*** ***F***	Signal	34.4 15.5	C B
15. Haun Road (NS) / Holland Road (EW)	AM PM	AWSC	***136.2*** ***146.8***	***F*** ***F***	Signal	41.2 41.9	D D
16. Haun-Zeiders Road (NS) / Scott Road (EW)	AM PM	Signal	***165.3*** ***83.1***	***F*** ***F***	Signal	72.7 64.9	E* E*

TWSC = Two Way Stop Controlled; AWSC = All Way Stop Controlled.
* Classified as a "constraint intersection". Acceptable LOS E in consistency with the City's GP Policy C-1.2.
OFL = Overflow conditions; Delay > 200 sec
XXX = Exceeds LOS Standard

Table 5-10 – Roadway Levels of Service – Existing Plus Ambient Growth Plus Cumulative Projects Plus Project Without Overpass (2021) With Improvements

Roadway Segment[1]	Roadway Classification	EACP without Improvement						EACP with Improvement					
		Lns[2]	Roadway Capacity[3]	Cumulative Projects ADT	Total ADT	Volume/ Capacity Ratio	LOS	Lns[2]	Roadway Capacity[3]	Project Only ADT	Total ADT	Volume/ Capacity Ratio	LOS
Bradley Road													
1. Park Avenue to Newport Road	Secondary	2	12,950	3,230	19,930	1.54	*F*	4	25,900	520	19,930	0.77	C
Haun Road													
4. Newport Road to La Piedra Road**	Major	4	34,100	1,109	34,580	0.99	*F*	4	34,100	8,826	34,580	0.99	*F*
5. La Piedra Road to Holland Road	Major	3	25,575	1,953	24,410	0.95	*E*	4	34,100	9,346	24,410	0.72	C
6. Holland Road to Scott Road	Major	2	17,050	2,906	15,880	0.93	*E*	4	34,100	1,248	15,880	0.47	A
Newport Road													
8. Bradley Road to Haun Road*	Urban Arterial	6	56,300	7,749	56,500	1.00	*F*	6	56,300	1,560	56,500	1.00	*F*
Scott Road													
14. I-215 NB Ramps to Antelope Road	Urban Arterial	4	36,530	5,618	49,420	1.32	*F*	6	56,300	416	49,420	0.88	D

[1] Roadway segment is in City of Menifee.

[2] Lns = Number of through lanes based on the City of Menifee General Plan Circulation Element Traffic Study.

[3] Source: City of Menifee Traffic Impact Analysis Guidelines.

EAC = Existing Plus Ambient Growth Plus Cumulative Projects Conditions

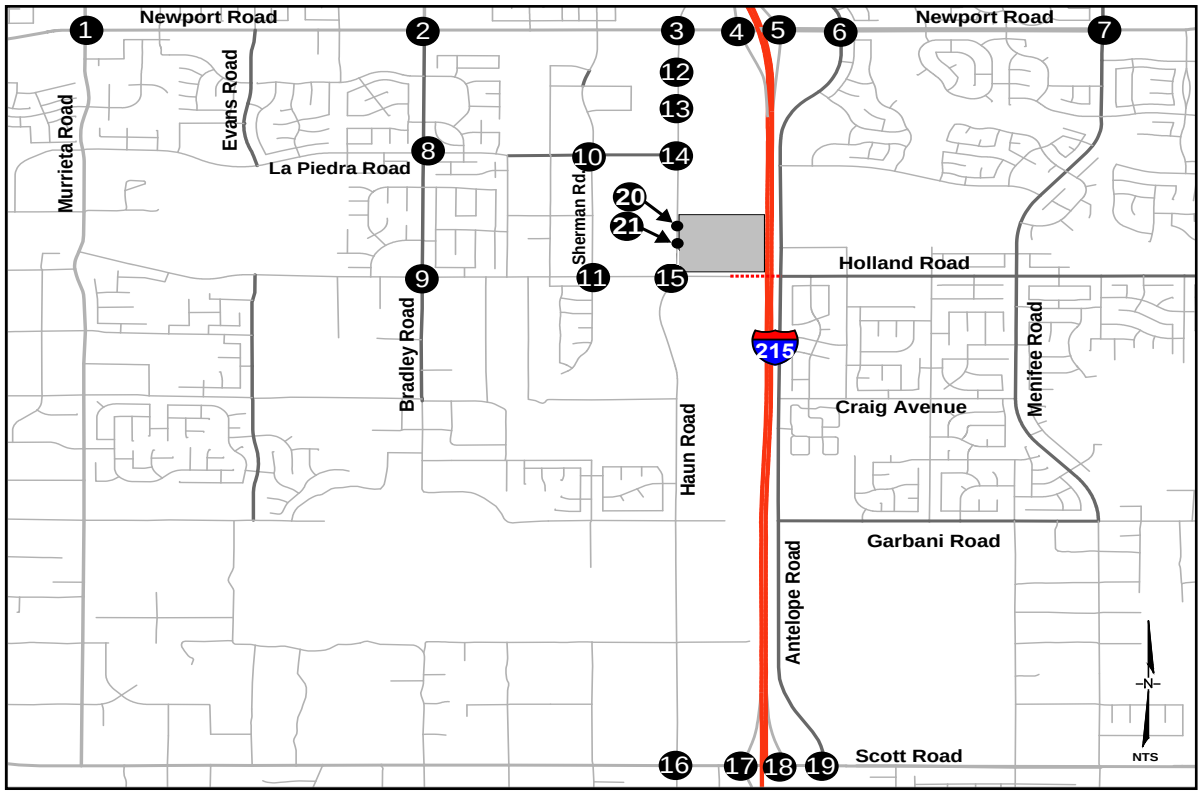
EACP = Existing Plus Ambient Growth Plus Cumulative Projects Plus Project Conditions

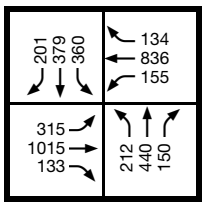
Roadway segment is expected to exceed its roadway capacity based on the City of Menifee's General Plan Roadway Classification.

* Segment's 8 fair share contribution would be used toward the Newport Road eastbound approach re-striping from Paloma Wash to the I-215 SB NB On-Ramp.

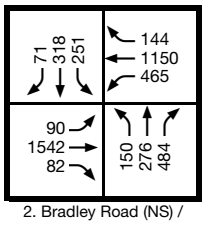
** Roadway is built to its ultimate conditions; however the intersections operate at acceptable levels of service; therefore, the roadway segments are also considered to be operating at acceptable conditions since the intersections in between are the driving factors of traffic flow.

Figure 5-E – Existing Plus Ambient Growth Plus Cumulative Projects Plus Project (2021) Without Overpass AM Peak Hour Intersection Volumes

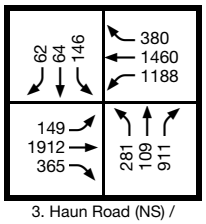




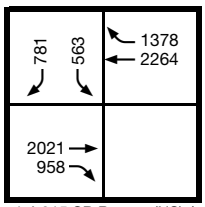
1. Murrieta Road (NS) / Newport Road (EW)



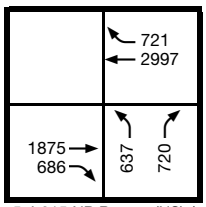
2. Bradley Road (NS) / Newport Road (EW)



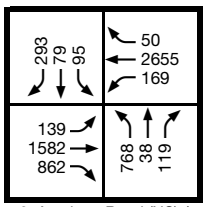
3. Haun Road (NS) / Newport Road (EW)



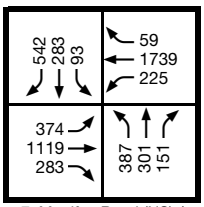
4. I-215 SB Ramps (NS) / Newport Road (EW)



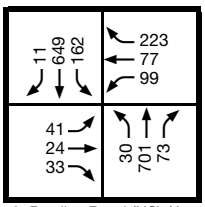
5. I-215 NB Ramps (NS) / Newport Road (EW)



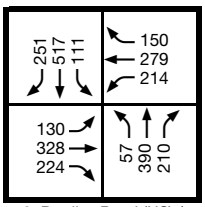
6. Antelope Road (NS) / Newport Road (EW)



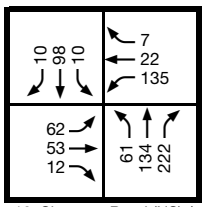
7. Menifee Road (NS) / Newport Road (EW)



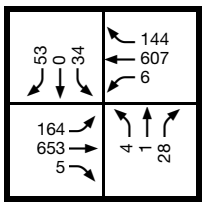
8. Bradley Road (NS) / La Piedra Road (EW)



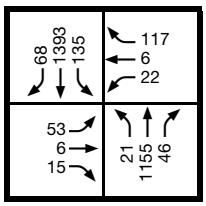
9. Bradley Road (NS) / Holland Road (EW)



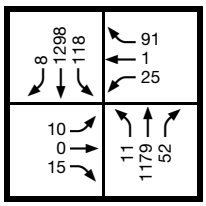
10. Sherman Road (NS) / La Piedra Road (EW)



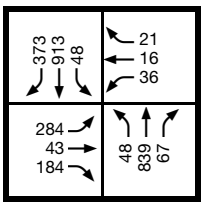
11. Sherman Road (NS) / Holland Road (EW)



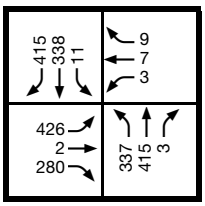
12. Haun Road (NS) / Village-Market Drive (EW)



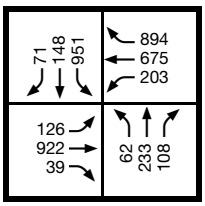
13. Haun Road (NS) / Countryside Market Place (EW)



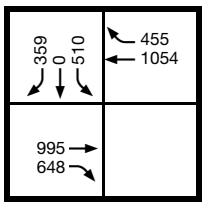
14. Haun Road (NS) / La Piedra Road (EW)



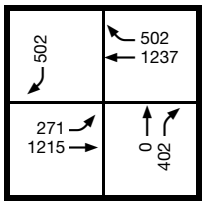
15. Haun Road (NS) / Holland Road (EW)



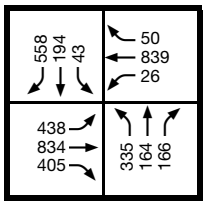
16. Haun Road-Zeiders Road (NS) / Scott Road (EW)



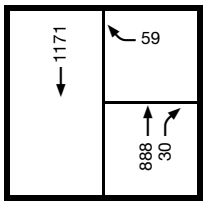
17. I-215 SB Ramps (NS) / Scott Road (EW)



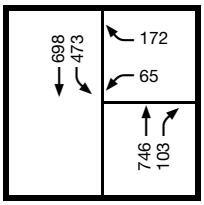
18. I-215 NB Ramps (NS) / Scott Road (EW)



19. Antelope Road (NS) / Scott Road (EW)

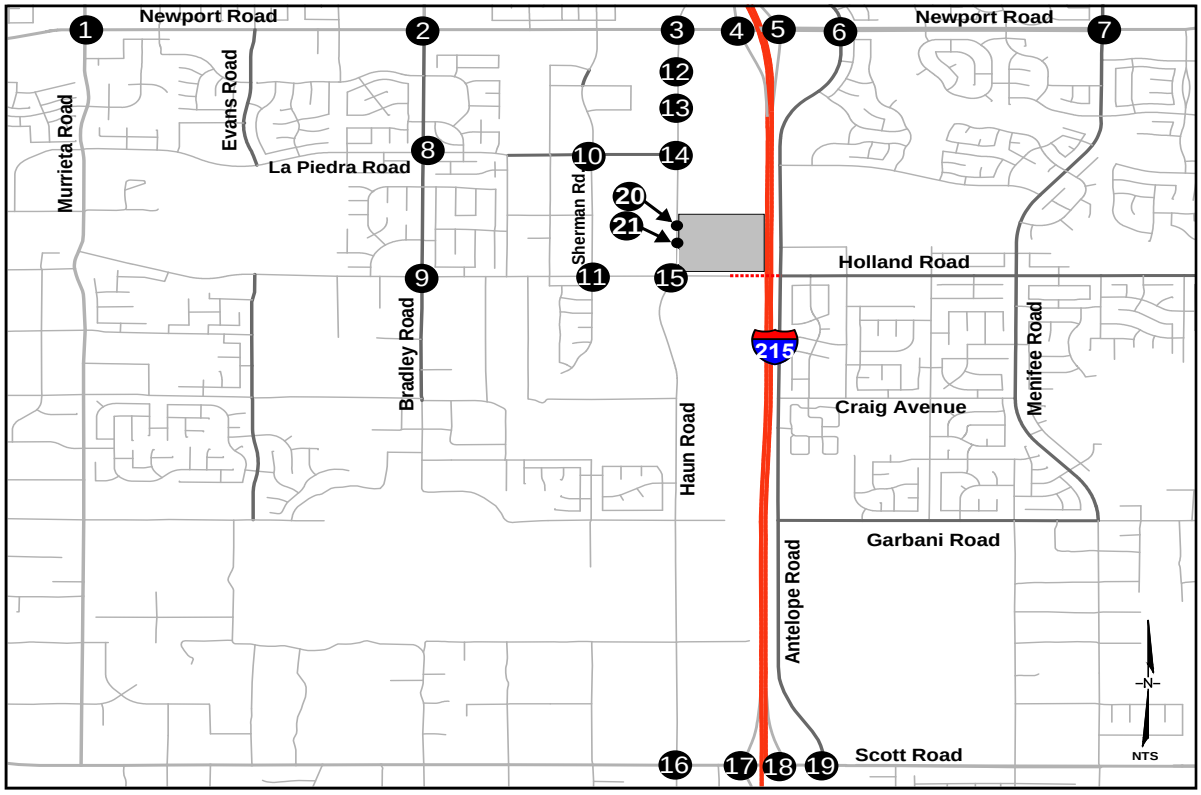


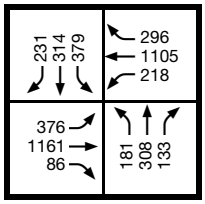
20. Haun Road (NS) / Driveway 1 (EW)



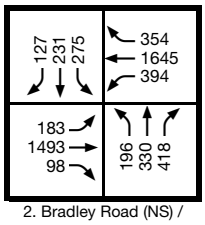
21. Haun Road (NS) / Driveway 2 (EW)

Figure 5-F – Existing Plus Ambient Growth Plus Cumulative Projects Plus Project (2021) Without Overpass PM Peak Hour Intersection Volumes

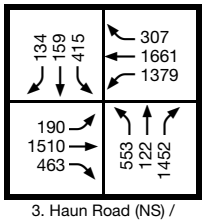




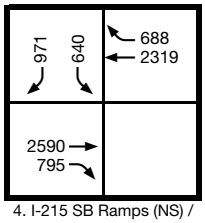
1. Murrieta Road (NS) / Newport Road (EW)



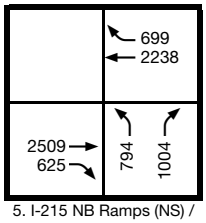
2. Bradley Road (NS) / Newport Road (EW)



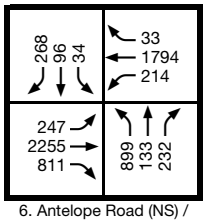
3. Haun Road (NS) / Newport Road (EW)



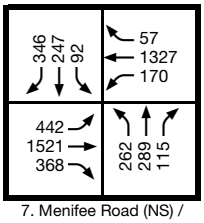
4. I-215 SB Ramps (NS) / Newport Road (EW)



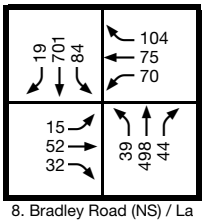
5. I-215 NB Ramps (NS) / Newport Road (EW)



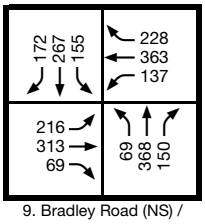
6. Antelope Road (NS) / Newport Road (EW)



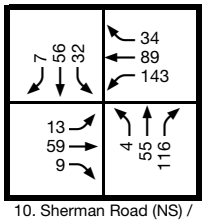
7. Menifee Road (NS) / Newport Road (EW)



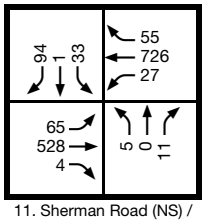
8. Bradley Road (NS) / La Piedra Road (EW)



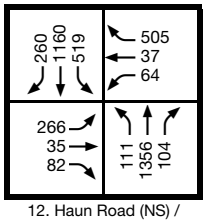
9. Bradley Road (NS) / Holland Road (EW)



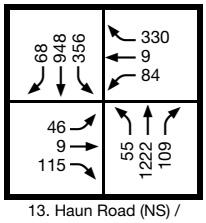
10. Sherman Road (NS) / La Piedra Road (EW)



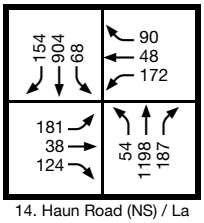
11. Sherman Road (NS) / Holland Road (EW)



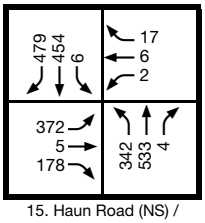
12. Haun Road (NS) / Village-Market Drive (EW)



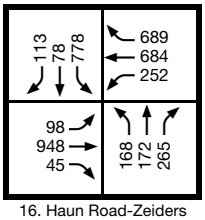
13. Haun Road (NS) / Countryside Market Place (EW)



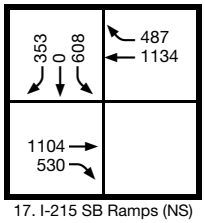
14. Haun Road (NS) / La Piedra Road (EW)



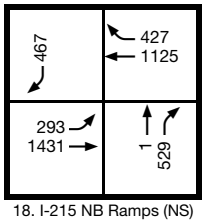
15. Haun Road (NS) / Holland Road (EW)



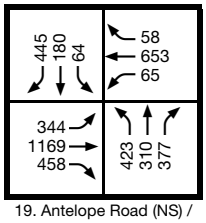
16. Haun Road-Zeiders Road (NS) / Scott Road (EW)



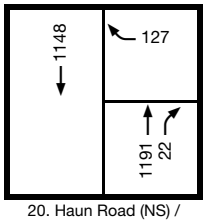
17. I-215 SB Ramps (NS) / Scott Road (EW)



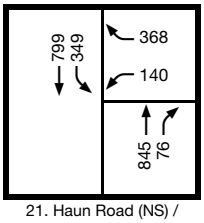
18. I-215 NB Ramps (NS) / Scott Road (EW)



19. Antelope Road (NS) / Scott Road (EW)



20. Haun Road (NS) / Driveway 1 (EW)



21. Haun Road (NS) / Driveway 2 (EW)

Levels of Service – Existing Plus Ambient Growth Plus Cumulative Projects (2021) With Overpass Conditions

The existing plus ambient growth plus other cumulative projects (2021) scenario includes existing traffic, an ambient growth of two percent per year for four years to 2021 (eight percent total ambient growth) and other projects in the project area provided by the City of Menifee. The traffic assumes there is an overpass at Holland Road. Table 5-11 and Table 5-12 provide the projected delay and levels of service at the study intersections and roadways under existing plus ambient growth plus other cumulative projects conditions without off-site improvements. These levels of service vary from LOS B to F. The existing plus ambient growth plus other cumulative projects AM and PM peak hour intersection turning movement volumes are shown on Figure 5-G and Figure 5-H, respectively. The levels of service are based upon the existing geometrics for the study intersections. The level of service calculation worksheets are provided in Appendix E. The following study intersections are expected to operate at an unacceptable level of service:

7. Menifee Road (NS) / Newport Road (EW)
9. Bradley Road (NS) / Holland Road (EW)
11. Sherman Road (NS) / Holland Road (EW)
15. Haun Road (NS) / Holland Road (EW)
22. Antelope Road (NS) / Albion Lane (EW)
24. Palomar Road (NS) / Holland Road (EW)

And the following study area roadway segments would operate at an unacceptable LOS.

1. Bradley Road from Park Avenue to Newport Road
6. Haun Road from Holland Road to Scott Road
8. Newport Road from Bradley Road to Haun Road
14. Scott Road from I-215 Northbound Ramps to Antelope Road

Table 5-11 – Intersection Levels of Service – Existing Plus Ambient Growth Plus Cumulative Projects With Overpass (2021) Conditions

Intersection	Jurisdiction	LOS Standard	Peak Hour	Traffic Control	Delay (sec)	LOS
1. Murrieta Road (NS) / Newport Road (E/W)	City of Menifee	D	AM PM	Signal	43.4 43.8	D D
2. Bradley Road (N/S) / Newport Road (E/W)	City of Menifee	D	AM PM	Signal	48.6 43.8	D D
3. Haun Road (NS) / Newport Road (EW)	City of Menifee	E	AM PM	Signal	36.0 45.2	D D
4. I-215 SB Ramps (NS) / Newport Road (EW)	Caltrans	D	AM PM	Signal	20.5 21.9	C C
5. I-215 NB Ramps (NS) / Newport Road (EW)	Caltrans	D	AM PM	Signal	21.0 25.6	C C
6. Antelope Road (NS) / Newport Road (EW)	City of Menifee	E	AM PM	Signal	50.4 61.7	D E*
7. Menifee Road (NS) / Newport Road (EW)	City of Menifee	D	AM PM	Signal	***67.0*** 42.9	***E*** D
8. Bradley Road (NS) / La Piedra Road (EW)	City of Menifee	D	AM PM	Signal	27.7 19.8	C B
9. Bradley Road (NS) / Holland Road (EW)	City of Menifee	D	AM PM	Signal	***74.4*** ***55.5***	***E*** ***E***
10. Town Center-Sherman Road (NS) / La Piedra Road (EW)	City of Menifee	D	AM PM	Signal	27.6 29.9	C C
11. Sherman Road (NS) / Holland Road (EW)	City of Menifee	D	AM PM	TWSC	***OFL*** ***OFL***	***F*** ***F***
12. Haun Road (NS) / Village-Market Drive (EW)	City of Menifee	D	AM PM	Signal	15.6 28.9	B C
13. Haun Road (NS) / Countryside Market Place (EW)	City of Menifee	D	AM PM	Signal	13.6 28.9	B C
14. Haun Road (NS) / La Piedra Road (EW)	City of Menifee	D	AM PM	Signal	28.8 32.2	C C
15. Haun Road (NS) / Holland Road (EW)	City of Menifee	D	AM PM	Signal	***56.0*** ***55.3***	***E*** ***E***
16. Haun-Zeiders Road (NS) / Scott Road (EW)	City of Menifee	E	AM PM	Signal	73.5 75.7	E* E*
17. I-215 SB Ramps (NS) / Scott Road (EW)	Caltrans	D	AM PM	Signal	12.2 12.8	B B
18. I-215 NB Ramps (NS) / Scott Road (EW)	Caltrans	D	AM PM	Signal	20.5 20.9	C C
19. Antelope Road (NS) / Scott Road (EW)	City of Menifee	E	AM PM	Signal	38.8 37.0	D D
20. Haun Road (NS) / Driveway 1 (EW)	City of Menifee	D	AM PM	*Does Not Exist*		
21. Haun Road (NS) / Driveway 2 (EW)	City of Menifee	D	AM PM	*Does Not Exist*		
22. Antelope Road (NS) / Albion Lane (EW)	City of Menifee	D	AM PM	OWSC	***71.1*** ***OFL***	***F*** ***F***
23. Hanover Lane (NS) / Holland Road (EW)	City of Menifee	D	AM PM	Signal	20.1 17.7	C B
24. Palomar Road (NS) / Holland Road (EW)	City of Menifee	D	AM PM	TWSC	***126.9*** ***OFL***	***F*** ***F***
25. Menifee Road (NS) / Holland Road (EW)	City of Menifee	D	AM PM	AWSC	14.0 13.1	B B

OWSC= One Way Stop Controlled; TWSC = Two Way Stop Controlled; AWSC = All Way Stop Controlled.
OFL = Overflow conditions; Delay > 200 sec
* Classified as a "constraint intersection". Acceptable LOS E in consistency with the City's GP Policy C-1.2.
XXX = Exceeds LOS Standard

Table 5-12 – Roadway Levels of Service – Existing Plus Ambient Growth Plus Cumulative Projects With Overpass (2021) Conditions

		EAC				
Roadway Segment[1]	Roadway Classification	Lns[2]	Roadway Capacity[3]	Total ADT	Volume/ Capacity Ratio	LOS
Bradley Road						
1. Park Avenue to Newport Road	Secondary	2	12,950	19,010	1.47	***F***
2. Newport Road to La Piedra Road	Major	4	34,100	15,450	0.45	A
3. La Piedra Road to Holland Road	Major	4	34,100	10,830	0.32	A
Haun Road						
4. Newport Road to La Piedra Road	Major	4	34,100	23,820	0.70	B
5. La Piedra Road to Holland Road	Major	3	25,575	16,160	0.63	B
6. Holland Road to Scott Road	Major	2	17,050	15,570	0.91	***E***
Newport Road						
7. Murrieta Road to Bradley Road	Urban Arterial	6	56,300	42,800	0.76	C
8. Bradley Road to Haun Road	Urban Arterial	6	56,300	51,970	0.92	***E***
9. Haun Road to I-215 SB Ramps	Urban Arterial	8	87,000	59,590	0.68	B
10. I-215 NB Ramps to Antelope Road	Urban Arterial	8	87,000	74,700	0.86	D
11. Antelope Road to Menifee Road	Urban Arterial	6	56,300	44,270	0.79	C
La Piedra Road						
12. Sherman Road to Haun Road	Secondary	4	25,900	5,450	0.21	A
Scott Road						
13. Haun Road to I-215 SB Ramps	Urban Arterial	4	36,530	28,420	0.76	C
14. I-215 NB Ramps to Antelope Road	Urban Arterial	4	36,530	43,990	1.17	***F***
Holland Road						
15. Bradley Road to Sherman Road	Major	2	17,050	14,210	0.83	D
16. Sherman Road to Haun Road	Major	3	25,575	17,460	0.68	C
17. Haun Road to Hanover Lane	Major	4	34,100	14,310	0.42	A
18. Hanover Lane to Palomar Road	Major	2	17,050	9,760	0.57	A
19. Palomar Road to Menifee Road	Major	2	17,050	8,780	0.51	A

[1] Roadway segment is in City of Menifee.

[2] Lns = Number of through lanes based on the City of Menifee General Plan Circulation Element Traffic Study.

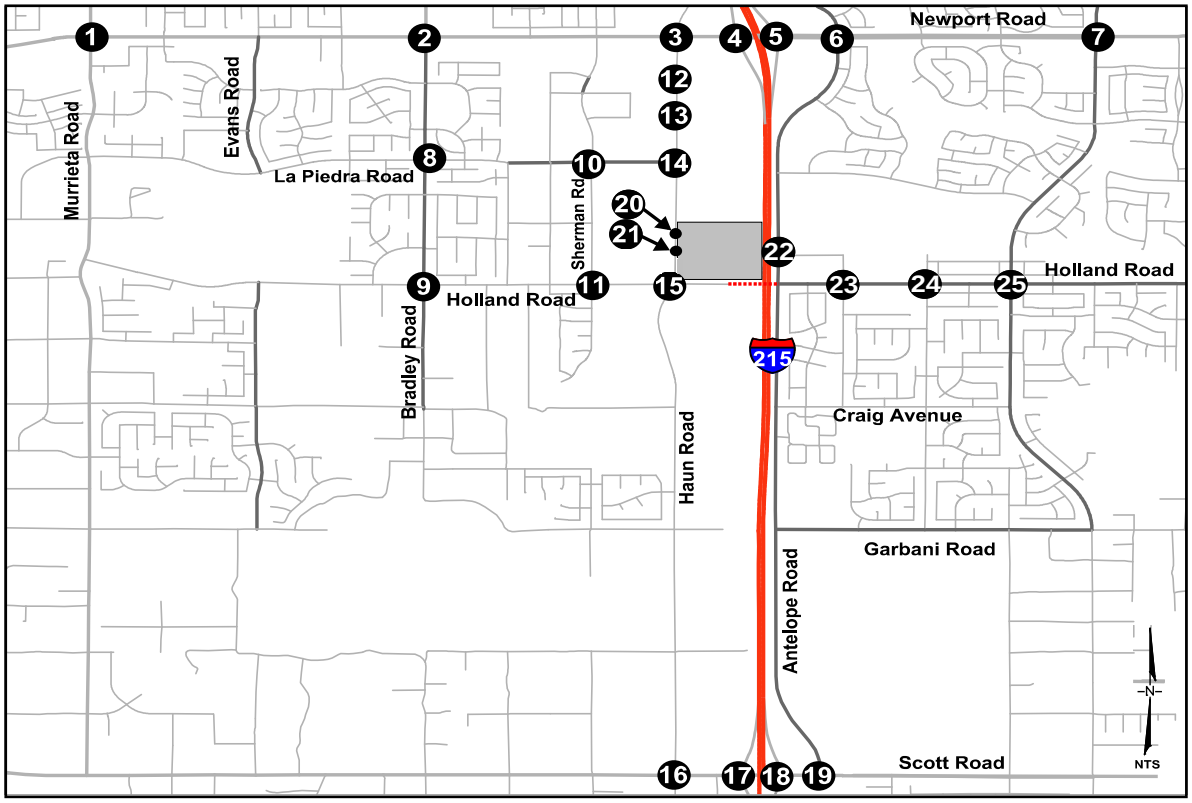
[3] Source: City of Menifee Traffic Impact Analysis Guidelines.

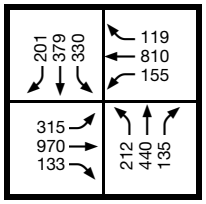
EAC = Existing Plus Ambient Growth Plus Cumulative Projects Conditions

Roadway segment is expected to exceed its capacity based on the General Plan Roadway Classification.

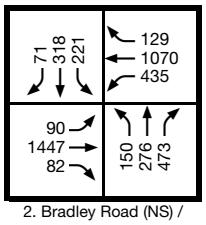
**** Classified as a "constraint roadway segment". Acceptable LOS E per discussion with City staff and in consistency with the City's GP Policy C-1.2.

Figure 5-G – Existing Plus Ambient Growth Plus Cumulative Projects (2021) With Overpass AM Peak

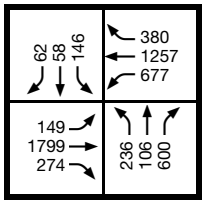




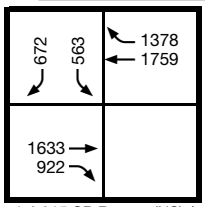
1. Murrieta Road (NS) / Newport Road (EW)



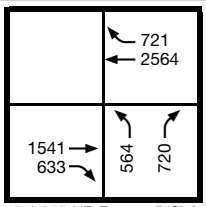
2. Bradley Road (NS) / Newport Road (EW)



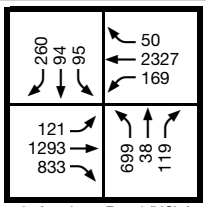
3. Haun Road (NS) / Newport Road (EW)



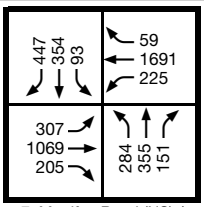
4. I-215 SB Ramps (NS) / Newport Road (EW)



5. I-215 NB Ramps (NS) / Newport Road (EW)



6. Antelope Road (NS) / Newport Road (EW)



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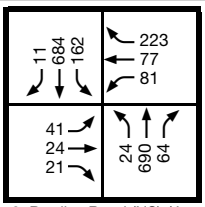

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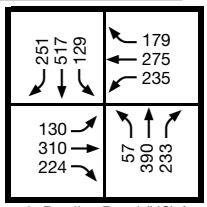

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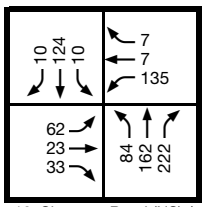

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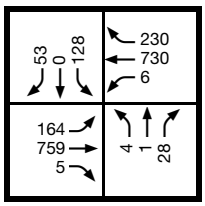

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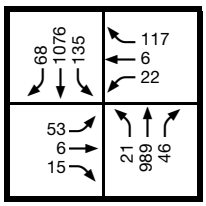
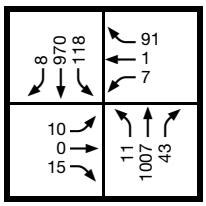


12. Haun Road (NS) / Village-Market Drive (EW)



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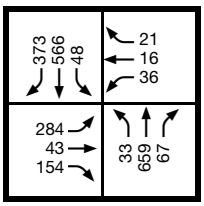

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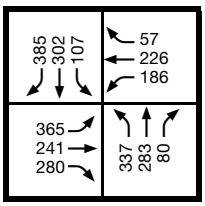

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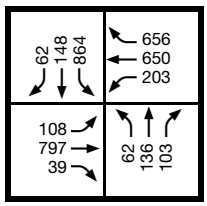

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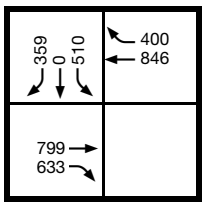

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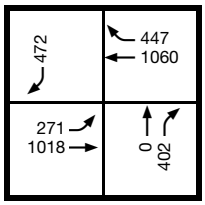

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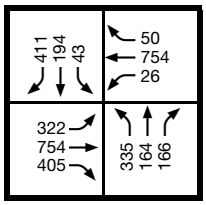

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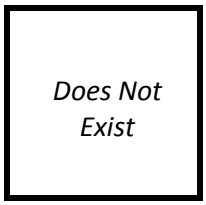

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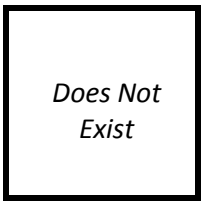
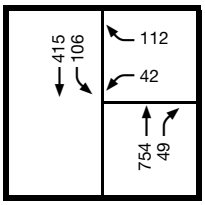
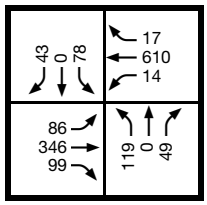


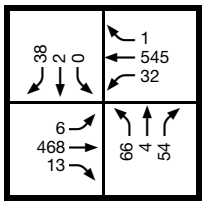
21. Haun Road (NS) / Driveway 2 (EW)



22. Antelope Rd (NS)/Albion Ln (EW)



23. Hanover Lane (NS) / Holland Road (EW)



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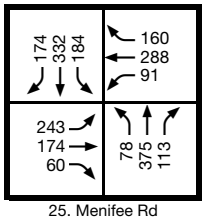
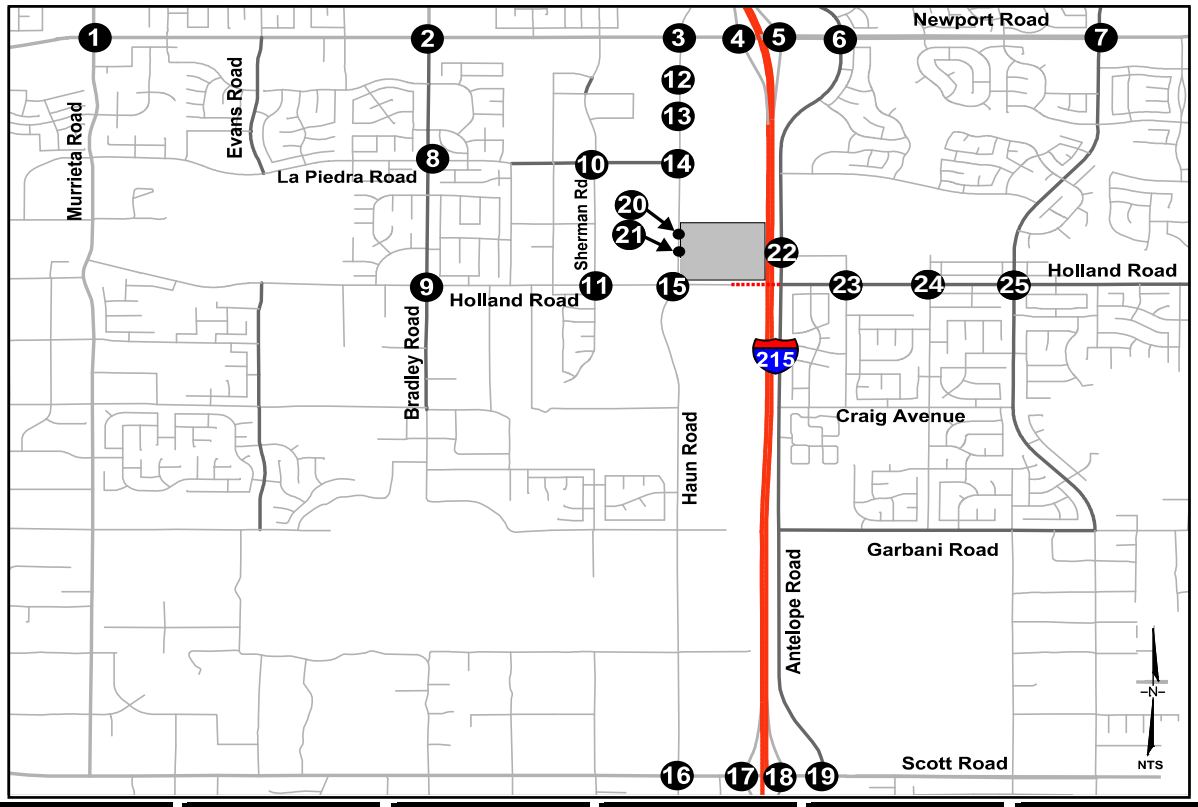
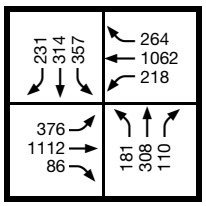


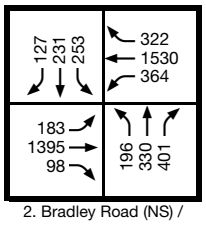
25. Menifee Rd (NS)/Holland Rd (EW)

Figure 5-H – Existing Plus Ambient Growth Plus Cumulative Projects (2021) With Overpass PM Peak

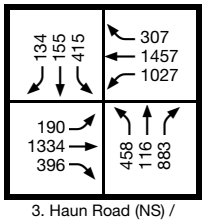




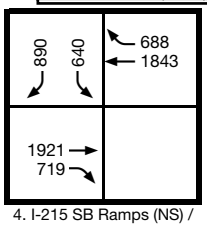
1. Murrieta Road (NS) / Newport Road (EW)



2. Bradley Road (NS) / Newport Road (EW)



3. Haun Road (NS) / Newport Road (EW)



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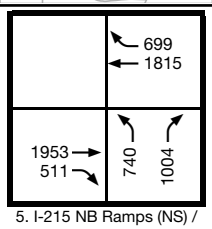

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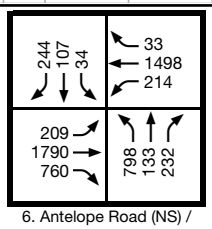
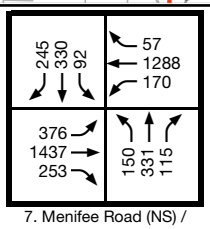
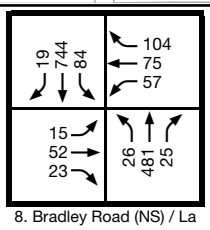


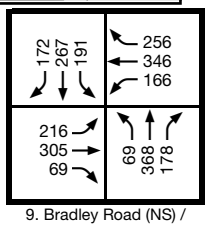
6. Antelope Road (NS) / Newport Road (EW)



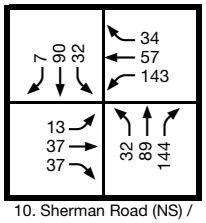
7. Menifee Road (NS) / Newport Road (EW)



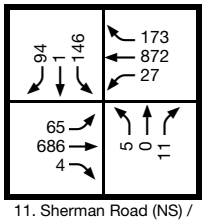
8. Bradley Road (NS) / La Piedra Road (EW)



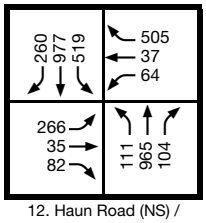
9. Bradley Road (NS) / Holland Road (EW)



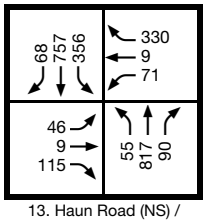
10. Sherman Road (NS) / La Piedra Road (EW)



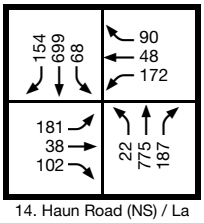
11. Sherman Road (NS) / Holland Road (EW)



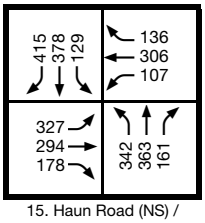
12. Haun Road (NS) / Village-Market Drive (EW)



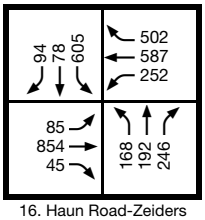
13. Haun Road (NS) / Countryside Market Place (EW)



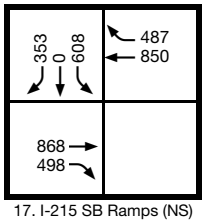
14. Haun Road (NS) / La Piedra Road (EW)



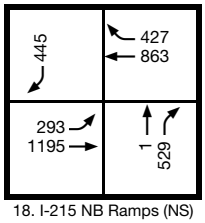
15. Haun Road (NS) / Holland Road (EW)



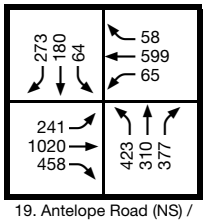
16. Haun Road-Zeiders Road (NS) / Scott Road (EW)



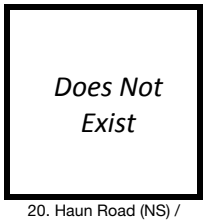
17. I-215 SB Ramps (NS) / Scott Road (EW)



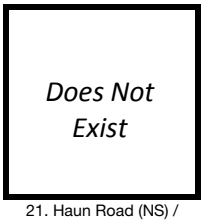
18. I-215 NB Ramps (NS) / Scott Road (EW)



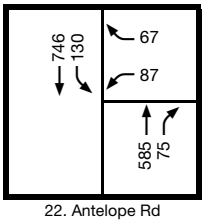
19. Antelope Road (NS) / Scott Road (EW)



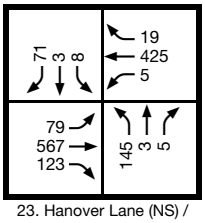
20. Haun Road (NS) / Driveway 1 (EW)



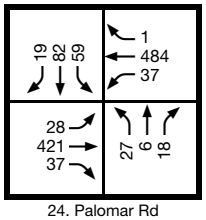
21. Haun Road (NS) / Driveway 2 (EW)



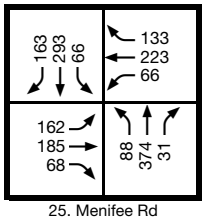
22. Antelope Rd (NS)/Albion Ln (EW)



23. Hanover Lane (NS) / Holland Road (EW)



24. Palomar Rd (NS)/Holland Rd (EW)



25. Menifee Rd (NS)/Holland Rd (EW)

Levels of Service – Existing Plus Ambient Growth Plus Cumulative Projects Plus Project (2021) With Overpass Conditions

The existing plus ambient growth plus other cumulative projects plus project (2021) scenario includes existing traffic, an ambient growth of two percent per year for four years to 2021 (eight percent total ambient growth), other projects in the study area provided by the City of Menifee and project traffic. The traffic assumes there is an overpass at Holland Road. Table 5-13 and Table 5-14 provide the projected delay and levels of service at the study intersections and roadways under existing plus ambient growth plus other cumulative projects plus project conditions without off-site improvements. These levels of service vary from LOS B to F. The existing plus ambient growth plus other cumulative projects plus project AM and PM peak hour intersection turning movement volumes are shown on Figure 5-I and Figure 5-J, respectively. The levels of service are based upon the geometrics proposed after the completion of the overpass for the study intersections. The level of service calculation worksheets are provided in Appendix E. The following study intersections are expected to operate at an unacceptable level of service:

7. Menifee Road (NS) / Newport Road (EW)
9. Bradley Road (NS) / Holland Road (EW)
11. Sherman Road (NS) / Holland Road (EW)
15. Haun Road (NS) / Holland Road (EW)
16. Haun Road (NS) / Scott Road (EW)
22. Antelope Road (NS) / Albion Lane (EW)
24. Palomar Road (NS) / Holland Road (EW)

And the following study area roadway segments would operate at an unacceptable LOS.

1. Bradley Road from Park Avenue to Newport Road
4. Haun Road from Newport Road to La Piedra Road
5. Haun Road from La Piedra Road to Holland Road
6. Haun Road from Holland Road to Scott Road
14. Scott Road from I-215 Northbound Ramps to Antelope Road

Table 5-13 – Intersection Levels of Service – Existing Plus Ambient Growth Plus Cumulative Projects Plus Project With Overpass (2021) Conditions

Intersection	Peak Hour	Without Project			With Project		
		Traffic Control	Delay (sec)	LOS	Traffic Control	Delay (sec)	LOS
1. Murrieta Road (NS) / Newport Road (E/W)	AM PM	Signal	43.4 43.8	D D	Signal	44.1 45.7	D D
2. Bradley Road (N/S) / Newport Road (E/W)	AM PM	Signal	48.6 43.8	D D	Signal	52.0 43.5	D D
3. Haun Road (NS) / Newport Road (EW)	AM PM	Signal	36.0 45.2	D D	Signal	39.7 54.4	D D
4. I-215 SB Ramps (NS) / Newport Road (EW)	AM PM	Signal	20.5 21.9	C C	Signal	21.9 23.7	C C
5. I-215 NB Ramps (NS) / Newport Road (EW)	AM PM	Signal	21.0 25.6	C C	Signal	22.4 26.7	C C
6. Antelope Road (NS) / Newport Road (EW)	AM PM	Signal	50.4 61.7	D E*	Signal	51.6 64.3	D E*
7. Menifee Road (NS) / Newport Road (EW)	AM PM	Signal	***67.0*** 42.9	***E*** D	Signal	***75.6*** 45.5	***E*** D
8. Bradley Road (NS) / La Piedra Road (EW)	AM PM	Signal	27.7 19.8	C B	Signal	28.2 20.8	C C
9. Bradley Road (NS) / Holland Road (EW)	AM PM	Signal	***74.4*** ***55.5***	***E*** ***E***	Signal	***82.7*** ***57.3***	***F*** ***E***
10. Town Center-Sherman Road (NS) / La Piedra Road (EW)	AM PM	Signal	27.6 29.9	C C	Signal	29.0 31.0	C C
11. Sherman Road (NS) / Holland Road (EW)	AM PM	TWSC	***OFL*** ***OFL***	***F*** ***F***	TWSC	***OFL*** ***OFL***	***F*** ***F***
12. Haun Road (NS) / Village-Market Drive (EW)	AM PM	Signal	15.6 28.9	B C	Signal	17.5 32.9	B C
13. Haun Road (NS) / Countryside Market Place (EW)	AM PM	Signal	13.6 28.9	B C	Signal	10.6 31.6	B C
14. Haun Road (NS) / La Piedra Road (EW)	AM PM	Signal	28.8 32.2	C C	Signal	35.3 43.9	D D
15. Haun Road (NS) / Holland Road (EW)	AM PM	Signal	***56.0*** ***55.3***	***E*** ***E***	Signal	***63.7*** ***67.9***	***E*** ***E***
16. Haun-Zeiders Road (NS) / Scott Road (EW)	AM PM	Signal	73.5 75.7	E* E*	Signal	***84.7*** ***87.4***	***F*** ***F***
17. I-215 SB Ramps (NS) / Scott Road (EW)	AM PM	Signal	12.2 12.8	B B	Signal	12.0 12.6	B B
18. I-215 NB Ramps (NS) / Scott Road (EW)	AM PM	Signal	20.5 20.9	C C	Signal	21.0 21.1	C C
19. Antelope Road (NS) / Scott Road (EW)	AM PM	Signal	38.8 37.0	D D	Signal	40.6 36.4	D D
20. Haun Road (NS) / Driveway 1 (EW)	AM PM	*Does Not Exist*			OWSC	13.2 17.1	B C
21. Haun Road (NS) / Driveway 2 (EW)	AM PM	*Does Not Exist*			Signal	24.4 28.0	C C
22. Antelope Road (NS) / Albion Lane (EW)	AM PM	OWSC	***71.1*** ***OFL***	***F*** ***F***	OWSC	***91.3*** ***OFL***	***F*** ***F***
23. Hanover Lane (NS) / Holland Road (EW)	AM PM	Signal	20.1 17.7	C B	Signal	26.4 23.9	C C
24. Palomar Road (NS) / Holland Road (EW)	AM PM	TWSC	***126.9*** ***OFL***	***F*** ***F***	TWSC	***158.4*** ***OFL***	***F*** ***F***
25. Menifee Road (NS) / Holland Road (EW)	AM PM	AWSC	14.0 13.1	B B	AWSC	13.9 13.1	B B

OWSC= One Way Stop Controlled; TWSC = Two Way Stop Controlled; AWSC = All Way Stop Control
* Classified as a "constraint intersection". Acceptable LOS E in consistency with the City's GP Policy C-1.2.
OFL = Overflow conditions; Delay > 200 sec
XXX = Exceeds LOS Standard

Table 5-14 – Roadway Levels of Service – Existing Plus Ambient Growth Plus Cumulative Projects Plus Project With Overpass (2021) Conditions

Roadway Segment[1]	Roadway Classification	EAC						EACP					
		Lns[2]	Roadway Capacity[3]	Cumulative Projects ADT	Total ADT	Volume/ Capacity Ratio	LOS	Lns[2]	Roadway Capacity[3]	Project Only ADT	Total ADT	Volume/ Capacity Ratio	LOS
Bradley Road													
1. Park Avenue to Newport Road	Secondary	2	12,950	2,830	19,010	1.47	***F***	2	12,950	520	19,530	1.51	***F***
2. Newport Road to La Piedra Road	Major	4	34,100	1,686	15,450	0.45	A	4	34,100	208	15,660	0.46	A
3. La Piedra Road to Holland Road	Major	4	34,100	1,304	10,830	0.32	A	4	34,100	520	11,350	0.33	A
Haun Road													
4. Newport Road to La Piedra Road	Major	4	34,100	641	23,820	0.70	B	4	34,100	7,786	31,600	0.93	***E***
5. La Piedra Road to Holland Road	Major	3	25,575	1,039	16,160	0.63	B	3	25,575	8,306	24,470	0.96	***E***
6. Holland Road to Scott Road	Major	2	17,050	4,268	15,570	0.91	***E***	2	17,050	1,040	16,610	0.97	***E***
Newport Road													
7. Murrieta Road to Bradley Road	Urban Arterial	6	56,300	5,978	42,800	0.76	C	6	56,300	1,040	43,840	0.78	C
8. Bradley Road to Haun Road	Urban Arterial	6	56,300	6,315	51,970	0.92	***E***	6	56,300	1,560	53,530	0.95	***E***
9. Haun Road to I-215 SB Ramps	Urban Arterial	8	87,000	1,875	59,590	0.68	B	8	87,000	5,603	65,190	0.75	C
10. I-215 NB Ramps to Antelope Road	Urban Arterial	8	87,000	6,229	74,700	0.86	D	8	87,000	1,248	75,950	0.87	D
11. Antelope Road to Menifee Road	Urban Arterial	6	56,300	4,906	44,270	0.79	C	6	56,300	936	45,200	0.80	D
La Piedra Road													
12. Sherman Road to Haun Road	Secondary	4	25,900	2,842	5,450	0.21	A	4	25,900	520	5,970	0.23	A
Scott Road													
13. Haun Road to I-215 SB Ramps	Urban Arterial	4	36,530	3,414	28,420	0.76	C	4	36,530	728	29,150	0.78	C
14. I-215 NB Ramps to Antelope Road	Urban Arterial	4	36,530	4,872	43,990	1.17	***F***	4	36,530	208	44,190	1.18	***F***
Holland Road													
15. Bradley Road to Sherman Road	Major	2	17,050	862	14,210	0.83	D	2	17,050	1,040	15,250	0.89	D
16. Sherman Road to Haun Road	Major	3	25,575	4,900	17,460	0.68	C	3	25,575	1,040	18,500	0.72	C
17. Haun Road to Hanover Lane	Major	4	34,100	6,500	14,310	0.42	A	4	34,100	1,248	15,560	0.46	A
18. Hanover Lane to Palomar Road	Major	2	17,050	3,217	9,760	0.57	A	2	17,050	520	10,280	0.60	B
19. Palomar Road to Menifee Road	Major	2	17,050	2,245	8,780	0.51	A	2	17,050	520	9,300	0.55	A

[1] Roadway segment is in City of Menifee.

[2] Lns = Number of through lanes based on the City of Menifee General Plan Circulation Element Traffic Study.

[3] Source: City of Menifee Traffic Impact Analysis Guidelines.

EAC = Existing Plus Ambient Growth Plus Cumulative Projects Conditions

EACP = Existing Plus Ambient Growth Plus Cumulative Projects Plus Project Conditions

Roadway segment is expected to exceed its capacity based on the City of Menifee's General Plan Roadway Classification.

*** Classified as a "constraint roadway segment". Acceptable LOS E per discussion with City staff and in consistency with the City's GP Policy C-1.2.

Levels of Service – Existing Plus Ambient Growth Plus Cumulative Projects Plus Project (2021) with Overpass with Improvements

Table 5-15 and Table 5-16 provide the projected delay and levels of service at the study intersection and roadway segment under existing plus ambient growth plus other cumulative projects plus project (2021) with overpass conditions with off-site improvements. With the recommended off-site improvements, the study area intersections would operate at an acceptable LOS D or better. The level of service calculation worksheets are provided in Appendix E.

Table 5-15 – Intersection Levels of Service – Existing Plus Ambient Growth Plus Cumulative Projects Plus Project with Overpass (2021) with Improvements

Intersection	Peak Hour	Without Improvements			With Improvements		
		Traffic Control	Delay (sec)	LOS	Traffic Control	Delay (sec)	LOS
7. Menifee Road (NS) / Newport Road (EW)	AM PM	Signal	***75.6*** 45.5	***E*** D	Signal	37.7 34.9	D C
9. Bradley Road (NS) / Holland Road (EW)	AM PM	Signal	***82.7*** ***57.3***	***F*** ***E***	Signal	51.1 54.5	D D
11. Sherman Road (NS) / Holland Road (EW)	AM PM	TWSC	***OFL*** ***OFL***	***F*** ***F***	Signal	26.3 20.8	C C
15. Haun Road (NS) / Holland Road (EW)	AM PM	Signal	***63.7*** ***67.9***	***E*** ***E***	Signal	37.9 38.6	D D
16. Haun-Zeiders Road (NS) / Scott Road (EW)	AM PM	Signal	***84.7*** ***87.4***	***F*** ***F***	Signal	59.9 51.8	E* D
22. Antelope Road (NS) / Albion Lane (EW)	AM PM	OWSC	***91.3*** ***OFL***	***F*** ***F***	Signal	15.4 14.0	B B
24. Palomar Road (NS) / Holland Road (EW)	AM PM	TWSC	***158.4*** ***OFL***	***F*** ***F***	Signal	13.4 17.9	B B

AWSC = All Way Stop Controlled and TWSC = Two Way Stop Controlled.
OFL = Overflow conditions; Delay > 200 sec
* Classified as a "constraint intersection". Acceptable LOS E in consistency with the City's GP Policy C-1.2.
XXX = Exceeds LOS Standard

Table 5-16 – Roadway Levels of Service – Existing Plus Ambient Growth Plus Cumulative Projects Plus Project with Overpass (2021) with Improvements

Roadway Segment[1]	Roadway Classification	EACP without Improvement						EACP with Improvement					
		Lns[2]	Roadway Capacity[3]	Cumulative Projects ADT	Total ADT	Volume/ Capacity Ratio	LOS	Lns[2]	Roadway Capacity[3]	Project Only ADT	Total ADT	Volume/ Capacity Ratio	LOS
Bradley Road													
1. Park Avenue to Newport Road	Secondary	2	12950	2,830	19530	1.51	*F*	4	25900	520	19530	0.75	C
Haun Road													
4. Newport Road to La Piedra Road**	Major	4	34100	641	31600	0.93	*E*	4	34100	7,786	31600	0.93	*E*
5. La Piedra Road to Holland Road	Major	3	25575	1,039	24470	0.96	*E*	4	34100	8,306	24470	0.72	C
6. Holland Road to Scott Road	Major	2	17050	4,268	16610	0.97	*E*	4	34100	1,040	16610	0.49	A
Newport Road													
8. Bradley Road to Haun Road*	Urban Arterial	6	56300	6,315	53530	0.95	*E*	6	56300	1,560	53530	0.95	*E*
Scott Road													
14. I-215 NB Ramps to Antelope Road	Urban Arterial	4	36530	4,872	44190	1.18	*F*	6	56300	208	44190	0.78	C

[1] Roadway segment is in City of Menifee.

[2] Lns = Number of through lanes based on the City of Menifee General Plan Circulation Element Traffic Study.

[3] Source: City of Menifee Traffic Impact Analysis Guidelines.

EAC = Existing Plus Ambient Growth Plus Cumulative Projects Conditions

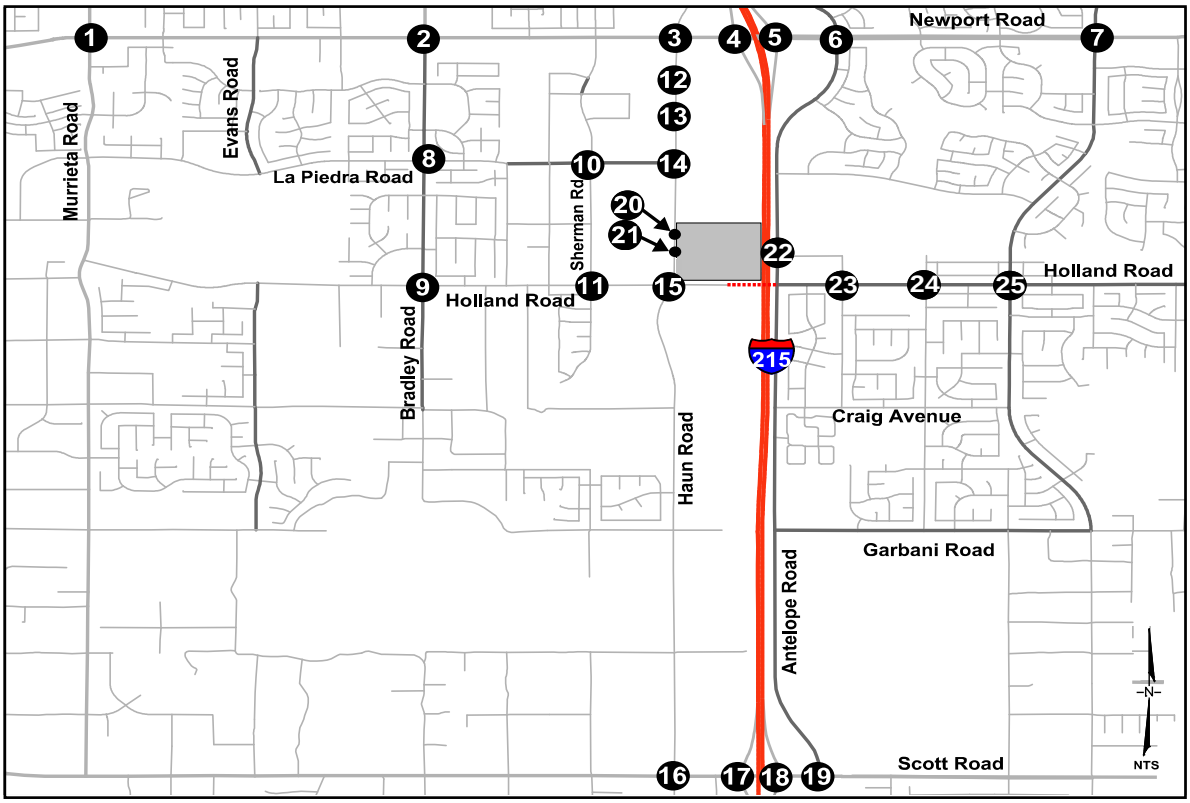
EACP = Existing Plus Ambient Growth Plus Cumulative Projects Plus Project Conditions

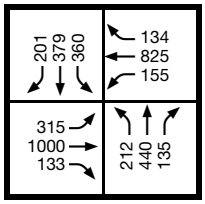
Roadway segment is expected to exceed its roadway capacity based on the City of Menifee's General Plan Roadway Classification.

* Segment's 8 fair share contribution would be used toward the Newport Road eastbound approach re-striping from Paloma Wash to the I-215 SB NB On-Ramp.

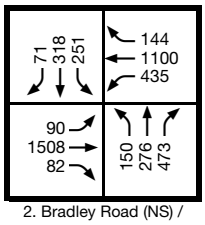
** Roadway is built to its ultimate conditions; however the intersections operate at acceptable levels of service; therefore, the roadway segments are also considered to be operating at acceptable conditions since the intersections in between are the driving factors of traffic flow.

Figure 5-I – Existing Plus Ambient Growth Plus Cumulative Projects Plus Project (2021) With Overpass AM Peak Hour Intersection Volumes

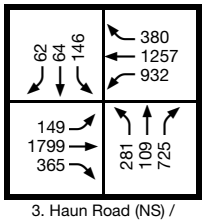




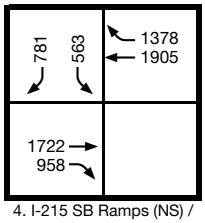
1. Murrieta Road (NS) / Newport Road (EW)



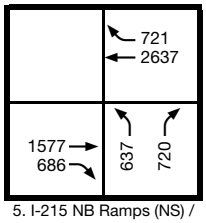
2. Bradley Road (NS) / Newport Road (EW)



3. Haun Road (NS) / Newport Road (EW)



4. I-215 SB Ramps (NS) / Newport Road (EW)



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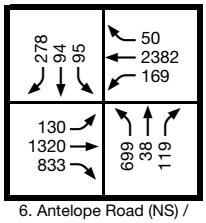
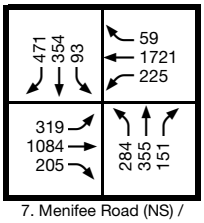
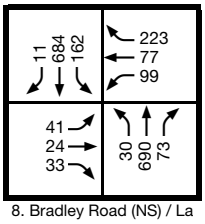


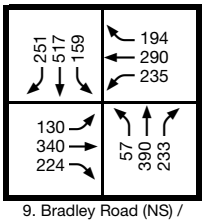
6. Antelope Road (NS) / Newport Road (EW)



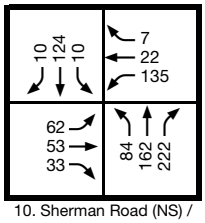
7. Menifee Road (NS) / Newport Road (EW)



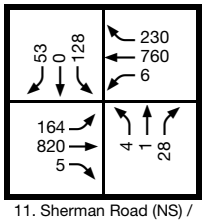
8. Bradley Road (NS) / La Piedra Road (EW)



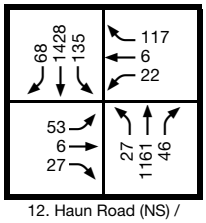
9. Bradley Road (NS) / Holland Road (EW)



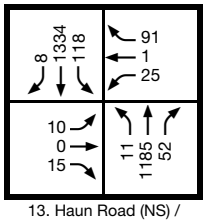
10. Sherman Road (NS) / La Piedra Road (EW)



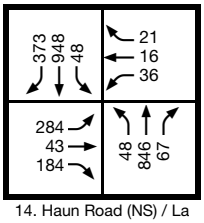
11. Sherman Road (NS) / Holland Road (EW)



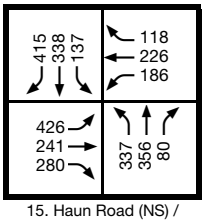
12. Haun Road (NS) / Village-Market Drive (EW)



13. Haun Road (NS) / Countryside Market Place (EW)



14. Haun Road (NS) / La Piedra Road (EW)



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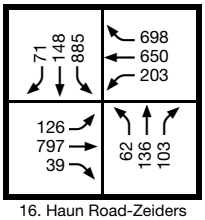
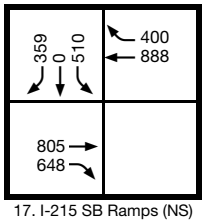
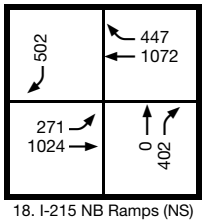


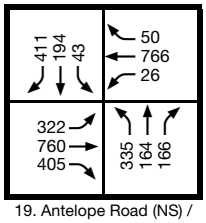
16. Haun Road-Zeiders Road (NS) / Scott Road (EW)



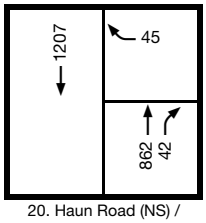
17. I-215 SB Ramps (NS) / Scott Road (EW)



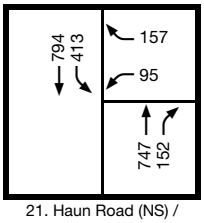
18. I-215 NB Ramps (NS) / Scott Road (EW)



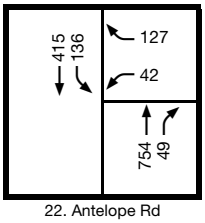
19. Antelope Road (NS) / Scott Road (EW)



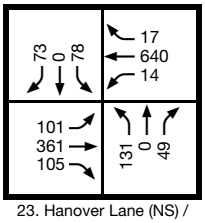
20. Haun Road (NS) / Driveway 1 (EW)



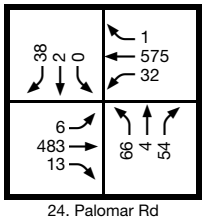
21. Haun Road (NS) / Driveway 2 (EW)



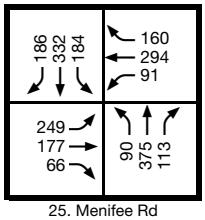
22. Antelope Rd (NS)/Albion Ln (EW)



23. Hanover Lane (NS) / Holland Road (EW)

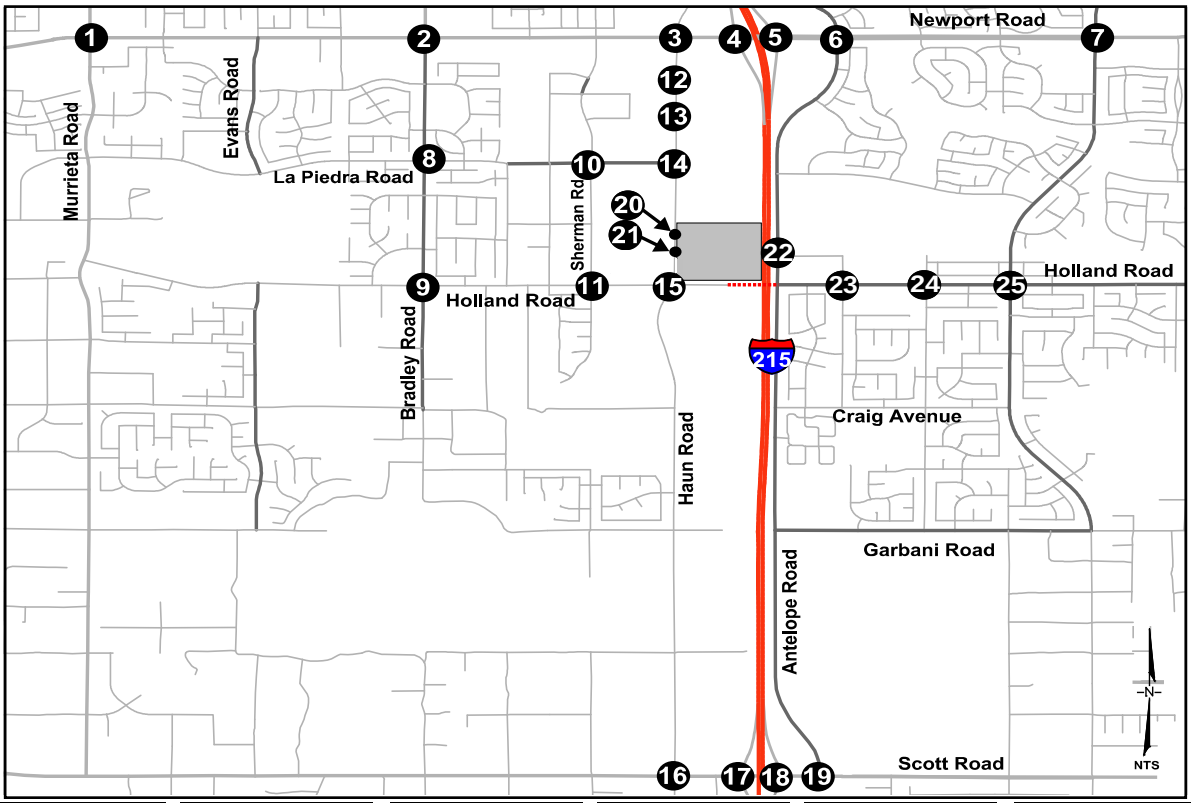


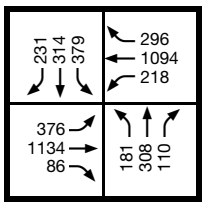
24. Palomar Rd (NS)/Holland Rd (EW)



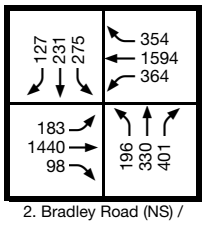
25. Menifee Rd (NS)/Holland Rd (EW)

Figure 5-J – Existing Plus Ambient Growth Plus Cumulative Projects Plus Project (2021) With Overpass PM Peak Hour Intersection Volumes

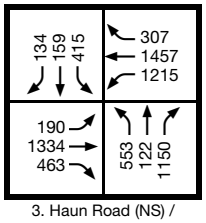




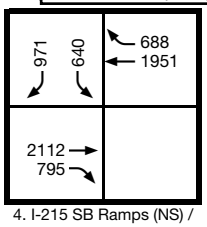
1. Murrieta Road (NS) / Newport Road (EW)



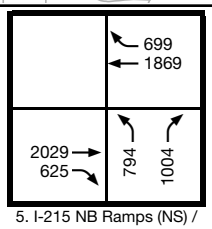
2. Bradley Road (NS) / Newport Road (EW)



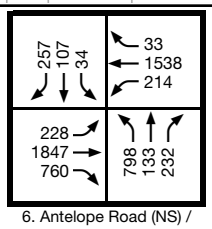
3. Haun Road (NS) / Newport Road (EW)



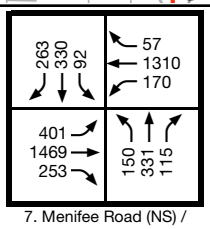
4. I-215 SB Ramps (NS) / Newport Road (EW)



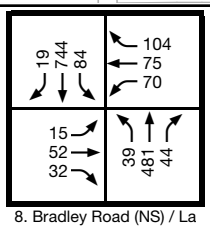
5. I-215 NB Ramps (NS) / Newport Road (EW)



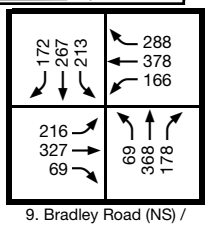
6. Antelope Road (NS) / Newport Road (EW)



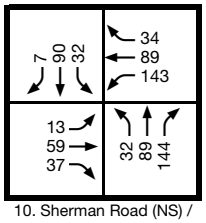
7. Menifee Road (NS) / Newport Road (EW)



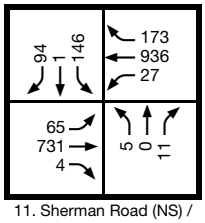
8. Bradley Road (NS) / La Piedra Road (EW)



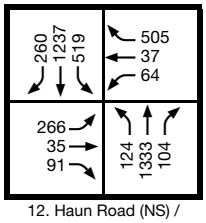
9. Bradley Road (NS) / Holland Road (EW)



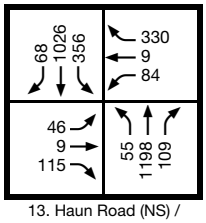
10. Sherman Road (NS) / La Piedra Road (EW)



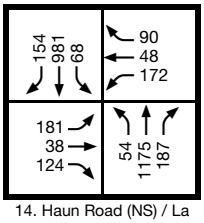
11. Sherman Road (NS) / Holland Road (EW)



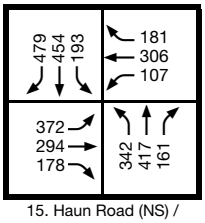
12. Haun Road (NS) / Village-Market Drive (EW)



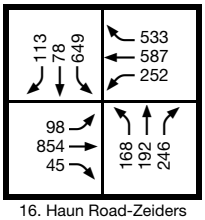
13. Haun Road (NS) / Countryside Market Place (EW)



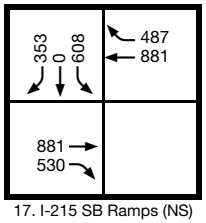
14. Haun Road (NS) / La Piedra Road (EW)



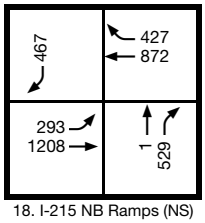
15. Haun Road (NS) / Holland Road (EW)



16. Haun Road-Zeiders Road (NS) / Scott Road (EW)



17. I-215 SB Ramps (NS) / Scott Road (EW)



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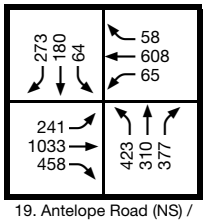
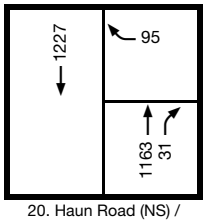
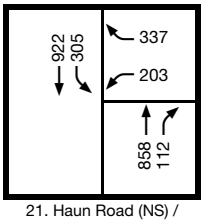


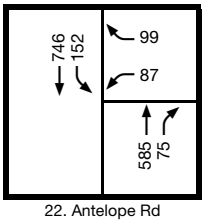
19. Antelope Road (NS) / Scott Road (EW)



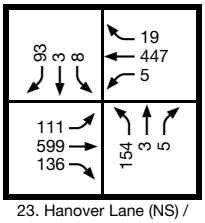
20. Haun Road (NS) / Driveway 1 (EW)



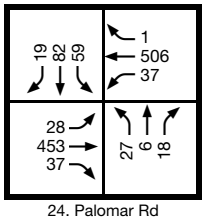
21. Haun Road (NS) / Driveway 2 (EW)



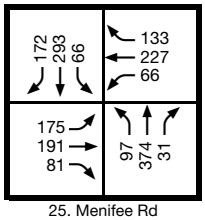
22. Antelope Rd (NS)/Albion Ln (EW)



23. Hanover Lane (NS) / Holland Road (EW)



24. Palomar Rd (NS)/Holland Rd (EW)



25. Menifee Rd (NS)/Holland Rd (EW)

Traffic Impacts and Level of Service Analysis

Proposed Improvement Measures – Existing Plus Project (2017) Conditions

Table 6-1, Table 6-2 and Figure 6-A, present the proposed improvement measures in order to achieve a satisfactory level of service at the study intersections in existing plus project (2017) conditions.

Table 6-1 – Summary of Intersection Improvements for Existing Plus Project (2017) Conditions

Intersection	Scenario	Northbound			Southbound			Eastbound			Westbound			Traffic Control
		L	T	R	L	T	R	L	T	R	L	T	R	
1. Murrieta Road (NS) / Newport Road (E/W)	Existing	1	2	1	1	2	1	1	3	1	1	3	1	Signal
2. Bradley Road (N/S) / Newport Road (E/W)	Existing	1	1	1OL	1	2	S	1	3	S	2	3	1	Signal
3. Haun Road (NS) / Newport Road (EW)	Existing	2	1	2OL	2	2	S	2	3	1	2	3	1d	Signal
4. I-215 SB Ramps (NS) / Newport Road (EW)	Existing	NA	NA	NA	1	LR	1	NA	4	1F	NA	3	1F	Signal
5. I-215 NB Ramps (NS) / Newport Road (EW)	Existing	1	LR	1	NA	NA	NA	NA	3	1F	NA	4	1F	Signal
6. Antelope Road (NS) / Newport Road (EW)	Existing	2	1	1	2	2	S	2	3	S	2	3	S	Signal
7. Menifee Road (NS) / Newport Road (EW)	Existing	2	2	1	1	2	1	1	3	S	2	3	1	Signal
8. Bradley Road (NS) / La Piedra Road (EW)	Existing	1	2	S	1	2	S	1	2	S	1	2	S	Signal
9. Bradley Road (NS) / Holland Road (EW)	Existing	1	1	S	1	1	1	1	1	S	1	1	1d	Signal
10. Town Center-Sherman Road (NS) / La Piedra Road (EW)	Existing	1	1	1	1	1	S	1	1	S	1	2	S	AWSC
11. Sherman Road (NS) / Holland Road (EW)	Existing Improvements	S ***1***	1 1	S S	S ***1***	1 1	S S	S ***1***	1 1	1 1	S ***1***	1 1	1 1	TWSC ***Signal***
12. Haun Road (NS) / Village-Market Drive (EW)	Existing	1	2	S	2	2	S	1	1	S	S	1	2OL	OWSC
13. Haun Road (NS) / Countryside Market Place (EW)	Existing	1	2	S	2	2	S	1	1	S	S	1	2OL	OWSC
14. Haun Road (NS) / La Piedra Road (EW)	Existing	1	2	S	1	2	1	S	1	1	S	1	S	Signal
15. Haun Road (NS) / Holland Road (EW)	Existing Improvements	1 1	1 1	S S	1 1	1 1	1 1	1 1	1 1	1 1	S S	1 1	S S	AWSC ***Signal***
16. Haun-Zeiders Road (NS) / Scott Road (EW)	Existing	1	1	1	1	A	NA	1	1	S	1	1	1	Signal
17. I-215 SB Ramps (NS) / Scott Road (EW)	Existing	NA	NA	NA	S	1	1	NA	1	1	1	1	NA	Signal
18. I-215 NB Ramps (NS) / Scott Road (EW)	Existing	S	1	1	NA	NA	NA	1	1	NA	NA	1	1	Signal
19. Antelope Road (NS) / Scott Road (EW)	Existing	2	1	1	1	1	1	1	1	1	1	1	1	Signal
20. Haun Road (NS) / Driveway 1 (EW)	Existing Project Design Features	NA NA	1 ***2***	NA ***S***	NA NA	2 2	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA ***1***	NA ***OWSC***
21. Haun Road (NS) / Driveway 2 (EW)	Existing Project Design Features	NA NA	1 ***2***	NA ***S***	NA ***2***	2 2	NA NA	NA NA	NA NA	NA NA	NA ***1***	NA NA	NA ***1OL***	NA ***Signal***

OWSC = One Way Stop Controlled; TWSC = Two Way Stop Controlled; AWSC = All Way Stop Controlled.
NA = Not Applicable
S = Lane is shared with through movement
LR = Lane shared by left-turn and right-turn movements
d = Defacto right-turn lane
OL= Overlaping right-turn
F = Free right-turn movement
A = Lane shared by left-turn, through and right-turn movements

Table 6-2 – Summary of Roadway Improvements for Existing Plus Project Conditions

Roadway Segment[1]	Roadway Classification	Lanes	
		Without Imp.	With Imp.
Bradley Road			
1. Park Avenue to Newport Road*	Secondary	2	***4***
2. Newport Road to La Piedra Road**	Major	4	*4*
Scott Road			
13. Haun Road to I-215 SB Ramps***	Urban Arterial	2	***4***
14. I-215 NB Ramps to Antelope Road***	Urban Arterial	2	***6***

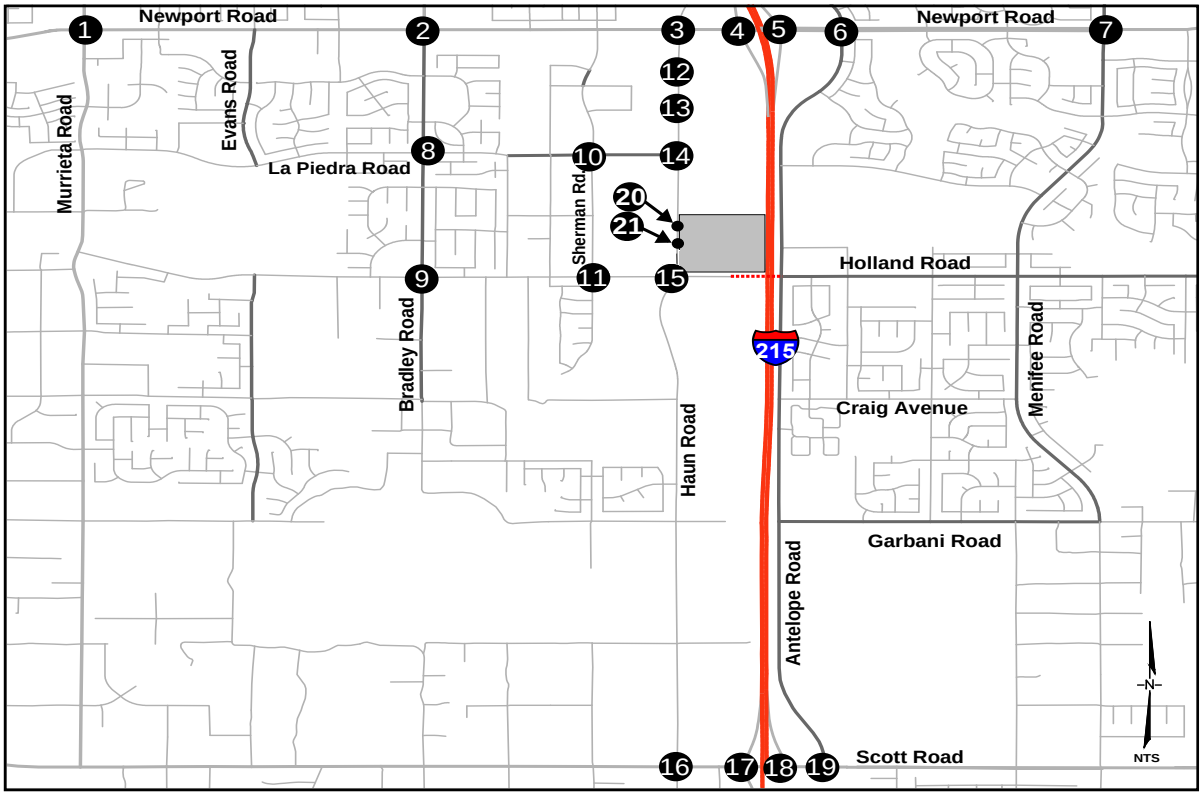
[1]Roadway segment is in he City of Menifee

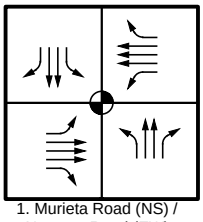
* Roadway is failing under existing conditions project will contribute fair share toward the proposed improvement.

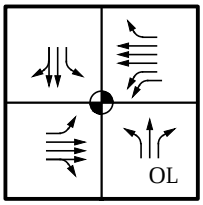
** Roadway is built to its ultimate conditions, no further improvements have been proposed in accordance within the City of Menifee's General Plan; therefore, fair share would be collected toward the failing roadway segment.

*** Future near term improvement of the Scott Interchange prior to the project's opening year would result in the widening of this failing segment, which would improve existing conditions.

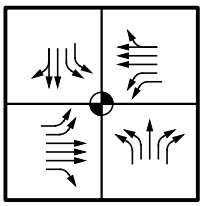
Figure 6-A – Summary of Intersection Improvements for Existing Plus Project (2017) Conditions

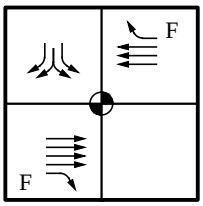



1. Murieta Road (NS) / Newport Road (EW)

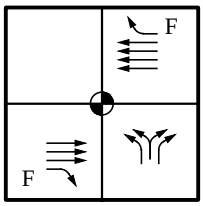


2. Bradley Road (NS) / Newport Road (EW)

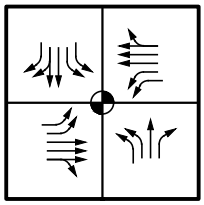

3. Haun Road (NS) / Newport Road (EW)

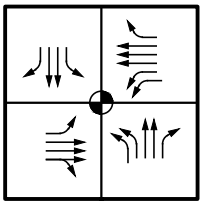


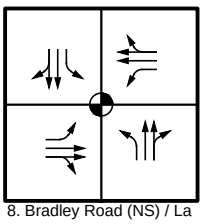
4. I-215 SB Ramps (NS) / Newport Road (EW)

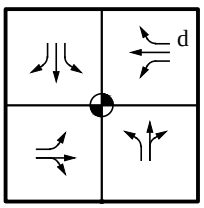


5. I-215 NB Ramps (NS) / Newport Road (EW)

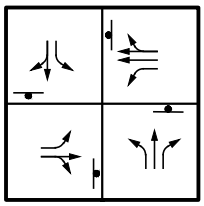

6. Antelope Road (NS) / Newport Road (EW)

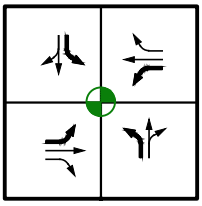

7. Menifee Road (NS) / Newport Road (EW)

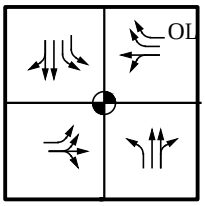

8. Bradley Road (NS) / La Piedra Road (EW)



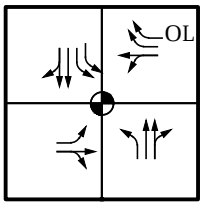
9. Bradley Road (NS) / Holland Road (EW)


10. Sherman Road (NS) / La Piedra Road (EW)

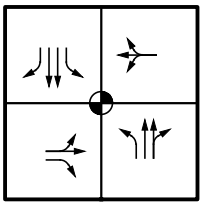

11. Sherman Road (NS) / Holland Road (EW)

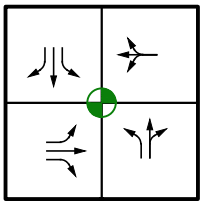


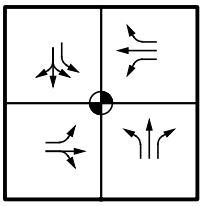
12. Haun Road (NS) / Village Market Drive (EW)

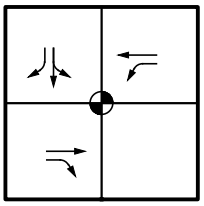


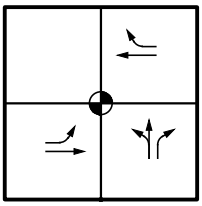
13. Haun Road (NS) / Countryside Marketplace (EW)

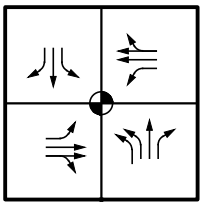

14. Haun Road (NS) / La Piedra Road (EW)

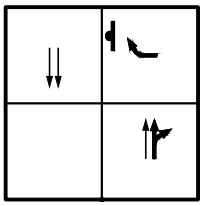

15. Haun Road (NS) / Holland Road (EW)

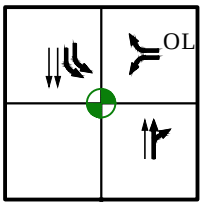

16. Haun Road (NS) / Scott Road (EW)


17. I-215 SB Ramps (NS) / Scott Road (EW)


18. I-215 NB Ramps (NS) / Scott Road (EW)


19. Antelope Road (NS) / Scott Road (EW)


20. Haun Road / Driveway 1 (EW)



21. Haun Road / Driveway 2 (EW)

LEGEND

- Existing Traffic Signal
- Existing Stop Sign
- Existing Lane Geometrics
- d Existing Defacto Right Turn
- F Existing Free Right Turn Lane
- OL Existing Overlap Right Turn
- Proposed Traffic Signal
- Proposed Stop Sign
- OL Proposed Overlap Right Turn
- Proposed Lane Geometrics

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Proposed Improvement Measures – Existing Plus Ambient Growth Plus Cumulative Projects Plus Project (2021) Without Overpass Conditions

Table 6-3, Table 6-4 and Figure 6-B, present the proposed improvement measures in order to achieve a satisfactory level of service at the study intersections in existing plus ambient growth plus other cumulative projects plus project (2021) without overpass conditions.

Table 6-3 – Summary of Intersection Improvements for Existing Plus Ambient Growth Plus Cumulative Projects Plus Project (2021) Without Overpass Conditions

Intersection	Scenario	Northbound			Southbound			Eastbound			Westbound			Traffic Control
		L	T	R	L	T	R	L	T	R	L	T	R	
1. Murrieta Road (NS) / Newport Road (E/W)	EAC No Overpass	1	2	1	1	2	1	1	3	1	1	3	1	Signal
2. Bradley Road (N/S) / Newport Road (E/W)	EAC No Overpass	1	1	1OL	1	2	S	1	3	S	2	3	1	Signal
3. Haun Road (NS) / Newport Road (EW)	EAC No Overpass	2	1	2OL	2	2	S	2	3	1	2	3	1d	Signal
4. I-215 SB Ramps (NS) / Newport Road (EW)	EAC No Overpass	NA	NA	NA	1	LR	1	NA	4	1F	NA	3	1F	Signal
5. I-215 NB Ramps (NS) / Newport Road (EW)	EAC No Overpass	1	LR	1	NA	NA	NA	NA	3	1F	NA	4	1F	Signal
6. Antelope Road (NS) / Newport Road (EW)	EAC No Overpass Improvements	2 2	1 1	1 1	2 2	2 2	S S	2 2	3 3	S ***1***	2 2	3 3	S S	Signal Signal
7. Menifee Road (NS) / Newport Road (EW)	EAC No Overpass Improvements	2 2	2 2	1 1	1 1	2 2	1 ***1OL***	1 1	3 3	S S	2 2	3 3	1 1	Signal Signal
8. Bradley Road (NS) / La Piedra Road (EW)	EAC No Overpass	1	2	S	1	2	S	1	2	S	1	2	S	Signal
9. Bradley Road (NS) / Holland Road (EW)	EAC No Overpass Improvements	1 1	1 1	S S	1 1	1 1	1 1	1 1	1 1	S ***1***	1 1	1 1	1d 1d	Signal Signal
10. Town Center-Sherman Road (NS) / La Piedra Road (EW)	EAC No Overpass	1	1	1	1	1	S	1	1	S	1	2	S	Signal
11. Sherman Road (NS) / Holland Road (EW)	EAC No Overpass Improvements	S ***1***	1 1	S S	S ***1***	1 1	S S	S ***1***	1 1	1 1	S ***1***	1 1	1 1	TWSC ***Signal***
12. Haun Road (NS) / Village-Market Drive (EW)	EAC No Overpass	1	2	S	2	2	S	1	1	S	S	1	2OL	OWSC
13. Haun Road (NS) / Countryside Market Place (EW)	EAC No Overpass	1	2	S	2	2	S	1	1	S	S	1	2OL	OWSC
14. Haun Road (NS) / La Piedra Road (EW)	EAC No Overpass	1	2	S	1	2	1	S	1	1	S	1	S	Signal
15. Haun Road (NS) / Holland Road (EW)	EAC No Overpass Improvements	1 1	1 ***2***	S S	1 1	1 ***2***	1 1	1 1	1 1	1 1	S ***1***	1 1	S S	AWSC ***Signal***
16. Haun-Zeiders Road (NS) / Scott Road (EW)	EAC No Overpass Improvements	1 1	1 1	1 1	1 1	A A	NA NA	1 1	2 2	S S	1 1	2 2	1 ***1OL***	Signal Signal
17. I-215 SB Ramps (NS) / Scott Road (EW)	EAC No Overpass	NA	NA	NA	1	LT	2	NA	2	1	NA	2	1	Signal
18. I-215 NB Ramps (NS) / Scott Road (EW)	EAC No Overpass	NA	TR	1	NA	NA	2	1	2	NA	NA	2	1	Signal
19. Antelope Road (NS) / Scott Road (EW)	EAC No Overpass	2	2	1	1	1	1	2	2	1	2	3	S	Signal
20. Haun Road (NS) / Driveway 1 (EW)	EAC No Overpass Project Design Features	NA NA	1 ***2***	NA ***S***	NA NA	2 2	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA ***1***	NA ***OWSC***
21. Haun Road (NS) / Driveway 2 (EW)	EAC No Overpass Project Design Features	NA NA	1 ***2***	NA ***S***	NA ***2***	2 2	NA NA	NA NA	NA NA	NA NA	NA ***1***	NA NA	NA ***1OL***	NA ***Signal***

OWSC = One Way Stop Controlled; TWSC = Two Way Stop Controlled; AWSC = All Way Stop Controlled.
NA = Not Applicable
S = Lane is shared with through movement
LT = Lane shared by left-turn and through movements
TR = Lane shared by through and right-turn movements
d = Defacto right-turn lane
OL= Overlaping right-turn
F = Free right-turn movement

Table 6-4 – Summary of Roadway Improvements for Existing Plus Ambient Growth Plus Cumulative Projects Plus Project (2021) Without Overpass Conditions

Roadway Segment[1]	Roadway Classification	Lanes	
		Without Imp.	With Imp.
Bradley Road			
1. Park Avenue to Newport Road	Secondary	2	***4***
Haun Road			
4. Newport Road to La Piedra Road**	Major	4	*4*
5. La Piedra Road to Holland Road	Major	3	***4***
6. Holland Road to Scott Road	Major	2	***4***
Newport Road			
8. Bradley Road to Haun Road*	Urban Arterial	6	*6*
La Piedra Road			
12. Sherman Road to Haun Road**	Secondary	4	*4*
Scott Road			
13. Haun Road to I-215 SB Ramps***	Urban Arterial	4	***6***
14. I-215 NB Ramps to Antelope Road***	Urban Arterial	4	***6***

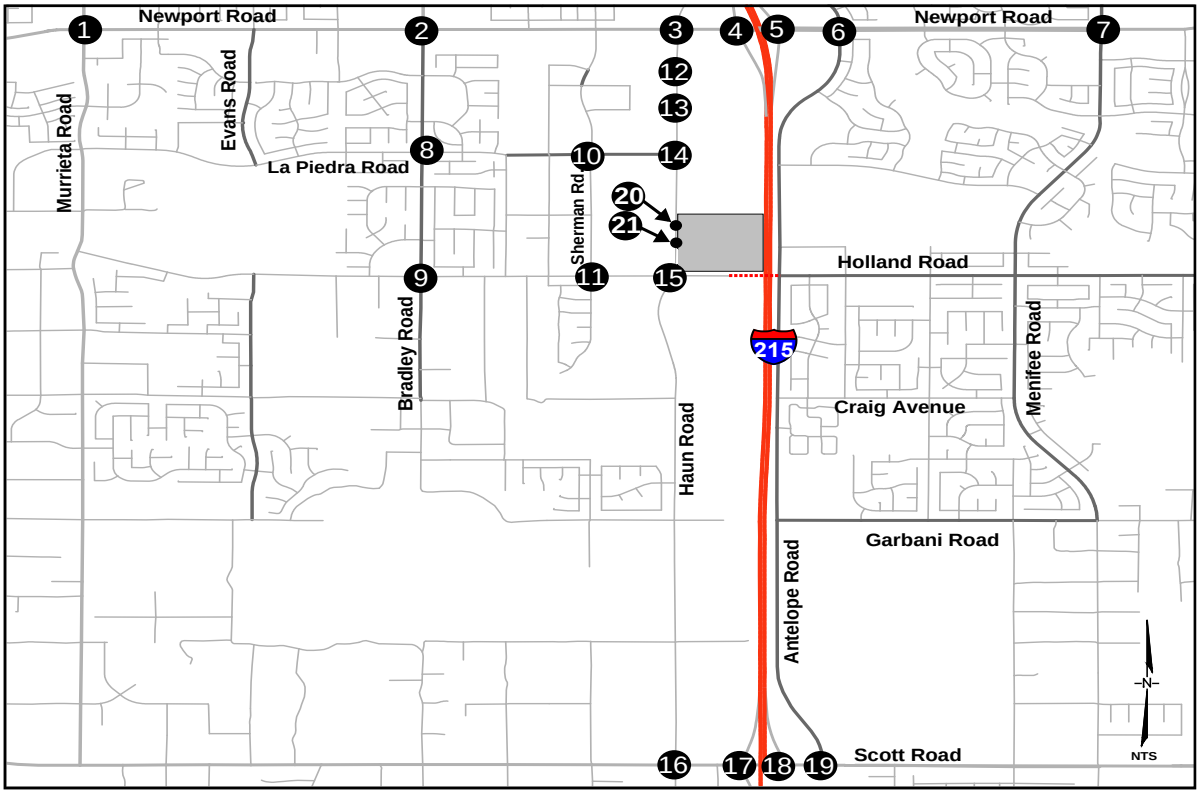
[1]Roadway segment is in he City of Menifee

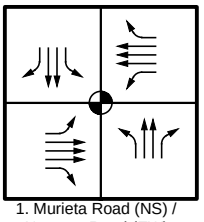
* Segment's 8 fair share contribution would be used toward the Newport Road eastbound approach re-striping from Paloma Wash to the I-215 SB NB On-Ramp.

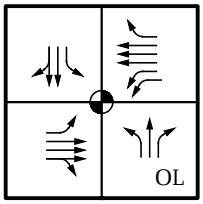
** Roadway is built to its ultimate conditions; however the intersections operate at acceptable levels of service; therefore, the roadway segments are also considered to be operating at acceptable conditions since the intersections in between are the driving factors of traffic flow.

*** Phase II improvement of the Scott Interchange prior to the project's opening year would result in the widening of this failing segmentof this failing segment, which would improve conditions. Also, Phase I of the Scott Road Interchange project improves the intersections operate at acceptable levels of service; therefore, the roadway segments are also considered to be operating at acceptable conditions since the intersections in between are the driving factors of traffic flow.

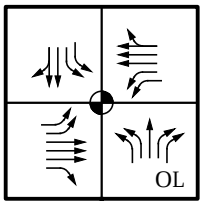
Figure 6-B – Summary of Intersection Improvements for Existing Plus Ambient Growth Plus Cumulative Projects Plus Project (2021) Without Overpass Conditions



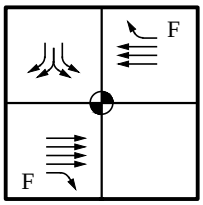

1. Murieta Road (NS) / Newport Road (EW)



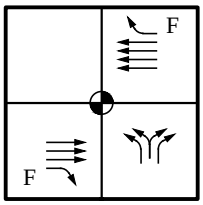
2. Bradley Road (NS) / Newport Road (EW)



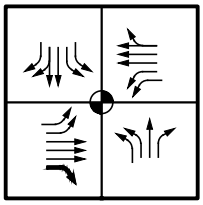
3. Haun Road (NS) / Newport Road (EW)

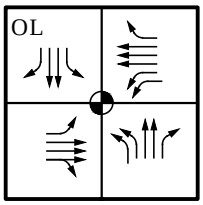


4. I-215 SB Ramps (NS) / Newport Road (EW)

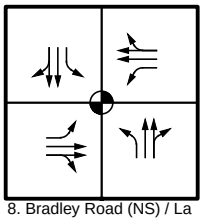


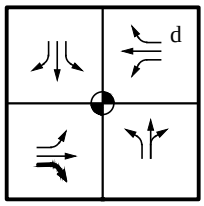
5. I-215 NB Ramps (NS) / Newport Road (EW)


6. Antelope Road (NS) / Newport Road (EW)

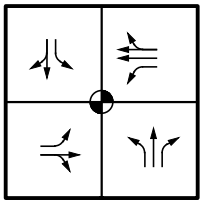


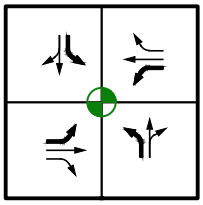
7. Menifee Road (NS) / Newport Road (EW)

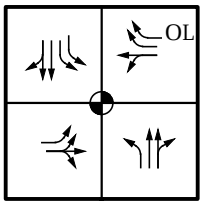

8. Bradley Road (NS) / La Piedra Road (EW)



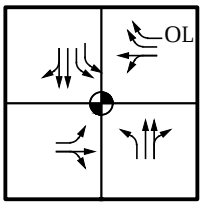
9. Bradley Road (NS) / Holland Road (EW)


10. Sherman Road (NS) / La Piedra Road (EW)

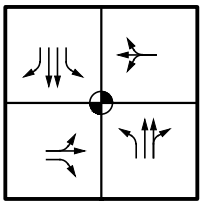

11. Sherman Road (NS) / Holland Road (EW)

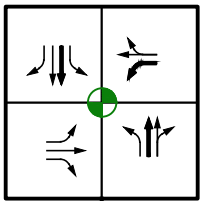


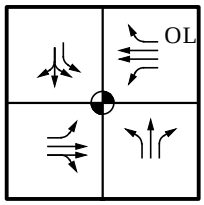
12. Haun Road (NS) / Village Market Drive (EW)



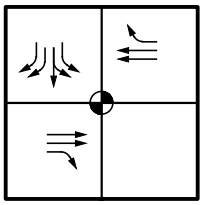
13. Haun Road (NS) / Countryside Marketplace (EW)

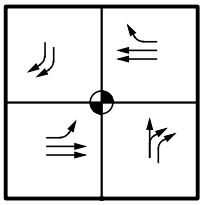

14. Haun Road (NS) / La Piedra Road (EW)

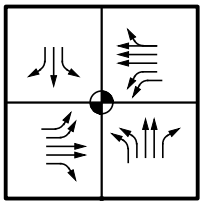

15. Haun Road (NS) / Holland Road (EW)

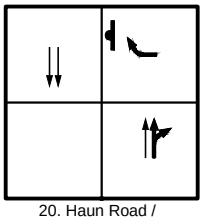


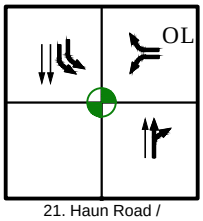
16. Haun Road (NS) / Scott Road (EW)


17. I-215 SB Ramps (NS) / Scott Road (EW)


18. I-215 NB Ramps (NS) / Scott Road (EW)


19. Antelope Road (NS) / Scott Road (EW)


20. Haun Road / Driveway 1 (EW)



21. Haun Road / Driveway 2 (EW)

LEGEND

- Existing Traffic Signal
- Existing Stop Sign
- Existing Lane Geometrics
- d Existing Defacto Right Turn
- F Existing Free Right Turn Lane
- OL Existing Overlap Right Turn
- Proposed Traffic Signal
- Proposed Stop Sign
- OL Proposed Overlap Right Turn
- Proposed Lane Geometrics

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Proposed Improvement Measures – Existing Plus Ambient Growth Plus Cumulative Plus Project (2021) with Overpass Conditions

Table 6-5, Table 6-6 and Figure 6-C, present the proposed improvement measures in order to achieve a satisfactory level of service at the study intersections in existing plus ambient growth plus other cumulative projects plus project (2021) with overpass conditions.

Table 6-5 – Summary of Intersection Improvements for Existing Plus Ambient Growth Plus Cumulative Projects Plus Project (2021) With Overpass Conditions

Intersection	Scenario	Northbound			Southbound			Eastbound			Westbound			Traffic Control
		L	T	R	L	T	R	L	T	R	L	T	R	
1. Murrieta Road (NS) / Newport Road (E/W)	EAC With Overpass	1	2	1	1	2	1	1	3	1	1	3	1	Signal
2. Bradley Road (N/S) / Newport Road (E/W)	EAC With Overpass	1	1	1OL	1	2	S	1	3	S	2	3	1	Signal
3. Haun Road (NS) / Newport Road (EW)	EAC With Overpass	2	1	2OL	2	2	S	2	3	1	2	3	1d	Signal
4. I-215 SB Ramps (NS) / Newport Road (EW)	EAC With Overpass	NA	NA	NA	1	LR	1	NA	4	1F	NA	3	1F	Signal
5. I-215 NB Ramps (NS) / Newport Road (EW)	EAC With Overpass	1	LR	1	NA	NA	NA	NA	3	1F	NA	4	1F	Signal
6. Antelope Road (NS) / Newport Road (EW)	EAC With Overpass	2	1	1	2	2	S	2	3	S	2	3	S	Signal
7. Menifee Road (NS) / Newport Road (EW)	EAC With Overpass Improvements	2 2	2 2	1 1	1 1	2 2	1 ***1OL***	1 1	3 3	S S	2 2	3 3	1 1	Signal Signal
8. Bradley Road (NS) / La Piedra Road (EW)	EAC With Overpass	1	2	S	1	2	S	1	2	S	1	2	S	Signal
9. Bradley Road (NS) / Holland Road (EW)	EAC With Overpass Improvements	1 1	1 1	S S	1 1	1 1	1 1	1 1	1 1	S ***1***	1 1	1 1	1d 1d	Signal Signal
10. Town Center-Sherman Road (NS) / La Piedra Road (EW)	EAC With Overpass	1	1	1	1	1	S	1	1	S	1	2	S	Signal
11. Sherman Road (NS) / Holland Road (EW)	EAC With Overpass Improvements	S ***1***	1 1	S S	S ***1***	1 1	S S	S ***1***	1 1	1 1	S ***1***	1 1	1 1	TWSC ***Signal***
12. Haun Road (NS) / Village-Market Drive (EW)	EAC With Overpass	1	2	S	2	2	S	1	1	S	S	1	2OL	OWSC
13. Haun Road (NS) / Countryside Market Place (EW)	EAC With Overpass	1	2	S	2	2	S	1	1	S	S	1	2OL	OWSC
14. Haun Road (NS) / La Piedra Road (EW)	EAC With Overpass	1	2	S	1	2	1	S	1	1	S	1	S	Signal
15. Haun Road (NS) / Holland Road (EW)	EAC With Overpass Improvements	1 1	1 ***2***	1 ***S***	1 1	1 ***2***	1 ***1OL***	1 1	1 1	1 1	1 1	2 2	S S	Signal
16. Haun-Zeiders Road (NS) / Scott Road (EW)	EAC With Overpass	1	1	1	1	A	NA	1	2	S	1	2	1	Signal
17. I-215 SB Ramps (NS) / Scott Road (EW)	EAC With Overpass	NA	NA	NA	1	LT	2	NA	2	1	NA	2	1	Signal
18. I-215 NB Ramps (NS) / Scott Road (EW)	EAC With Overpass	NA	TR	1	NA	NA	2	1	2	NA	NA	2	1	Signal
19. Antelope Road (NS) / Scott Road (EW)	EAC With Overpass	2	2	1	1	1	1	2	2	1	2	3	S	Signal
20. Haun Road (NS) / Driveway 1 (EW)	EAC With Overpass Project Design Features	NA NA	1 ***2***	NA ***S***	NA NA	2 2	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA ***1***	NA ***OWSC***
21. Haun Road (NS) / Driveway 2 (EW)	EAC With Overpass Project Design Features	NA NA	1 ***2***	NA ***S***	NA ***2***	2 2	NA NA	NA NA	NA NA	NA NA	NA ***1***	NA NA	NA ***1OL***	NA ***Signal***
22. Antelope Road (NS) / Albion Lane (EW)	EAC With Overpass Project Design Features	NA NA	2 2	S S	1 1	1 1	NA NA	NA NA	NA NA	NA NA	1 1	NA NA	1 1	NA ***OWSC***
23. Hanover Lane (NS) / Holland Road (EW)	EAC With Overpass	S	1	S	S	1	S	1	1	1	1	1	S	Signal
24. Palomar Road (NS) / Holland Road (EW)	EAC With Overpass Improvements	S S	1 1	S S	S S	1 1	S S	S ***1***	1 1	S S	S ***1***	1 1	1 ***S***	TWSC ***Signal***
25. Menifee Road (NS) / Holland Road (EW)	EAC With Overpass	1	2	S	1	2	S	1	2	S	1	2	S	AWSC

OWSC = One Way Stop Controlled; TWSC = Two Way Stop Controlled; AWSC = All Way Stop Controlled.
NA = Not Applicable
S = Lane is shared with through movement
LT = Lane shared by left-turn and through movements
TR = Lane shared by through and right-turn movements
OL = Overlaping right-turn
F = Free right-turn movement

Table 6-6 – Summary of Roadway Improvements for Existing Plus Ambient Growth Plus Cumulative Projects Plus Project (2021) With Overpass Conditions

Roadway Segment[1]	Roadway Classification	Lanes	
		Without Imp.	With Imp.
Bradley Road			
1. Park Avenue to Newport Road	Secondary	2	***4***
Haun Road			
4. Newport Road to La Piedra Road**	Major	4	*4*
5. La Piedra Road to Holland Road	Major	3	***4***
6. Holland Road to Scott Road	Major	2	***4***
Newport Road			
8. Bradley Road to Haun Road*	Urban Arterial	6	*6*
La Piedra Road			
12. Sherman Road to Haun Road**	Secondary	4	*4*
Scott Road			
14. I-215 NB Ramps to Antelope Road***	Urban Arterial	4	***6***

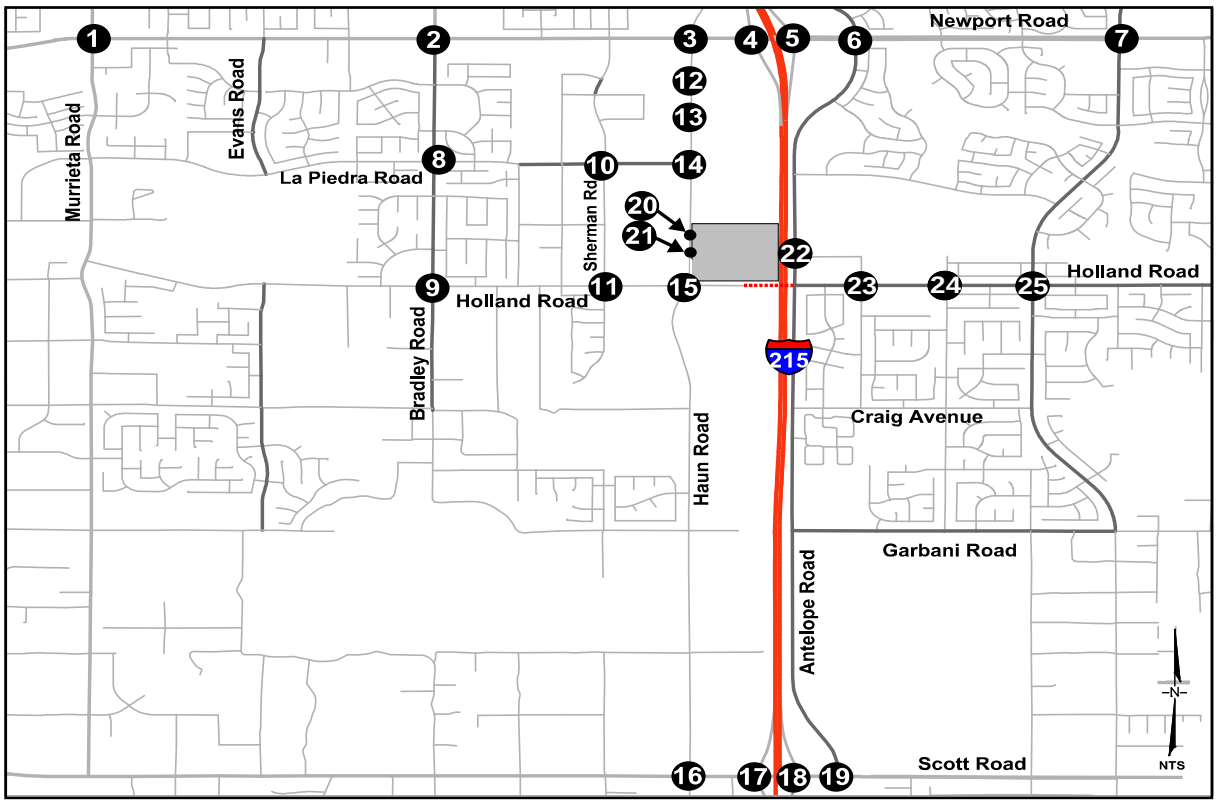
[1]Roadway segment is in he City of Menifee

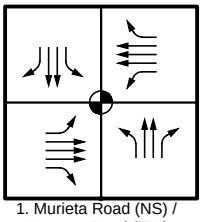
* Segment's 8 fair share contribution would be used toward the Newport Road eastbound approach re-striping from Paloma Wash to the I-215 SB NB On-Ramp.

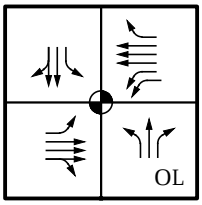
** Roadway is built to its ultimate conditions; however the intersections operate at acceptable levels of service; therefore, the roadway segments are also considered to be operating at acceptable conditions since the intersections in between are the driving factors of traffic flow.

*** Phase II improvement of the Scott Interchange prior to the project's opening year would result in the widening of this failing segmentof this failing segment, which would improve conditions. Also, Phase I of the Scott Road Interchange project improves the intersections operate at acceptable levels of service; therefore, the roadway segments are also considered to be operating at acceptable conditions since the intersections in between are the driving factors of traffic flow.

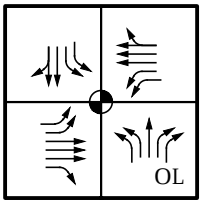
Figure 6-C – Summary of Intersection Improvements for Existing Plus Ambient Growth Plus Cumulative Projects Plus Project (2021) With Overpass Conditions



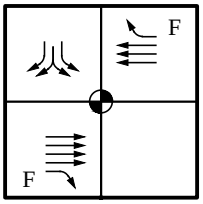

1. Murieta Road (NS) / Newport Road (EW)



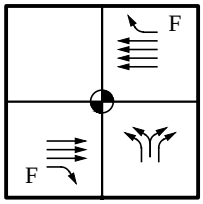
2. Bradley Road (NS) / Newport Road (EW)



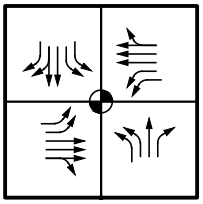
3. Haun Road (NS) / Newport Road (EW)

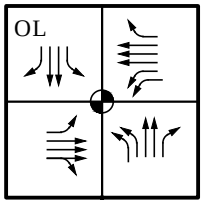


4. I-215 SB Ramps (NS) / Newport Road (EW)

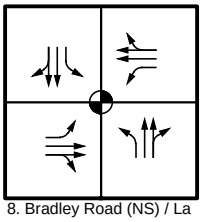


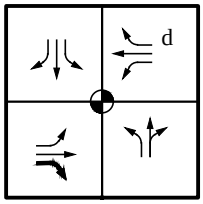
5. I-215 NB Ramps (NS) / Newport Road (EW)


6. Antelope Road (NS) / Newport Road (EW)

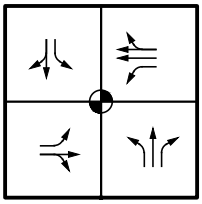


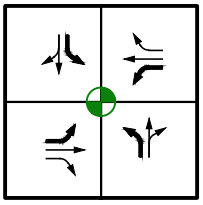
7. Menifee Road (NS) / Newport Road (EW)

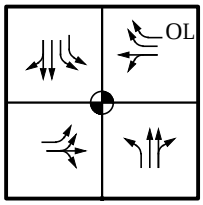

8. Bradley Road (NS) / La Piedra Road (EW)



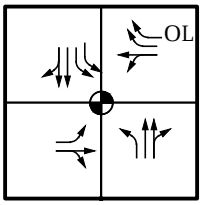
9. Bradley Road (NS) / Holland Road (EW)


10. Sherman Road (NS) / La Piedra Road (EW)

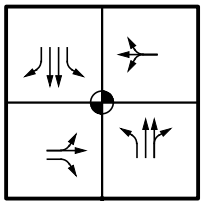

11. Sherman Road (NS) / Holland Road (EW)

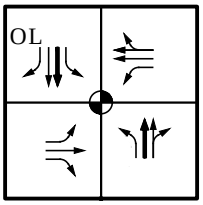


12. Haun Road (NS) / Village Market Drive (EW)

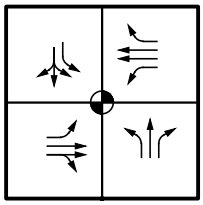


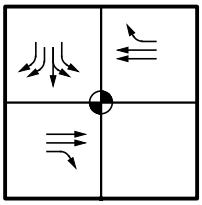
13. Haun Road (NS) / Countryside Marketplace (EW)

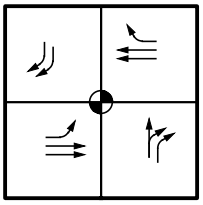

14. Haun Road (NS) / La Piedra Road (EW)

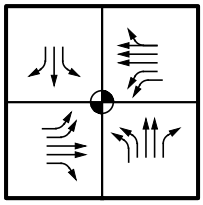


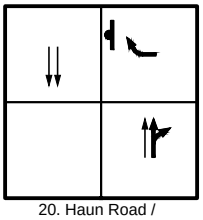
15. Haun Road (NS) / Holland Road (EW)

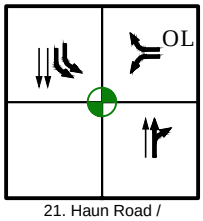

16. Haun Road (NS) / Scott Road (EW)


17. I-215 SB Ramps (NS) / Scott Road (EW)

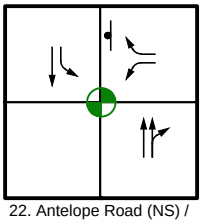

18. I-215 NB Ramps (NS) / Scott Road (EW)

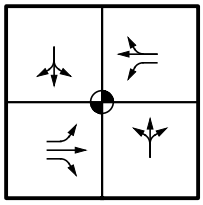

19. Antelope Road (NS) / Scott Road (EW)

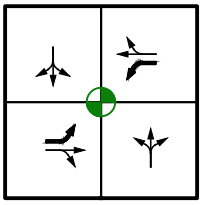

20. Haun Road / Driveway 1 (EW)

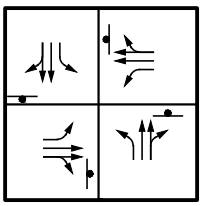


21. Haun Road / Driveway 2 (EW)


22. Antelope Road (NS) / Albion Lane (EW)


23. Hanover Lane (NS) / Holland Road (EW)


24. Palomar Road (NS) / Holland Road (EW)


25. Menifee Road (NS) / Holland Road (EW)

LEGEND

- Existing Traffic Signal
- Existing Stop Sign
- Existing Lane Geometrics
- d Existing Defacto Right Turn
- F Existing Free Right Turn Lane
- OL Existing Overlap Right Turn
- Proposed Traffic Signal
- Proposed Stop Sign
- OL Proposed Overlap Right Turn
- Proposed Lane Geometrics

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Traffic Signal Warrants

The California MUTCD states that the satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal. Peak hour traffic signal warrant analysis should only be considered as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal. Intersections that exceed the peak hour warrant are more likely to meet one or more of the other volume-based signal warrants. The MUTCD also advises that a traffic control signal should not be installed unless:

- One or more of the traffic signal warrants are satisfied;
- An engineering study indicates that installing a traffic control signal will improve the overall safety and/or operation of the intersection; and
- It will not seriously disrupt progressive traffic flow.

For existing (2017) traffic conditions, the peak hour traffic control signal warrant is satisfied for the following study area unsignalized intersection (see Appendix D for technical calculations):

15. Haun Road (NS) / Holland Road (EW)

For existing plus project (2017) traffic conditions, the peak hour traffic control signal warrant is satisfied for the following study area unsignalized intersections (see Appendix D for technical calculations):

21. Haun Road (NS) / Driveway 2 (EW)

For existing plus ambient growth plus other cumulative projects (2021) without overpass traffic conditions, the peak hour traffic control signal warrant is satisfied for the following study area unsignalized intersection (see Appendix D for technical calculations):

11. Town Center Dr-Sherman Road (NS) / Holland Road (EW)

For existing plus ambient growth plus other cumulative projects plus project (2021) without overpass traffic conditions, no additional study area unsignalized intersections are expected to meet the peak hour traffic control signal warrant (see Appendix D for technical calculations).

For existing plus ambient growth plus other cumulative projects (2021) with overpass traffic conditions, the peak hour traffic control signal warrant is satisfied for the following study area unsignalized intersections (see Appendix D for technical calculations):

22. Antelope Road (NS) /Albion Lane (EW)
24. Palomar Road (NS)/Holland Road (EW)
25. Menifee Road (NS)/Holland Road (EW)

For existing plus ambient growth plus other cumulative projects plus project (2021) with overpass traffic conditions, no additional study area unsignalized intersections are expected to meet the peak hour traffic control signal warrant (see Appendix D for technical calculations).

The following study area unsignalized intersection does not satisfy the peak hour traffic signal warrant in any study scenario (see Appendix D for technical calculations):

10. Town Center-Sherman Road (NS) / La Piedra Road (EW)

Table 6-7 – Traffic Signal Warrants Summary

	Intersection	Scenarios					
		E	EP	EAC	EACP	EAC2	EACP2
10.	Sherman Road/La Piedra Road	NO	NO	NO	NO	NO	NO
11.	Sherman Road/Holland Road	YES	YES	YES	YES	YES	YES
15.	Haun Road/Holland Road	YES	YES	YES	YES	*N/A*	*N/A*
21.	Haun Road/Driveway 2	*N/A*	YES	*N/A*	YES	*N/A*	YES
22.	Antelope Road/Albion Lane	*N/A*	*N/A*	*N/A*	*N/A*	YES	YES
24.	Palomar Road/Holland Road	*N/A*	*N/A*	*N/A*	*N/A*	YES	YES
25.	Menifee Road/Holland Road	*N/A*	*N/A*	*N/A*	*N/A*	YES	YES

E = Existing Conditions; EP = Existing Plus Project Conditions
EAC = Existing Plus Ambient Growth Plus Cumulative Projects Conditions No Overpass
EACP = Existing Plus Ambient Growth Plus Cumulative Projects Plus Project Conditions No Overpass
EAC2 = Existing Plus Ambient Growth Plus Cumulative Projects Conditions +Overpass
EACP2 = Existing Plus Ambient Growth Plus Cumulative Projects Plus Project Conditions +Overpass

▪ Circulation Recommendations for Project Design Features and Mitigation Measures

This traffic impact analysis demonstrates that the direct traffic impacts generated by the proposed JPN Haun and Holland Commercial Center can be mitigated to meet the required level of service if the following recommended improvements are adopted. Project design features are improvements that the project had anticipated and is 100 percent the project's responsibility because the improvements are proposed to provide access and improve safety for the proposed project. Mitigation measures are proposed as a result of intersection and/or roadway segment impact due to the addition of project traffic. A fair share percentage responsibility or a project responsibility is determined based on the impacts.

Roadway Segment Recommendations

Project Design Features

- Construct full-width improvements on all internal roadways.
- Construct half width improvements on the easterly side of Haun Road at its ultimate cross-section as a Major Road adjacent to project boundary line. All roadways designated as major under the general plan are required to have a median constructed. The project would contribute toward the construction of the median on Haun Road at the project frontage.
- Dual left-turn lanes would be provided at the main project acess (Haun Road and Driveway 2), the standard cross-section of Haun Road is proposed as 90' (which incudes two 8 feet bike lanes, four 12 feet through lanes, two 11 feet left-turn lanes, and one 4 feet median). The cross-section of a roadway classified as Major is expected to be 76 feet curb-to-curb (which incudes two 8 feet bike lanes, four 12 feet through lanes, and one 12 feet median) in accordance with the City's General Plan. A conceptual striping exhibit has been provided on Appendix I. The conceptual striping exhibit shows the right-of-way that the project will be dedicating to accommodate Haun's Road ultimate cross-section of 90 feet along the project frontage. Also, further north Haun Road's cross-section ranges from 90 feet to 105 feet curb to curb between la Piedra Road and Newport Road.

Mitigation Measures

Project contribution towards mitigation measure is indicated "*italicized*" next to the roadway segment.

1. Bradley Road – Park Avenue to Newport Road – *Fair Share Contribution*
5. Haun Road – La Piedra Road to Holland Road – *Fair Share Contribution*
    - Construction of one additional northbound through lane.
6. Haun Road – Holland Road to Scott Road – *Fair Share Contribution*

- Construction of one additional northbound through lane and one additional southbound through lane including a TWTL.

8. Newport Road[A] – Bradley Road to Haun Road – *Fair Share Contribution*
    - Restripe of the eastbound approach to accommodate one additional eastbound through lane from the Paloma Wash frontage to the I-215 Southbound On-Ramp.
17. Holland Road[B] – Haun Road to Hanover Lane – *Fair Share Contribution*
    - Construction of Overpass.

[A] Newport Road is built to ultimate conditions and although the roadway segments are operating at unacceptable levels of service the intersections along this segments operate at acceptable level of service of D or better and the intersections are the driving factor for the true operation of a roadway segment. Therefore; given the right of way restrictions along Newport Road and as agreed upon with City staff restriping of the eastbound approach would be implemented to improve conditions.

[B] Holland Road Overpass: In addition to the Transportation Uniform Mitigation Fee (TUMF) program Fees the project would be anticipated to contribute to the gap between the cost of the overpass and the funding allocated by the TUMF program. The Holland Overpass project as of 2018, was estimated to cost 24 million dollars and the TUMF program estimates to contribute 21.5 million dollars. The proposed JPN Haun project would be anticipated to contribute the indicated fair share percentage toward the 2.5 million gap.

Intersection Recommendations

Intersection improvements have been presented using "**bold**" text below. Project contribution towards mitigation measure is indicated *"italicized"* next to the intersection.

Project Design Features

Based on the traffic impact analysis the following improvements are recommended to improve access at the project driveways. On-site improvements are the project developer's responsibility.

- Construct the intersection of Haun Road (NS) and Driveway 1 (#20) as a right-in right-out intersection (RIRO) with the following geometrics:
  Northbound: One through lane. One shared through and right-turn lane.
  Southbound: Two through lanes.
  Eastbound: Not applicable.
  Westbound: One right-turn lane. Stop controlled.

- Install a **signal** at the intersection Haun Road (NS) and Driveway 2 (#21) with the following geometrics:
  Northbound: One through lane. **One through and right-turn lane.**
  Southbound: Two left-turn lanes. Two through lanes.
  Eastbound: Not applicable.
  Westbound: One left-turn lane. One right-turn overlap.

Mitigation Measures

- Intersection of Menifee Road and Newport Road (#7) – *Fair Share Contribution*
  Northbound: Two left-turn lanes. Two through lanes. One right-turn lane.
  Southbound: One left-turn lane. Two through lanes. **Install one right-turn overlap.**

Eastbound: One left-turn lane. Two through lanes. One through and right-turn lane.
Westbound: One left-turn lane. Three through lanes. One right-turn lane.

- Intersection of Bradley Road and Holland Road (#9) – *Fair Share Contribution*
  Northbound: One left-turn lane. One shared through and right-turn lane.
  Southbound: One left-turn lane. One through lane. One right-turn lane.
  Eastbound: Restripe to provide one left-turn lane. One through lane. One right-turn lane.
  Westbound: One left-turn lane. One through lane. One right-turn lane.

- **Installation of a traffic signal** at the intersection of Sherman Road and Holland Road (#11) – [C] – *Project Responsibility*
  Northbound: Construct one left-turn lane. One shared through and right-turn lane.
  Southbound: Construct one left-turn lane. One shared through and right-turn lane.
  Eastbound: Restripe to provide one left-turn lane. One through lane. One right-turn lane.
  Westbound: Restripe to provide one left-turn lane. One through lane. One right-turn lane.

  [C] The project will pay 100 percent of the improvements at Sherman Road and Holland Road.

- **Installation of a traffic signal** at the intersection of Haun Road and Holland Road (#15) – [D] – *Project Responsibility*
  Northbound: One left-turn lane. One through lane. One shared through and right-turn lane.
  Southbound: One left-turn lane. Two through lanes. One right-turn lane with overlap.
  Eastbound: One left-turn lane. One through lane. One right-turn lane.
  Westbound: One left-turn lane. One through lane. One shared through and right-turn lane.

  [D] The project will pay 100 percent of the improvements at Haun Road and Holland Road.

- **Installation of a traffic signal** at the intersection of Antelope Road and Albion Lane (#22) – *Fair Share Contribution*
  Northbound: One through lane. One shared through and right-turn lane.
  Southbound: One left-turn lane. One through lane.
  Eastbound: Not applicable.
  Westbound: One left-turn lane. One right-turn lane.

- **Installation of a traffic signal** at the intersection of Palomar Road and Holland Road (#24) – *Fair Share Contribution*
  Northbound: One shared left-through and right-turn lane.
  Southbound: One shared left-through and right-turn lane.
  Eastbound: Construct one left-turn lane. One shared through and right-turn lane.
  Westbound: Construct one left-turn lane. One shared through and right-turn lane.

Holland Road Overpass Comparison

As shown in Table 6-8, the construction of the Holland Road Overpass results in traffic volume reductions, showing a significant improvement on impacted roadway segments.

Table 6-8 – Holland Road Overpass Comparison

Roadway Segment	EACP No Overpass ADT	V/C	LOS	EACP With Overpass ADT	V/C	LOS
Haun Road						
4. Newport Road to La Piedra Road	34,580	0.99	F	31,600	0.93	E
Newport Road						
8. Bradley Road to Haun Road	56,500	1.00	F	53,530	0.95	E
La Piedra Road						
12. Sherman Road to Haun Road	27,570	1.06	F	27,570	1.06	F

▪ Safety and Operational Improvements

- Sight distance at the project entrance roadway will be reviewed with respect to City of Menifee sight distance standards at the time of preparation of final grading, landscape, site development, and street improvement plans.
- Participate in the phased construction of off-site traffic signals through payment of project's fair share of traffic signal improvement fees.
- Signing/striping should be implemented in conjunction with detailed construction plans for the project site.

▪ Regional Funding Mechanisms

The project will participate in the cost of off-site improvements through the payment of "fair share" improvement fees, including the following:

- Transportation Uniform Mitigation Fee (TUMF), current at the time of construction.
- Menifee Valley Road & Bridge Benefit District (RBBD) Fee, Zone C, current at the time of construction.
- City of Menifee Development Impact Fee (DIF), current at the time of construction.

These fees will be collected and utilized as needed by the City of Menifee to construct the improvements necessary to assist in maintaining the required level of service. Table 6-9 and Table 6-10 summarize the proposed improvement measures and associated funding mechanism for the project with and without the Holland Overpass. The traffic study determined the percentage fair share that is the responsibility of the project for improvements proposed at the study area intersections and roadway segments.

Table 6-9 – Intersections – Project Improvement Summary

No.	Intersection	Scenario Impacted	Impact Type	Improvement Measure	Funding Mechanism	Existing Volume		Project Volume		EACP Volume		Net New Volume		AM	PM	% Fair Share
						AM	PM	AM	PM	AM	PM	AM	PM	Fair Share	Fair Share	
6	Antelope Road (NS) / Newport Road (EW)	EACP No Overpass	Cumulative	Improve intersection geometrics to include: • Eastbound: Restripe one right-turn lane.	Fair Share	5,236	5,335	199	238	6,849	7,017	1,613	1,682	12.3%	14.2%	14.2%
7	Menifee Road (NS) / Newport Road (EW)	EACP No Overpass	Cumulative	Improve intersection geometrics to include: • Southbound: Add a right-turn overlap.	Fair Share	4,387	4,040	126	151	5,556	4,940	1,169	900	10.8%	16.8%	16.8%
		EACP With Overpass				4,354	3,989	81	97	5,322	4,940	968	951	8.4%	10.2%	
9	Bradley Road (NS) / Holland Road (EW)	EACP No Overpass	Cumulative	Improve intersection geometrics to include: • Eastbound: restripe to add one right-turn lane.	Fair Share	2,200	1,903	90	108	2,862	2,506	662	603	13.6%	17.9%	17.9%
		EACP With Overpass				2,222	1,935	90	108	3,021	2,711	798	776	11.3%	13.9%	
11	Sherman Road (NS) / Holland Road (EW)	Existing Plus Project	Direct	Improve intersection geometrics to include: Intersection Control: Install a traffic signal. • Northbound: Construct a left-turn lane. • Southbound: Construct a left-turn lane • Eastbound: Restripe to provide one left-turn lane, one through lane and one right-turn lane. • Westbound: Restripe to provide one left-turn lane, one through lane and one right-turn lane.	Project Responsibility	--										100%
		EACP No Overpass														
		EACP With Overpass														
15	Haun Road (NS) / Holland Road (EW)	Existing Plus Project	Direct	Improve intersection geometrics to include: Intersection Control: Install a traffic signal. • Northbound: Construct one left turn lane and two through lanes. • Southbound: Construct one left turn lane, two through lanes, and one right turn lane with overlap • Westbound: Construct one left-turn lane and two through lanes.	Project Responsibility	--										100%
		EACP No Overpass														
		EACP With Overpass														
16	Haun-Zeiders Road (NS) / Scott Road (EW)	EACP No Overpass	Cumulative	Improve intersection geometrics to include: • Westbound: Add a right-turn overlap.	TUMF Fees	2,148	1,954	109	129	4,430	4,289	2,282	2,335	4.8%	5.5%	5.5%
22	Antelope Road (NS) / Albion Lane (EW)	EACP With Overpass	Cumulative	Improve intersection geometrics to include: Intersection Control: Install a traffic signal.	Fair Share	1,163	1,282	45	54	1,524	1,745	360	463	12.5%	11.7%	11.7%
24	Palomar Road (NS) / Holland Road (EW)	EACP With Overpass	Cumulative	Improve intersection geometrics to include: Intersection Control: Install a traffic signal. • Eastbound: Construct a left-turn lane. • Westbound: Restripe a left-turn lane.	Fair Share	773	623	45	54	1,276	1,275	503	652	9.0%	8.3%	8.3%
Project Design Features						Project Design Features										
20	Haun Road (NS) / Driveway 1 (EW)	Project Developer	N/A	Improve intersection geometrics to include: Intersection Control: Install a stop sign. • Northbound: Construct a second through lane. • Westbound: Construct a right-turn lane. Stop controlled.	Project Responsibility	--										100%
21	Haun Road (NS) / Driveway 2 (EW)	Project Developer	N/A	Improve intersection geometrics to include: Intersection Control: Install a traffic signal. • Northbound: Construct a second through lane. •Southbound: Construct two left-turn lanes. • Westbound: Construct one left-turn lane. Construct one right-turn overlap.	Project Responsibility	--										100%

Table 6-10 – Roadway Segments – Project Improvement Summary

Roadway Segment	Scenario Impacted	Impact Type	Recommended Improvement	Funding Mechanism	Existing Volume	Project Volume	EACP + Overpass ADT	EACP No Overpass ADT	Net ADT	% Fair Share
Bradley Road										
1. Park Avenue to Newport Road	EACP w/o Overpass	Cumulative	Construct one additional through lane in each direction. For a total of 4 through lanes with one TWLTL.	Fair Share	14,984	520	--	19,933	4,949	10.51%
	EACP with Overpass				14,984	520	19,633	--	4,549	**11.43%**
Haun Road										
4. Newport Road to La Piedra Road	Existing Plus Project	Direct	Roadway has reached its ultimate conditions, project's fair share percent contribution is provided. Roadway segment mitigated by the construction of the Holland Overpass.	Fair Share to be applied toward the construction of the Overpass	22,821	8,826				**27.89%**
	EACP without Overpass				22,821	8,826		31,647		27.89%
	EACP with Overpass				21,457	7,786	34,582			22.51%
5. La Piedra Road to Holland Road	EACP w/o Overpass	Cumulative	Construct one additional through lane in each direction for a total of 4 through lanes and install a raised median.	Fair Share	12,141	9,346	--	24,411	12,270	76.17%
	EACP with Overpass				14,005	8,306	24,470	--	10,465	**79.37%**
6. Holland Road to Scott Road	EACP w/o Overpass	Cumulative	Construct one additional through lane in each direction for a total of 4 through lanes and install a raised median.	Fair Share	10,858	1,248	--	15,881	5,023	**24.85%**
	EACP with Overpass				10,464	1,040	16,609	--	6,145	16.92%
Newport Road										
8. Bradley Road to Haun Road	EACP w/o Overpass	Cumulative	Roadway has reached its ultimate conditions, project's fair share percent contribution is provided. Roadway segment mitigated by the construction of the Holland Overpass.	Fair Share to be applied toward the construction of the Overpass	43,696	1,560	--	56,501	--	2.76%
	EACP with Overpass				42,271	1,560	53,528	--	--	**2.91%**
Scott Road										
13. Haun Road to I-215 SB Ramps	EACP w/o Overpass	Cumulative	Construct two additional through lane in each direction. For a total of 6 through lanes.	TUMF Fees	--					
	EACP with Overpass									
14. I-215 NB Ramps to Antelope Road	EACP w/o Overpass	Cumulative	Construct two additional through lane in each direction. For a total of 6 through lanes.	TUMF Fees	--					
	EACP with Overpass									

XX= *Highest Fair Share percentage would be applied toward mitigation improvement.*

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Scoping Agreement
Appendix A

ALBERT A.
WEBB
ASSOCIATES

APPENDIX A

SCOPING AGREEMENT

Project No: _____

CITY OF MENIFEE
ENGINEERING DEPARTMENT

SCOPING AGREEMENT FOR TRAFFIC IMPACT STUDY

This letter acknowledges the City of Menifee requirements for the traffic impact analysis of the following project.

RPT No. 17-038
Case No. PM 2016-185
Related Cases -
SP No. _____
EIR No. _____
GPA No. _____
CZ No. _____
Project Name: JPN Haun and Holland Mixed Use Project
Project Location: Northwestern corner of I-215 and Holland Road, Menifee, Riverside County
Project Description: 7.5 TSF Shopping Center, 13.3 TSF High-Turn Over Restaurant, 39 TSF Supermarket, Gasoline/Service station (16VFP) with convenience market and a car wash, 4.5 TSF Day Care Center, 4.8 TSF Fast Food Restaurant with Drive Thru, 47.2 TSF Industrial Park, 105 TSF Automobile Sales, and 79 TSF of General Office Building

	Consultant	Developer
Name:	Albert A. Webb Associates	JPN Corporation
Address:	3788 McCray Street	1100 Wagner Drive
	Riverside, CA 92506	El Cajon, CA 92020-3047
Telephone:	(951) 686-1070	(619) 985-8220

A. Trip Generation Source: ITE *Trip Generation Manual,* 9th Edition

Existing Land Use	Vacant	Proposed Land Use	Commercial
Existing Zoning	EDC – (Community Core)	Proposed Zoning	EDC – (Community Core)
Total Daily Trips	11,868		

	In	Out	Total
AM Trips	607	297	904
PM Trips	448	635	1,083

Internal Trip Allowance ☒ Yes ☐ No 10 % Trip Discount)
Pass-By Trip Allowance ☒ Yes ☐ No (See Attached) % Trip Discount)
(Attach additional sheet if this is a multi-use site with a breakdown of trips generated)

B. Trip Geographic Distribution: N 78 % S 12 % E 0 % W 10 %
(See attached exhibit for detailed assignment)

C. Background Traffic

Project Completion Year: 2021

Annual Ambient Growth Rate: 2.0%

Other area projects to be included: Please provide us with the latest Cumulative Project List for Menifee Projects. County of Riverside would be contacted to obtain cumulative projects.

Please contact the Engineering Department or use the most recently provided data

Model/Forecast methodology if required Build-Up Method

Build-out Studies: Does this project require a Build-out Study?

☐ Yes ☒ No

D. Study intersections: (NOTE: Subject to revision after other projects, trip generation and distribution are determined, or comments from other agencies.)

1. Murrieta Rd. / Newport Rd.
2. Bradley Rd./ Newport Rd.
3. Haun Rd. / Newport Rd.
4. I-215 SB Ramps / Newport Rd.
5. I-215 NB Ramps / Newport Rd.
6. Antelope Rd. / Newport Rd.
7. Menifee Rd. / Newport Rd.
8. Bradley Rd. / La Piedra Rd.
9. Bradley Rd. / Holland Rd.
10. Sherman Rd. / La Piedra Rd.
11. Sherman Rd. / Holland Rd.
12. Haun Rd. / Countryside Marketplace North Access
13. Haun Rd. / Countryside Marketplace South Access
14. Haun Rd. / La Piedra Rd.
15. Haun Rd. / Holland Rd.
16. Haun Rd. / Scott Rd.
17. I-215 SB Ramps / Scott Rd.
18. I-215 NB Ramps / Scott Rd.
19. Antelope Rd. / Scott Rd.
20. Haun Road / Driveway 1 (RIRO)
21. Haun Road / Driveway 2 [Proposed Signal]
22. Haun Road / Driveway 3 (RIRO)
23. Antelope Rd. / Albion Ln.
24. Holland Rd. / Hanover Ln.
25. Holland Rd. / Palomar Rd.
26. Holland Rd. / Menifee Rd.

- Antelope Rd. / Holland Rd. (Intersection will be removed with Holland Road overpass, do not include as study intersection but collect turning movement counts for future diversion to Antelope/Albion and Holland/Hanover Intersection

E. Study Roadway Segments (For Build-out Studies):

1. Newport Rd: Murrieta Rd to Bradley Rd
2. Newport Rd: Bradley Rd to Haun Rd
3. Newport Rd: Haun Rd to I-215 SB Ramps
4. Newport Rd: I-215 NB Ramps to Antelope Rd
5. Newport Rd: Antelope Rd to Menifee Rd
6. La Piedra Road: Sherman Rd to Haun Rd
7. Bradley Rd: Holland Rd to La Piedra Rd
8. Bradley Rd: La Piedra Rd to Newport Rd
9. Bradley Rd: Newport Rd to Park Avenue Rd
10. Haun Rd: Newport Rd to La Piedra Rd
11. Haun Rd: La Piedra Rd to Holland Rd
12. Haun Rd: Holland Rd to Garbani Road
13. Scott Rd: Haun Rd to I-215 SB Ramps
14. Scott Rd: I-215 NB Ramps to Antelope Rd
15. Holland Road: Bradley Rd to Sherman Rd
16. Holland Road: Sherman Rd to Haun Rd
17. Holland Road: Haun Rd to Hanover Ln
18. Holland Road: Hanover Ln to Palomar Rd
19. Holland Road: Palomar Rd to Menifee Rd

F. Site Plan (please attach a legible 11'X17' copy)

G. Specific issues to be addressed in the Study (in addition to the standard analysis described in the Guideline) (To be filled out by Engineering Department)

Signal Warrant Analysis for all unsignalized intersections for all scenarios

H. Existing Conditions Traffic count data must be new or recent.
Provide traffic count dates if using other than new counts. Date of counts: N/A

I. Analysis Scenario

1. Existing (2017) Conditions.
2. Existing Plus Project (2017) Conditions.
3. Existing Plus Ambient (2021) Plus Cumulative Conditions Without Holland Overpass.
4. Existing Plus Ambient (2021) Plus Cumulative Plus Project Conditions Without Holland Overpass.
5. Existing Plus Ambient (2021) Plus Cumulative Conditions With Holland Overpass.
6. Existing Plus Ambient (2021) Plus Cumulative Conditions Plus Project With Holland Overpass.

Recommended by:

Consultant Engineer — 07/27/2017 Date

Scoping Agreement Submitted on — 07/31/2017 Date

Scoping Agreement Resubmitted on — 11/01/17 Date

Approved Scoping Agreement:

City of Menifee – Traffic Engineer — Date

Table 1: Trip Generation Rates

Land Use	Unit	AM Peak Hour			PM Peak Hour			Daily
		Total	In	Out	Total	In	Out	
Shopping Center [1] Land Use Category: 820	TSF	4.27	2.65	1.62	14.13	6.78	7.35	168.13
High-Turnover (Sit-Down) Restaurant Land Use Category: 932	TSF	10.81	5.95	4.86	9.85	5.91	3.94	127.15
Supermarket Land Use Category: 850	TSF	3.40	2.11	1.29	9.48	4.83	4.65	102.24
General Office Building [1] Land Use Category: 710	VFP	11.84	6.04	5.80	13.86	7.07	6.79	152.84
Day Care Center Land Use Category: 565	TSF	12.18	6.46	5.72	12.34	5.80	6.54	74.06
Fast-Food Restaurant with Drive-Through Window Land Use Category: 934	TSF	45.42	23.16	22.26	32.65	16.98	15.67	496.12
Automobile Sales Land Use Category: 841	TSF	1.92	1.44	0.48	2.62	1.05	1.57	32.30
General Office Building Land Use Category: 710	TSF	2.00	1.76	0.24	2.11	0.36	1.75	13.89
Industrial Park [2] Land Use Category: 130	TSF	--	--	--	--	--	--	--
Passenger Cars		0.65	0.53	0.12	0.71	0.15	0.56	10.22
Trucks (2 Axle)		0.04	0.03	0.03	0.06	0.01	0.05	0.77
Trucks (3 Axle)		0.03	0.02	0.03	0.05	0.01	0.04	0.64
Trucks (4+ Axle)		0.38	0.31	0.31	0.60	0.13	0.47	7.71
		1.10	0.90	0.20	1.42	0.30	1.12	19.36

TSF = 1000 Square Feet Gross Floor Area, VFP = Vehicle Fueling Positions.
Average trip generation rates from *Trip Generation Manual, ITE, 9th Edition* (2012) except as noted.
[1] Trip generation rates derived from fitted curve equation in *Trip Generation Manual, ITE, 9th Edition* (2012).
[2] Passenger car / 2 axle / 3 axle / 4+axle truck split from Truck Trip Generation Study by the City of Fontana, 2003.

Table 2: Project Trip Generation

Land Use	Qty	Unit	AM Peak Hour			PM Peak Hour			Daily
			Total	In	Out	Total	In	Out	
Shopping Center	7.5	TSF	32	20	12	106	51	55	1,261
Pass-by Trips (PM: 34%)			--	--	--	(32)	(16)	(16)	(386)
High-Turnover (Sit-Down) Restaurant	13.3	TSF	144	79	65	131	79	52	1,691
Pass-by Trips (PM: 43%)			--	--	--	(50)	(25)	(25)	(654)
Supermarket	39	TSF	133	82	51	370	189	181	3,987
Pass-by Trips (PM: 36%)			--	--	--	(120)	(60)	(60)	(1,292)
Gasoline/Service Station with Convenience Market and Car Wash	16	VFP	189	96	93	222	113	109	2,445
Pass-by Trips (AM: 62%, PM: 59%)			(104)	(52)	(52)	(118)	(59)	(59)	(1,298)
Day Care Center	4.5	TSF	55	29	26	56	26	30	333
Fast-Food Restaurant with Drive-Through Window	4.8	TSF	218	111	107	157	82	75	2,381
Pass-by Trips (AM: 49%, PM: 50%)			(97)	(49)	(49)	(56)	(28)	(28)	(1,071)
Automobile Sales	105	TSF	202	151	51	275	110	165	3,392
General Office Building	79	TSF	158	139	19	167	28	139	1,097
Industrial Park [1]	47.2	TSF	--	--	--	--	--	--	--
Passenger Cars (PCE = 1.0)			31	25	6	34	7	26	482
Trucks (2 Axle, PCE = 1.5)			3	2	1	4	1	3	55
Trucks (3 Axle, PCE = 2.0)			3	2	1	5	1	4	60
Trucks (4+ Axle, PCE = 3.0)			54	44	10	85	18	67	1,092
Industrial Park Net PCE Trips			90	74	17	127	27	101	1,689
Trip Generation			*1,221*	*781*	*441*	*1,611*	*705*	*907*	*18,276*
*Internal Trips**			*(116)*	*(73)*	*(43)*	*(152)*	*(69)*	*(84)*	*(1707)*
*Driveway Volume***			*1105*	*708*	*398*	*1459*	*636*	*823*	*16569*
*Pass-by Trips****			*(201)*	*(101)*	*(101)*	*(376)*	*(188)*	*(188)*	*(4702)*
PROJECT TOTAL			904	607	297	1,083	448	635	11,868

TSF = 1,000 Square Feet Gross Floor Area, VFP = Vehicle Fueling Positions.

* Internal trip capture of 10 percent was applied.

** Driveway Volume = Trip Generation - Internal Trips.

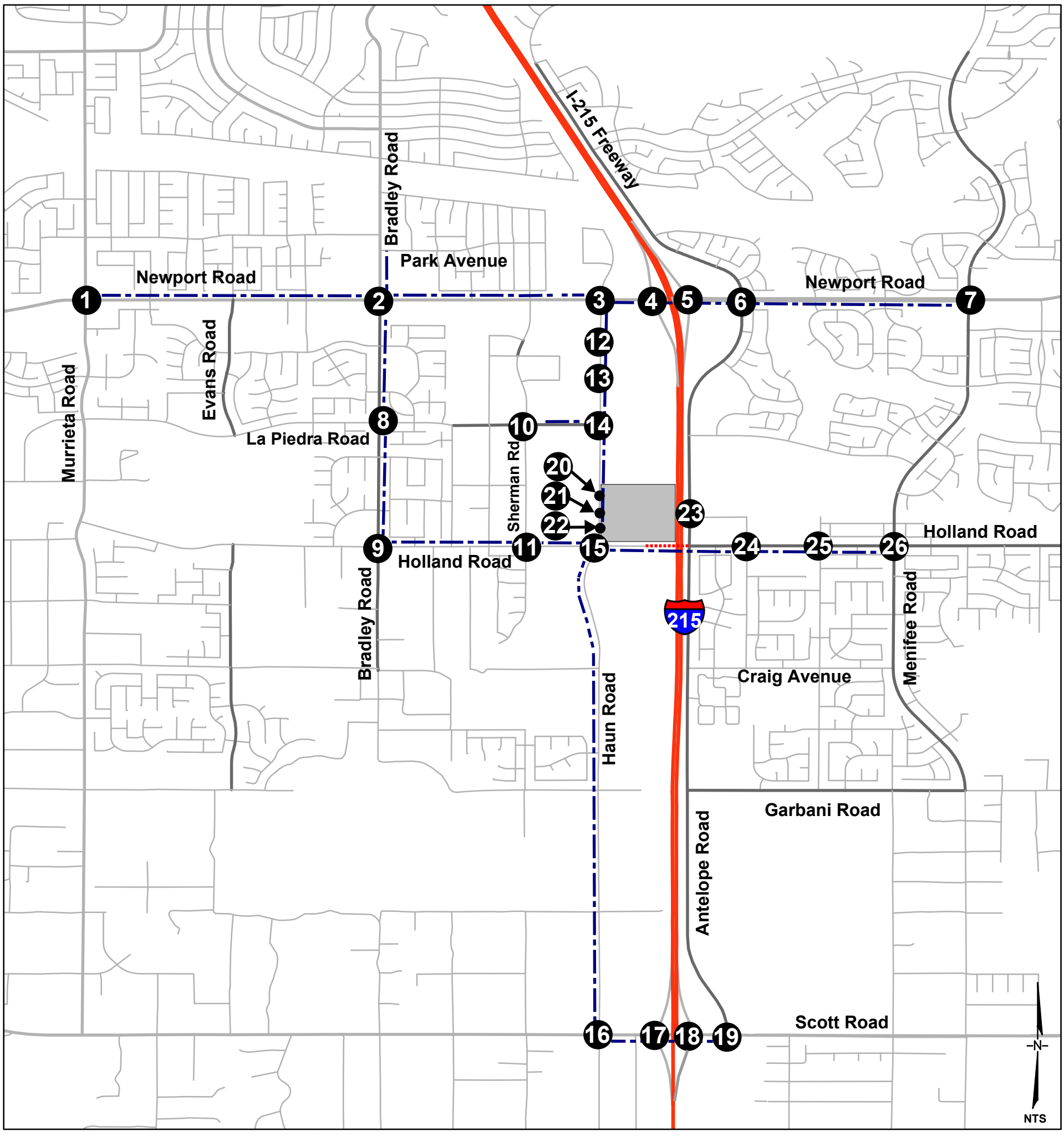
*** Pass-by trips are only applicable to trips that enter or exit the site, not internal trips.

**** Net Total Trip Generation = Trip Generation - Internal Trips - Pass-by Trips.

[1] PCE Factor per San Bernardino County CMP, 2005 Update.

Study Area Intersections and Roadway Segments (without overpass)

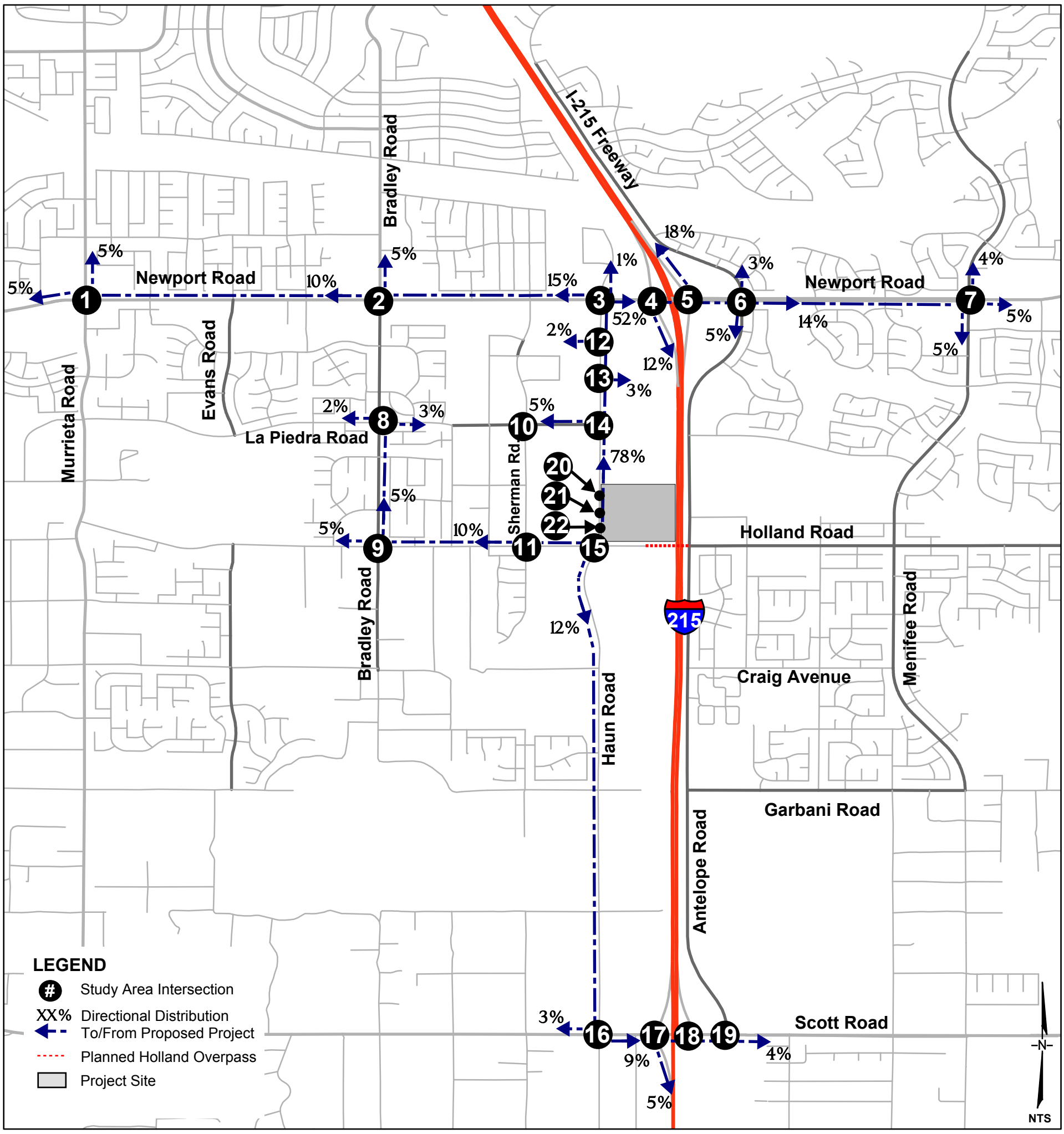
Study Area Intersections and Roadway Segments (with overpass)



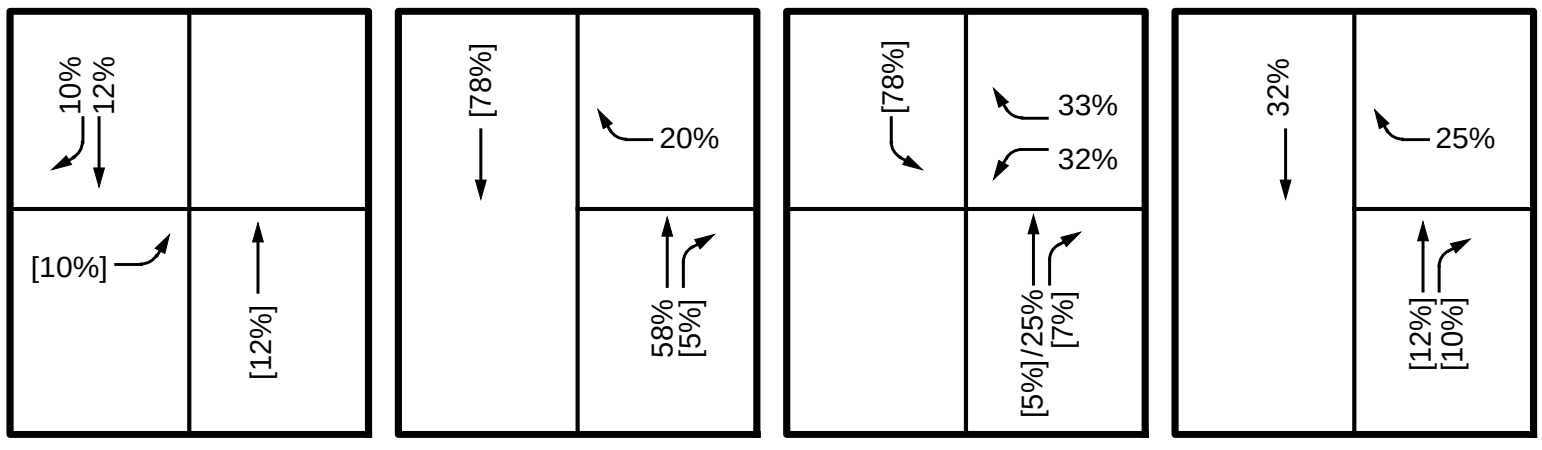
LEGEND

- # Study Area Intersection
- Planned Holland Overpass
- Project Site
- Roadway Segments

Project Distribution (without overpass)



Project Frontage Directional Distribution
[XX%]/XX%: [Inbound]/Outbound



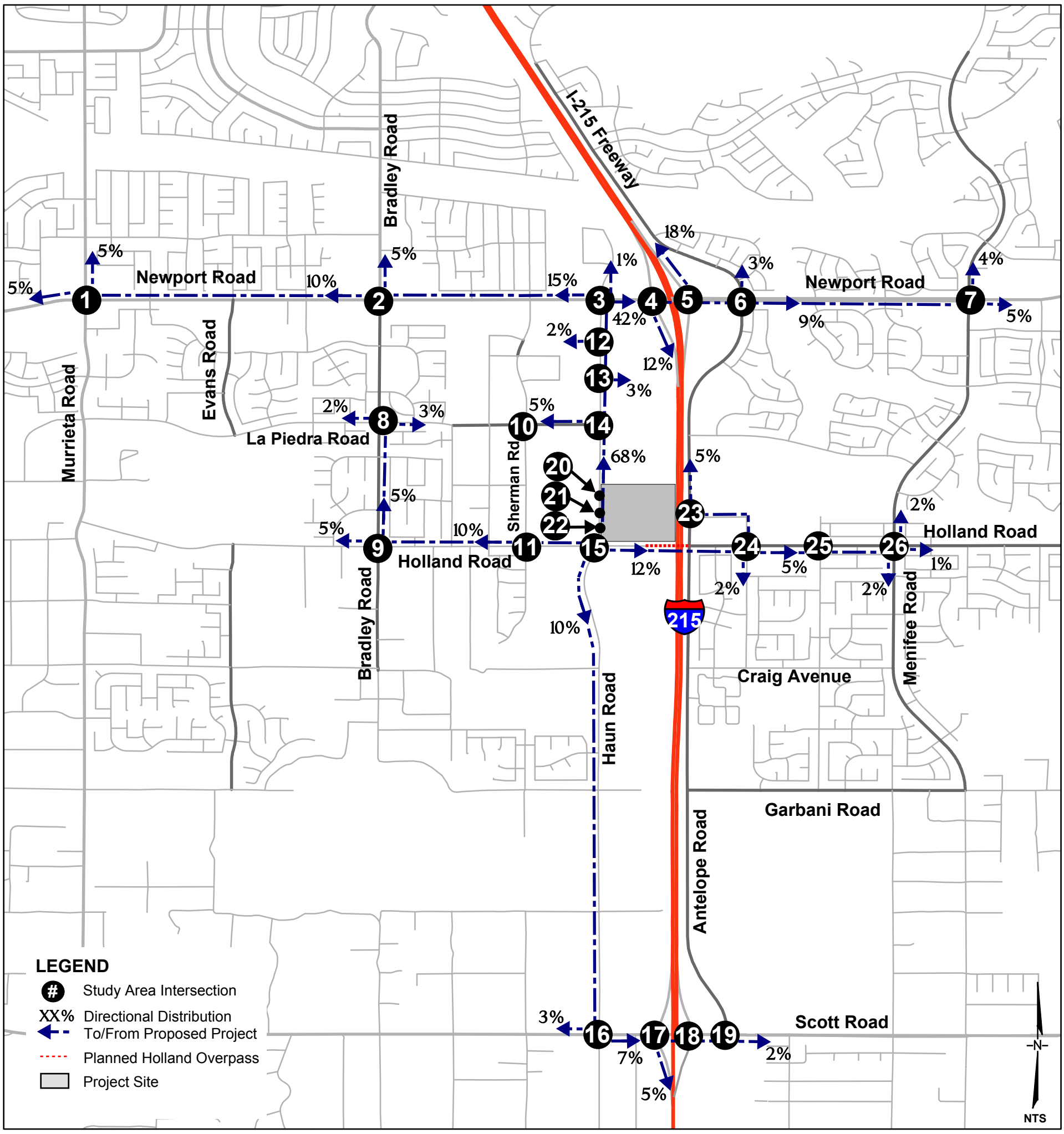
15. Haun Road (NS) / Holland Road (EW)

20. Haun Road (NS) / Driveway 1 (EW)

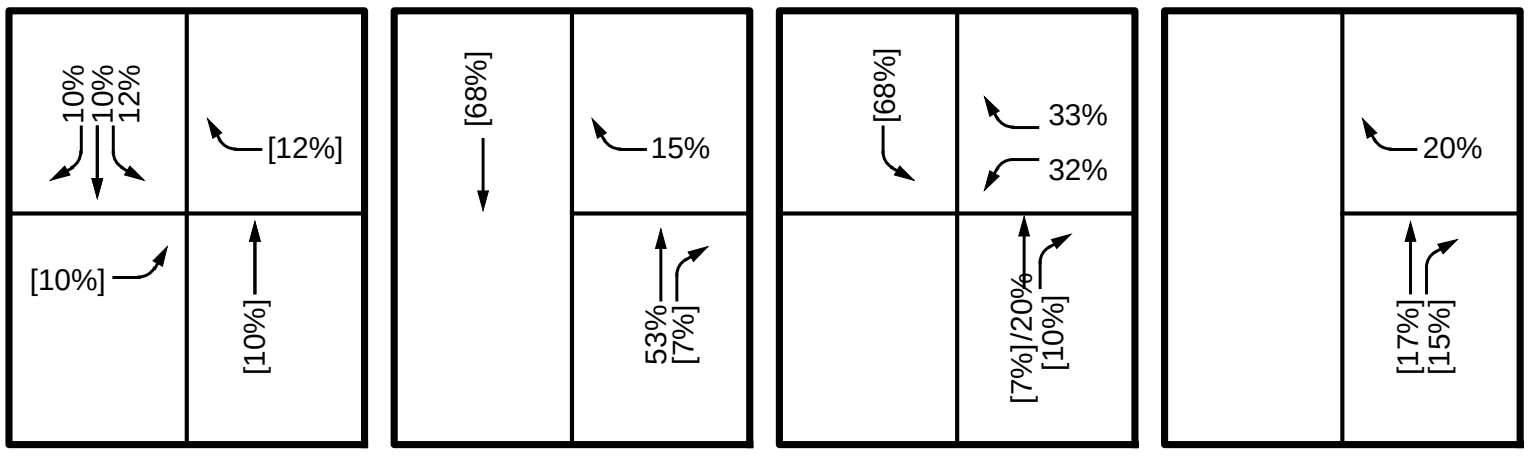
21. Haun Road (NS) / Driveway 2 (EW)

22. Haun Road (NS)/ Driveway 3 (EW)

Project Distribution (with overpass)



Project Frontage Directional Distribution
[XX%]/XX%: [Inbound]/Outbound



15. Haun Road (NS) / Holland Road (EW)

20. Haun Road (NS) / Driveway 1 (EW)

21. Haun Road (NS) / Driveway 2 (EW)

22. Haun Road (NS)/ Driveway 3 (EW)

USE AND PARKING SUMMARY:

ZONE: EDC - CC (COMMUNITY CORE)

LOT 1 - RETAIL

SITE AREA: 217,540 SF — 5.0 ACRES GROSS

TYPE	BUILDING AREA	PARKING REQUIREC	RATIO
A MAJOR	22,700 SF	114 SPACES	5.0 /1000 S.F.
B MAJOR	16,300 SF	82 SPACES	5.0 /1000 S.F.
C RETAIL/QUICK SERVE RESTAURANTS	5,500 SF	28 SPACES	5.0 /1000 S.F.
TOTAL BUILDING AREA	44,500 SF		
TOTAL PARKING REQUIRED BY CITY		223 SPACES	
TOTAL PARKING PROVIDED:		230 SPACES	

LOT 2 - OFFICE

SITE AREA: 217,800 SF (0.36 FAR) — 5.0 ACRES GROSS

TYPE	BUILDING AREA	PARKING REQUIREC	RATIO
A OFFICE	40,000 SF	160 SPACES	4.0 /1000 S.F.
B OFFICE	39,000 SF	156 SPACES	4.0 /1000 S.F.
TOTAL BUILDING AREA	79,000 SF		
TOTAL PARKING REQUIRED BY CITY		316 SPACES	
TOTAL PARKING PROVIDED:		316 SPACES	

LOT 3 - AUTOMOBILE SALES

SITE AREA: 270,508 SF — 6.2 ACRES GROSS

TYPE	BUILDING AREA	PARKING REQUIREC	RATIO
A AUTO DEALERSHIP SHOWROOM/OFFICE/REPAIR BAYS	65,000 SF	150 SPACES	2.3 /1000 S.F.
TOTAL BUILDING AREA	65,000 SF		
TOTAL PARKING PROVIDED:		378 SPACES	

LOT 4 - AUTOMOBILE SALES

SITE AREA: 196,020 SF — 4.5 ACRES GROSS

TYPE	BUILDING AREA	PARKING REQUIREC	RATIO
A AUTO DEALERSHIP SHOWROOM/OFFICE/REPAIR BAYS	40,000 SF	92 SPACES	2.3 /1000 S.F.
TOTAL BUILDING AREA	40,000 SF		
TOTAL PARKING PROVIDED:		303 SPACES	

LOT 5 - INDUSTRIAL

SITE AREA: 217,800 SF (0.29 FAR) — 5.0 ACRES GROSS

TYPE	BUILDING AREA	PARKING REQUIREC	RATIO
A INDUSTRIAL	17,800 SF	41 SPACES	2.3 /1000 S.F.
B INDUSTRIAL	15,500 SF	36 SPACES	2.3 /1000 S.F.
C INDUSTRIAL	13,900 SF	32 SPACES	2.3 /1000 S.F.
TOTAL BUILDING AREA	47,200 SF		
TOTAL PARKING REQUIRED BY CITY		109 SPACES	
TOTAL PARKING PROVIDED:		109 SPACES	

LOT 6 - RETAIL

SITE AREA: 262,587 SF — 6.0 ACRES GROSS

TYPE	BUILDING AREA	PARKING REQUIREC	RATIO
A GAS STATION WITH C-STORE AND CAR WASH	3,500 SF	18 SPACES	5.0 /1000 S.F.
B RETAIL/QUICK SERVE RESTAURANTS	10,000 SF	50 SPACES	5.0 /1000 S.F.
C RESTAURANT	5,800 SF	86 SPACES	1.0 /45 S.F. OF SERVING AREA
D DAY CARE CENTER	4,500 SF	12 SPACES	1.0 /500 S.F.
E RESTAURANT WITH DRIVE THROUGH	4,800 SF	71 SPACES	1.0 /45 S.F. OF SERVING AREA
TOTAL BUILDING AREA	28,600 SF		
TOTAL PARKING REQUIRED BY CITY		237 SPACES	
TOTAL PARKING PROVIDED:		237 SPACES	

Proposed Site Plan

0 15' 30' 100'

Mixed Use Center

SOUTHWEST CORNER OF HAUN ROAD AND HOLLAND ROAD
MENIFEE, CALIFORNIA

sca ARCHITECTURE
13280 Evening Creek Drive South | Suite 125
San Diego, CA 92128
858.793.4777 | sca-sd.com

05/31/2017 06146.S51

Cumulative Project Information
Appendix B

ALBERT A. WEBB ASSOCIATES

CUMULATIVE PROJECT INFORMATION

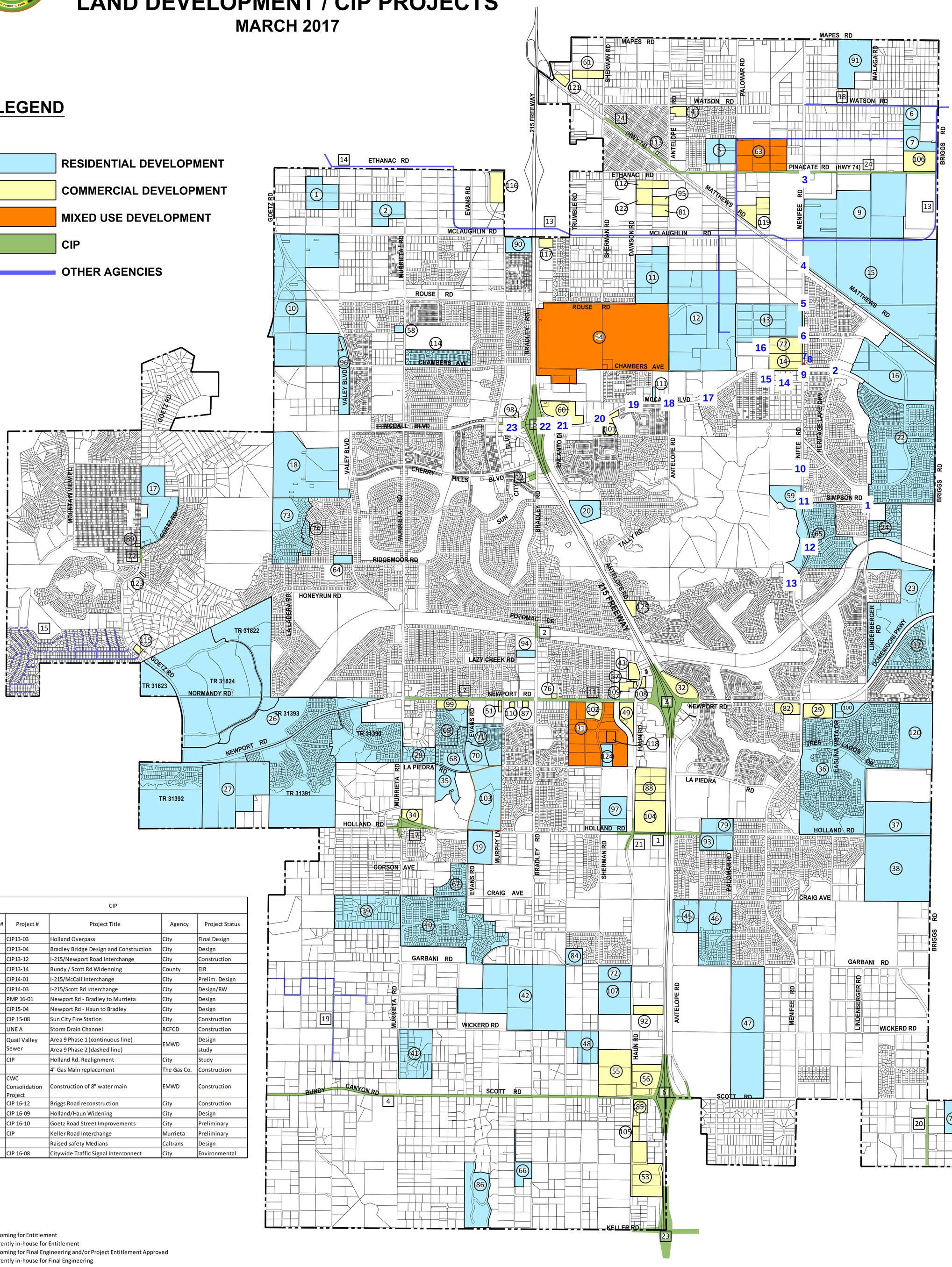
CITY OF MENIFEE

LAND DEVELOPMENT / CIP PROJECTS

MARCH 2017

LEGEND

- RESIDENTIAL DEVELOPMENT
- COMMERCIAL DEVELOPMENT
- MIXED USE DEVELOPMENT
- CIP
- OTHER AGENCIES



CIP				
Map ID #	Project #	Ptoject Title	Agency	Project Status
1	CIP13-03	Holland Overpass	City	Final Design
2	CIP13-04	Bradley Bridge Design and Construction	City	Design
3	CIP13-12	I-215/Newport Road Interchange	City	Construction
4	CIP13-14	Bundy / Scott Rd Widenning	County	EIR
5	CIP14-01	I-215/McCall Interchange	City	Prelim. Design
6	CIP14-03	I-215/Scott Rd Interchange	City	Design/RW
7	PMP 16-01	Newport Rd - Bradley to Murrieta	City	Design
11	CIP15-04	Newport Rd - Haun to Bradley	City	Design
12	CIP 15-08	Sun City Fire Station	City	Construction
13	LINE A	Storm Drain Channel	RCFCD	Construction
15	Quail Valley Sewer	Area 9 Phase 1 (continuous line)	EMWD	Design
		Area 9 Phase 2 (dashed line)		study
17	CIP	Holland Rd. Realignment	City	Study
18		4" Gas Main replacement	The Gas Co.	Construction
19	CWC Consolidation Project	Construction of 8" water main	EMWD	Construction
20	CIP 16-12	Briggs Road reconstruction	City	Construction
21	CIP 16-09	Holland/Haun Widening	City	Design
22	CIP 16-10	Goetz Road Street Improvements	City	Preliminary
23	CIP	Keller Road Interchange	Murrieta	Preliminary
24		Raised safety Medians	Caltrans	Design
25	CIP 16-08	Citywide Traffic Signal Interconnect	City	Environmental

U/E = Upcoming for Entitlement
C/E = Currently in-house for Entitlement
U/F = Upcoming for Final Engineering and/or Project Entitlement Approved
C/F = Currently in-house for Final Engineering

Map ID #	Project Reference	Name	Approved By	Status
1	TTM 34037	Developer: Capstone	County	C/E
2	TTM 31856	Developer: Sunwood	County	U/F
4	TTM 35876	Romoland Ranch LLC	City	C/E
5	TTM 34118	MR-27 LLC (Rancon)	County	U/E
6	TTM 33738	MR 56 LLC (Rancon)	County	C/E
7	TTM 34600	MR-27 LLC (Rancon)	County	C/E
9	TTM 31811	Heritage Lakes (Brookfield)	County	U/E
10	TTM 36657 / PM 36658	Cimarron Ridge (Van Daele)	City	U/F
11	TTM 29777	Talavera (True Life Companies)	County	
12	TTM 29835	Underwood (CV Communities)	County	C/E
13	TTM 31098	2014-204 MC (Strata Equity)	County	C/F
14	CUP 3549	Heritage Square (Rancon)	City	U/E
15	TTM 31812	Developer: Brookfield	County	U/E
16	TTM 34406	Heritage Lakes (Standard Pacific)	County	C/F
17	TR 32794	Quail Hill (Repke)	City	
18	TTM 31456	Stonegate (Gordon Youde)	County	U/E
19	PA 2014-218	Rowland (Rowland Development)	City	C/E
20	PP 19469	Kensington Apartments (Bob Love)	City	
22	TR 34180/TR34406	Heritage Lake (Standard Pacific)	County	
23	TR 32100/32102	Developer: Rancon	City	U/E
24	TTM 32186	Mahogany (DR Horton)	County	
26	SP 209	Audie Murphy Ranch (Brookfield)	County	C/F
27	TR 32025	Canyon Cove (Brookfield)	County	

Map ID #	Project Reference	Name	Approved By	Status
28	TR 30812	Boulder Creek (JCA Homes)	County	
29	2014-091 / PM 36728	Stater Brothers	City	C/F
31	SP 2009-069	Town Center (Regent)	City	C/E
32	PP2014-113, CUP2016-289	Menifee Lakes Plaza (Menifee Lakes LLP)	City	
33	TTM 32101	Developer: Rancon	County	U/F
34	PUP 2009-077	His Light (His Light) - Expired	City	
35	TR 28786	Pacific Communities	County	
36	TR 30422/CUP 03581	The Lakes (Pulte and Lennar)	County/City	C/F
37	TTM 31229	Menifee Nautical's Cove (Rancon)	City	U/E
38	TTM 32277	Menifee Heights (CV Communities)	County	U/F
39	TTM 29636	Calder Ranch (Classic Pacific)	County	
40	TR 30142	KB Hidden Hills (KB Homes)	County	C/F
41	TR 30664	Gallery States (Pacific Communities)	County	
42	TTM 31194	Golden Meadows (Richland Comm.)	County	
43	2014-146	Menifee Unified School district HQ	City	C/F
45	TTM 32628	Christensen Ranch (Breson Comm.)	County	U/E
46	TTM 28206	Terra Bella/Mosaic (DR Horton, Watt Comm.)	County	C/F
47	TTM 33732	Cantelena (Richland Communities)	County	C/E
48	TR 33511	Granite (Granite Investments)	County	
49	PP 2014-009	Shopping Center (Rich Dev)	City	C/F
51	CUP 2015-157	Cal Cruz Express	In progress	C/E
53	PDS-CP	Commerce Pointe (PacTen)	City	U/F
54	SP 2009-025	Fleming Ranch (Fleming)	In progress	U/E

Map ID #	Project Reference	Name	Approved By	Status
55	PP 2010-022	The Junction (PacTen)	City	U/E
56	PP 2009-121	Walmart	City	U/F
57	PP 2017-021	Newport Town Squate II	City	U/E
58	PP 2014-237	Thorton Terraces (Sudweeks Development)	In progress	
59	2013-040	Chaparral Apartments (Chaparral LLC)	In progress	
60	2012-120	Walmart	In progress	C/E
61	2009-11	UPS Expansion (UPS)	City	C/F
63	2010-090	Menifee North SP (Vonham Inc.-Romola General)	In progress	U/E
64	2016-038 TR	Ridgemoore Investments LLC	City	U/E
65	TM 31582	El Dorado (Rancon and Lennar)	County	C/E
66	PM 36135	Sweetwater Canyon Rd (Mr. Cook)	County	
67	TM 30554	Alasia - Meritage Homes	County	Complete
68	TM 28787	Pacific Communities	County	C/F
69	TM 28788	Pacific Communities	County	C/F
70	TM 28789	Pacific Communities	County	C/F
71	TM 28790	Pacific Communities	County	C/F
72	2016-057PP; -058 CZ	Rancho Bonito	In progress	
73	TR 28859	Ascho	County	U/F
74	TR 28859-1		County	
76	CUP 2013-157	American Tire Depot	In progress	
77	PP 2014-189	(North Bayport Industrial Park II, LTD)	In progress	U/E
78	PAR 2014-188	(Southern CA Properties)	In progress	
79	PP 2015-164	Market Rate Apartments (Strata Equity)	In progress	C/E

Map ID #	Project Reference	Name	Approved By	Status
81	EOT 2015-012	Motte Town Center	In progress	U/E
82	2015-031	Rite Aid/Archibald's Restaurant	City	C/F
84	TR 2014-073	DCI Investments	City	
85	PP 22946	Shops at Scott (Menifee Partners LP)	City	
86	PAR2015-053 / TR 36684	(Bundy Canyon Development Co)	In progress	U/F
87	PP 2015-099	Shops at Newport (Newport Road LP)	City	C/E
88	PP 2015-115	Menifee Village (Pechanga Dev Corp.)	In progress	U/E
89	PP 2015-130	El Ranchito Market	In progress	
90	PAR 2015-133	McLaughlin Village	In progress	U/E
91	TR 31536		City	U/F
92	PP 2015-156	All Star Super Storage	In progress	
93	TTM 2015-165	2015-165 (Strata Equity)	In progress	
94	2015-195 PAR	Womble Property (MDMG, Inc)	In progress	
95	2011-003	Trumble Offices and warehouse	In progress	
96	2015-211	Valley Blvd. Tract Map	City	C/E
97	PAR 2015-039	Tract Map - single family homes	In progress	C/E
98	2016-110 CUP	Fast food	In progress	
99	2016-021 PM	CP Menifee DPSS	In progress	
100	2016-061 GPA; -062 SPA	Pulte Homes	In progress	C/E
101	PP 2016-124	McCall & Sherman Retail Center	In progress	C/E
102	CUP 2016-130	Krikorian Theatre	In progress	C/F
103	MC 2016-107	Pacific Communities	Country	C/E
104	PM 2016-185	JPN Corporation Inc.	City	C/E

Map ID #	Project Reference	Name	Approved By	Status
105	2016-078 CUP	Zeiders Rd. CUP	In progress	
106	PP 22628 - EOT 2016-102	Harvest Glen Marketplace		
107	2016-246 PA	Mill Creek		
108	2016-135 PP	Haun Professional Building		
109	2016-154 PAR	Newport Towne Square Phase II		
110	2016-164 PP	Popeyes		
111	2016-183 CUP	Sun City Senior Care		
112	2016-187 PP	So Cal Mulch		
113	2016-197 CUP	4th St. Auto Repair		
114	2016-213 PP	TR30507 "The Retreat at Holiday"	In progress	
115	2016-215 PAR	Goetz Road Gas and Retail	In progress	
116	2015-228 PAR	Ethanac/Barnett Gas and Retail	In progress	
117	2016-233 CUP	RV SupeCenter	In Progress	
118	2016-239 PP	Town Ctr. Private Recreation Center	In progress	
119	2016-263 CUP	Forterra		
120	2016-286 SP, -287 GPA	Rockport Ranch		
121	2016-290 CUP, 2016-291 PM	Hwy 74 and Trumble. Hotel & Retail		
122	2016-291 CUP	Kiewitt		
123	CUP 2016-299	Cook Automotive		
124	PP 2017-005	Town Center Apartments		
125	PP 2017-042	Gallery Senior Living		

Map ID #	Project Reference	Name	Approved By	Status	Description
1	TTM 34037	Developer: Capstone	County	C/E	Tentative Tract Map No. 34037 is a proposal for a Schedule 'A' subdivision and development of approximately 28.88 acres project site into 132 single-family residential lots with a minimum lot size of 5,500 square feet. In addition the development of this project will include a 1.66 acre neighborhood park, a 0.9 acre water quality basin and a 10-foot wide community trail along Wheat Street. Access to the site will be provided via two access points, one to the west of the project along Wheat Street and the other to the east of the site along Byers Street.
2	TTM 31856	Developer: Sunwood	County	U/F	The project proposes to change the zoning from Rural Residential (R-R) to One Family Dwellings (R-1) and a Schedule A subdivision of 24.11 acres into 79 single family lot with a 7,200 sq. ft. minimum lot size and a 1.3 acre park. The project site is located southerly of Ethanac Road, northerly of McLaughlin Road and westerly of Murrieta Road
4	TTM 35876	Romoland Ranch LLC	City	C/E	The land division hereby permitted is a Schedule A subdivision of 5.58 acres into 17 single family residential lots with a minimum lot size of 7,200 square feet and one lot for a water quality basin.
5	TTM 34118	MR-27 LLC (Rancon)	County	U/E	The land division hereby permitted is to subdivide 27.58 acres into 85 single family residential lots with a minimum lot size of 4,000 square feet, 87 garden court condominium homes, 1 clubhouse, 1 pool, and 2 parks for an overall density of 6.24 dwelling units per acre.
6	TTM 33738	MR 56 LLC (Rancon)	County	C/E	The land division hereby permitted is to subdivide 11.37 acres into 52 residential lots with a minimum lot size of 5,000 square feet and two open space lots for a detention basin and a paseo connection.
7	TTM 34600	MR-27 LLC (Rancon)	County	C/E	The land division hereby permitted is to subdivide 18.3 acres into 153 condominium units on one lot, one recreational center and one pool for an overall density of 8.36 dwelling units per acre.
9	TTM 31811	Heritage Lakes (Brookfield)	County	U/E	The land division hereby permitted is to subdivide 205.2 acres into 559 single family residential lots, 15 open space lots for 3 parks, paseos, and drainage. This project is located east of Briggs Road, north of Matthews Road, east of Menifee Road, and south of Pinacate Road.
10	TTM 36657 / PM 36658	Cimarron Ridge (Van Daele)	City	U/F	Planning Case No. 2013-247 (Specific Plan) proposes a Specific Plan establishing a land use plan, circulation plan, design standards and guidelines for a 240.3 acre area. The Specific Plan has a maximum of 756 single-family residential dwelling units between seven (7) residential Planning Areas on 226.3 acres, a total of 10.9 acres of open space-recreational land use between three (3) Planning Areas, and 3.1 acres of open space-conservation in one (1) Planning Area. Planning Case No. 2014-017 (Change of Zone) proposes to change the zoning of the subject site from One-Family Dwellings (R-1), One-Family Dwellings 10,000 square foot minimum (R-1-10,000), and Open Area Combining Zone (R-5) to Specific Plan (SP) to reflect the proposed Specific Plan and its land use designations and development standards. The Specific Plan creates its own zoning ordinance for the property that will be used for setbacks, lot sizes, lot coverage, etc. Planning Case No. 2013-208 (Tentative Tract Map) (TR 36658) proposes a Schedule A subdivision of 240.3 gross acres into 756 single-family residential lots and 111 lots for park, landscape, monumentation, drainage, and storm drain purposes, including one 10.0 acre park, one 0.64 acre park, and one 0.195 acre park. Single-family residential lots will have a minimum lot size ranging from 5,000 square feet, 5,500 square feet, 6,500 square feet, and 10,000 square feet. The Tentative Tract Map is proposed to be recorded in seven (7) phases, generally following the phasing of the Specific Plan. Planning Case No. 2013-209 (Tentative Parcel Map) (PM 36657) proposes a Schedule I subdivision of 240.3 gross acres into 7 parcels with a minimum lot size of 26.2 acres for financing purposes.
11	TTM 29777	Talavera (True Life Companies)	County		). TR29777 was approved by the County of Riverside Board of Supervisors on May 17, 2005. TR29777 originally was approved for a Schedule A subdivision of 63.48 acres into 173 single family residential lots with a minimum lot size of 7,200 sq. ft. and included a 2.7 acre park, paseos and 10.65 acre open space lot.
12	TTM 29835	Underwood (CV Communities)	County	C/E	The land division hereby permitted is to divide the 236.08 gross acre site into 543 residential lots with a minimum lot size of 5,000 square feet, a 9.4 acre park site, a detention basin and 71.6 acres of natural open space.
13	TTM 31098	2014-204 MC (Strata Equity)	County	C/F	TR 31098 was approved for the subdivision of 91.2 gross acres into 264 residential lots with a minimum lot size of 7,200 sq. ft., four (4) drainage channel lots, two (2) park lots, and two (2) drainage/trail easement lots with offsite grading to the south of the project site.
14	CUP 3549	Heritage Square (Rancon)	City	U/E	Plot Plan No. 2009-051 proposes a 132,580 sq. ft. retail center. The project will include: • 43,830 sq. ft. grocery store, • one (1) 15,661 sq. ft. major retail building with drive through • two (2) buildings for multi-tenant shops totaling 15,600 sq. ft. • one (1) 9,973 sq. ft. retail pad building • one (1) 6,240 sq. ft. retail pad building • 3,860 sq. ft. fast food restaurant building pad with a drive through, • 3,878 sq. ft. gas station and convenience store including a drive through car wash and six (6) fueling pumps • three (3) major retail buildings totaling 33,629 sq. ft. • 719 parking spaces. • The project also includes a recyclable collections area and seasonal sales located in the parking areas. Conditional Use Permit No. 3549 proposes to allow for the convenience store, car wash and gasoline service station with the concurrent sale of beer and wine for off-premises consumption.
15	TTM 31812	Developer: Brookfield	County	U/E	The land division hereby permitted is to subdivide 346.4 acres into 737 single family residential lots with a minimum lot size of 5000 sq. ft., 6 lots for future triplex development, and 8 open space lots for active and passive recreation uses.
16	TTM 34406	Heritage Lakes (Standard Pacific)	County	C/F	The land division hereby permitted is a schedule A subdivision of 231.89 gross acres into 817 residential lots (69 lots with a minimum lot size of 7200 sq ft in PA 14, 113 lots with a minimum lot size of 6000 sq ft in PA 18, 117 lots with a minimum lot size of 6000 sq ft in PA 19, 187 lots with a minimum lot size of 5000 sq ft in PA 20, 116 lots with a minimum lot size of 7200 sq ft in PA 24, 215 lots with a minimum lot size of 5000 sq ft in PA 25), 19.71 acres of open space and 15.00 acres for future commercial development.

17	TR 32794	Quail Hill (Repke)	City		Change of Zone No. 7051 modifies the existing zoning classification on approximately 13 acres adjacent to Goetz Road from General Residential (R-3) to One Family Dwellings (R-1) and to change approximately 18.88 acres associated with the on-site mountain and open space lot adjacent to Palm Drive (Street "D") from One Family Dwellings (R-1) to Open Area Combining Zone Residential Developments (R-5). 2009-007 Quail Hill Repke (TR32794) subdivides 64.30 gross acres into 152 single-family residential lots, two lots to be dedicated to a home owners association consisting of Lot "A" and "B" and 13.86 acres of road right-of-way and utility dedications. The subdivision is required to have lots no smaller than 7,200 square feet. The actual lots range from 7,234 (Lot 49) to 17,933 (Lot 46) square feet with an average lot size of 8,831 square feet. The pad sizes range from 6,502 (Lot 95) to 16,346 (Lot 47) square feet.
18	TTM 31456	Stonegate (Gordon Youde)	County	U/E	The project is a Schedule A tract map proposing to subdivide 161.34 gross acres into 177 residential lots with a minimum lot size of 7,200 square feet, one (1) 2.60 acre basin, one (1) 3.32 acre park and 96.83 acres of open space.
19	PA 2014-218	Rowland (Rowland Development)	City	C/E	Planning Application TR No. 2015-108 (TTM No. 36803) proposes to subdivide 30 gross acres into 80 single family residential lots with a minimum size of 7,200 square feet and three lettered lots consisting of a 0.73 acre open space park lot, a 0.61 acre detention basin, and a 0.62 acre remainder lot for a site located south of Holland Road, north of Corson Road, and east of Evans Road (APN: 360-150-019).
20	PP 19469	Kensington Apartments (Bob Love)	City		Plot Plan No. 19469 Revised Permit No. 1 is for the first revised permit for Plot Plan No. 19469 which was originally approved in April of 2006 for a senior apartment complex consisting of 31 apartment buildings (25 one-story buildings and 6 two-story buildings) with 148 dwelling units, a club house with swimming pool, putting green, pitching tee and shuffle board area and 305 parking spaces. The revised permit is proposing to reduce the number of apartment buildings to 26 and increase the density of the buildings by allowing for 154 one-bedroom units and 67 two-bedroom units for a total of 221 units. Buildings 11-13 and 20-23 are proposed for "12-Plex" buildings and will be two-stories in height (previously approved for one-story). Buildings 24-26 are proposed for "15 Plex" Buildings and will be three-stories in height (previously approved for one-story). The project now proposes 381 parking spaces (210 garage spaces, 54 covered spaces, and 117 non-covered spaces).
22	TR 34180/TR34406	Heritage Lake (Standard Pacific)	County		The land division hereby permitted is to subdivide 319.89 acres into 173.18 acres for 483 single family residential lots with a minimum lot size of 7,200 square feet and 6,000 square feet, a 20.0 acre school site, a 7.69 acre park site, three open space areas totaling 3.99 acres for 40' to 90' wide paseo areas, six open space lots for pedestrian access to the adjacent lake area, one lot for entry monumentation, fifteen lots for expanded landscaped parkways/slopes outside of the dedicated right of way, and one 146.71 acre remainder lot for future development.
23	TR 32100/32102	Developer: Rancon	City	U/E	The land division hereby permitted is to subdivide 68.61 acres into 165 schedule "A" residential lots (minimum lot size 7,200 s.f.) and 11 open space lots. The land division hereby permitted is to subdivide 82.06 acres into 277 single family lots and 11 open space lots.
24	TTM 32186	Mahogany (DR Horton)	County		The land division hereby permitted is to subdivide 33.7 acres into 108 single-family residence lots, 3 open space lots, and 1 park site.
26	SP 209	Audie Murphy Ranch (Brookfield)	County	C/F	Planning Case No. 2012-033 (Specific Plan Amendment) proposes a fifth amendment to the Audie Murphy Ranch Specific Plan No. 209. SPA 2012-033 consists of a proposal to reconfigure planning area boundaries within the portion of the Specific Plan area located north of Salt Creek; modify the range of lot sizes available within the plan; and incorporate minor changes to the recreational amenities provided within the community. Proposed Amendment No. 5 primarily would affect approximately 400 acres, concentrated in the northwestern portion of the Specific Plan area. The maximum developable number of dwelling units within the Specific Plan would decrease from 2,190 to 2,157. Acreage allocated to residential use would decrease from 600.6 acres to 567.6 acres and non-residential uses would increase from 512.58 acres to 545.8 acres. Of the non-residential land uses, community recreation center would remain at 4.9 acres, parks would increase from 24.0 acres to 28.3 acres, linear parks/paseos would decrease from 35.2 acres to 26.2 acres, floodplain/riparian area would increase from 105.5 acres to 120.4 acres, conserved open space would increase from 248.1 acres to 266.6 acres, school sites would increase in size from 28.8 acres to 32.8 acres, sewer lift station would increase from 0 acres to 0.9 acres, and roadways would decrease from 66.3 acres to 65.7 acres. There have also been several revisions to the parks within the community. The following two tables show the number of units per minimum lot size and the changes between the prior March 5th City Council version and the current proposed version of the Specific Plan.
27	TR 32025	Canyon Cove (Brookfield)	County		Minor Change No. 2015-028 proposes a Minor Change (MC) to the previously approved Tentative Tract Map No. 32025 (TR32025). TR32025 was approved by the County of Riverside Board of Supervisors on April 4, 2006. TR32025 originally was approved for a Schedule A subdivision of 130 acres into 198 single family residential lots ranging in size from 5,500 to 6,500 square feet and seven lots for open space and/or landscaping (76.9 acres). Under the minor change, the subdivision would include 198 single family residential lots ranging in size from a minimum of 5,500 square feet to over 10,000 square feet and thirteen (13) lots for open space (83.05). The thirteen lots for landscaped areas are noted below: 1. Lot 199 – 1.01 acre Slope Landscaping along Newport Road behind Lots 1-13 2. Lot 200 – 0.95 acre Slope Landscaping between lots 26-37 and lots 38-49 3. Lot 201 – 1.03 acre Slope Landscaping adjacent to Hidden Timber Lane, behind Lots 50-56 4. Lot 202 – 0.22 acre Passive park area between Lots 56 and 57 5. Lot 203 – 0.99 acre Slope Landscaping adjacent to lots 66-82 6. Lot 204 – 0.10 acre Landscaping over drainage lot between lots 77 and 78 7. Lot 205 – 0.81 acre Passive park area adjacent to lots 83, 92, and 93 8. Lot 206 – 0.99 acre Passive park area adjacent to lots 148-152 9. Lot 207 – 4.32 acre Slope Landscaping and trail behind lots 113 to 137 10. Lot 208 – 0.51 acre Passive park area adjacent to lot 25 11. Lot 209 – 71.6 acre Primarily open space with some slope landscaping and two basins 12. Lot 210 – 0.49 acre Slope Landscaping behind lots 153-167 13. Lot 211 – 0.03 acre Slope Landscaping adjacent to lot 177 All of the lots are proposed to be maintained by the Homeowner's Association. A regional trail (12 feet wide and within the right-of-way) is proposed along the west side of Lone Pine Drive. Local trails (8 feet wide) are proposed within some open space lots, connecting the western portion of the development, east through the park site (205/206) and to the regional trail.
28	TR 30812	Boulder Creek (JCA Homes)	County		The land division hereby permitted is to subdivide 18.62 gross acres into 29 residential lots with a minimum lot size of 20,000 sq. ft.

29	2014-091 / PM 36728	Stater Brothers	City	C/F	Planning Case No. 2014-091 (Plot Plan) is a proposal for a 121,277 square foot commercial retail center consisting of ten (10) buildings on 14.04 acres. Development of the center is proposed in two phases (Phase I – 97,131 square feet maximum, Phase II – 24,146 square feet maximum). Phase I would consist of the majority of the site with Phase II including proposed Shops 3 and 4 located in the southeast portion of the site. All road improvements would be completed with Phase I along with all Phase I area on-site drive aisles and parking areas, excluding the minor drive aisles and parking areas located in Phase II that would be constructed in Phase II to serve Shops 3 and 4. Buildings would consist of a 45,112 square feet grocery store (Stater Bros.), four (4) Shops buildings totaling 40,946 square feet, and five (5) Pad buildings totaling 35,219 square feet. Within these buildings uses would include the grocery store (Stater Bros.), drive-thru fast food and coffee, pharmacy (CVS), restaurant and retail.
31	SP 2009-069	Town Center (Regent)	City	C/E	Specific Plan Amendment 2009-069 Town Center. 2015-238 proposes a Schedule A subdivision of Planning Areas 1, 2 and 4 of the Town Center Specific Plan into a total of 452 residential lots The Town Center Specific Plan is designed to allow the development of a master planned community comprised of complimentary commercial, recreational, civic, residential and educational land uses. The Specific Plan envisions development at a scale, mix, intensity and design that departs from the typical suburban residential development proposed under the original Countryside Specific Plan No. 194. The central location of the project and its proximity to Countryside Marketplace provides a unique opportunity to establish a landmark place to serve as the City's future center of activity. The Specific Plan covers approximately 168 acres located at the southwest corner of Newport Road and Haun Road. The Specific Plan establishes three land use categories: • Mixed Use (113 acres): allows a mix of civic, office, retail, service, restaurant, hospitality, open space/park and residential uses with densities ranging from 5 to 36 dwelling units per acre, including live/work or senior housing, to create a lively and dynamic urban center; • Office/Commercial (12 acres): permits a mix of office, retail, service, restaurant and hospitality uses adjacent to the existing Countryside Marketplace; and • Residential (33 acres): permits exclusively residential with densities ranging from 5 to 24 dwelling units per acre with a target density of 10 dwelling units per acre to allow a transition from the existing residential neighborhoods to the west to the more dense mixed use core. The Preferred Plan reflects the applicant preference of development. The goal of the specific plan was to provide a planning document that had sufficient flexibility to respond to changing market demands and conditions. In response to this, the EIR analyzed the preferred plan as well as several alternatives
32	PP 2014-113	Menifee Lakes Plaza (Menifee Lakes LLP)	City		Planning Case No. 2014-113 (Revised Plot Plan) proposes a revision to the previously approved Menifee Lakes Plaza (County Case No. CUP03487/City Case No. 2009-052) to add an LA Fitness gym. Specifically, the changes to the site plan include the following: 1. Eliminate Pad 1 (11,200 sq. ft.), Pad 2 (8,800 sq. ft.), Pad 3 (6,000 sq. ft.) and Pad 4 (6,000 sq. ft) and replace with a 34,500 sq. ft. LA Fitness (with additional 3,500 sq. ft. mezzanine); 2. Revise references from pads to outparcels; 3. Convert Pad 5 to Outparcel 1; 4. Modify parking field around proposed LA Fitness; 5. Modify driveway across from Balsa Road; 6. Modify driveway between Balsa Road and Pampas Street (removed throat); 7. Major 1 increased in size from 15,000 to 16,000 sq. ft.; 8. Major 2 increased in size from 30,000 to 34,700 sq. ft.; 9. Major 3 increased in size from 15,500 to 17,700 sq. ft.; 10. Increase parking spaces from 787 to 843 spaces (775 parking spaces required per Specific Plan Amendment proposed new parking criteria); 11. Increase total building square footage from 171,817 sq. ft. to 184,717 sq. ft.; 12. Include two additional sign panel areas for freeway pylon sign A and pylon sign B; and 13. Shift the primary pylon sign along the I-215 frontage northerly to adjacent to the hotel site.
33	TTM 32101	Developer: Rancon	County	U/F	The land division hereby permitted is to subdivide 69.32 acres into 197 schedule "A" residential lots (minimum lot size 6000 sq.ft. and 5 open space lots including a 1.52-acre park and trail system.
34	PUP 2009-077	His Light (His Light) - Expired	City		Public Use Permit 2009-77 proposes several buildings that will constitute the new His Light on the Hill church. The entire facility is proposed to be constructed in two phases with the following buildings are proposed: Phase I, Building I (initial sanctuary, future gymnasium conversion): 12,310 square feet (s.f). Phase I, Building II (two classroom / meeting room buildings of about 2,750 s.f. each): 5,512 s.f. total Phase II, Building III (main sanctuary building): 26,328 square feet Phase II, Building IV (maintenance building): 2,880 square feet Ancillary actions requested in this application include: two driveway entrances, one on Holland Road, and a right-in-right-out driveway on Murrieta Road. The grading and exporting of 15,650 cubic yards of dirt, the architecture of each of the buildings, the conceptual landscaping, and the proposed signage of the site
35	TR 28786	Pacific Communities	County		The subdivision hereby permitted is to subdivide 24.1 acres into 72 single-family lots. This tract is located within Planning Area 3 of SP 140-S1.
36	TR 30422	The Lakes (Pulte and Lennar)	County/City	C/F	The land division hereby permitted is to SUBIVIDE 399-acres into 992 single family residential units with a commerical, school, park, lake/greenbelt, and multi-family/day care lots.

37	TTM 31229	Menifee Nautical's Cove (Rancon)	City	U/E	Tentative Tract Map No. 2009-114 (County Case No. TR31229) is hereby approved for a Schedule A subdivision of 77.15 gross acres into 239 single-family residential lots and 14 open space/recreational lots at an overall density of 3.10 dwelling units per acre. A minimum lot size of 6,000 square feet is proposed with the exception of the lots adjacent to Briggs Road which are required to be a minimum of 10,000 square feet to provide a compatible buffer to the larger lots of the east side of Briggs Road. Three of the 14 open space lots are comprised of active amenities including a 12.38-gross-acre community lake (Lot 250), a 5,188 square foot community center on 0.95 acres (Lot 251), and a 0.72-gross-acre community park (Lot 252). The remaining 11 lots include access roads, trails, drainage swales, landscaped areas, bio-swales and storm drain easements. All 14 open space lots will be maintained by a homeowners association.
38	TTM 32277	Menifee Heights (CV Communities)	County	U/F	Planning Application No. 2012-045 proposes revisions to the County-approved Tentative Tract Map No. 32277. The County of Riverside Board of Supervisors approved the tentative tract map on September 16, 2008. The County approved map proposed a Schedule A subdivision of 158.75 acres into 359 residential lots ranging in size from 6,000 to 35,496 sq. ft. The subdivision included sixteen (16) open space lots for landscaping open space and drainage: one (1) 10.22 net acre park and fifteen (15) additional lots for landscaping, open space and drainage which included a 12-foot multipurpose trail along Holland and Briggs Road. The revised tentative tract map has the same number of residential lots, but the sizes of the lots now range from 6,000 to 18,165 sq. ft. Specifically, the sizes of the lots were reduced along the eastern and southern boundaries of the tract. A large basin was removed from the northern portion of the site and was replaced with three smaller basins in the same general location. The street and lot layout has been reconfigured for the lots in the northern and southeastern portion of the tract. The park has been reduced in size from 10.22 to 9.97 acres due to more detailed engineering design (the overall function of the park has not changed). A paseo has also been removed due to the steep slope that was originally proposed. The number of lots for open space, landscaping and drainage has increased to 17 lots. The revised tentative map includes a 15-foot multipurpose trail along Holland and Briggs Road and seventeen (17) open space lots for landscaping open space and drainage: one (1) central park, four (4) lots for water quality basins, eight (8) lots for perimeter and main entryway landscaping, two (2) lots for drainage, one (1) lot for trails (along the southerly project boundary), one (1) 39.18-acre hillside open space lot in the southwesterly portion of the site.
39	TTM 29636	Calder Ranch (Classic Pacific)	County		The land division hereby permitted is to subdivide 76.87 gross acres into 72 residential lots with the minimum lot size of 1 gross acres and four detention basins. The map is designed in accordance with the Schedule "B" map and Residential Agricultural- 1 Acre Minimum (R-A-1) zone.
40	TR 30142	KB Hidden Hills (KB Homes)	County	C/F	The land division hereby permitted is for a Schedule A subdivision of 166.3 acres into 523 single family lots with 409 lots with a 7200 square foot minimum and 114 lots with a 6000 square foot minimum, a 5.3 acre park. 3 detention basins totaling 2 acre, 11 acres of open space (paseo) lots and a 3.3 acre hillside area.
41	TR 30664	Gallery States (Pacific Communities)	County		The project is a Schedule B tract map proposing to subdivide 58.5 acres into 34 lots. The proposed tract map lots will vary from 1 to 5 acres and include one detention basin.
42	TTM 31194	Golden Meadows (Richland Comm.)	County		The land division hereby permitted is to do a schedule "A" tract map that would subdivide 206.8-acres into 474 residential lots with a minimum lot size of 6,000 square feet and an average lot size of 8,439 square feet, 3 detention basin lots, 6 open space lots and 3 parks (7.4 acres).
43	2014-146	Menifee Unified School district HQ	City	C/F	Planning Application Plot Plan No. 2014-146 proposes the construction and operation of a two-story 44,932 square-foot (first floor: 30,789 sq. ft.; second floor: 14,143 sq. ft.) concrete tilt-up office building for the Menifee Union School District to serve as the District Education Center. The office building includes offices, conference rooms, a boardroom, restrooms, staff lounge, training room, lobby and enclosed patio. The project proposes 177 parking spaces, including six (6) ADA accessible spaces. The project site is 6.1 acres in size.
44	2013-210	Int'l Auto Crafters	City	C/F	Planning Application No. 2013-210 (Plot Plan) is hereby approved for International Auto Crafters to construct a new commercial building on 1.37 acres on the northeast corner of Haun Road and New Hub Drive. A 17,007 square foot automotive body shop will be located on the western portion of the project site with the entrance facing Haun Road. The building will consist of various sections of an automotive body shop and two floors of office space. 1,300 square feet is proposed on the first floor and 950 square feet proposed on the second floor.
45	TTM 32628	Christensen Ranch (Breson Comm.)	County	U/E	General Plan Amendment No. 702 proposes to change the existing land use designation from Business Park (BP) to High Density Residential (HDR). The Riverside County Integrated Project (RCIP) General Plan Foundation Component will remain Community Development. Change of Zone No. 6993 proposes to change the existing Industrial Park (I-P) zone to General Residential (R-3) zone. Tentative Tract Map No. 32628 proposes to subdivide 30.54 acres into five (5) multi-family parcels with a minimum lot size of 5 acres. This proposal also included the development of a residential condominium project comprised of 327 condominium attached units for sale. The residential two and three story units are comprised of three different building types with three different floor plans. The building units are dispersed throughout the site as triplexes and sixplexes compounds and each are clustered around a motor-courtyard. The proposed bulding's architecture provides a blend of Craftsman, Spanish, and Ranch styles. A recreational comples is proposed in the center of the project site. It includes a 5,763 sq. ft. community building, a pool, exercise room, a tenis court, and an open space play area. The proposed development will be served by 666 covered parking spaces, 97 uncovered parking spaces and 80 parking spaces for street parking. There will be 13.06 gross acres of open space and landscaping that include common areas, exterior and interior parkways. The proposal includes two water detention ponds for flood control purposes.
46	TTM 28206	Terra Bella/Mosaic (DR Horton, Watt Comm.)	County	C/F	The subdivision hereby permitted is consists of the development of 277 single-family residential lots averaging 8402 square feet, four open space lots totaling 30,126 square feet, and three detention basins on 79.82 acres.

47	TTM 33732	Cantelena (Richland Communities)	County	C/E	The land division hereby permitted is a Schedule A subdivision of 94.3 acres into 296 single-family residential lots, one 13.97 acre park, 38 open space lots for additional landscaping, drainage easements/pedestrian access, detention basins and drainage channels. This proposal would implement the development of Planning Areas (PA) 1, 2, 7, 8, and 9 of Specific Plan No. 334. The following is a breakdown of the dwelling units proposed within each Planning Area: PA 1 includes 47 dwelling units (DUs); PA 2 includes 80 DUs; PA 7 includes 74 DUs; and PA 8 includes 95 DUs. This proposal includes the development of the Paloma Wash and mass grading of the entire Specific Plan area.
48	TR 33511	Granite (Granite Investments)	County		The land division hereby permitted is for a Schedule "A" subdivision of 27.30 acres into 71 Single-Family Residential lots with a minimum lot size of 7,200 square feet, three (3) detention basins and a foot-path along an existing dry channel.
49	PP 2014-009	Shopping Center (Rich Dev)	City	C/F	Plot Plan No. 2014-009 proposes the development of a retail shopping center totaling 100,024 sq. ft. (not including outdoor patio{s}) on 12.42 net acres. Five (5) buildings are proposed for major tenants, ranging in size from 7,000 to 18,440 sq. ft. Additional buildings are proposed for shops, retail and food, ranging in size from 2,400 sq. ft. to 12,545 sq. ft. Four (4) restaurant pads are proposed: three (3) fast food restaurants with drive throughs and one (1) sit down restaurant. There are a total of 522 parking spaces provided, including twenty-one (21) parking spaces for persons with disabilities and two (2) electric vehicle charging spaces. Access to the site is proposed from a driveway on Newport Road and two (2) driveways on Haun Road which are aligned with existing driveways at the “Countryside Marketplace.”
51	CUP 2015-157	Cal Cruz Express	In progress	C/E	Planning Application Conditional Use Permit No. 2015-157 proposes the construction and operation of a new 4,392 sq. ft. self-service, drive-thru car wash and a 6,166 sq. ft. tire shop with 1,225 sq. ft. attached retail tenant space within a .80 acre site located at the southwest corner of Newport Road and Winterhawk Road (APN 360-020-030 and -031). The project proposal includes 12,789 sq. ft. of landscaping and 26 parking spaces.
53	PDS-CP	Commerce Pointe (PacTen)	City	U/F	85. Project Description The proposed project is for the development of two light industrial parks totaling ±827,777 square-feet of building floor area within 51 individual buildings plus a total of 1,362 parking spaces (Attachment 5 – Project Plans). The buildings range in size from ±5,475 square-feet to ±36,360 square-feet and would accommodate research and development uses, warehouse uses, and associated office uses. Specifically, each development is proposed as follows: 1. Commerce Pointe I - ±617,919 square-feet of floor area within 33 buildings, plus 1,035 parking spaces; and 2. Commerce Pointe II - ±209,858 square-feet of floor area within 18 buildings, plus 327 parking spaces. The buildings are both single story and two stories of concrete tilt-up construction. Landscaping will surround the perimeter of each development and will surround each building. Landscaping also acts as a buffer between the Commerce Pointe I development and the I-215 Freeway. Commerce Pointe I includes the conservation and enhancement of an open space area for an existing riparian/riverine habitat. The habitat feature is sited on the eastern boundary of the site, adjacent to I-215 freeway. The site plan shows one entry drive to each project site along Zeiders Road and one entry drive each along Ciccotti Street. Commerce Pointe II will also have an entry drive along Bailey Park Boulevard. The proposed project also includes the installation of new utilities and road improvements.
54	SP 2009-025	Fleming Ranch (Fleming)	In progress	U/E	Planning Application Specific Plan No. 2009-025 proposes the development of a 333.6 acre site with up to 1,588 residential dwelling units; an optional 12.2 acre elementary school site; open space, recreation and paseo uses on 47.6 acres; and mixed uses on 23.3 acres that could comprise residential, retail, office, light industrial, public facilities and/or recreational land uses. Planning Application Tentative Tract Map No. 2009-106 (TM 34104) proposes a subdivision map for conveyance purposes. The map proposes to establish 22 parcel lots, two park lots, one onpen space lot, five drainage lots and ten lettered lots within the 333.6 acre site in a manner consistent with the planning areas identified in the Specific Plan. The map includes six parcels for mixed use (lots 2-7); one parcel for open space (lot 26); five lots for drainage purposes (lots 1 and 27-30); and ten lots associated with proposed roadway facilities. Planning Application Tentative Tract Map No. 2009-107 (TM 34105) proposes a subdivision of 209.1 acres of property within the Specific Plan into 1,231 dwelling units, including three pocket parks and 24 lots for landscaping. The map is proposed to implement the land uses identified by the SP in Planning Areas E-1 through E-8 and W-1 through W-7B. The project site is located east of Interstate 215, north of Chambers Avenue, south of Rouse Road, and west of Antelope Road, City of Menifee, County of Riverside, State of California. APN # 333-020-003; 333-020-004; 333-020-006; 333-020-007; and a portion of 333-030-009.

55	PP 2010-022	The Junction (PacTen)	City	U/E	Plot Plan No. 2010-022 is for the construction of a 526,800 square foot shopping center consisting of eighteen (18) buildings for future commercial and retail uses within a 50.28 gross acre site located north of Scott Road, east of Howard Way and west of Haun Road. The buildings include the following: • Building 1 – 160,000 sq. ft. o Includes gas station with 10 fuel pumps • Building 2 – 106,110 sq. ft. o Includes attached 34,650 sq. ft. Garden Center • Building 3 – 35,000 sq. ft. • Building 4 – 30,000 sq. ft. • Building 5 – 20,000 sq. ft. • Building 6 – 24,800 sq. ft. (intended for multiple tenants) • Building 7 – 32,800 sq. ft. (intended for multiple tenants) • Building 8 – 18,300 sq. ft. (intended for multiple tenants) • Building 9 – 19,640 sq. ft. (intended for multiple tenants) • Building 10 – 5,000 sq. ft. • Building 11 – 5,000 sq. ft.
56	PP 2009-121	Walmart	City	U/F	Plot Plan No. 2009-121 proposes the construction and operation of a shopping center totaling 240,980 sq. feet. The shopping center consists of the following: • "Major" retail anchor (Walmart) totaling approximately 205,000 square feet, including outdoor garden center uses; o The Walmart is proposed to operate 24 hours a day o Walmart will offer groceries and general retail merchandise, including, but not limited to alcohol for off-site consumption, pool chemicals, petroleum products, pesticides, paint, and ammunition. o The garden center will include an exterior customer pick-up facility for prepaid bagged garden supplies, such as potting soil and mulch. o Includes five (5) signs affixed to the Walmart building: 8' x 37' 3" "Walmart" sign on the south elevation 3' 5 ½" x 29' 8 ½" "Market & Pharmacy" sign on the south elevation 3' 4" x 21' 9 ½" "Home & Living" sign on the south elevation 3' 5" x 22' 8" "Outdoor Living" sign on the south elevation 5' 6" x 8' "Walmart" sign on the west elevation • 3,200-square-foot fast food restaurant with drive-through; • 2,800-square-foot convenience store with 16-pump fueling station and a drive-through car wash; • 3,000-square-foot fast food restaurant with drive-through; • 6,500-square-foot high turnover sit-down restaurant; • 13,800 square feet of retail shops; • 6,680-square-foot automobile service and repair.
57	PAR 2016-154/PP2017-021	Newport Town Square II	City	U/E	Plot Plan No. 2017-021 proposes the construction and operation of a commercial center anchored by an approximately 29,536-sq. ft. Smart and Final Market (Major A) on an approximately 5.36 acre site. The center will also include a 12,993-sq. ft. retail building (Major B) and a pad for an 8,646-sq. ft. sit down restaurant (Pad 1) The project site is located on the northwest corner of Newport Road and Haun Road within the New Hub Specific Plan (APNs 336-380-071).
58	PP 2014-237	Thorton Terraces (Sudweeks Development)	In progress		Tentative Tract Map No. 2014-225 proposes a Schedule 'A' subdivision of 2.65 gross acres into 19-multi-family residential townhome (condominium) units. Plot Plan No. 2014-237, which implements Tentative Tract Map No. 2014-225, and proposes a site plan for a gated residential townhouse (condominium) project, private streets, floor plans and elevations for seven (7) two-story buildings containing the nineteen (19) units (totaling 42,213 square feet of building area, wherein the buildings will range in size from 4,534 sq. ft. to 6,629 sq. ft.), five (5) guest parking stalls, one (1) open space lot to serve as community open space in the central portion of the project site, and one (1) infiltration basin in the southeast corner of the site The project is located at the northwest corner of Murrieta Road and Thornton Avenue (APN: 335-481-015).
59	2013-040	Chaparral Apartments (Chaparral LLC)	In progress		Planning Application Specific Plan No. 2013-039 proposes the seventh amendment to the Menifee Lakes Specific Plan No. 158. The amendment proposes to increase the overall number of dwelling units by 228 from 5,344 to 5,572; reduce the land area associated with Planning Area 5-2 from 89.5 acres to 43.5 acres; create a new Planning area (Planning area 5-7) consisting of 46.0 acres and designate as Medium Density Residential (2-5 du/acre) and establish development standards for the Planning Area 5-7; Amend the Circulation Plan for a portion of Menifee Road from north of Aldergate Drive to the project site's northern boundary to an Arterial Highway (128' ROW); and make minor technical changes to the Specific Plan text and graphics for consistency with the built environment. Planning Application Plot Plan No. 2013-040 proposes an age restricted/senior apartment project including 228 units in 21 buildings with a total building square footage of 136,227 sq. ft. within a 46.0 acre site. The buildings proposed are 2 and 3 stories in height. A total of 531 parking spaces are proposed and divided between dedicated garage parking and open parking stalls. The project also includes multiple outdoor recreation facilities including two pools, two spas, tot lot, putting green, bbq equipment, shuffle board and recreation building with fitness center room and multi-purpose room. 22.3-acres of the 46.0-acre site will remain as natural open space. Planning Application Tentative Tract Map No. 2013-203 (TR36645) proposes to subdivide the 46.0-acre site into 5 lots for 228 condominium units and 6 lettered lots for private roads as proposed by the associated Plot Plan.

60	2012-120	Walmart	In progress	C/E	Plot Plan No. 2012-122 proposes the construction of an approximately 208,371 sq. ft. shopping center on approximately 24.5 gross acres. The shopping center will include the following buildings: a 182,171 sq. ft. Walmart shopping center, including seasonal garden center, pharmacy and tire and lube center; three (3) buildings with drive-thrus ranging in size from 3,000 sq. ft. to 5,500 sq. ft.; and 12,000 sq. ft. of shops. The Walmart garden center will include an exterior pick-up facility for prepaid bagged garden supplies, such as potting soils, mulch and manure. The exterior pick-up facility will have an attendant for customer loading, but will not accommodate direct sales, as all supplies picked up from the exterior pick-up facility will be prepaid. The Walmart will have a pharmacy with a drive-through. The Walmart may also include a medical clinic; vision and hearing care center; food service; a photo studio and photo finishing center; a banking center and other similar accessory uses. The Walmart will include truck doors and loading facilities. The Walmart is proposing to operate 24 hours a day.
61	2009-111	UPS Expansion (UPS)	City	C/F	Planning Case No. 2009-111 (Plot Plan) the use hereby permitted is to permit the expansion of an existing parcel delivery facility on the 9.33 gross acre subject parcels of land bounded by Trumble Road on the west and Sherman Road on the east. The project will be dedicating 0.17 acre of right-of-way resulting in a 9.16 net acre development site. The eastern half of the project site that has the frontage onto Sherman Road is occupied by the existing operational UPS facility entitled under Plot Plan No. 6581 on February 17, 1982. This existing facility has originally approved for a total floor area of 18,750 square feet. In September of 1982, a Substantial Conformance was processed to add an additional 1,080 square feet to the northern portion of the existing building, to add a car wash area adjacent to the western side of the building and to add a fuel dispensing island to northeast of the building adjacent to the employee parking area. The expansion will predominately involve the construction of a new building on the western half of the site. A total of 30,654 square feet of additional floor area is proposed within a new building. The proposed building has a maximum height of 32 feet with the main structure standing at 28 feet and a four foot mechanical screen atop the roof to shield equipment. The first floor is committed to 28,228 square feet of operations area with a new conveyor area, employee locker rooms, restrooms, an employee break room and offices. The second floor is comprised of 2,426 square feet of offices and a conference room. The facility will include two run-out services areas for loading vehicles. The expanded facility will include 15 tractor trailer docks, 17 long haul trailer parking spaces, 93 parcel van docks, 222 automobile parking spaces, a truck washing area, a below ground fuel tank and four fuel islands. The new construction will also involve the construction of an outdoor employee lunch area adjacent to the new building. In addition, the current application includes the following additional modifications: • Adding a new auto shop in the existing building. • Relocating the outside vehicle wash area to inside the existing structure. • Relocating an existing office to the new building. • Relocating employee parking area.
62	2010-057/058	Jack in the Box and Gas Station	City	C/F	Plot Plan 2010-057 is a proposal for the construction of a new Jack in the Box fast food restaurant with a drive-thru on a 0.54 net acre vacant parcel (0.62 gross acre). The 2,599 square foot rectangular-shaped structure is to be located in the northern portion of the site. A concrete drive-thru lane is proposed along the northeast and northwest sides of the building. The remainder of the site will be developed with asphaltic concrete pavement for 26 parking spaces and drive aisles, decorative flatwork and landscaped areas. Access to the site requires off-site improvements to adjacent parcels (APN 329-030-075 to the west and 329-030-071 to the east). Plot Plan 2010-058 is a proposal for the construction of a new gasoline station and convenience store on a 0.74 net acre vacant parcel. The 3,000 square foot rectangular-shaped structure is to be located in the northwestern portion of the site. The plan includes a fuel sales area canopy for six (6) fuel pumps. There will be two underground storage tanks located adjacent to the pump island canopy and two new trash enclosures. The remainder of the site will be developed with asphaltic concrete pavements for 16 parking spaces and drive aisles, decorative flatwork and landscaped areas. Access to the site requires off-site improvements to an adjacent parcel (APN 329-030-073 to the east). The proposal includes off-site drainage improvements to the parcel to the north (APN 329-030-071).
63	2010-090	Menifee North SP (Vonham Inc.-Romola General)	In progress	U/E	Planning Application No. 2010-090 (Specific Plan) proposes to amend the existing Menifee North Specific Plan (Specific Plan No. 260) by changing the land use designations of Planning Areas 11, 12, 13, and a portion of 14 from Business Park, Commercial/Business Park, and Commercial to High Density Residential, Mixed-Use, and Commercial and reconfiguring the boundaries of these Planning Areas. The project site is located north of Highway 74, south of Stone Lane, west of Junipero Road and east of Palomar Road. APNs: 329-090-069, -070, -071,-072, and 329-100-025, -026, -027, -030, -031 and -032.
64	2016-038 TR	Ridgemoore Investments LLC	City	U/E	The subdivision hereby permitted is to subdivide 5.59 acres into 18 residential lots.
65	TM 31582	El Dorado (Rancon and Lennar)	County	C/E	The land division hereby permitted is to subdivide 89.96 open space acres into 271 Schedule "A" residential lots, 21 open space lots, one (1) basin lot and one (1) park.
66	PM 36135	Sweetwater Canyon Rd (Mr. Cook)	County		Subdivision of five parcels - 2 acre minimums on Sweetwater Canyon Road, south of Scott Rd.
67	TM 30554	Alasia - Meritage Homes	County	Complete	The project is a Schedule A tract map proposing to subdivide 35.4 gross acres into 86 single-family residential lots and two detension basin lots.
68	TM 28787	Pacific Communities	County	C/F	The subdivision hereby permitted is to subdivide 32.7 acres into one school lot, 67 single family lots and two landscape lots. The residential units and landscape lots of this tract are located in Planning Area 1; the school lot is located in Planning Area 5.
69	TM 28788	Pacific Communities	County	C/F	The subdivision hereby permitted is to subdivide 36.6 acres into 1 park site/detention basin and 123 single family lots. The residential units of this tract (TR 28788) are located in Planning Area 1; the park/detention basin site is located in Planning Area 6C.
70	TM 28789	Pacific Communities	County	C/F	The subdivision hereby permitted is to subdivide 28.0 acres into 131 single-family lots and two landscape lots. This tract (TR 28789) is located in Planning Area 2 of SP 140-S1.
71	TM 28790	Pacific Communities	County	C/F	The subdivision hereby permitted is to subdivide 30.6 acres into 156 single-family lots, one landscape lot and one recreational center lot. These lots are all located within Planning Area 2 of SP 140-S1.

72	2016-057PP; -058 CZ	Rancho Bonito	In progress		Planning Application Plot Plan No. 2016-057 proposes the development of a vacant 17.04 acre property into a 196-unit apartment complex and a separate 26,909 square foot commercial center. The 196-unit apartment complex consists of forty-five (45) two-story residential buildings, a 1,972 square foot 1-story recreation building, and three (3) large open space areas containing recreational amenities including a pool, tot lots, community garden, basketball court and volleyball court. Parking for the apartment complex consists of individual two-car garages attached to each unit (392 stalls) and 121 uncovered stalls for guest parking. Access to the development is provided from a main driveway entrance located near the center of the project frontage on Garbani Road. A second driveway is located at the southwest corner of the development for emergency access off of Sherman Road. The apartment complex would occupy the westerly 13.91 acres of the site. The proposed commercial center consists of two (2) 1-story buildings having areas of 20,509 and 6,400 square feet. The parking field is located behind (west) of the buildings and contains 148 stalls and three (3) loading spaces. Access to the commercial center is provided from two (2) driveways, one (1) located on Haun Road and one (1) on Garbani Road. The commercial center would occupy the easterly 3.13 acres of the site. The project site is located within the City of Menifee. The site is bounded as follows: Garbani Road and a single family residential neighborhood to the north, vacant land to the south, Haun Road and vacant land to the east and Sherman Road and vacant land to the west. The project site APN is 360-350-006.
73	TR 28859	Ascho	County	U/F	This subdivision will result in 246 single family residential lots with a minimum parcel size of 7,200 square feet. There will also be a 25.0 acre remainder parcel. (Amended, 3/23/99)
74	TR 28859-1		County		Planning Case No. 2012-056 (Plot Plan) is hereby approved for the establishment of a 6,214 sq. ft. freestanding building for the sale of automobile parts and supplies within a 0.58-acre site within an existing shopping center (i.e., Stater Bros. Shopping Center). As previously stated, the existing shopping center was entitled under Riverside County Plot Plan No. 10666 in 1990. No fencing or walls were approved as part of this project. The hours of operation, including loading, unloading, and deliveries, shall be limited to 7:00 a.m. to 10:00 p.m. seven days a week.
76	CUP 2013-157	American Tire Depot	In progress		Planning Application No. 2013-157 proposes a conditional use permit for the construction and operation of a new 7,171 sq. ft. building for tire installation and other minor automobile repair on a 0.79-acre parcel. Access to the project site is proposed via the adjacent site to the east and the existing driveway on Newport Road for the adjacent site. The site is located northerly of Newport Road, easterly of Bradley Road, southerly of Park Avenue, and westerly of Calle Tomas on APN 336-180-018.
77	PP 2014-189	(North Bayport Industrial Park II, LTD)	In progress	U/E	Planning Application No. PP 2014-189 proposes an apartment project including 240 units in 24 two-story buildings with a total building square footage of 317,472 sq. ft. and 6,440 sq. ft. leasing/clubhouse building on a 19.25-acre site. A total of 577 parking spaces are proposed and divided between dedicated garage parking and open parking stalls. Planning Application No. CZ 2014-190 proposes to change the zoning of the subject site from One-Family Dwellings (R-1) to Multiple Family Dwellings (R-2) for consistency with the General Plan land use and proposed project. The site is located westerly of Menifee Road, northerly of McCall Boulevard, easterly of Junipero Road, and southerly of Rouse Road on APNs 333-070-018, 333-070-019, 333-070-053.
78	PAR 2014-188	(Southern CA Properties)	In progress		Pre-Application Review No. 2014-188 proposes a Schedule 'A' gated subdivision of 19.98 gross acres into 128 lots with a density range of 2 to 5 dwelling units per acre. The project is located along the south side of Scott Road approximately 650 feet east of Briggs Road in the City of Menifee (APN: 472-010-009). The subdivision includes a detention basin on the north side of the tract, a clubhouse, pool, and tot lot/playground.
79	PP 2015-164	Market Rate Apartments (Strata Equity)	In progress	C/E	Tentative Tract Map No. 2015-165 proposes a Schedule 'A' subdivision of 20.0 gross (16.4 net) acres (south of Holland Road) into 68 single-family residential lots and one (1) sand filter basin. The single-family residential subdivision has a proposed density of 3.94 dwelling units per acre and a minimum lot size of 7,200 square feet. The single-family subdivision is proposed to be accessed via two (2) entry points: one (1) mid-block entry off of Holland Road between Hanover Lane and Palomar Road; and one (1) entry off of Palomar Road south of Holland Road. Plot Plan No. 2015-165 is a proposal for the construction and operation of a 238-unit market-rate apartment complex and a gated 100-unit senior (independent) living facility on 17.2 gross acres (north of Holland Road). The 238-unit apartment complex consists of fourteen (14) three-story apartment buildings, two (2) one-story recreational buildings, two (2) pool facilities, and 450 (including in-garage) parking spaces on 8.8 acres. The senior living facility would consist of one (1) 102-unit, three-story building, a pool facility, community gardens, and 189 parking spaces on 4.8 acres. The apartment complex is proposed to be accessed via two (2) driveways: one (1) off of Hanover Lane north of Holland Road; and one (1) mid-block driveway off of Holland Road between Hanover Lane and Palomar Road. The senior facility is proposed to be accessed via a primary driveway off of Palomar Road north of Holland Road and a secondary (emergency vehicle only access) driveway off of Holland Road west of Palomar Road. The project site include one (1) proposed bus stop on the north side of Holland Road.

81	EOT 2015-012	Motte Town Center	In progress	U/E	2. Planning Case No. 2011-093 (Plot Plan) is a proposal to permit the construction of four industrial buildings totaling 97,564 square feet on the 6.71 gross acre subject parcel of land. The project will be dedicating 0.21 acre of right-of-way resulting in a 6.50 net acre development site. The applicant is proposing the division of the buildings into 35 individual condominium units. The applicant has not identified specific tenants for the individual units or for the separate buildings. The site plan delineates that Building A will consist of seven units, Building B will have eight units, Building C is comprised of nine units and Building D is proposed for eleven units. The industrial buildings are proposed to be one-story with a maximum height of 28 feet. The individual units will have pedestrian/employee access through the front with service entrances at the rear. Access from the rear will be provided by both man doors and overhead rolling doors. The building shall be protected with a fire sprinkler system. The balance of the site will contain a four trash enclosures, landscaped areas, parking areas and drive aisles. The site plan also delineates four precast concrete picnic tables. Their locations are at the southern end of Buildings A and C and the northern end of Buildings B and D.
82	2015-031	Rite Aid/Archibald's Restaurant	City	C/F	Planning Application Plot Plan No. 2015-031 is for the proposed construction and operation of a new 17,185 sq. ft. Rite Aid drug store and pharmacy with drive-thru and a new 3,634 sq. ft. fast food restaurant with drive-thru on a 2.62 gross acre (2.4 net acre) project site. The project proposes 135 parking spaces, including eight (8) ADA accessible spaces. The site is located on the southwest corner of the intersection of Newport Road and Menifee Road (APN: 364-030-004 & -005). Access to the project site is proposed off of Newport Road and Menifee Road. The project site is currently vacant.
83	PUP 2013-146	SCE Expansion	In progress		Planning Application No. 2013-146 proposes a public use permit for the construction and operation of a new 10,287 sq. ft. freestanding “control building” and demolition of an existing maintenance building as part of Southern California Edison’s existing Valley Substation within a 0.96-acre project site on a 73.62 gross acre parcel. The proposed project would also involve revisions to internal drive aisles, additional parking, but would retain the existing driveway on Menifee Road. No existing Public Use Permit is on record for the existing facility. The Public Use Permit would only address the current proposed building, demolition, and associated on-site changes. The site is located on the southwest corner of Ethanac Road and Menifee Road on APNs 331-230-003.
84	TR 2014-073	DCI Investments	City		Planning Case No. 2014-073 (Tentative Tract Map) (TR 36788) proposes a Schedule A subdivision of 9.2 gross acres into 30 single-family residential lots with a minimum lot size of 7,200 square feet and one open space lot for water quality/detention. Access to the project site is proposed via a new intersection on Garbani Road and connection to Garlington Street to the north. Planning Case No. 2014-072 (Change of Zone) proposes to change the zoning of the subject site from Industrial Park (I-P) to One-Family Dwellings (R-1) for consistency with the General Plan land use and the proposed project.
85	PP 22946	Shops at Scott (Menifee Partners LP)	City		The use hereby permitted is for the development of a retail center comprised of 10 buildings totaling 87,733 square feet ranging in size from 3,500 to 18,850 square feet and includes 486 parking stalls.
86	PAR2015-053 / TR 36684	(Bundy Canyon Development Co)	In progress	U/F	Planning Application TR No. 2015-053 (Tentative Tract No. 36684) proposes to subdivide three (3) existing lots (384-060-002, 007, and 009) with a net cumulative area of approximately 52 acres into ten (10) single family residential lots. The subdivision is located south of Scott Road, west of Sweetwater Canyon Road, and is north of (abuts) the southerly City limit line. Lots range in size from 4.5 to 6.43 net acres. Access to lots will be via dedicated but unimproved streets: Wild Lilac Road, Buckwheat Road, and Pinewood Lane. Grading is limited to driveways and building pad areas with a majority of the natural topography on each lot being retained. As part of the project a dedicated but unimproved 1341 foot long segment of Keller Road will be vacated located at the southerly boundary of the tract. In addition, portions of Wild Lilac Road and Pinewood Lane south of Buckwheat Road will be vacated and converted to private access roads. The project site is zoned Residential Agricultural, Two and One Half Acre Minimum Lot Size (R-A-21/2).
87	PP 2015-099	Shops at Newport (Newport Road LP)	City	C/E	Planning Application Plot Plan No. 2015-099 proposes a 9,750 sq. ft. commercial/retail building on a 1.30 gross acre parcel. The proposed building is anticipated to be used for a 2,200 sq. ft. restaurant with drive-thru, 3,490 sq. ft. of office and 4,060 sq. ft. of retail use. Ninety-Nine (99) parking spaces and 6,028 square feet of landscaping are proposed. The project site is located south of Newport Road, west of Bradley and east of Winterhawk Road within the City of Menifee. The site is bounded as follows: Newport Plaza Shopping Center to the north, vacant property to the south, an existing Arco gas station, including convenience store to the east and McDonald’s and a gas station with convenience store, cash for gold shop, car wash and drive-thru restaurant (Los Primos) to the west. The project site APN is 360-030-025.

88	PP 2015-115	Menifee Village (Pechanga Dev Corp.)	In progress	U/E	Planning Application Plot Plan No. 2015-115 proposes the development of a retail shopping center including ten (10) buildings totaling 231,600 sq. ft. on a 27.3 gross acre site. The following buildings are proposed: Bldg. A: 41,000 sq. ft. major retail Bldg. B: 50,000 sq. ft. major retail Bldg. C: 60,000 sq. ft. major retail Bldg. D: 20,000 sq. ft. major retail Bldg. E: 18,400 sq. ft. major retail Bldg. F: 15,200 sq. ft. Pharmacy with Drive-thru Bldg. G: 3,600 sq. ft. Financial (bank) Bldg. H: 7,400 sq. ft. Shops Bldg. I: 8,500 sq. ft. Shops Bldg. J: 7,500 sq. ft. Restaurant The project proposal includes 114,127 sq. ft. of landscaping and 1,275 parking spaces. The project site is located within the City of Menifee. The site is bounded as follows: Countryside Marketplace shopping center to the north; vacant land to the south, Interstate 215 to the east, and the Paloma Wash Channel and Santa Rosa Academy beyond to the west. The project site APNs are 360-110-012,-004, -005, -006, and -007.
89	PP 2015-130	El Ranchito Market	In progress		Planning Application Plot Plan No. 2015-130 proposes to convert an existing 1,655 sq. ft. commercial building into a market including deli, and sale of produce and dry goods. The site contains an existing patio and storage building. The project also includes adding a new 20'x20' patio cover and deck to the front of the store and exterior upgrades to the building. The applicant also proposes the sale of beer and wine for off-site consumption. The project site is located within the City of Menifee; more specifically, north of Newport drive at west of Palm Drive. The address is 23980 Newport Drive. The project site APNs are 350-254-033, -031 and -014.
90	PAR 2015-133	McLaughlin Village	In progress	U/E	Pre-Application Review No. 2015-133 proposes the preliminary review of a proposal for the development of 126 detached townhomes and a recreation center on 14.76 gross acres located south of McLaughlin Road, east of Barnett Road and west of Interstate 215.
91	TR 31536		City	U/F	The land division hereby permitted is to subdivide 49.47 gross acres into 44 single family residential lots with one acre minimum lot size and one 1.14 acre detention basin (LOT 45).
92	PP 2015-156	All Star Super Storage	In progress		Project Description: Planning Application No. 2015-156 proposes the development of a fifteen (15) building, 242,150 square foot public storage facility on 9.77 acres. The project is located within the City of Menifee. The site is bounded as follows: an existing self storage facility (All Star Super Storage) to the north, vacant land formerly used as a nursery to the south, Haun Road to the west, and the Interstate 215 Freeway to the east. The project site APN is 360-350-029.
93	TTM 2015-165	2015-165 (Strata Equity)	In progress		Tentative Tract Map No. 2015-165 proposes a Schedule 'A' subdivision of 20.0 gross acres (south of Holland Road) into 68 single-family residential lots and one (1) sand filter basin. The single-family residential subdivision has a proposed density of 3.94 dwelling units per acre and a minimum lot size of 7,200 square feet.
94	2015-195 PAR	Womble Property (MDMG, Inc)	In progress		**Pre-Application Review No. 2015-195** proposes the preliminary review for the subdivision of 15.81 gross acres for 207 condominium units with a community center and pool facility located west of Bradley Road, north of Lazy Creek Road, and south of Salt Creek. (APNs: 338-150-029 and 338-150-031).
95	2011-003	Trumble Offices and warehouse	In progress		Plot Plan No. 2015-165 is a proposal for the construction and operation of a 237-unit market-rate apartment complex and a gated 102-unit senior (independent) living facility on 17.2 gross acres (north of Holland Road). The 237-unit apartment complex consists of fourteen (14) three-story apartment buildings, two (2) one-story recreational buildings, two (2) pool facilities, and 450 (including in-garage) parking spaces on 8.8 acres. The senior living facility would consist of one (1) 102-unit, three-story building, a pool facility, community gardens, and 185 parking spaces on 4.8 acres.
96	2015-211	Valley Blvd. Tract Map	City	C/E	Proposed Tentative Tract Map on 21.6 acres consisting of 75 residential lots and a water quality and detention basin
97	PAR 2016-039/TR33511	Tract Map - single family homes	In progress	C/E	"PAR 2016-039" proposes the preliminary review of a proposal to revise County-approved Tentative Tract Map No. 33511 (approved by the County Board of Supervisors on September 18, 2007). The previously approved map proposed a Schedule "A" subdivision of 27.3 acres into 71 single-family residential lots with a minimum lot size of 7,200 square feet, three (3) detention basins, and a foot-path along an existing dry channel. The revise tentative tract map would increase the number of residential lots from 71 to 98 units, but the minimum lot size of 7,200 square feet would remain the same. The revised map would reduce the number of basins from three (3) to two (2), eliminate the foot path, and convert the dry channel into an underground storm drain system.
98	2016-110 CUP	Fast food	In progress		Conditional Use Permit No. 2016-110 proposes a 2,400 square foot fast food restaurant on a 0.52 gross acre parcel located at 26820 McCall Boulevard. The fast food restaurant includes a drive-thru, 16 parking spaces, and 4,197 sq. ft. of onsite landscaping. A Pre-application Review (PAR 2015-246) was previously submitted for the proposal on November 10, 2015 and a Development Review Committee meeting took place with the Applicant and staff on December 10, 2015.
99	2016-021 PM	CP Menifee DPSS	In progress		Project Description: Parcel Map No. 2016-021 proposes a Schedule E Subdivision of 10.2 acres into four commercial parcels. Parcel 1 is 4.3 gross acres; Parcel 2 is 2.3 gross acres; Parcel 3 is 2.3 gross acres; and Parcel 4 is 1.3 gross acres. The property is located on the southwest corner of Newport and Evans Road. The project site is vacant. APN 360-020-051. No development of the site is proposed at this time.
100	2016-061 GPA; -062 SPA; -063 TR	Pulte Homes	In progress	C/E	Tentative Tract Map Application No. 2016-063 proposes to subdivide 12.43 acres into 54 single family residential lots with a minimum lot size of 5,000 square feet, one (1) Lot (Lot 55) for a sewer lift station, and five (5) lettered lots for open space. The map is proposed for vesting which would confer a vested right to proceed with the development in substantial compliance with City ordinances, policies and standards, including development impact fees in effect at the time the vesting tentative map is approved.

101	PP 2016-124	McCall & Sherman Retail Center	In progress	C/E	Plot Plan No. 2016-124 proposes an 18,255 sq. ft. retail center on 4.71 acres located on the southeast corner of McCall Boulevard and Sherman Road. The following buildings/uses are proposed: 1. Conveniences Store – 2,900 sq. ft. 2. Fast Food with Drive-Thru – 3,000 sq. ft. 3. Carwash – 2,080 sq. ft. 4. 8-Pump Gas Station Canopy – 4,395 sq. ft. 5. Fast Food with Drive-Thru - 3,200 sq. ft. 6. Retail Store – 1,000 sq. ft. 7. 4-Pump Diesel Gasoline Canopy – 1,680 sq. ft.
102	CUP 2016-130	Krikorian Theatre	In progress	C/F	Conditional Use Permit No. 2016-130 proposes the construction and operation of a commercial center anchored by an approximately 114,392-sq. ft. Krikorian Premiere Theater containing twelve (12) theater auditoria on an 80,000 sq. ft. pad. The theater will include dining services, a 9,700-sq. ft. sports-themed restaurant/bar, 6,300-sq. ft. gaming area, 550-sq. ft. party room, and a twenty-two (22) lane bowling alley. The overall center will also include four (4) additional building pads. Sit-down and quick-serve restaurant, retail, and service retail uses will occupy these four (4) pads. All pad sizes are listed below including the Cinema: • Cinema 80,000 square feet • Pad 1 7,000 square feet • Pad 2 7,000 square feet • Pad 3 8,600 square feet • Pad 4 12,500 square feet The proposed uses require 1,015 parking spaces. The project proposes 553 onsite parking space. There are an additional 240 temporary offsite parking spaces proposed on APN 360-080-084 and 240 long-term offsite parking spaces proposed on APN 360-080-076. The project site is located on the southwest corner of Newport Road and Town Center Drive within the Menifee Town Center Specific Plan. The 10.18-net-acre site is located on Parcels 13, 14 and 15 of Parcel Map No. 36299-1 (APNs 360-080-077 through -079).
103	MC 2016-107	Pacific Communities	Country	C/E	Minor Change No. 2016-107 proposes a Minor Change (MC) to the previously approved Tentative Tract Map Nos. 28791 (TR28791), 28792 (TR28792) and 28793 (TR28793). TR28791, TR28792 and TR28793 were all approved by the County of Riverside Board of Supervisors on July 17, 2001. TR28791 was originally approved for a Schedule A subdivision of 22.2 acres into 80 single family residential lots. TR28792 was originally approved for a Schedule A subdivision of 23.8 acres into 85 single family residential lots. TR28793 was originally approved for a Schedule A subdivision of 21.4 acres into 77 single family residential lots. Under the minor change, portions of the above mentioned tracts will have revisions to their current elevations in an effort to minimize blasting during grading efforts and to reduce the overall amount of grading needed for the project.
104	PM 2016-185	JPN Corporation Inc.	City	C/E	
105	2016-078 CUP	Zeiders Rd. CUP	In progress		Conditional Use Permit No. 2016-078 proposes the development of a 14,000 square foot (sq. ft.) warehouse and office facility with a gravel yard on a 3.86 net acre site (4.26 gross). In addition to the gravel yard, outdoor storage is proposed to the north and west of the warehouse building. The warehouse and office building is existing and was permitted by the County in 2005 as a "private garage." A six (6) foot tall block wall is proposed along the west boundary of the site and an eight (8) foot t all block wall is proposed along the north, east, and south boundaries. The site proposes two (automatic) gated entrances off of Zeiders Road. The site is bounded as follows: vacant land to the north (entitled for shopping center under Plot Plan No. 22946), vacant land to the south, Zeiders Road to the west, and a contractor's storage yards to the east. The project site APNs are 384-180-035 and -036. The project site is currently used for outdoor storage. The entire site has been disturbed as a result of current outdoor storage use. Potential impacts of the project will be analyzed in compliance with the requirements of the California Environmental Quality Act (CEQA). Related Cases: Plot Plan No. 21141 (processed at County, but not approved).
106	PP 22628 - EOT 2016-102	Harvest Glen Marketplace			Project Description: Parcel Map No. 2016-185 proposes a Schedule E Subdivision of 37.06 gross acres into eleven (11) commercial/industrial parcels. The parcels range in size from 5.05 to 1.06 acres. The subdivision also includes dedications on Haun and Holland Road and a new proposed public street off of Haun Road. No development or site plan has been submitted at this time; however, the project proposal includes the construction of five (5) water quality bioretention facilities and mass grading of the site. The property is located north of Holland Road, west of I-215 and east of Haun Road. The project site is vacant. APN 360-130-003.
107	Specific Plan No. 2016-246	Mill Creek			Planning Application No. 2016-246 (Specific Plan) proposes establishment of a Specific Plan on a total 58.51 acres for planned residential and commercial development that includes a 196 townhouse community on approximately 13.91 acres (14.1 dwelling units per acre), a 392 unit apartment complex on 20.61 acres (19.0 dwelling units per acre), a 117,208 square foot commercial center comprised of retail, office, and restaurant space on 13.85 acres, a 33,288 square foot industrial park on 2.82 acres and 2.76 acres of open space in the form of a preserved dry streambed (and surrounding area) that traverses the site. The project site is located within the City of Menifee. The site is located on the south side of Garbani Road, the west side of Haun Road, the east side of Sherman Road and is immediately north of an existing Verizon equipment yard. The project site APNs are 360-350-006, 360-350-011, and 360-350-017.

108	2016-135 PP	Haun Professional Building			Planning Application Plot Plan No. 2016-135 is for the proposed construction and operation of one new 25,698 sq. ft. (gross building area) medical office building on a 1.81-gross acre project site. The project proposes 120 parking spaces, including eight (8) ADA accessible spaces. The site is located north of Newport Road and east of Haun Road (APN: 336-380-058 and -059). Access to the project site is proposed via one (1) existing and one (1) proposed driveway off of Haun Road. The project site is currently being used for a construction staging yard during construction of the Newport Road/I 215 bridge expansion.
109	2016-154 PAR	Newport Towne Square Phase II			**Pre-Application Review No. 2016-154** is the preliminary review of a proposal for the construction and operation of a new retail shopping center with two (2) free-standing buildings. The first building includes "Major A" which is a 29,936 sq. ft. market, "Shops" which are 3,000 sq. ft. and "Major B" which is 9,997 sq. ft. of additional retail space. The second building, "Pad Restaurant," is 8,646 sq. ft. of restaurant space. The center is being proposed on a 5.36-acre project site. The site is located on west of Haun Road and north of Newport Road, just north of the existing Newport Towne Square. (APN: 336-380-071).
110	2016-164 PP	Popeyes			Plot Plan No. 2016-164 proposes a 2,730 sq. ft. fast food restaurant with drive-thru on 1.00 gross acre located east of Winterhawk Road, south of Newport Road, and west of Bradley Road in between the existing McDonald's Restaurant and Mobile Gas Station (APN: 360-030-014 and -026). The project includes 22 parking spaces.
111	2016-183 CUP	Sun City Senior Care			Planning Application Conditional Use Permit No. 2016-183 proposes the development of an assisted living facility and retail/offices. The assisted living facility consists of a four (4) story, 45,246 sq. ft. building (1st Floor: 12,471 sq. ft.; 2nd, 3rd, and 4th Floor: 10,925 sq. ft. on each). The assisted living includes 58 single units, six (6) double units, eight (8) handicap units, offices, laundry, dining, kitchen, and a library. The office and retail building consists of a two (2) story, 10,368 sq. ft. building (5,181 sq. ft. on each floor). Thirty-eight parking spaces are provided for the retail/office building and thirty-five (35) parking spaces are provided for the assisted living facility. The project site is 1.83 gross acres. The project site is located within the City of Menifee. The site is bounded as follows: McCall Boulevard to the south, Chatham Lane to the west, vacant land to the east and vacant land to the north. The project site APN: 333-050-035.
112	2016-187 PP	So Cal Mulch			Planning Application Plot Plan No. 2016-187 proposes a mulch and garden materials sales yard on 10.02 acres located south of Ethanac Road, west of Antelope Road, and east of Dawson Road. The project is proposed to be developed in two phases. The first phase proposes development of the portion of the site adjacent to Antelope Road and includes a 1,400 sq. ft. modular sales office, eighteen (18) parking spaces, area for product sample boxes, mulch bins, soil area, loading area, flagstone area, rock and aggregate bins, driveways and landscaping. The second phase proposes development of the western half of the site adjacent to Dawson Road and includes additional storage of mulch and materials, a bioretention basin and driveway. The applicant proposes to utilize the existing gravel surface for vehicular circulation throughout the site. Chain link fencing is proposed and existing around the site on the side property line and along Dawson Road. Wrought iron fencing is proposed along Antelope Road. The project site is located within the City of Menifee. The site is bounded as follows: residential and businesses to the north, vacant properties previously used for construction storage yards to the south, Inland Empire Energy Center and a ready mix concrete supplier to the east and vacant land to the west. The project site APNs are 331-150-040 and 039.
113	2016-197 CUP	4th St. Auto Repair			Planning Application for Conditional Use Permit (CUP) No. 2016-197 proposes the request for approval of an existing unpermitted auto repair shop located at 27902 HWY 74, City of Menifee. The current 14,375 square foot site is an active code violation as the property owners have not received the CUP or building permits required to operate an auto repair facility at the site. The Applicants are proposing a 40' by 50' (2,000 square foot) structure that houses an office, a restroom, a storage room and an auto repair garage area. The proposal includes fourteen (14) parking spaces along with one (1) ADA parking space. The site is surrounded by an existing chain link fence that allows for two access points to the property, one along HWY 74 and the second along Fourth Street. No building permits have been issued for existing structures on the project site. The site is bounded as follows: Residential property to the north, HWY 74 to the south, an used tire shop to the east and a blighted commercial site to the west, across Fourth Street. The project site APN is 329-132-031.
	PP 2016-213	Retreat at Holiday	In progress		TR30507 "The Retreat" within Holiday Lots 1-44, Lots 47-82, Lot 85, Lots 138-152, Lots 103-113, Lots 163-166. The project is located on the northeast corner of Chambers and Murrieta Road.
	PAR 2016-215	Goetz Road Gas and Retail	In progress		Planning Application Pre-Application Review No. 2016-215 proposes the preliminary review of a development of a gas station and commercial center on 2 gross acres. The project site is currently two (2) parcels, but it appears the applicant proposes to subdivide the property into three (3) parcels each containing its own building and parking. Parcel 1 (1.16 acres) will consist of a 3,800 square foot convenience store, 1,152 sq. ft. carwas h and gas station that includes four dual pumps along with a fueling canopy, Parcel 2 (.60 acres) a 3,200 square foot fast food restaurant with drive-thru and Parcel 3 (.32 acres) a 2,000 square foot retail building located on the corner of Goetz Road and Vista Way. A total of 63 parking spaces are proposed. The project site is located within the City of Menifee. The site is bounded as follows: vacant property to the northwest, Goetz Road to the southwest, Vista Way to the southeast, and a residential property to the northeast. The project site APNs are 351-074-016 and 021.
	PAR 2015-228	Ethanac/Barnett Gas and Retail	In progress		Planning Application Pre-Application Review No. 2016-228 proposes the preliminary review of a development of a gas station and commercial center on 11.68 gross acres. The project will consist of the following: a 3,800 square foot convenience store, along with a fueling canopy that houses eight (8) dual pumps, a 2,080 square foot carwash and a 4,365 square foot restaurant with drive-thru. The Applicant is proposing 80 parking stalls. The vacant project site is located within the City of Menifee. The site is bounded as follows: Ethanac Road to the north (northern City boundary), Barnett Road to the east (city boundary), vacant property to the south and a Riverside County Flood Control channel (Line A) to the west. The project site APN is 331-060-027.

	2016-233 CUP	RV Super Center	In progress		Conditional Use Permit No. 2016-233 proposes the construction and operation of a recreational vehicle (RV) sales and service center containing a 17,600 sq. ft. steel building (10,400 sq. ft. for service bays and 7,200 sq. ft. for sales and office use) on a 4.43-gross-acre site. The project proposes 48 parking spaces and would be accessed via two driveways along Encanto Drive. The project includes 161,288 sq. ft. of onsite A/C pavement (for drive aisles, RV display areas, and parking spaces) across the entire site (85%) and 9.969 sq. ft. of landscaping (5%). The building and sidewalks comprise the remaining 10% of the site (9% and 1%, respectively). The project site is located at the southeast corner of McLaughlin Road and Encanto Drive (APN 331-120-066). The project site is currently vacant.
	TR 30507	Holiday	Approved and Recorded Map		DR Horton building out remainder of tract map (111 Lots). The project site is located on the northwest corenr of Murrieta Road and Chambers Ave.
	PP 2016-239	Town Center Private Recreation Center	In progress		Plot Plan No. 2016-239 proposes a Recreation Center called "Cortana Club" within the Menifee Town Center Specific Plan No. 2009-069. Specifically, the Recreation Center it is located north of north of Park Plaza Avenue, west of Civic Plaza Drive, south of City Hall Drive. The Recreation Center includes one (1) pool, one (1) spa, one (1) Recreation Center Building with Gym/Fitness, Portico, Kitchen, Entertainment Room, Pool Equipment Room, restrooms, and outdoor seating, fireplace event space, a tot lot, bocce court, half-court basketball court and passive turf area and on-site parking. The recreation center is meant to serve the residential homes within the Specific Plan and will be a private facility. APN: 360-080-086.
	CUP 2016-263	Forterra			Conditional Use Permit No. 2016-263 proposes a revision to the previous County-approved Plot Plan No. 10557, by constructing a new 12,323 metal building addition which will enclose new pipe manufacturing equipment. The new building will be constructed adjacent to the existing metal building facility and will comprise a single connected building enclosing all new equipment. The exterior of the existing building will be refurbished to match the new addition construction. In addition, the existing block storage areas will be used to store pipe products. While the application does not make reference to expanded storage areas, the proposed site plan does show expansion of storage areas beyond what was previously approve under PP 10557 and PP 10557S1, particularly within the northerly edge of the project site. The Conditional Use Permit is required, because the new metal building addition will exceed the 50' height limit allowed under the Medium Manufacturing (M-M) zone. The building is proposed to be 59'-4" tall. The project site is located at the northwest corner of the intersection of Matthews Road and Palomar Road (APN 331-220-022 through -025, -037, and -040).
	TR 2016-285, SP 2016-286, GPA 2016-287 and CZ 2016-288	Rockport Ranch			General Plan Amendment No. 2016-287 proposes to amend the general plan land use designation of 78.8 acres on the southwest corner of Briggs Road and Old Newport Road/Rockport Road (APNs 364-190-005 and -004) from Agriculture (AG) to Specific Plan (SP). Change of Zone No. 2016-288 proposes to change the zoning classification of 78.8 acres on the southwest corner of Briggs Road and Old Newport Road/Rockport Road (APNs 364-190-005 and -004) from Heavy Agriculture – 10 Acre Minimum (A-2-10) to Specific Plan (SP). Specific Plan No. 2016-286 proposes establishment of a Specific Plan on a total 78.8 acres for 305 single-family residential lots, 20.1 acres of open space and 20.3 acres of road and easements. Tentative Tract Map No. 2016-285 (TM37131) proposes the subdivision of 78.8 gross acres into a total of 305 single family residential lots, with 20.1 acres of trails, open space and recreation and 20.3 acres of roads, easements and other. The residential lots include the following: • 60 lots with a minimum lot size of 5,000 sq. ft. • 79 lots with a minimum lot size of 6,000 sq. ft. • 42 lots with a minimum lot size of 6,500 sq. ft. • 27 lots with a minimum lot size of 7,000 sq. ft. • 96 courtyard type lots (all take access off single private drive - 8 packs) The open space lots include lots for recreation (.3 acre private pool, and 1.2 acre park, .1 acre tot lot), two (2) lakes comprising 5.2 acres, .6 acre water quality basin, and 8.5 acres of landscaping throughout the development for paseos and additional perimeter landscaping. The development is proposed to be a gated community. The project site is located within the City of Menifee. The site is bounded as follows: Old Newport Road and Tierra Shores residential development to the north, Wilderness Lakes RV Resort to the south, Briggs Road, Ramona Egg Ranch and agricultural land to the east and The Lakes residential development to the west. The project site APNs are 364-190-005 and -004.
	CUP 2016-289	Menifee Lakes Plaza - REVISION to 32			Conditional Use Permit No. 2016-289 proposes a 3,039 square foot Raising Cane's fast food restaurant with a drive-thru, a 10,010 square foot Kahoots Feed and Pet store with a 4,940 square foot outside sales area and the allowance of alcohol sales for off-premises consumption for Barons Market located at Menifee Lakes Plaza. Menifee Lakes Plaza is located at the northwest corner of the intersection of Newport Road and Antelope Road. The Menifee Lakes Plaza commercial center was approved under Plot Plan No. 2014-113. The site is bounded as follows: Interstate 215 to the west, Newport Road to south and Antelope Road to the east of the subject site. The project site APN is 340-020-065.
	CUP 2016-290 and PM 2016-291	Hwy. 74 and Trumble Hotel and Retail Center			Proposal for a 120 room hotel, sit down restaurant, fast food restaurant with drive through and a gas station with convenience store and car wash. No exhibits have been submitted, so no square footage is available. APN 329-020-009 and -022.
	PP 2016-292	Kiewitt			Contractor's storage yard - outdoor storage of construction equipment. APN 331-150-036
	CUP 2016-299	Cook Automotive			Planning Application Conditional Use Permit No. 2016-299 proposes to establish an auto body repair shop on a 0.45 acre site improved with an existing parking lot and an 18,000 square foot building located at 29060 Goetz Road in the City of Menifee. The project site APN is 341-133-041.

	PP 2017-005	Town Center Apartments			Project Description: Planning Case No. 2017-005 (Plot Plan) proposes a 330 unit apartment complex on two adjacent sites with a combined area of 12.71 acres identified as Development Area 3 on the attached Site Plan and designated as Planning Area 2 -Mixed Use of the Town Center Specific Plan. For Site A, the project proposes the development of 220 apartments on 8.47 acres within twenty-one (21) three-story buildings and five (5) two-story buildings. A combined leasing office and recreation building with swimming pool is also proposed. A reduction in the required number of parking stalls is also being requested from the required total of 476 stalls to a proposed total of 454 parking stalls. Parking spaces are provided in the form of attached garages, detached car ports, and uncovered stalls. Access to the site is provided at one (1) location on Town Center Drive and one (1) location on Park Plaza Avenue. For Site B, the project proposes the development of 110 unit apartments on 4.24 acres within eleven (11) three-story buildings. A recreation building with swimming pool is also proposed. A reduction in the required number of parking stalls is also being requested from the required total of 235 stalls to a proposed total of 224 parking stalls. Parking spaces are provided in the form of attached garages, detached car ports, and uncovered stalls. Access to the site is provided at one (1) location on City Hall Drive and one (1) location on Park Plaza Avenue. A large recreation center shown immediately east of Site B is not part of this proposal. The project site is located within the City of Menifee. The site is located north of La Piedra Road, south of Newport Road and west of the Paloma Wash. The project site APNs are 360-080-088, 089.
	PP 2017-042	Gallery Senior Living			Planning Case No. 2017-042 (Conditional Use Permit) proposes the construction and operation of a gated 118-unit assisted living facility on a 4.86 acre property located on the east side of Antelope Road and immediately north of Adergate Drive. The facility consist of one (1) three-story building with two (2) interior courtyards. Access into and out of the site is provided at one (1) location on Antelope Road. An emergency only exit gate is provided at the north end of the project site proving access onto Antelope Road. A total of 92 parking stalls are proposed for the facility. The project site APN is 340-010-002.
	CUP 2017-055	Goetz Marketplace	In Progress	In Progress	Convenience store with attached car wash and fueling canopy; fast food with drive thru-APNS: 351-074-016 and 351-074-021

Town Center Regent SP – There have been numerous projects submitted and one built so here is a comprehensive list of what we have for the SP

1. 2014-009 – This is on your list but it is built and open – almost 100% occupied
2. 2017-123 – 33,000 sq. ft. Medical Office Building
3. 2017-137 – 4 story 99 room hotel with meeting space
4. Courthouse site – not submitted – no information
5. City Hall site – not submitted – no information
6. 2017-005 – Apartment project – 330 units (2 and 3 bedroom)
7. 2016-239 – Private Rec Center 6,320 sq. ft. building – Pool
8. City Central park – 5 acre park
9. 2015-238 - Lennar Motorcourts and SFR lots – 125 motorcourt units and 151 residential lots
10. 2017-094 – 218 condos – Lennar (2 and 3 bedroom)
11. 2016-130 – Kirkorian - **Conditional Use Permit No. 2016-130** proposes the construction and operation of a commercial center anchored by an approximately 114,392-sq. ft. Krikorian Premiere Theater containing twelve (12) theater auditoria on an 80,000 sq. ft. pad. The theater will include dining services, a 9,700-sq. ft. sports-themed restaurant/bar, 6,300-sq. ft. gaming area, 550-sq. ft. party room, and a twenty-two (22) lane bowling alley.

    The overall center will also include four (4) additional building pads. Sit-down and quick-serve restaurant, retail, and service retail uses will occupy these four (4) pads. All pad sizes are listed below including the Cinema:

    - Cinema 80,000 square feet
    - Pad 1 7,000 square feet
    - Pad 2 7,000 square feet
    - Pad 3 8,600 square feet
    - Pad 4 12,500 square feet

    The proposed uses require 1,015 parking spaces. The project proposes 553 onsite parking space. There are an additional 240 temporary offsite parking spaces proposed on APN 360-080-084 and 240 long-term offsite parking spaces proposed on APN 360-080-076. The project site is located on the southwest corner of Newport Road and Town Center Drive within the Menifee Town Center Specific Plan. The 10.18-net-acre site is located on Parcels 13, 14 and 15 of Parcel Map No. 36299-1 (APNs 360-080-077 through -079).
12. Commercial Site #1 to West of Krikorian – 10.29 acres – No project in process
13. Commercial Site #2 to north of Medical Offices – 1.95 acres – No project in process

So delete Rich Development and Krikorian as separate projects and include under the Town Center (Regent) Specific Plan so you are not double counting traffic.

Menifee Lakes Plaza

Project Description Plot Plan No. 2009-052 as revised by Plot Plan No. 2014-113. The use hereby permitted is for a 184,717 sq. ft. commercial shopping center with three (3) major stores ranging in size from 16,000 sq. ft. to 34,700 sq. ft., one (1) 6,500 sq. ft. building for shops, five (5) outparcel buildings for future retail use ranging in size from 3,850 sq. ft. to 11,200 sq. ft., one (1) gas service station including a car wash, lube center, gas canopy and a 3,440 sq. ft. convenience store, one (1) 38,000 sq. ft. gym/health club and one (1) four-story 40,532 sq. ft. hotel with 70 rooms with a maximum height of forty-five (45) feet. A

corner monument identifying the name of the center that would not include any tenant identification is proposed at the southeast corner of the site at the corner of Newport Road and Antelope Road.

5. Chaparral Apts. – This project has not been active for at least two (2) years, so we are comfortable removing it from the list.

6. Pacific Communities – The school is built and open. There are actually several tracts in the Specific plan (TR28791, 28792, 28793, 28794). You should include all of these tracts. You can get the project descriptions from RC Online Services.

7. Motte Town Center – Just go by square footage of the buildings.

9. JPN Corporation – This is a schedule E subdivision. No development is proposed at this time, just subdividing land.

URBAN
CROSSROADS

41 Corporate Park, Suite 300
Irvine, CA 92606

Prepared by:

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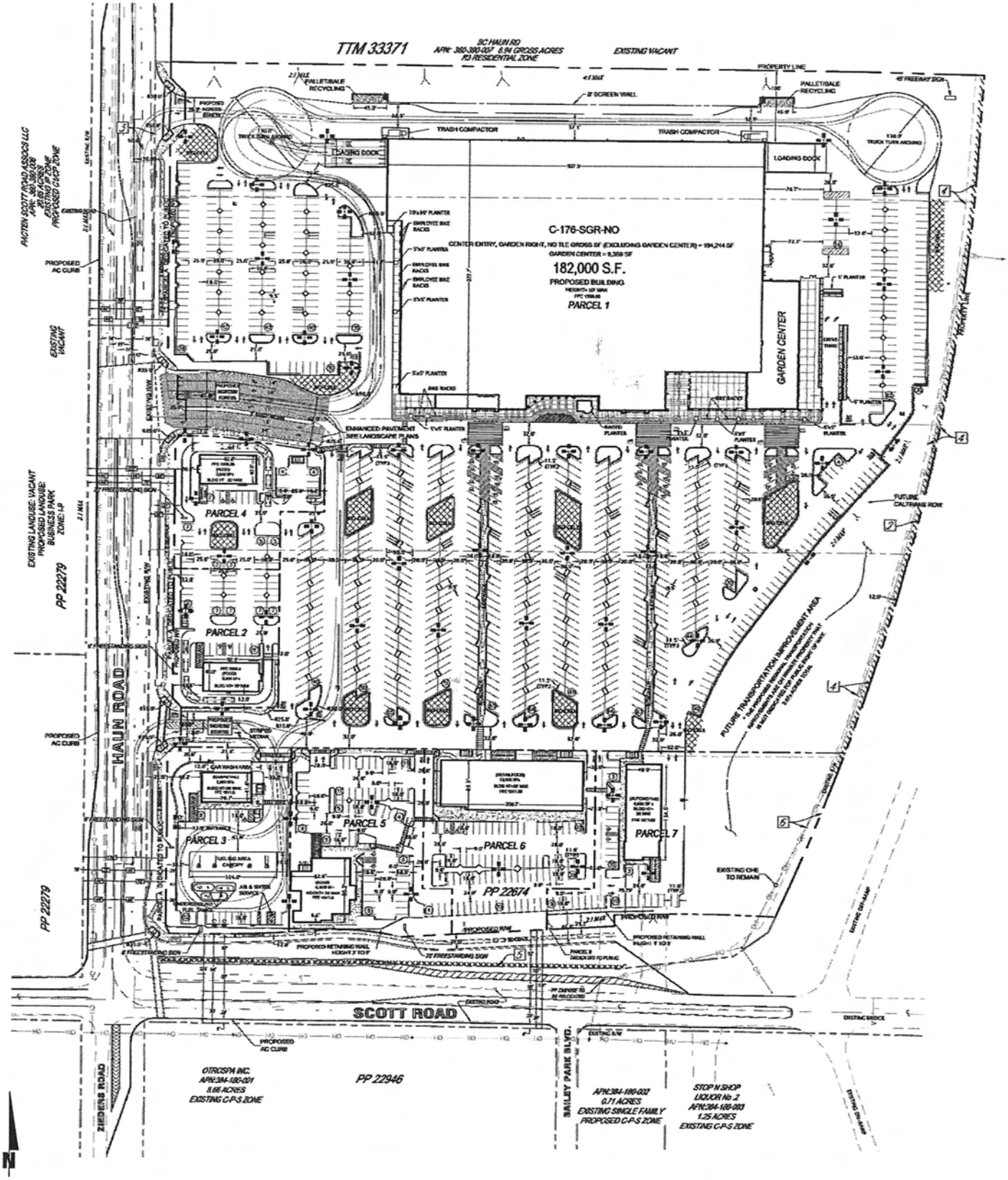
MENIFEE SHOPPING CENTER
(I-215 AND SCOTT ROAD) (PP 22674)
TRAFFIC IMPACT ANALYSIS
CITY OF MENIFEE, CALIFORNIA

January 26, 2009 (Revised)
June 2, 2008

JN:04087-15
AE:CH:pc

EXHIBIT 1-B

SITE PLAN



3.0 PROJECTED FUTURE TRAFFIC

A. Project (2011) Traffic

1. Ambient Growth Rate

To account for ambient growth on roadways, future traffic volumes have been calculated based on a 2.0 percent annual growth rate of existing (2008) traffic volumes for a total of 6.12 % for EAP (2011) and EAPC (2011) conditions.

The ambient growth rate has been approved by the County of Riverside Transportation Department staff (see Appendices "1.2" and "1.3").

Ambient growth has been added to daily and peak hour traffic volumes on surrounding roadways, in addition to traffic generated by the project and other cumulative developments.

The remaining growth is anticipated to be accounted for by development of other future projects in the study area that have been approved or are being processed concurrently.

2. Project (2011) Trip Generation

Trip generation represents the amount of traffic which is attracted and produced by a development. The traffic generation for this project is based upon the specific land uses planned for this project. For the purpose of this analysis, commercial retail, specialty retail, gas station with convenience store and car wash, and fast food with drive thru are the land use assumptions evaluated.

Trip generation for a development is typically calculated based on rates published in the Institute of Transportation Engineer's (ITE) Trip Generation Manual, 8th Edition (2008). The ITE Trip Generation manual is a standard reference used by jurisdictions throughout the country, including Riverside County, for the estimation of trip generation for proposed projects.

Trip Generation defines a single or one-directional vehicle movement with either the origin or the destination at the project site. In other words, a trip can either be "to" or "from" the site. A single customer visit to a site is counted as two trips (i.e. one to and one from the site).

In addition to average daily trips, to conservatively determine a project's impact on the surrounding roadway network, the trips generated by a proposed development are typically estimated between the hours of 7:00 AM to 9:00 AM (AM peak) and 4:00 PM to 6:00 PM (PM peak).

The proposed Wal-Mart component of this project is most appropriately classified as Free-Standing Discount Superstore (ITE Land Use 813). This use is defined by ITE as being "... similar to the free-standing discount stores described in Land Use 815, with the exception that they also contain a full service grocery department under the same roof that shares entrances and exits with the discount store area."

Free-Standing Discount Store (ITE Land Use 815) is characterized by ITE as being a free-standing store that offers "a variety of customer services, centralized cashiering, and a wide range of products. They typically maintain long store hours 7 days a week." The major difference between Land Use 813 and Land Use 815 is that Free-Standing Discount Stores do not have a full service grocery department.

According to ITE, Discount Superstores have higher average trip rates than the Discount Store during the AM peak hour, and Discount Stores have

higher average trip rates during the PM peak hour and a higher average daily trip rate than the Discount Superstores. For the most conservative analysis of the proposed project's impact on traffic, especially since the project is adjacent to the I-215 Freeway, a regional north-south freeway, and Scott Road, a regional east-west thoroughfare, both with different directions of AM and PM peak traffic, trip generation for the AM peak will be based on ITE Land Use 813 (Free-Standing Discount Superstore) and ITE Land Use 815 (Free-Standing Discount Store) for determining the PM peak and average daily trips.

Trip generation rates for this project are shown in Table 3-1. The trip generation rates are based upon data collected by the Institute of Transportation Engineers (ITE).

Daily and peak hour trip generation for the proposed project are shown in Table 3-2. The proposed development is projected to generate a net total of approximately 15,702 trip-ends per day with 878 vehicles per hour during the AM peak hour and 1,335 vehicles per hour during the PM peak hour. These totals reflect an internal capture percentage within the center of ten (10) percent. The ITE Trip Generation Handbook defines internal capture "as a percentage reduction that can be applied to the trip generation estimates for individual land uses to account for trips internal to the site. These internal trips can be made either by walking or by vehicle entirely on internal pathways or internal roadways without using streets external to the site." The ITE suggests anywhere from 20 percent to 30 percent for internal capture rates for retail to retail uses, so a ten (10) percent internal capture rate yields a more conservative analysis.

It is anticipated that approximately 25 percent of the gas station and fast food trips to be "pass-by" trips. "Pass-by" trips are defined as an intermediate stop between a primary origin and a primary destination (see Appendix "3.1"). The pass-by reduction of 25 percent assumed for the

TABLE 3-1

TRIP GENERATION RATES[1]

LAND USE	ITE CODE	UNITS[2]	PEAK HOUR TRIP RATES AM IN	AM OUT	AM TOTAL	PM IN	PM OUT	PM TOTAL	DAILY
Project Trip Generation Rates:									
Free-standing Discount Superstore	813	TSF	0.94	0.73	1.67	--	--	--	--
Specialty Retail[3]	814	TSF	1.44	0.96	2.40	1.19	1.52	2.71	44.32
Free-standing Discount Store	815	TSF	--	--	--	2.50	2.50	5.00	57.24
High-turnover (Sit-down) Restaurant	932	TSF	5.99	5.53	11.52	6.58	4.57	11.15	127.15
Fast-food with Drive-thru	934	TSF	25.17	24.18	49.35	17.60	16.24	33.84	496.12
Automobile Care Center[4]	942	TSF	1.91	1.03	2.94	1.69	1.69	3.38	20.00
Gas Station w/ Food Mart & Car Wash	946	VFP	6.08	5.85	11.93	7.11	6.83	13.94	152.84
Cumulative Trip Generation Rates:									
General Light Industrial	110	TSF	0.81	0.11	0.92	0.12	0.85	0.97	6.97
General Light Industrial	110	AC	6.23	1.28	7.51	1.60	5.66	7.26	51.80
Warehousing	150	TSF	0.24	0.06	0.30	0.08	0.24	0.32	3.56
Mini Warehouse	151	TSF	0.09	0.06	0.15	0.13	0.13	0.26	2.50
Mini Warehouse	151	SU	0.01	0.01	0.02	0.01	0.01	0.02	0.25
Single Family Detached Residential	210	DU	0.19	0.56	0.75	0.64	0.37	1.01	9.57
Apartments	220	DU	0.10	0.41	0.51	0.40	0.22	0.62	6.65
Residential Condo/Townhouse	230	DU	0.07	0.37	0.44	0.35	0.17	0.52	5.81
Senior Adult Housing - Detached	251	DU	0.08	0.14	0.22	0.16	0.11	0.27	3.71
Recreational Community Center	495	TSF	0.99	0.63	1.62	0.54	0.91	1.45	22.88
Church	560	TSF	0.35	0.21	0.56	0.26	0.29	0.55	9.11
Office (5.00 TSF)	710	TSF	3.01	0.41	3.42	2.87	14.01	16.88	26.57
Office (5.04 TSF)	710	TSF	3.00	0.41	3.41	2.85	13.91	16.76	26.52
Office (27.6 TSF)	710	TSF	2.14	0.29	2.43	0.68	3.30	3.98	17.94
Free Standing Discount Superstore	813	TSF	0.94	0.73	1.67	2.26	2.35	4.61	53.13
Commercial / Retail (4.205 TSF)	820	TSF	3.44	2.20	5.64	8.87	9.23	18.10	205.88
Commercial / Retail (93.25 TSF)	820	TSF	0.97	0.62	1.59	3.19	3.32	6.51	69.59
Commercial / Retail (82 TSF)	820	TSF	1.02	0.65	1.67	3.33	3.46	6.79	72.80
Commercial / Retail (237.377 TSF)	820	TSF	0.66	0.42	1.08	2.34	2.44	4.78	50.18
Commercial / Retail (23.34 TSF)	820	TSF	1.71	1.09	2.80	5.04	5.24	10.28	113.01
Commercial / Retail (5.875 TSF)	820	TSF	3.00	1.92	4.92	7.94	8.27	16.21	183.14
Commercial / Retail (68.2 TSF)	820	TSF	1.10	0.70	1.80	3.54	3.68	7.22	77.64
Discount Club	861	TSF	0.40	0.16	0.56	2.12	2.12	4.24	41.80
Home Improvement Superstore	862	TSF	0.72	0.54	1.26	1.14	1.23	2.37	29.80
Pharmacy with Drive-thru	881	TSF	1.52	1.14	2.66	5.17	5.18	10.35	88.16
Fast-food with Drive-thru	934	TSF	25.17	24.18	49.35	17.60	16.24	33.84	496.12
Gas Station w/ Food Mart & Car Wash	946	VFP	6.08	5.85	11.93	7.11	6.83	13.94	152.84

[1] Source: ITE (Institute of Transportation Engineers) Trip Generation Manual, 8th Edition, 2008.

[2] VFP = Vehicle Fueling Positions; TSF = Thousand Square Feet; DU = Dwelling Unit; AC = Acres

[3] The ITE Trip Generation Manual (7th and 8th Editions) does not provide AM peak hour trip generation rates for the adjacent street traffic. The San Diego Municipal Code Land Development Code Trip Generation Manual, May 2003 (Revised) has been utilized to obtain the Specialty Retail AM peak hour rates.

[4] Daily Trip Generation Rate Source: SANDAG Land Development Code Trip Generation Manual, May 2003. ITE does not provide a weekday rate for Land Use 942 (Automobile Care Center) in either the 7th or 8th Edition Trip Generation Manual.

TABLE 3-2

PROJECT TRIP GENERATION SUMMARY

LAND USE	QUANTITY	UNITS[1]	AM			PM			DAILY
			IN	OUT	TOTAL	IN	OUT	TOTAL	
Free-Standing Discount Superstore[2]	205.000	TSF	193	151	344	513	513	1,026	11,734
Automobile Care Center	6.680	TSF	13	7	20	11	11	22	134
Specialty Retail	13.800	TSF	20	13	33	16	21	37	612
High-turnover (Sit-down) Restaurant	6.500	TSF	39	36	75	43	30	72	826
Fast-food with Drive-thru	6.200	TSF	156	150	306	109	101	210	3,076
Gas Station w/ Food Mart & Car Wash	16	VFP	97	94	191	114	109	223	2,445
Subtotal			518	450	968	806	784	1,590	18,827
Internal Capture within Center (10%)			-45	-45	-90	-78	-78	-156	-1,883
Pass-By (25% on Fast-food and Gas Station only)			--	--	--	-51	-48	-99	-1,242
TOTAL			**473**	**405**	**878**	**677**	**658**	**1,335**	**15,702**

[1] TSF = Thousand Square Feet, VFP = Vehicle Fueling Positions

[2] To ensure a more conservative approach to trip generation ITE Land Use Code 813 rates used for AM peak hour and ITE Land Use Code 815 rates used for PM peak hour and daily.

purposes of this analysis is a conservative approximation as compared to the 46 percent to 72 percent pass-by trips suggested by ITE for a gas station with a convenience market/car wash and 32 percent to 68 percent pass-by trips suggested by ITE for fast-food restaurants with a drive-through window.

It should be noted that the internal capture of ten (10) percent and the pass-by reduction of 25 percent are per the approved scoping agreement with the County of Riverside Transportation Department and is consistent with other traffic studies in the area for developments with similar proposed land uses.

3. Project (2011) Trip Distribution

Trip distribution represents the directional orientation of traffic to and from the project site. Trip distribution is heavily influenced by the geographical location of the site, the location of employment and recreational opportunities, and the proximity to the regional freeway system.

The directional orientation of traffic was determined by evaluating existing and proposed land uses and highways within the community and existing traffic volumes.

Trip distribution for this study has been based upon near-term and long-term conditions, based upon those highway facilities which are either in place or will be constructed in conjunction with other future developments over the next few years (for near-term analysis scenario). As the cumulative conditions analyzed in this report include 47 projects and approximately 122,658 vehicle trips per day, the following network improvements are anticipated to be in place for the cumulative scenario only:

- Garbani Road Bridge over the I-215 Freeway
- I-215 Freeway/Scott Road Interchange ultimate improvements

At the direction of County staff and consistent with other traffic studies in the area, both the Garbani Road Bridge over the I-215 Freeway and the preferred interchange alternative design for the I-215 Freeway / Scott Road have been assumed to be in place for cumulative conditions only. The proposed future Holland Road crossing of the I-215 Freeway was not assumed for cumulative conditions at the direction of County staff. Both the Garbani Road Bridge over the I-215 Freeway and the I-215 Freeway interchange improvements at Scott Road are consistent with the currently adopted County of Riverside General Plan Circulation Element and are facilities that are identified and funded as part of the TUMF, Community Facilities District No. 05-8 (Scott Road) and/or the Scott Road & Bridge Benefit District.

The project will have a full-access driveway located on Haun Road (Driveway B) and two right-in/right-out driveways located on Haun Road (Driveways A and C).

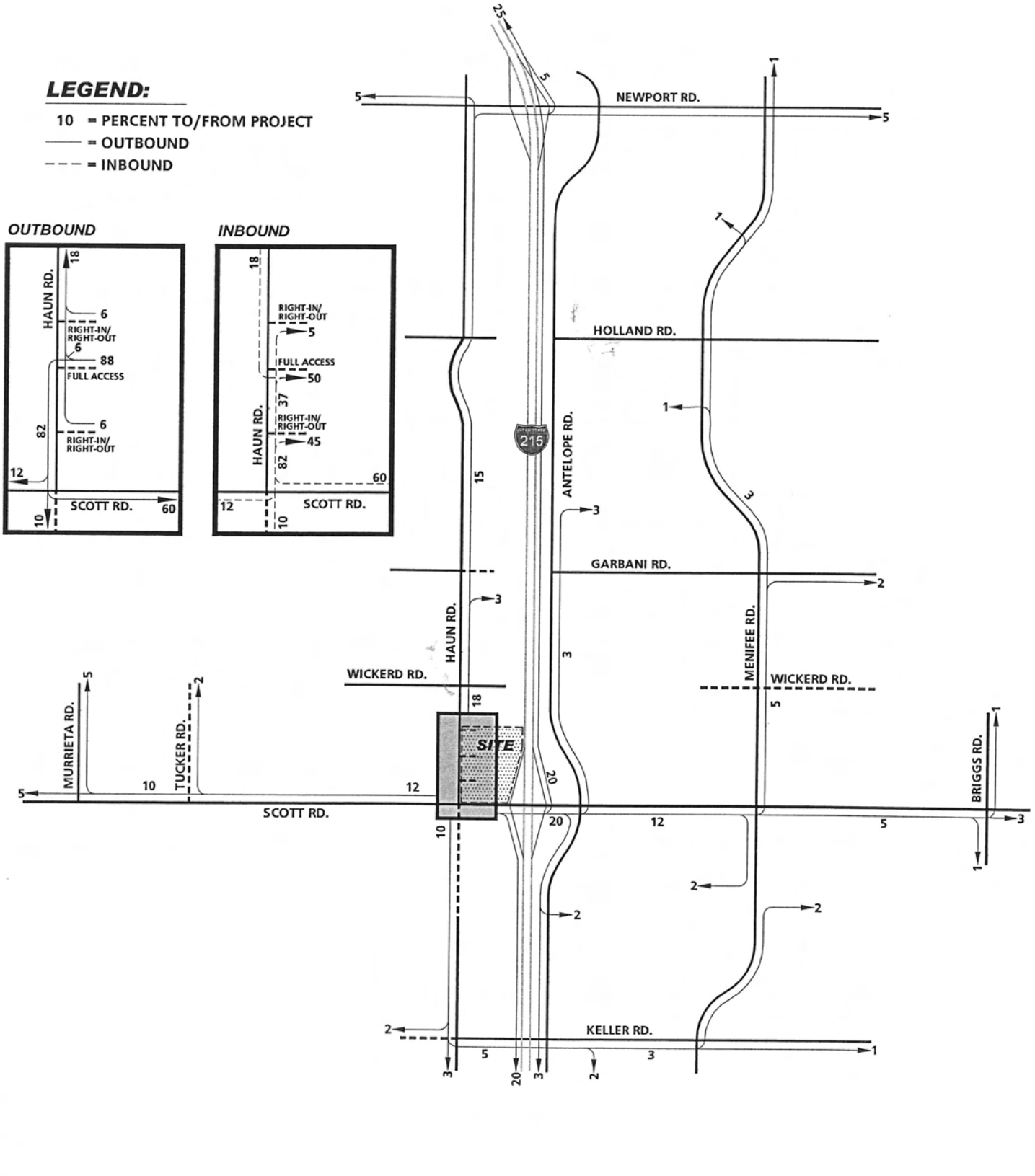
The trip distribution pattern for the project (2011) is graphically depicted on Exhibit 3-A.

4. Modal Split

The trip generation rates used in this report have been obtained from the ITE Trip Generation Manual, 7th Edition and are generally consistent with/based on data collected in suburban areas with typical suburban transit service.

EXHIBIT 3-A

PROJECT (2011) TRIP DISTRIBUTION



The traffic reducing potential of more extensive public transit has not been considered in this report. Essentially the traffic projections may be "conservative" with the future expansion of public transit might be able to reduce the traffic volumes.

5. Project (2011) Trip Assignment

The assignment of traffic from the site to the adjoining roadway system has been based upon the site's trip generation, trip distributions, and proposed arterial highway and local street systems, which would be in place by the time of initial occupancy of the site. Based on the identified project traffic generation and primary trip distribution, project (2011) ADT volumes are shown on Exhibit 3-B for 2011 conditions. Project (2011) AM and PM peak hour intersection traffic volumes are shown on Exhibits 3-C and 3-D, respectively.

B. Cumulative Development Traffic

1. Method of Projection

To assess EAP (2011) conditions, project traffic is combined with existing (2008) traffic and area-wide growth. The County also requires an additional scenario that includes cumulative developments which are approved or being processed concurrently in the study area. Developments which are being processed concurrently in the study area have been provided by County of Riverside staff. The list provided has been refined to remove projects that have been built (field verified) or have expired approvals (see Appendices "1.2" and "1.3").

THE JUNCTION
TRAFFIC IMPACT STUDY SUPPLEMENT (3/4/10)
City of Menifee, California

RK engineering group, inc.

THE JUNCTION
TRAFFIC IMPACT STUDY SUPPLEMENT
Menifee, California

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Newport Beach, CA 92660

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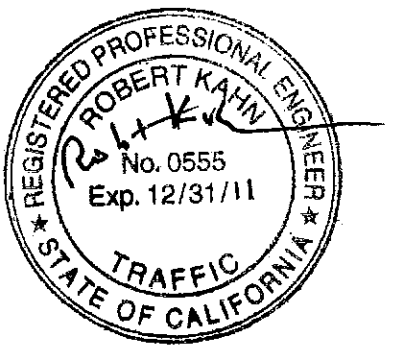

March 4, 2010

RK:AG:nq/RK7580
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1.0 Introduction

A. Purpose of Report and Study Objectives

The purpose of this supplemental traffic study is to update the previously approved Traffic Impact Study for the development of The Junction project from a traffic circulation standpoint. The proposed development is located within the City of Menifee. The proposed project will include a discount club store, home improvement super store and other retail land uses.

This project was previously approved by Riverside County (RCTD) in 2008 (*PM 34841/PP22279 Traffic Impact Study* dated 4/27/2007) and included Conditions of Approval (included in Appendix A). The site which was previously a part of unincorporated Riverside County, has now been incorporated into the City of Menifee. The DEIR for the project was previously circulated, but will be re-circulated as part of this process. The project is essentially the same as the project description approved by Riverside County in 2008 with only a slight change to trip generation which does not have any significant impact to the Level of Service of study area intersections (based upon *The Junction at Menifee Valley Updated Trip Generation Evaluation* prepared by RK on 1/30/2008).

In order to supplement the previously approved Traffic Impact Study, this Traffic Impact Study Supplement has been prepared utilizing updated traffic counts, cumulative projects and analysis based upon *The Menifee Shopping Center Traffic Impact Study* prepared by Urban Crossroads, Inc. (2/17/2009) which studied a proposed shopping center across the street from The Junction. Menifee City Staff has approved this scope of work to update the *PM 34841/PP22279 Traffic Impact Study* by RK (dated 4/27/2007).

Study objectives include: (1) documentation of Existing traffic conditions in the vicinity of the site; (2) evaluation of traffic conditions in the Project Completion (Year 2011)

Without and With Cumulative Project conditions; (3) determination of on-site and off-site improvements and system management actions needed to achieve City of Menifee level of service requirements; and (4) a summary of the Freeway Analysis conducted by Urban Crossroads, Inc. for *The Menifee Shopping Center Traffic Impact Study.*

B. Site Location and Study Area

The project is located at the northwest corner of the intersection of Haun Road at Scott Road in the City of Menifee. Exhibit 1 illustrates the site location and traffic analysis study area. The Junction project will have three access points to Haun Road, one access point to Scott Road and three access points to Howard Road. The access points and access restrictions are included on Exhibit 2. The project is not directly impacted by any of the CETAP corridors.

It should be noted that although *The Menifee Shopping Center Traffic Impact Study* assumed a temporary shift to the intersection of Haun Road at Holland Road, RK has assumed this to be an aligned intersection. In addition, RK has not included the minor roadways from *The Menifee Shopping Center Impact Study* of Haun Road at Wickerd Road, Tucker Road at Scott Road and Menifee Road at Wickerd Road in this supplemental study, since they were not a part of the original or updated traffic impact studied which was approved by The County of Riverside in 2008.

The study area for this Traffic Impact Study Supplement includes the following intersections:

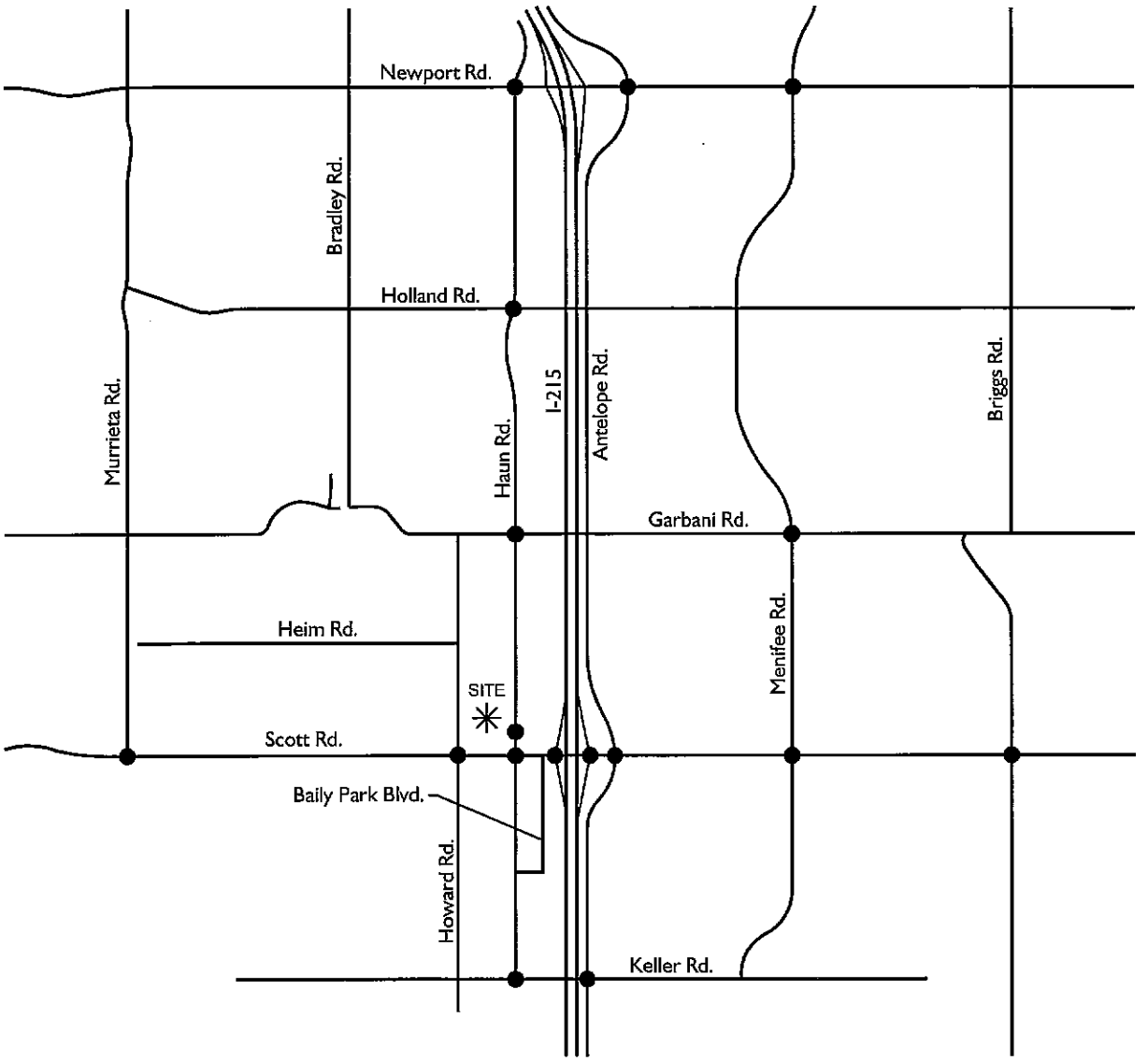
North-South Street	East-West Street
Murrieta Road	Scott Road
Howard Road	Scott Road
Haun Road/Zeiders Road	Newport Road Holland Road Garbani Road Southern Project Access Scott Road Keller Road
I-215 Southbound Ramps	Scott Road
I-215 Northbound Ramps	Scott Road
Antelope Road	Newport Road Scott Road Keller Road
Menifee Road	Newport Road Garbani Road Scott Road
Briggs Road	Scott Road

C. Development Project Description

The analysis in this traffic study was based upon a site plan that included a total of 526,800 square feet of commercial land use with a 160,000 square foot discount club store, a 140,760 square foot home improvement super store and 226,040 square feet of retail use. Exhibit 2 illustrates the final site plan. The site is currently vacant. The current Land Use Designation per the SW Area Land Plan dated 10/07/03, is Business Park with a Community Center Overlay. It is requested to change the zoning to Commercial Retail. Both Land Use Designations are within the Community Development component of the General Plan.

The project is proposed for completion by Year 2011 and has been analyzed in one complete phase.

Exhibit 1
Location Map



Legend:

● = Study Area Intersection

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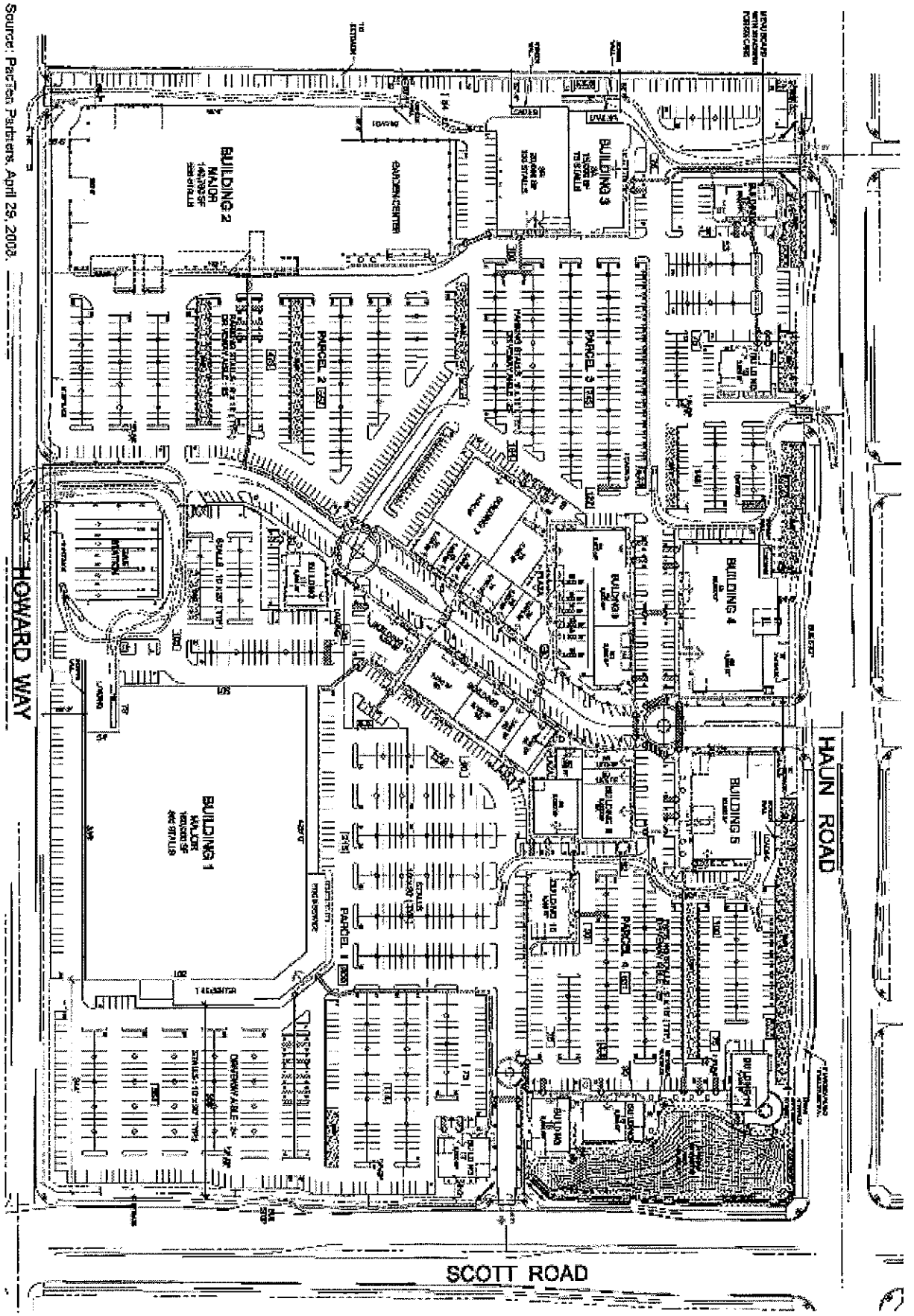
Exhibit 2
Site Plan



Source: Paul Tan Partners, April 29, 2003.

3.0 Projected Traffic

A. Project Traffic Conditions

1. Trip Generation

Trip generation represents the amount of traffic that is attracted and produced by a development. The traffic generation for the project is based upon the specific land use that has been planned for this development. The site plan includes a total of 526,800 square feet of commercial land use with a 160,000 square foot discount club store, a 140,760 square foot home improvement super store and 226,040 square feet of retail use.

Trip generation rates for the proposed development are shown in Table 2 and are from the *Institute of Transportation Engineers (ITE) Trip Generation, 8th Edition*. This publication provides a comprehensive evaluation of trip generation rates for a variety of land uses.

Both daily and peak-hour trip generation for the proposed development are shown in Table 3. A pass-by reduction of 25% has been utilized at study area intersections; however, it should be noted, in order to maintain consistency with *The Menifee Shopping Center Traffic Center Traffic Impact Study*, the pass-by reduction has only been taken during the PM park hour at study area intersections. The full trip generation has been used at project access points for both AM and PM peak hours.

2. Trip Distribution and Assignment

Trip distribution represents the directional orientation of traffic to and from the project site. Trip distribution is heavily influenced by the geographical location of the site, the location of residential, employment and recreational opportunities, and the proximity

to the regional freeway system. The directional orientation of traffic was determined by evaluating existing and proposed land uses, highways within the community, and existing traffic volumes.

Trip distribution for this study has been based upon near-term conditions, based upon those highway facilities that are either in place or will be contemplated over the next few years, which represents the buildout occupancy for the proposed development. The outbound and inbound trip distribution patterns for the project are graphically depicted on Exhibits 7-1 and 7-2, respectively.

The assignment of traffic from the site to the adjoining roadway system has been based upon the site's trip generation, trip distributions, and proposed arterial highway and local street systems that would be in place by the time of initial occupancy of the site.

3. Modal Split

Modal split denotes the proportion of traffic generated by a project that would use any of the transportation modes, namely bus, car, bicycles, motorcycles, trains, carpools, etc. The traffic reducing potential of public transit and other modes is significant. However, the traffic projections are "conservative" in that public transit and alternative transportation may be able to reduce the traffic volumes. Thus no modal split reduction is applied to the projections. With the implementation of transit service and provision of alternative transportation ideas and incentives, the automobile traffic demand can be reduced significantly.

4. Project Peak Hour Traffic Volumes

Project AM and PM peak hour intersection turning movement volumes and average daily traffic are shown on Exhibit 8. It should be noted that full project trip generation has been shown for the AM peak hour and project access points. The net project trip

generation has been shown for the PM peak hour. This was done to maintain consistency with the methodology used by Urban Crossroads, Inc. in their analysis of The Menifee Shopping Center.

B. Background Traffic

1. Method of Projection

To assess Project Completion (Year 2011) traffic conditions, project traffic is combined with existing traffic and area wide growth. To account for ambient growth on roadways, a 2% annual growth rate has been utilized. The project completion is expected to be in the Year 2011. The Existing analysis utilized in *The Menifee Shopping Center Traffic Impact Study* was from 2008; therefore, 3 years of growth have been projected for a total of 6% of growth for Project Completion (Year 2011) Conditions.

2. Other Development Traffic

A list of the proposed land uses for the nearby development for Project Completion (Year 2011) With Cumulative Project traffic conditions which were integrated in *The Menifee Shopping Center Traffic Impact Study* is included in Appendix D. It should be noted that the Menifee Shopping Center itself has been added to that list as a cumulative project and The Junction project as been omitted as a cumulative project for analysis in this study.

3. Background Traffic Growth Rate

To account for area wide growth on roadways, future traffic volumes have been calculated based on a 2% annual growth rate of existing traffic volumes over a three-year period. This growth rate is consistent with the growth rate utilized in *The Menifee Shopping Center Traffic Impact Study*.

C. Project Completion (Year 2011) Traffic Volumes

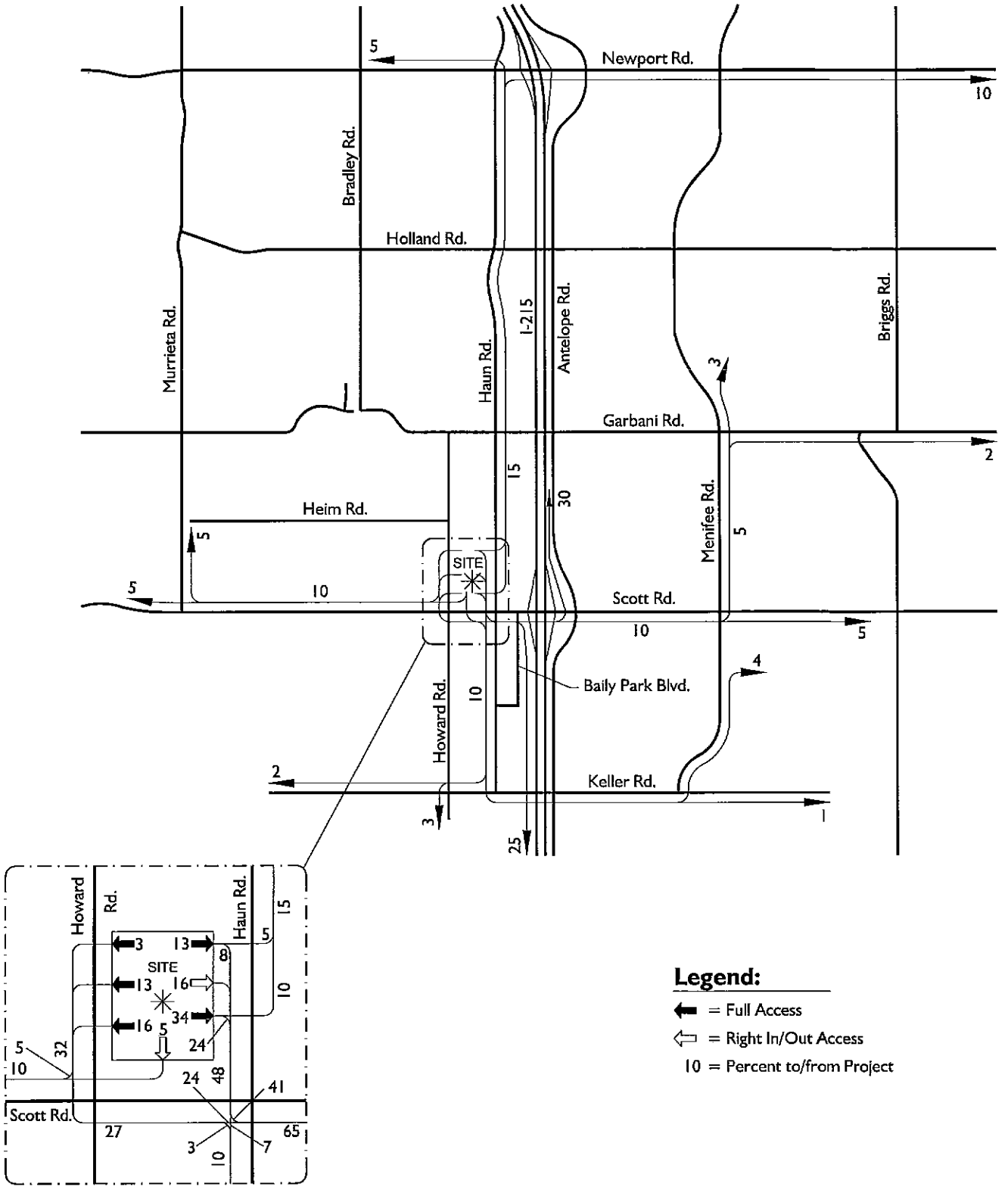
Project Completion (Year 2011) traffic conditions include updated existing traffic volumes on surrounding roadways (based upon *The Menifee Shopping Center Traffic Impact Study),* project traffic, and area wide growth. The AM and PM peak hour intersection turning movement volumes and average daily traffic are shown on Exhibit 9 for Project Completion (Year 2011) traffic conditions.

D. Project Completion (Year 2011) With Cumulative Project Traffic Volumes

Project Completion (Year 2011) With Cumulative Project traffic volumes include project traffic, background traffic volumes on surrounding roadways, traffic from surrounding development, and area wide growth. These volumes are from *The Menifee Shopping Center Traffic Impact Study*. Project Completion (Year 2011) With Cumulative Project AM and PM peak hour intersection turning movement volumes and average daily traffic are shown on Exhibit 10.

Exhibit 7-1

Outbound Project Trip Distribution



RK engineering group, inc.

Exhibit 7-2

Inbound Project Trip Distribution

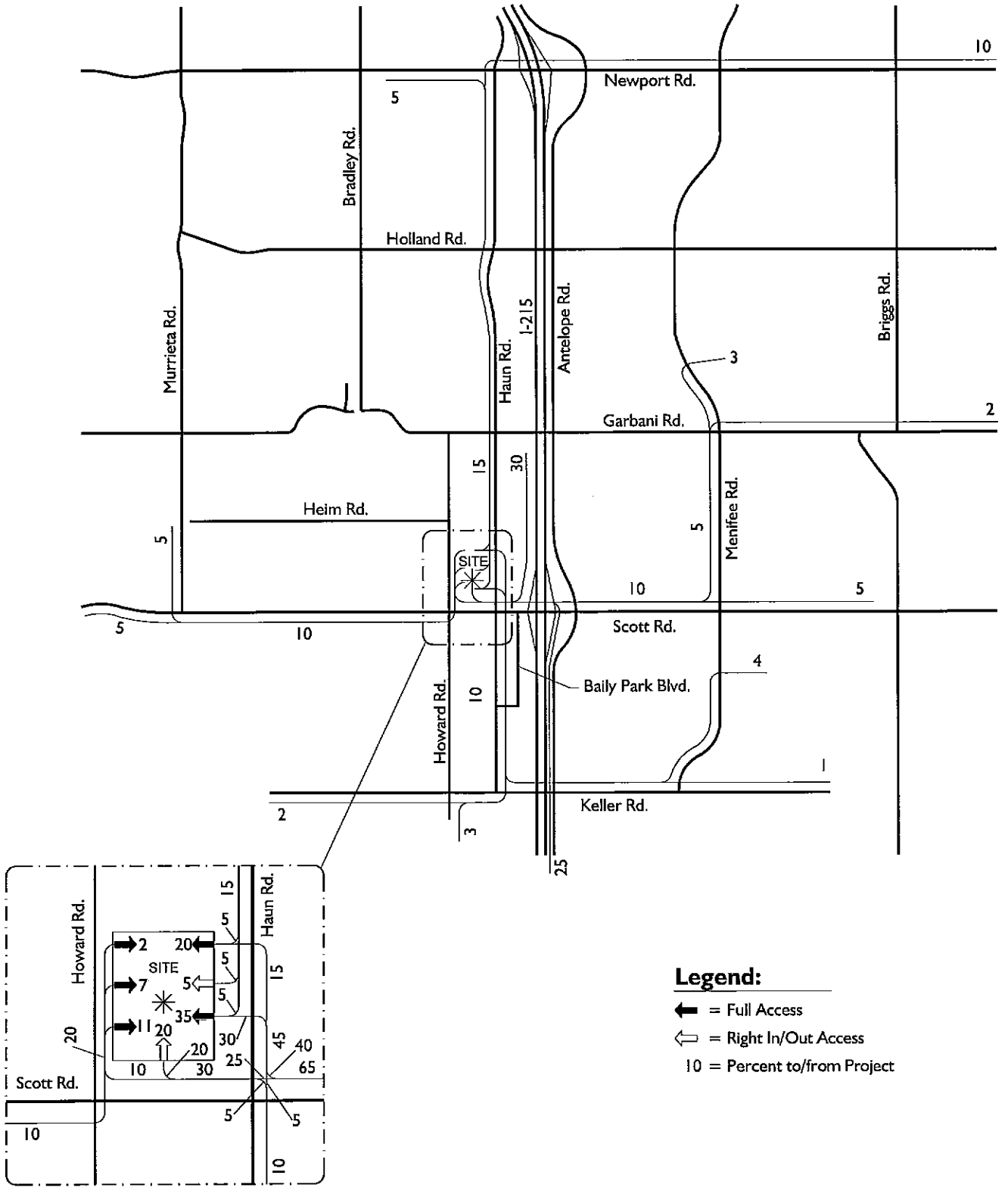
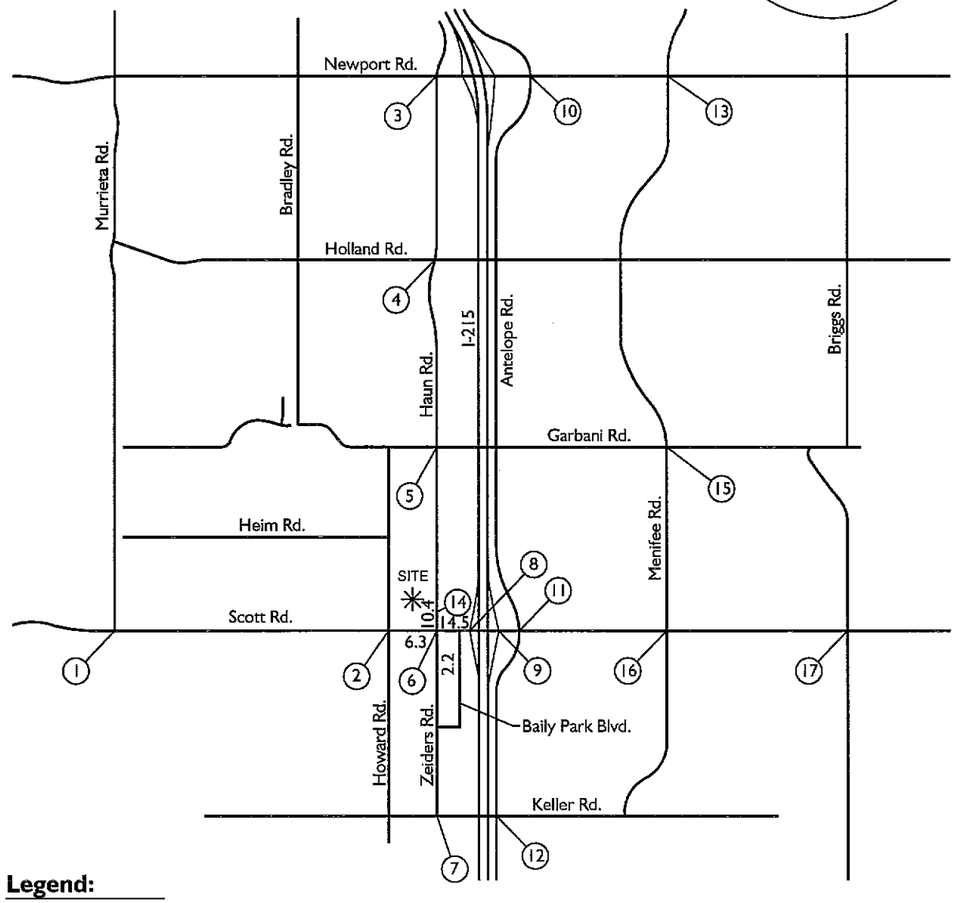
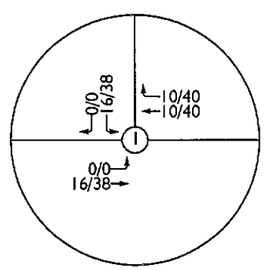
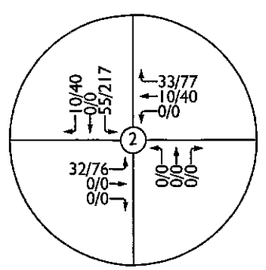


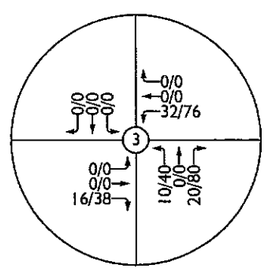
Exhibit 8

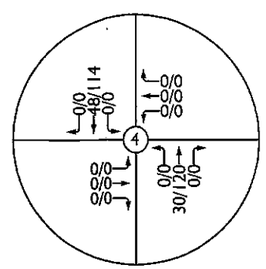
Project Traffic Volumes

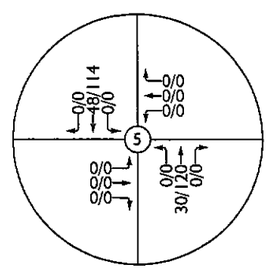


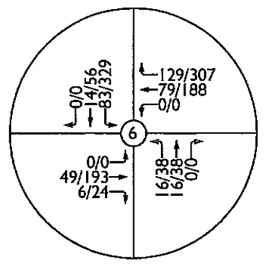


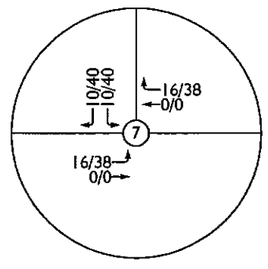


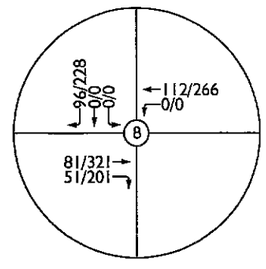


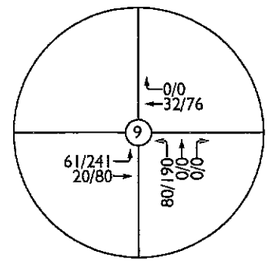


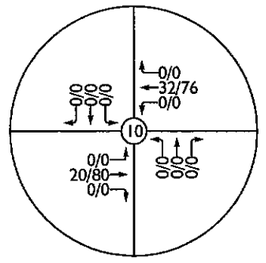


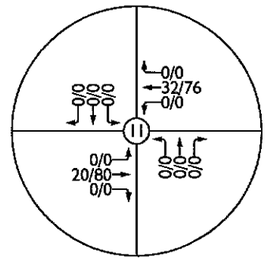


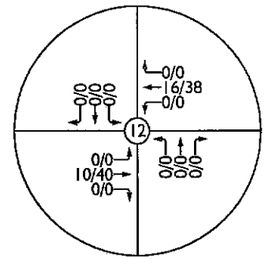


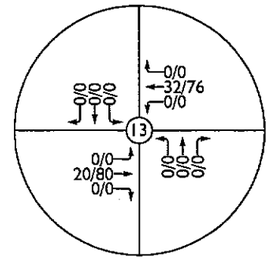


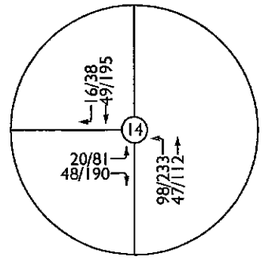


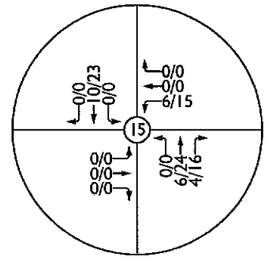


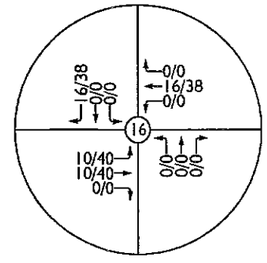


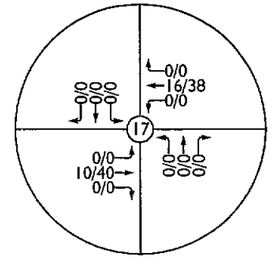












Legend:

10/20 = AM/PM Peak Hour Volumes
10.0 = Average Daily Traffic (1000's)

It should be noted that full project trip generation has been shown at project access points and during the AM peak hour. Net project trip generation (reduced by pass -by trips) has been shown for the PM peak hour.

N

Source: Menifee Shopping Center (I-215 and Scott Road) TIA by Urban Crossroads (2/17/09)

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TABLE 2

Trip Generation Rates[1]

Land Use	Units[2]	Peak Hour				Daily
		AM		PM		
		In	Out	In	Out	
Discount Club	TSF	0.40	0.16	2.12	2.12	41.80
Home Improvement Super Store	TSF	0.72	0.54	1.14	1.23	29.8
Retail (226.040 TSF)	TSF	0.67	0.43	2.38	2.48	51.05

[1] Source: Institute of Transportation Engineers (ITE), *Trip Generation, 8th Edition.*

[2] TSF = Thousand Square Feet

TABLE 3

Project Trip Generation

Land Use	Quantity	Units[1]	Peak Hour				Daily
			AM		PM		
			In	Out	In	Out	
Discount Club	160.000	TSF	64	26	339	339	6,688
Home Improvement Super Store	140.760	TSF	101	76	160	173	4,195
Retail	226.040	TSF	151	97	538	561	11,539
Subtotal	526.800	TSF	321	202	1,014	1,070	22,422
Less Pass-By Trips (25%)			-80	-51	-254	-268	-5,606
Net Trip Generation Total[2]			241	152	761	803	16,817

[1] TSF = Thousand Square Feet

[2] For purposes of this supplemental traffic analyis, the full trip generation has been used for the AM peak hour in order to remain consistent with *The Menifee Shopping Center TIS Analysis* . Numbers may not add due to rounding.

Project Trip Generation

Table 4-2 presents the daily and peak hour trip generation for the proposed project. As shown, the proposed project is anticipated to generate approximately 2,257 daily trip-ends, including 135 trip-ends during the AM peak hour and 119 trip-ends during the PM peak hour.

Table 4-2 – Project Trip Generation (in PCE)

Land Use	Qty	Unit	AM Peak Hour			PM Peak Hour			Daily
			Total	In	Out	Total	In	Out	
Pharmacy/Drugstore with Drive-Through Window	17.185	TSF	59	31	28	170	85	85	1,665
Internal Trips (PM Peak:12%, Daily:28%)[1]			0	0	0	-21	-10	-11	-461
Pass-by Trips (PM Peak: 49%)			0	0	0	-73	-37	-36	-73
Subtotal			59	31	28	76	38	38	1,131
Fast-Food Restaurant with Drive-Through Window	3.285	TSF	149	76	73	107	56	51	1,630
Internal Trips (PM Peak:20%, Daily:28%)[1]			0	0	0	-21	-11	-10	-461
Pass-by Trips (AM Peak: 49%, PM Peak: 50%)			-73	-37	-36	-43	-23	-21	-43
Subtotal			76	39	37	43	23	21	1,126
PROJECT TOTAL			135	70	65	119	61	58	2,257

TSF = 1,000 Square Feet Gross Floor Area.

[1] Internal Trip Capture calculated based on the ITE Trip Generation Handbook, 2nd Edition. See figure.

Internal Trips

A key characteristic of a multi-use development is that trips among the various land uses can be made on-site. These internal trips can be made either by walking or by vehicle entirely on internal pathways or internal roadways without using street external to the site.

Pass-by Trips

Pass-by trips are trips made as intermediate stops on the way from an origin to a primary trip destination without a route diversion. Pass-by trips are attracted from traffic passing the site on an adjacent street or roadway that offers direct access to the site. Pass-by trips do not add new traffic to the adjacent street system. Pass-by trips are only applicable to trips that enter or exit the site.

Project Trip Distribution

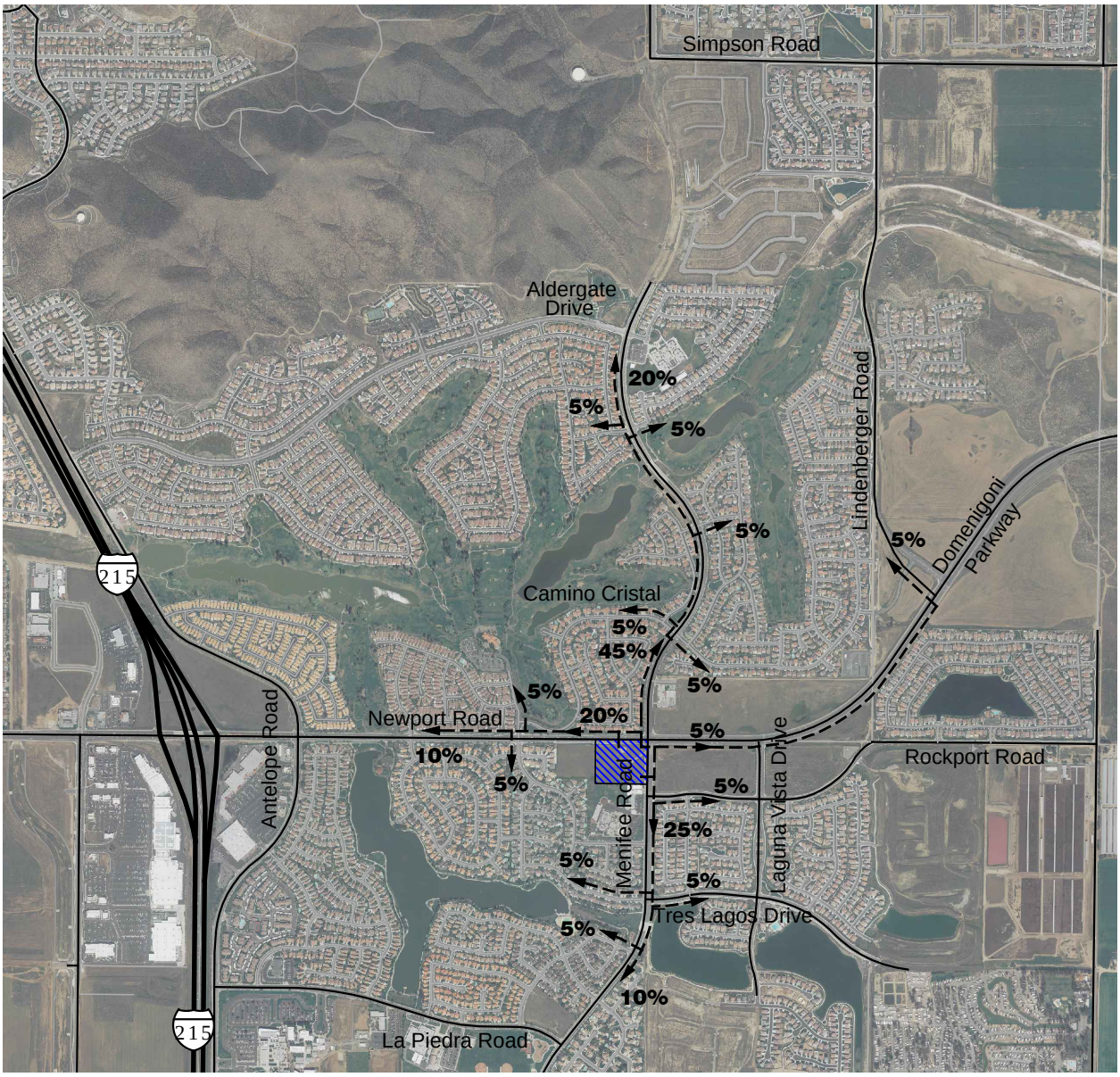
Trip distribution represents the directional orientation of traffic to and from the project site. Trip distribution is influenced by the geographical location of the site, type of land use in the study area, such as shopping centers and recreational sites, and proximity to the regional freeway system.

The trip directional orientation of traffic for the proposed project was determined based upon the existing roadway system, existing traffic patterns, and existing and future land uses. The directional distribution for the proposed project traffic assumed in this study is shown on Figure 4-A.

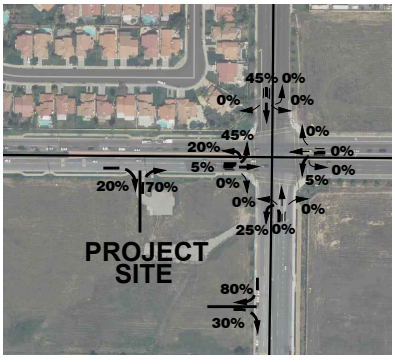
Project Modal Split

The traffic reducing potential of public transit has not been considered in this study. Therefore, the traffic projections provided in this report are considered conservative since public transit could reduce traffic volumes in the project area.

Figure 4-A – Directional Distribution of Project Traffic



DETAILED DISTRIBUTION



LEGEND

- Project Site
- Future Roadway
- X% Directional Distribution To/From Proposed Project Site

N

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Table 4-1 – Trip Generation Rates

Land Use	Unit	AM Peak Hour			PM Peak Hour			Daily
		Total	In	Out	Total	In	Out	
Gasoline/Service Station with Convenience Market and Car Wash (16 VFP)	VFP	11.94	6.06	5.88	13.94	7.13	6.81	152.81

VFP = Vehicle Fueling Positions.
Weighted average trip generation rates from Trip Generation Manual, 9th Ed. by ITE, 2012.

Project Trip Generation

Table 4-2 presents the daily and peak hour trip generation for the proposed project. As shown, the proposed project is anticipated to generate approximately 2,202 daily trip-ends, including 73 trip-ends during the AM peak hour and 98 trip-ends during the PM peak hour.

Table 4-2 – Project Trip Generation

Land Use	Qty	Unit	AM Peak Hour			PM Peak Hour			Daily
			Total	In	Out	Total	In	Out	
Gasoline/Service Station with Convenience Market and Car Wash	16	VFP	191	97	94	223	114	109	2,445
Pass-by Trips (62% AM Peak)[1]			*(118)*	*(60)*	*(58)*				*(118)*
Pass-by Trips (56% PM Peak)[1]						*(125)*	*(64)*	*(61)*	*(125)*
Total			73	37	36	98	50	48	2,202

VFP = Vehicle Fueling Positions.
Weighted average trip generation rates from Trip Generation Manual, 9th Ed. by ITE, 2012.
[1] Average pass-by trip percentages from *Trip Generation Handbook,* 9th Ed. by ITE, 2012. Not applicable to internal trips.

Pass-by Trips

Pass-by trips are trips made as intermediate stops on the way from an origin to a primary trip destination without a route diversion. Pass-by trips are attracted from traffic passing the site on an adjacent street or roadway that offers direct access to the site. Pass-by trips do not add new traffic to the adjacent street system. Pass-by trips are only applicable to trips that enter or exit the site. The pass-by trips are shown in Figure 4-D and Figure 4-E for AM and PM respectively.

Project Trip Distribution

Trip distribution represents the directional orientation of traffic to and from the project site. Trip distribution is influenced by the geographical location of the site, type of land use in the study area, such as shopping centers and recreational sites, and proximity to the regional freeway system.

The trip directional orientation of traffic for the proposed project was determined based upon the existing roadway system, existing traffic patterns, and existing and future land uses. The directional distribution for the proposed project primary traffic assumed in this study is shown on Figure 4-A. The project trip distribution is based on the assumption of the completion of the Newport Road expansion

Traffic Count Data
Appendix C

ALBERT A.
WEBB
ASSOCIATES

ADT Counts

SEGMENT 1 - CITY PROVIDED

Counts Unlimited, Inc.

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

City of Menifee
Bradley Road
N/ Newport Road
24 Hour Directional Volume Count

MEN009
Site Code: 003-16623

Start Time	11/16/2016 Wed	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		14	144			5	**148**				
12:15		10	165			13	**138**				
12:30		12	182			5	**146**				
12:45		6	142	42	633	4	**125**	27	557	69	1190
01:00		5	149			4	130				
01:15		3	131			5	127				
01:30		5	173			2	130				
01:45		3	124	16	577	3	128	14	515	30	1092
02:00		3	142			1	130				
02:15		9	136			5	133				
02:30		5	136			3	118				
02:45		4	152	21	566	5	121	14	502	35	1068
03:00		6	**178**			5	142				
03:15		10	**163**			6	143				
03:30		6	**167**			9	113				
03:45		6	**160**	28	668	10	124	30	522	58	1190
04:00		9	149			13	130				
04:15		14	170			15	127				
04:30		24	124			28	147				
04:45		8	156	55	599	38	120	94	524	149	1123
05:00		20	157			26	140				
05:15		18	158			37	129				
05:30		29	138			45	111				
05:45		46	132	113	585	47	120	155	500	268	1085
06:00		37	123			50	84				
06:15		31	123			69	94				
06:30		43	119			93	66				
06:45		53	108	164	473	108	62	320	306	484	779
07:00		92	89			168	67				
07:15		133	77			134	50				
07:30		127	80			85	52				
07:45		95	78	447	324	91	61	478	230	925	554
08:00		87	71			95	45				
08:15		83	56			110	46				
08:30		103	51			118	44				
08:45		125	54	398	232	130	39	453	174	851	406
09:00		97	38			142	43				
09:15		93	54			111	48				
09:30		113	40			119	28				
09:45		107	33	410	165	129	21	501	140	911	305
10:00		116	31			136	24				
10:15		104	30			112	21				
10:30		123	21			**154**	20				
10:45		**132**	21	475	103	**161**	19	563	84	1038	187
11:00		**155**	15			**134**	11				
11:15		**118**	10			**117**	15				
11:30		**141**	12			150	12				
11:45		128	9	542	46	154	6	555	44	1097	90
Total		2711	4971	2711	4971	3204	4098	3204	4098	5915	9069
Combined Total		7682		7682		7302		7302		14984	
AM Peak	-	10:45	-	-	-	10:30	-	-	-	-	-
Vol.	-	546	-	-	-	566	-	-	-	-	-
P.H.F.		0.881				0.879					
PM Peak	-	-	03:00	-	-	-	12:00	-	-	-	-
Vol.	-	-	668	-	-	-	557	-	-	-	-
P.H.F.			0.938				0.941				
Percentage		35.3%	64.7%			43.9%	56.1%				
ADT/AADT		ADT 14,984		AADT 14,984							

SEGMENT 2 - CITY PROVIDED

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

City of Menifee
Bradley Road
S/ Newport Road
24 Hour Directional Volume Count

MEN010
Site Code: 003-16623

Start Time	11/16/2016 Wed	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		9	109			8	111				
12:15		6	175			6	95				
12:30		7	116			9	100				
12:45		7	99	29	499	1	104	24	410	53	909
01:00		6	115			8	73				
01:15		6	119			1	79				
01:30		6	105			3	84				
01:45		4	82	22	421	3	87	15	323	37	744
02:00		4	124			4	85				
02:15		5	112			0	98				
02:30		4	97			4	**116**				
02:45		9	125	22	458	5	**129**	13	428	35	886
03:00		8	**220**			3	**144**				
03:15		10	**199**			3	**120**				
03:30		13	**126**			5	105				
03:45		19	**126**	50	671	7	82	18	451	68	1122
04:00		23	119			6	100				
04:15		25	123			10	99				
04:30		37	118			18	93				
04:45		39	127	124	487	11	98	45	390	169	877
05:00		45	103			16	123				
05:15		42	115			21	109				
05:30		48	97			32	98				
05:45		60	113	195	428	26	114	95	444	290	872
06:00		70	93			33	92				
06:15		81	92			47	82				
06:30		86	88			**84**	63				
06:45		**116**	68	353	341	**131**	66	295	303	648	644
07:00		**173**	69			**218**	59				
07:15		**220**	64			**147**	53				
07:30		**197**	59			70	58				
07:45		116	64	706	256	62	54	497	224	1203	480
08:00		105	45			67	48				
08:15		79	45			62	54				
08:30		71	39			61	53				
08:45		84	30	339	159	55	41	245	196	584	355
09:00		85	28			55	27				
09:15		73	35			61	36				
09:30		81	27			60	15				
09:45		78	28	317	118	69	21	245	99	562	217
10:00		83	29			75	21				
10:15		80	7			77	27				
10:30		96	21			86	18				
10:45		81	18	340	75	80	14	318	80	658	155
11:00		108	19			70	16				
11:15		67	15			74	8				
11:30		97	12			88	10				
11:45		108	9	380	55	112	8	344	42	724	97
Total		2877	3968	2877	3968	2154	3390	2154	3390	5031	7358
Combined Total		6845		6845		5544		5544		12389	
AM Peak	-	06:45	-	-	-	06:30	-	-	-	-	-
Vol.	-	706	-	-	-	580	-	-	-	-	-
P.H.F.		0.802				0.665					
PM Peak	-	-	03:00	-	-	-	02:30	-	-	-	-
Vol.	-	-	671	-	-	-	509	-	-	-	-
P.H.F.			0.763				0.884				
Percentage		42.0%	58.0%			38.9%	61.1%				
ADT/AADT		ADT 12,389		AADT 12,389							

SEGMENT 3 - WEBB PROVIDED

Counts Unlimited, Inc.

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

City of Menifee
Bradley Road
N/ Holland Road
24 Hour Directional Volume Count

MEN001
Site Code: 067-18193

Start Time	13-Mar-18 Tue	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		4	46			1	46				
12:15		2	68			0	44				
12:30		2	49			2	54				
12:45		2	47	10	210	1	49	4	193	14	403
01:00		2	78			3	49				
01:15		1	51			0	35				
01:30		2	82			1	46				
01:45		6	71	11	282	0	124	4	254	15	536
02:00		0	101			2	99				
02:15		1	91			0	86				
02:30		1	77			3	**113**				
02:45		2	**112**	4	381	1	**137**	6	435	10	816
03:00		3	**220**			2	**135**				
03:15		2	**156**			3	**111**				
03:30		4	**104**			5	77				
03:45		1	105	10	585	3	76	13	399	23	984
04:00		7	105			5	73				
04:15		2	103			7	85				
04:30		9	80			11	56				
04:45		8	77	26	365	5	61	28	275	54	640
05:00		10	94			9	69				
05:15		12	88			15	81				
05:30		14	96			19	50				
05:45		20	69	56	347	23	73	66	273	122	620
06:00		16	63			21	50				
06:15		18	99			40	58				
06:30		30	65			72	50				
06:45		**81**	57	145	284	**168**	40	301	198	446	482
07:00		**143**	57			**232**	40				
07:15		**128**	59			**188**	36				
07:30		**144**	39			**93**	21				
07:45		61	27	476	182	97	28	610	125	1086	307
08:00		69	17			95	20				
08:15		98	29			83	18				
08:30		52	26			50	24				
08:45		39	18	258	90	35	24	263	86	521	176
09:00		30	21			34	15				
09:15		19	24			27	11				
09:30		26	15			26	15				
09:45		38	12	113	72	48	12	135	53	248	125
10:00		40	11			45	11				
10:15		39	4			49	9				
10:30		47	10			38	9				
10:45		35	8	161	33	45	6	177	35	338	68
11:00		35	18			49	4				
11:15		38	9			52	4				
11:30		53	9			41	4				
11:45		38	2	164	38	72	7	214	19	378	57
Total		1434	2869	1434	2869	1821	2345	1821	2345	3255	5214
Combined Total		4303		4303		4166		4166		8469	
AM Peak	-	06:45	-	-	-	06:45	-	-	-	-	-
Vol.	-	496	-	-	-	681	-	-	-	-	-
P.H.F.		0.861				0.734					
PM Peak	-	-	02:45	-	-	-	02:30	-	-	-	-
Vol.	-	-	592	-	-	-	496	-	-	-	-
P.H.F.			0.673				0.905				
Percentage		33.3%	66.7%			43.7%	56.3%				
ADT/AADT		ADT 8,469		AADT 8,469							

SEGMENT 4 - WEBB PROVIDED

Counts Unlimited, Inc.

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

City of Menifee
Haun Road
N/ La Piedra Road
24 Hour Directional Volume Count

MEN008
Site Code: 067-18193

Start Time	13-Mar-18 Tue	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		3	84			3	85				
12:15		4	89			3	85				
12:30		4	99			5	100				
12:45		6	108	17	380	4	83	15	353	32	733
01:00		1	146			1	82				
01:15		1	97			1	81				
01:30		3	107			3	109				
01:45		1	91	6	441	3	119	8	391	14	832
02:00		0	93			0	120				
02:15		1	145			2	**134**				
02:30		1	165			2	**146**				
02:45		1	**153**	3	556	2	**125**	6	525	9	1081
03:00		0	**133**			3	**127**				
03:15		6	**193**			0	106				
03:30		5	**196**			1	99				
03:45		8	139	19	661	4	101	8	433	27	1094
04:00		12	122			2	102				
04:15		14	114			4	106				
04:30		12	132			3	101				
04:45		17	133	55	501	4	115	13	424	68	925
05:00		9	127			8	109				
05:15		26	135			13	86				
05:30		26	106			21	101				
05:45		50	126	111	494	26	102	68	398	179	892
06:00		26	100			38	93				
06:15		43	106			37	94				
06:30		53	120			81	91				
06:45		63	99	185	425	**186**	86	342	364	527	789
07:00		86	97			**230**	76				
07:15		**171**	81			**166**	74				
07:30		**198**	55			**108**	83				
07:45		**203**	56	658	289	65	56	569	289	1227	578
08:00		**107**	58			59	69				
08:15		82	45			44	55				
08:30		88	49			44	43				
08:45		95	30	372	182	49	41	196	208	568	390
09:00		68	29			52	49				
09:15		87	22			39	41				
09:30		54	22			48	32				
09:45		86	15	295	88	62	26	201	148	496	236
10:00		72	11			67	16				
10:15		81	9			74	17				
10:30		85	6			67	7				
10:45		95	5	333	31	80	10	288	50	621	81
11:00		98	6			67	10				
11:15		115	7			72	10				
11:30		112	0			64	11				
11:45		88	3	413	16	72	7	275	38	688	54
Total		2467	4064	2467	4064	1989	3621	1989	3621	4456	7685
Combined Total		6531		6531		5610		5610		12141	
AM Peak	-	07:15	-	-	-	06:45	-	-	-	-	-
Vol.	-	679	-	-	-	690	-	-	-	-	-
P.H.F.		0.836				0.750					
PM Peak	-	-	02:45	-	-	-	02:15	-	-	-	-
Vol.	-	-	675	-	-	-	532	-	-	-	-
P.H.F.			0.861				0.911				
Percentage		37.8%	62.2%			35.5%	64.5%				
ADT/AADT		ADT 12,141		AADT 12,141							

SEGMENT 4 - CITY PROVIDED

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

City of Menifee
Haun Road
S/ Newport Road
24 Hour Directional Volume Count

MEN019
Site Code: 003-16623

Start Time	11/16/2016 Wed	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		30	345			19	292				
12:15		20	332			17	**345**				
12:30		26	346			10	**320**				
12:45		14	317	90	1340	15	**320**	61	1277	151	2617
01:00		23	**341**			13	**344**				
01:15		9	**331**			4	317				
01:30		13	**373**			12	319				
01:45		12	**330**	57	1375	5	289	34	1269	91	2644
02:00		6	290			4	312				
02:15		5	340			5	282				
02:30		9	356			7	320				
02:45		5	345	25	1331	3	255	19	1169	44	2500
03:00		4	319			4	282				
03:15		8	303			16	303				
03:30		6	320			31	291				
03:45		10	273	28	1215	12	267	63	1143	91	2358
04:00		16	232			11	304				
04:15		24	305			31	293				
04:30		35	300			37	289				
04:45		36	291	111	1128	36	332	115	1218	226	2346
05:00		26	278			37	292				
05:15		35	257			50	304				
05:30		43	312			84	309				
05:45		79	309	183	1156	72	300	243	1205	426	2361
06:00		70	314			89	284				
06:15		84	301			92	257				
06:30		69	303			144	286				
06:45		114	260	337	1178	206	228	531	1055	868	2233
07:00		186	278			278	243				
07:15		181	250			216	189				
07:30		205	287			234	179				
07:45		171	245	743	1060	172	158	900	769	1643	1829
08:00		132	221			178	134				
08:15		176	220			162	115				
08:30		151	211			229	101				
08:45		169	194	628	846	229	91	798	441	1426	1287
09:00		207	130			253	95				
09:15		217	146			253	86				
09:30		193	128			293	71				
09:45		203	128	820	532	267	37	1066	289	1886	821
10:00		251	96			313	34				
10:15		253	84			295	27				
10:30		263	56			**348**	30				
10:45		277	63	1044	299	**332**	30	1288	121	2332	420
11:00		**311**	59			**356**	22				
11:15		**320**	56			**345**	19				
11:30		**322**	48			332	27				
11:45		**313**	38	1266	201	321	12	1354	80	2620	281
Total		5332	11661	5332	11661	6472	10036	6472	10036	11804	21697
Combined Total		16993		16993		16508		16508		33501	
AM Peak	-	11:00	-	-	-	10:30	-	-	-	-	-
Vol.	-	1266	-	-	-	1381	-	-	-	-	-
P.H.F.		0.983				0.970					
PM Peak	-	-	01:00	-	-	-	00:15	-	-	-	-
Vol.	-	-	1375	-	-	-	1329	-	-	-	-
P.H.F.			0.922				0.963				
Percentage		31.4%	68.6%			39.2%	60.8%				
ADT/AADT		ADT 33,501		AADT 33,501							

SEGMENT 5 - WEBB PROVIDED

Counts Unlimited, Inc.

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

City of Menifee
Haun Road
N/ Holland Road
24 Hour Directional Volume Count

MEN006
Site Code: 067-18193

Start Time	13-Mar-18 Tue	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		5	95			9	82				
12:15		3	94			4	116				
12:30		6	115			3	100				
12:45		1	102	15	406	5	107	21	405	36	811
01:00		1	109			4	100				
01:15		2	101			1	96				
01:30		0	101			1	80				
01:45		0	88	3	399	3	108	9	384	12	783
02:00		1	111			2	104				
02:15		1	110			1	**127**				
02:30		2	109			2	**169**				
02:45		0	101	4	431	1	**162**	6	562	10	993
03:00		5	**205**			2	**187**				
03:15		5	**184**			2	125				
03:30		9	**125**			0	130				
03:45		12	**122**	31	636	1	121	5	563	36	1199
04:00		15	124			4	115				
04:15		8	135			2	124				
04:30		18	145			2	131				
04:45		9	125	50	529	3	107	11	477	61	1006
05:00		30	137			4	136				
05:15		34	118			4	120				
05:30		50	120			15	109				
05:45		34	109	148	484	15	111	38	476	186	960
06:00		43	111			17	129				
06:15		55	121			26	119				
06:30		65	115			28	113				
06:45		**85**	100	248	447	50	100	121	461	369	908
07:00		**101**	75			**95**	105				
07:15		**117**	63			**177**	95				
07:30		**138**	60			**115**	89				
07:45		81	59	437	257	**84**	86	471	375	908	632
08:00		87	47			71	69				
08:15		96	52			52	80				
08:30		92	27			56	58				
08:45		87	29	362	155	48	54	227	261	589	416
09:00		74	16			60	57				
09:15		69	19			42	55				
09:30		86	13			48	44				
09:45		67	9	296	57	56	31	206	187	502	244
10:00		78	10			59	32				
10:15		98	1			71	19				
10:30		98	5			69	18				
10:45		84	5	358	21	76	7	275	76	633	97
11:00		107	7			63	11				
11:15		95	0			84	15				
11:30		85	3			84	9				
11:45		106	6	393	16	65	9	296	44	689	60
Total		2345	3838	2345	3838	1686	4271	1686	4271	4031	8109
Combined Total		6183		6183		5957		5957		12140	
AM Peak	-	06:45	-	-	-	07:00	-	-	-	-	-
Vol.	-	441	-	-	-	471	-	-	-	-	-
P.H.F.		0.799				0.665					
PM Peak	-	-	03:00	-	-	-	02:15	-	-	-	-
Vol.	-	-	636	-	-	-	645	-	-	-	-
P.H.F.			0.776				0.862				
Percentage		37.9%	62.1%			28.3%	71.7%				
ADT/AADT		ADT 12,140		AADT 12,140							

SEGMENT 7 - CITY PROVIDED

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

City of Menifee
Newport Road
B/ Murrieta Road - Evans Road
24 Hour Directional Volume Count

MEN004
Site Code: 003-16623

Start Time	11/16/2016 Wed	Eastbound		Hour Totals		Westbound		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		16	294			27	298				
12:15		18	290			23	307				
12:30		14	265			20	257				
12:45		14	273	62	1122	15	285	85	1147	147	2269
01:00		9	277			16	261				
01:15		16	261			16	276				
01:30		15	290			13	280				
01:45		15	305	55	1133	12	256	57	1073	112	2206
02:00		10	294			21	247				
02:15		17	300			14	251				
02:30		14	267			22	276				
02:45		21	314	62	1175	33	312	90	1086	152	2261
03:00		23	312			49	329				
03:15		32	270			62	258				
03:30		46	290			58	317				
03:45		36	261	137	1133	83	**304**	252	1208	389	2341
04:00		91	298			75	**276**				
04:15		94	**319**			88	**305**				
04:30		86	**332**			100	**347**				
04:45		94	**307**	365	1256	94	298	357	1226	722	2482
05:00		116	**308**			124	266				
05:15		130	274			109	301				
05:30		142	267			157	290				
05:45		193	291	581	1140	157	297	547	1154	1128	2294
06:00		238	276			186	257				
06:15		224	236			217	279				
06:30		**286**	204			201	219				
06:45		**317**	181	1065	897	210	224	814	979	1879	1876
07:00		**302**	170			252	219				
07:15		**292**	162			233	202				
07:30		260	177			205	174				
07:45		259	132	1113	641	204	166	894	761	2007	1402
08:00		245	137			213	164				
08:15		263	113			194	161				
08:30		250	119			233	138				
08:45		245	99	1003	468	204	120	844	583	1847	1051
09:00		246	107			222	130				
09:15		260	76			237	112				
09:30		234	73			228	85				
09:45		272	59	1012	315	230	85	917	412	1929	727
10:00		265	49			240	51				
10:15		237	38			235	46				
10:30		262	51			231	58				
10:45		245	34	1009	172	**286**	48	992	203	2001	375
11:00		260	40			**266**	37				
11:15		281	33			**256**	35				
11:30		285	28			**271**	28				
11:45		243	21	1069	122	265	19	1058	119	2127	241
Total		7533	9574	7533	9574	6907	9951	6907	9951	14440	19525
Combined Total		17107		17107		16858		16858		33965	
AM Peak	-	06:30	-	-	-	10:45	-	-	-	-	-
Vol.	-	1197	-	-	-	1079	-	-	-	-	-
P.H.F.		0.944				0.943					
PM Peak	-	-	04:15	-	-	-	03:45	-	-	-	-
Vol.	-	-	1266	-	-	-	1232	-	-	-	-
P.H.F.			0.953				0.888				
Percentage		44.0%	56.0%			41.0%	59.0%				
ADT/AADT		ADT 33,965		AADT 33,965							

SEGMENT 6 - WEBB PROVIDED

Counts Unlimited, Inc.

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

City of Menifee
Haun Road
S/ Holland Road
24 Hour Directional Volume Count

MEN005
Site Code: 067-18193

Start Time	13-Mar-18 Tue	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		11	89			8	81				
12:15		8	82			1	82				
12:30		3	79			0	76				
12:45		4	109	26	359	2	90	11	329	37	688
01:00		1	91			4	75				
01:15		4	85			1	101				
01:30		4	106			2	57				
01:45		2	109	11	391	3	79	10	312	21	703
02:00		6	132			2	91				
02:15		1	95			1	101				
02:30		3	116			5	109				
02:45		4	**136**	14	479	4	**93**	12	394	26	873
03:00		0	**114**			2	**109**				
03:15		2	**180**			2	**91**				
03:30		3	**137**			4	**122**				
03:45		7	100	12	531	3	86	11	408	23	939
04:00		4	130			8	87				
04:15		6	121			17	94				
04:30		3	135			25	93				
04:45		13	122	26	508	30	83	80	357	106	865
05:00		8	115			27	106				
05:15		12	143			16	94				
05:30		9	122			23	82				
05:45		27	120	56	500	20	78	86	360	142	860
06:00		13	106			32	98				
06:15		28	127			46	78				
06:30		22	129			46	77				
06:45		50	109	113	471	68	71	192	324	305	795
07:00		**78**	105			80	72				
07:15		**142**	107			**119**	56				
07:30		**111**	84			**102**	59				
07:45		**99**	75	430	371	**103**	57	404	244	834	615
08:00		68	60			**86**	49				
08:15		48	62			78	48				
08:30		65	54			74	31				
08:45		77	42	258	218	66	36	304	164	562	382
09:00		75	41			62	34				
09:15		50	39			60	39				
09:30		59	38			64	26				
09:45		64	23	248	141	57	15	243	114	491	255
10:00		52	21			66	19				
10:15		68	22			61	16				
10:30		71	10			74	10				
10:45		87	14	278	67	67	11	268	56	546	123
11:00		74	16			58	10				
11:15		90	18			72	9				
11:30		70	12			70	12				
11:45		86	10	320	56	51	9	251	40	571	96
Total		1792	4092	1792	4092	1872	3102	1872	3102	3664	7194
Combined Total		5884		5884		4974		4974		10858	
AM Peak	-	07:00	-	-	-	07:15	-	-	-	-	-
Vol.	-	430	-	-	-	410	-	-	-	-	-
P.H.F.		0.757				0.861					
PM Peak	-	-	02:45	-	-	-	02:45	-	-	-	-
Vol.	-	-	567	-	-	-	415	-	-	-	-
P.H.F.			0.788				0.850				
Percentage		30.5%	69.5%			37.6%	62.4%				
ADT/AADT		ADT 10,858		AADT 10,858							

SEGMENT 7 - CITY PROVIDED ADT 2

Counts Unlimited, Inc.

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

City of Menifee
Newport Road
B/ Evans Road - Winter Hawk Road
24 Hour Directional Volume Count

MEN007
Site Code: 003-16623

Start Time	11/16/2016 Wed	Eastbound Morning	Eastbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Westbound Morning	Westbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		22	249			28	294				
12:15		19	301			28	298				
12:30		18	346			23	274				
12:45		15	264	74	1160	18	265	97	1131	171	2291
01:00		14	276			18	282				
01:15		9	313			16	266				
01:30		17	274			17	305				
01:45		15	290	55	1153	12	261	63	1114	118	2267
02:00		17	309			12	280				
02:15		9	302			20	260				
02:30		16	320			12	239				
02:45		16	286	58	1217	22	279	66	1058	124	2275
03:00		22	320			30	328				
03:15		26	319			51	299				
03:30		36	283			55	280				
03:45		53	279	137	1201	52	312	188	1219	325	2420
04:00		41	268			75	286				
04:15		100	301			75	288				
04:30		105	**325**			87	307				
04:45		93	**385**	339	1279	95	**337**	332	1218	671	2497
05:00		98	**312**			90	**304**				
05:15		128	**314**			121	**280**				
05:30		142	281			110	**320**				
05:45		141	276	509	1183	154	296	475	1200	984	2383
06:00		199	287			160	304				
06:15		245	286			194	268				
06:30		220	245			223	273				
06:45		**286**	209	950	1027	209	226	786	1071	1736	2098
07:00		**325**	178			228	225				
07:15		**332**	179			254	226				
07:30		**312**	172			227	212				
07:45		282	167	1251	696	200	177	909	840	2160	1536
08:00		275	147			203	181				
08:15		238	132			218	161				
08:30		288	107			194	158				
08:45		263	123	1064	509	242	147	857	647	1921	1156
09:00		284	94			208	124				
09:15		236	110			223	127				
09:30		267	83			228	122				
09:45		253	76	1040	363	227	83	886	456	1926	819
10:00		253	58			249	88				
10:15		278	58			245	62				
10:30		248	39			244	47				
10:45		259	53	1038	208	257	59	995	256	2033	464
11:00		276	36			**255**	52				
11:15		253	42			**282**	42				
11:30		309	33			**280**	38				
11:45		309	30	1147	141	**291**	28	1108	160	2255	301
Total		7662	10137	7662	10137	6762	10370	6762	10370	14424	20507
Combined Total		17799		17799		17132		17132		34931	
AM Peak	-	06:45	-	-	-	11:00	-	-	-	-	-
Vol.	-	1255	-	-	-	1108	-	-	-	-	-
P.H.F.		0.945				0.952					
PM Peak	-	-	04:30	-	-	-	04:45	-	-	-	-
Vol.	-	-	1336	-	-	-	1241	-	-	-	-
P.H.F.			0.868				0.921				
Percentage		43.0%	57.0%			39.5%	60.5%				
ADT/AADT		ADT 34,931		AADT 34,931							

Counts Unlimited, Inc

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

City of Menifee
Newport Road
E/ Sherman Road
24 Hour Directional Volume Count

MEN004
Site Code: 051-17029

Start Time	1/26/2017 Thu	Eastbound Morning	Eastbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Westbound Morning	Westbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		52	342			16	351				
12:15		44	347			18	333				
12:30		29	338			19	352				
12:45		23	324	148	1351	17	329	70	1365	218	2716
01:00		25	370			12	348				
01:15		17	352			19	357				
01:30		10	359			12	384				
01:45		19	325	71	1406	14	328	57	1417	128	2823
02:00		31	390			11	352				
02:15		10	397			12	357				
02:30		28	366			11	422				
02:45		28	347	97	1500	11	393	45	1524	142	3024
03:00		26	**394**			25	364				
03:15		44	**398**			31	384				
03:30		43	**386**			45	407				
03:45		52	**406**	165	1584	58	432	159	1587	324	3171
04:00		78	342			62	396				
04:15		113	421			74	**453**				
04:30		119	402			80	**411**				
04:45		154	372	464	1537	85	**409**	301	1669	765	3206
05:00		167	370			112	**438**				
05:15		163	394			102	416				
05:30		223	361			131	392				
05:45		216	281	769	1406	127	435	472	1681	1241	3087
06:00		223	327			187	427				
06:15		281	297			193	360				
06:30		273	276			212	316				
06:45		**378**	258	1155	1158	282	326	874	1429	2029	2587
07:00		**399**	225			285	312				
07:15		**478**	245			268	269				
07:30		**467**	190			299	296				
07:45		347	212	1691	872	251	282	1103	1159	2794	2031
08:00		344	169			240	217				
08:15		308	162			233	206				
08:30		336	155			274	207				
08:45		337	126	1325	612	232	184	979	814	2304	1426
09:00		310	147			264	174				
09:15		322	145			241	166				
09:30		326	92			246	133				
09:45		311	86	1269	470	293	114	1044	587	2313	1057
10:00		345	86			302	90				
10:15		344	84			307	85				
10:30		344	68			294	59				
10:45		347	64	1380	302	321	71	1224	305	2604	607
11:00		328	51			**331**	56				
11:15		352	59			**297**	50				
11:30		367	46			**329**	36				
11:45		367	42	1414	198	**369**	19	1326	161	2740	359
Total		9948	12396	9948	12396	7654	13698	7654	13698	17602	26094
Combined Total		22344		22344		21352		21352		43696	
AM Peak	-	06:45	-	-	-	11:00	-	-	-	-	-
Vol.	-	1722	-	-	-	1326	-	-	-	-	-
P.H.F.		0.901				0.898					
PM Peak	-	-	03:00	-	-	-	04:15	-	-	-	-
Vol.	-	-	1584	-	-	-	1711	-	-	-	-
P.H.F.			0.975				0.944				
Percentage		44.5%	55.5%			35.8%	64.2%				

ADT/AADT ADT 43,696 AADT 43,696

Counts Unlimited, Inc

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

City of Menifee
Newport Road
E/ Haun Road
24 Hour Directional Volume Count

MEN005
Site Code: 051-17029

Start Time	1/26/2017 Thu	Eastbound Morning	Eastbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Westbound Morning	Westbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		57	429			19	460				
12:15		47	410			14	482				
12:30		41	437			15	465				
12:45		40	451	185	1727	26	415	74	1822	259	3549
01:00		42	481			19	452				
01:15		31	442			14	434				
01:30		18	504			18	410				
01:45		27	448	118	1875	9	412	60	1708	178	3583
02:00		39	472			13	417				
02:15		14	470			11	489				
02:30		29	**541**			8	492				
02:45		33	**524**	115	2007	15	507	47	1905	162	3912
03:00		32	**493**			21	486				
03:15		44	**558**			36	510				
03:30		38	507			42	524				
03:45		55	479	169	2037	87	**524**	186	2044	355	4081
04:00		82	469			100	**538**				
04:15		125	510			86	**544**				
04:30		131	519			122	**535**				
04:45		174	529	512	2027	112	499	420	2116	932	4143
05:00		180	503			126	532				
05:15		179	499			139	533				
05:30		235	445			180	512				
05:45		248	456	842	1903	169	493	614	2070	1456	3973
06:00		272	480			244	488				
06:15		335	433			254	440				
06:30		315	375			349	393				
06:45		372	391	1294	1679	418	419	1265	1740	2559	3419
07:00		**426**	338			**516**	362				
07:15		**496**	329			**450**	329				
07:30		**542**	316			**491**	343				
07:45		**465**	313	1929	1296	**426**	278	1883	1312	3812	2608
08:00		377	307			358	213				
08:15		321	272			370	197				
08:30		332	248			437	180				
08:45		329	270	1359	1097	361	177	1526	767	2885	1864
09:00		345	235			376	149				
09:15		330	205			350	143				
09:30		328	171			414	114				
09:45		354	164	1357	775	379	88	1519	494	2876	1269
10:00		387	141			384	81				
10:15		407	109			426	72				
10:30		396	91			443	57				
10:45		419	79	1609	420	461	51	1714	261	3323	681
11:00		405	69			444	54				
11:15		414	86			453	36				
11:30		479	63			447	32				
11:45		461	47	1759	265	441	14	1785	136	3544	401
Total		11248	17108	11248	17108	11093	16375	11093	16375	22341	33483
Combined Total		28356		28356		27468		27468		55824	
AM Peak	-	07:00	-	-	-	07:00	-	-	-	-	-
Vol.	-	1929	-	-	-	1883	-	-	-	-	-
P.H.F.		0.890				0.912					
PM Peak	-	-	02:30	-	-	-	03:45	-	-	-	-
Vol.	-	-	2116	-	-	-	2141	-	-	-	-
P.H.F.			0.948				0.984				
Percentage		39.7%	60.3%			40.4%	59.6%				

ADT/AADT	ADT 55,824	AADT 55,824

SEGMENT 10 - WEBB PROVIDED

Counts Unlimited, Inc.

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

City of Menifee
Newport Road
W/ Antelope Road
24 Hour Directional Volume Count

MEN009
Site Code: 067-18193

Start Time	13-Mar-18 Tue	Eastbound Morning	Eastbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Westbound Morning	Westbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		91	473			32	530				
12:15		64	483			37	500				
12:30		72	499			26	486				
12:45		47	497	274	1952	26	483	121	1999	395	3951
01:00		37	476			19	486				
01:15		52	506			23	490				
01:30		40	553			18	443				
01:45		33	535	162	2070	40	467	100	1886	262	3956
02:00		27	530			32	485				
02:15		27	569			32	**547**				
02:30		33	580			37	**564**				
02:45		33	600	120	2279	46	**536**	147	2132	267	4411
03:00		31	601			70	**574**				
03:15		30	665			79	521				
03:30		44	635			165	559				
03:45		39	659	144	2560	175	524	489	2178	633	4738
04:00		52	654			234	516				
04:15		63	648			312	559				
04:30		70	654			306	488				
04:45		83	**678**	268	2634	279	534	1131	2097	1399	4731
05:00		90	**653**			253	474				
05:15		135	**669**			329	583				
05:30		168	**666**			302	511				
05:45		187	610	580	2598	349	520	1233	2088	1813	4686
06:00		228	606			432	416				
06:15		311	547			463	457				
06:30		346	538			527	428				
06:45		**402**	540	1287	2231	**646**	325	2068	1626	3355	3857
07:00		**501**	491			**686**	340				
07:15		**544**	475			**683**	265				
07:30		**594**	490			**626**	316				
07:45		396	432	2035	1888	525	271	2520	1192	4555	3080
08:00		371	409			536	306				
08:15		408	344			596	248				
08:30		375	344			549	226				
08:45		417	317	1571	1414	436	196	2117	976	3688	2390
09:00		443	317			498	168				
09:15		386	246			449	167				
09:30		416	220			544	169				
09:45		389	248	1634	1031	487	119	1978	623	3612	1654
10:00		441	180			499	94				
10:15		455	174			530	83				
10:30		444	134			506	86				
10:45		441	129	1781	617	503	82	2038	345	3819	962
11:00		424	111			466	69				
11:15		439	89			497	64				
11:30		501	92			519	49				
11:45		445	98	1809	390	459	48	1941	230	3750	620
Total		11665	21664	11665	21664	15883	17372	15883	17372	27548	39036
Combined Total		33329		33329		33255		33255		66584	
AM Peak	-	06:45	-	-	-	06:45	-	-	-	-	-
Vol.	-	2041	-	-	-	2641	-	-	-	-	-
P.H.F.		0.859				0.962					
PM Peak	-	-	04:45	-	-	-	02:15	-	-	-	-
Vol.	-	-	2666	-	-	-	2221	-	-	-	-
P.H.F.			0.983				0.967				
Percentage		35.0%	65.0%			47.8%	52.2%				
ADT/AADT		ADT 66,584		AADT 66,584							

SEGMENT 11 - CITY PROVIDED

ADT 9

Counts Unlimited, Inc.

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

City of Menifee
Newport Road
Antelope Road - Menifee Road
24 Hour Directional Volume Count

MEN023
Site Code: 003-16623

Start Time	11/16/2016 Wed	Eastbound Morning	Eastbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Westbound Morning	Westbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		60	274			34	232				
12:15		57	284			35	276				
12:30		46	301			18	380				
12:45		41	275	204	1134	23	273	110	1161	314	2295
01:00		25	298			19	278				
01:15		43	259			10	246				
01:30		23	273			12	283				
01:45		23	306	114	1136	18	271	59	1078	173	2214
02:00		19	318			13	295				
02:15		20	354			22	299				
02:30		17	318			21	297				
02:45		22	354	78	1344	20	284	76	1175	154	2519
03:00		17	358			22	257				
03:15		31	367			34	277				
03:30		24	356			69	313				
03:45		23	**390**	95	1471	82	277	207	1124	302	2595
04:00		25	**413**			111	281				
04:15		17	**368**			137	290				
04:30		40	**357**			190	**291**				
04:45		37	380	119	1518	191	**333**	629	1195	748	2713
05:00		57	384			199	**257**				
05:15		61	376			205	**346**				
05:30		64	358			218	272				
05:45		112	354	294	1472	239	274	861	1149	1155	2621
06:00		140	355			248	243				
06:15		145	374			255	223				
06:30		223	377			347	196				
06:45		**296**	344	804	1450	**374**	232	1224	894	2028	2344
07:00		**289**	298			**445**	165				
07:15		**345**	312			**342**	157				
07:30		**317**	273			**352**	148				
07:45		271	265	1222	1148	367	147	1506	617	2728	1765
08:00		263	243			362	142				
08:15		243	247			328	130				
08:30		239	196			346	107				
08:45		222	194	967	880	315	139	1351	518	2318	1398
09:00		209	200			263	118				
09:15		227	182			286	89				
09:30		250	150			301	81				
09:45		234	126	920	658	288	70	1138	358	2058	1016
10:00		201	142			266	55				
10:15		226	86			299	58				
10:30		234	91			330	57				
10:45		237	76	898	395	254	38	1149	208	2047	603
11:00		253	79			270	32				
11:15		251	77			261	40				
11:30		261	56			258	30				
11:45		264	47	1029	259	239	40	1028	142	2057	401
Total		6744	12865	6744	12865	9338	9619	9338	9619	16082	22484
Combined Total		19609		19609		18957		18957		38566	
AM Peak	-	06:45	-	-	-	06:45	-	-	-	-	-
Vol.	-	1247	-	-	-	1513	-	-	-	-	-
P.H.F.		0.904				0.850					
PM Peak	-	-	03:45	-	-	-	04:30	-	-	-	-
Vol.	-	-	1528	-	-	-	1227	-	-	-	-
P.H.F.			0.925				0.807				
Percentage		34.4%	65.6%			49.3%	50.7%				
ADT/AADT		ADT 38,566		AADT 38,566							

SEGMENT 12 - WEBB PROVIDED

Counts Unlimited, Inc.

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

City of Menifee
La Piedra Road
W/ Haun Road
24 Hour Directional Volume Count

MEN007
Site Code: 067-18193

Start Time	13-Mar-18 Tue	Eastbound Morning	Eastbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Westbound Morning	Westbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		0	7			0	15				
12:15		0	10			0	19				
12:30		0	9			0	21				
12:45		1	10	1	36	1	33	1	88	2	124
01:00		0	6			0	25				
01:15		0	10			0	33				
01:30		0	13			0	53				
01:45		0	20	0	49	0	**48**	0	159	0	208
02:00		0	**29**			0	**61**				
02:15		0	**45**			0	**62**				
02:30		0	**59**			1	**96**				
02:45		0	**27**	0	160	0	43	1	262	1	422
03:00		0	22			0	41				
03:15		0	31			0	36				
03:30		0	13			0	20				
03:45		0	12	0	78	0	21	0	118	0	196
04:00		0	14			0	17				
04:15		3	10			0	20				
04:30		1	7			0	23				
04:45		0	11	4	42	0	15	0	75	4	117
05:00		1	10			2	20				
05:15		0	7			2	14				
05:30		0	6			7	14				
05:45		1	5	2	28	10	13	21	61	23	89
06:00		2	6			11	7				
06:15		2	5			14	10				
06:30		3	8			38	8				
06:45		**7**	4	14	23	**85**	9	148	34	162	57
07:00		**50**	2			**171**	5				
07:15		**28**	2			**114**	5				
07:30		**32**	0			**94**	5				
07:45		5	2	115	6	36	2	415	17	530	23
08:00		7	0			18	4				
08:15		7	0			10	3				
08:30		8	0			12	2				
08:45		8	0	30	0	17	3	57	12	87	12
09:00		18	3			15	3				
09:15		8	1			14	6				
09:30		7	0			15	2				
09:45		8	0	41	4	6	2	50	13	91	17
10:00		8	0			16	1				
10:15		8	4			16	1				
10:30		7	0			14	0				
10:45		13	0	36	4	25	2	71	4	107	8
11:00		10	0			28	0				
11:15		16	0			15	1				
11:30		12	0			26	1				
11:45		8	0	46	0	14	0	83	2	129	2
Total		289	430	289	430	847	845	847	845	1136	1275
Combined Total		719		719		1692		1692		2411	
AM Peak	-	06:45	-	-	-	06:45	-	-	-	-	-
Vol.	-	117	-	-	-	464	-	-	-	-	-
P.H.F.		0.585				0.678					
PM Peak	-	-	02:00	-	-	-	01:45	-	-	-	-
Vol.	-	-	160	-	-	-	267	-	-	-	-
P.H.F.			0.678				0.695				
Percentage		40.2%	59.8%			50.1%	49.9%				
ADT/AADT		ADT 2,411		AADT 2,411							

SEGMENT 13 - CITY PROVIDED

LINSCOTT LAW & GREENSPAN engineers

24 Hour Segment Count

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136

AVC

Location: B. Scott Road between Haun Road and I-215

Orientation: *East-West*

Date of Count: *Thursday, February 16, 2017*

Analysts: *DASH*

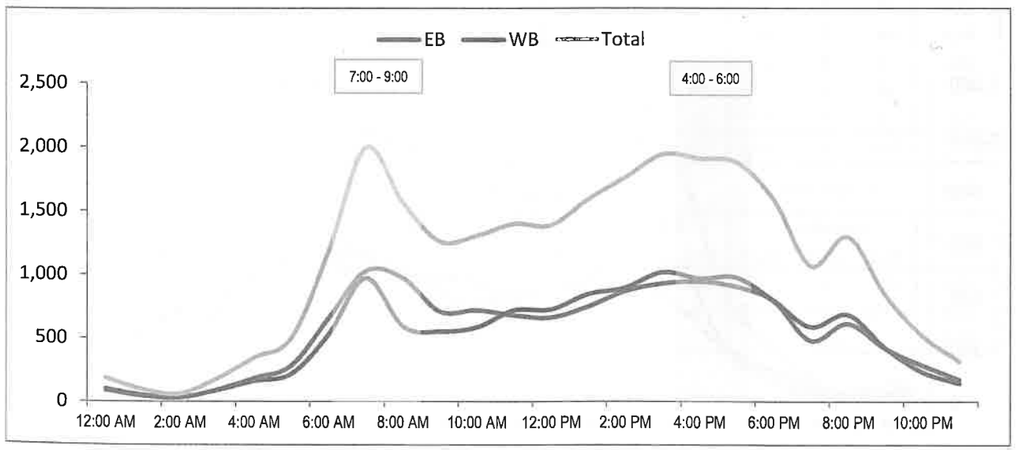
Weather: *Sunny*

AVC Proj. No: *17-0624*

24 Hour Segment Volume			26,108
Time	Hourly Volume		
	EB	WB	Total
12:00 AM - 1:00 AM	89	98	187
1:00 AM - 2:00 AM	44	51	95
2:00 AM - 3:00 AM	31	30	61
3:00 AM - 4:00 AM	91	88	179
4:00 AM - 5:00 AM	183	160	343
5:00 AM - 6:00 AM	281	216	497
6:00 AM - 7:00 AM	650	523	1,173
7:00 AM - 8:00 AM	1,024	967	1,991
8:00 AM - 9:00 AM	969	590	1,559
9:00 AM - 10:00 AM	707	550	1,257
10:00 AM - 11:00 AM	718	584	1,302
11:00 AM - 12:00 PM	678	717	1395
Total	**5,465**	**4,574**	**10,039**

Time	Hourly Volume		
	EB	WB	Total
12:00 PM - 1:00 PM	660	724	1,384
1:00 PM - 2:00 PM	745	842	1,587
2:00 PM - 3:00 PM	865	892	1,757
3:00 PM - 4:00 PM	925	1,014	1,939
4:00 PM - 5:00 PM	941	966	1,907
5:00 PM - 6:00 PM	902	974	1,876
6:00 PM - 7:00 PM	791	796	1,587
7:00 PM - 8:00 PM	479	587	1,066
8:00 PM - 9:00 PM	611	682	1,293
9:00 PM - 10:00 PM	417	422	839
10:00 PM - 11:00 PM	285	233	518
11:00 PM - 12:00 AM	173	143	316
Total	**7,794**	**8,275**	**16,069**

24-Hour EB Volume	13,259	24-Hour WB Volume	12,849



SEGMENT 14 - CITY PROVIDED

LINSCOTT LAW & GREENSPAN engineers

24 Hour Segment Count

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136

AVC

Location: C. Scott Road between I-215 and Antelope Road

Orientation: *East-West*

Date of Count: *Thursday, February 09, 2017*

Analysts: *DASH*

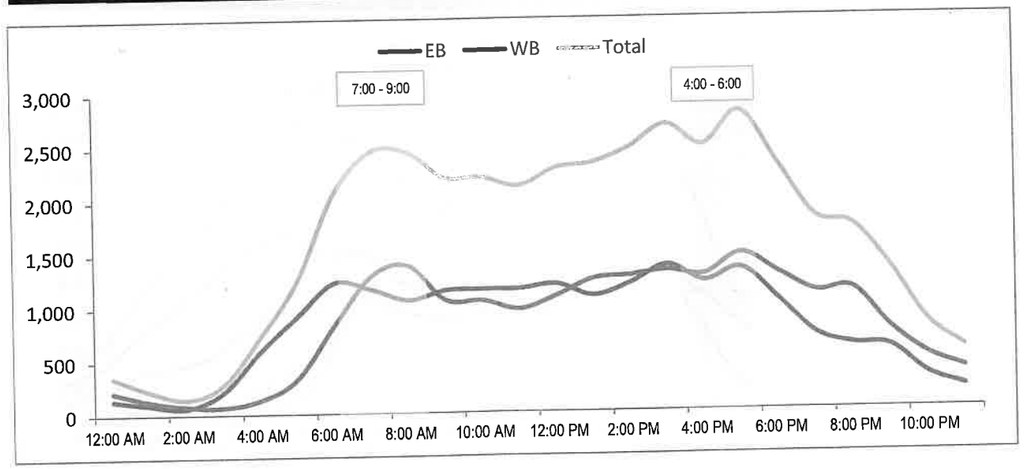
Weather: *Sunny*

AVC Proj. No: *17-0624*

24 Hour Segment Volume			40,170
Time	Hourly Volume		
	EB	WB	Total
12:00 AM - 1:00 AM	215	139	354
1:00 AM - 2:00 AM	129	95	224
2:00 AM - 3:00 AM	81	66	147
3:00 AM - 4:00 AM	69	217	286
4:00 AM - 5:00 AM	136	596	732
5:00 AM - 6:00 AM	332	917	1,249
6:00 AM - 7:00 AM	834	1,232	2,066
7:00 AM - 8:00 AM	1,292	1,165	2,457
8:00 AM - 9:00 AM	1,385	1,063	2,448
9:00 AM - 10:00 AM	1,060	1,151	2,211
10:00 AM - 11:00 AM	1,051	1,159	2,210
11:00 AM - 12:00 PM	967	1,157	2124
Total	**7,551**	**8,957**	**16,508**

Time	Hourly Volume		
	EB	WB	Total
12:00 PM - 1:00 PM	1,088	1,198	2,286
1:00 PM - 2:00 PM	1,245	1,088	2,333
2:00 PM - 3:00 PM	1,273	1,199	2,472
3:00 PM - 4:00 PM	1,319	1,366	2,685
4:00 PM - 5:00 PM	1,278	1,215	2,493
5:00 PM - 6:00 PM	1,471	1,330	2,801
6:00 PM - 7:00 PM	1,284	1,029	2,313
7:00 PM - 8:00 PM	1,107	708	1,815
8:00 PM - 9:00 PM	1,130	605	1,735
9:00 PM - 10:00 PM	762	580	1,342
10:00 PM - 11:00 PM	504	318	822
11:00 PM - 12:00 AM	369	196	565
Total	**12,830**	**10,832**	**23,662**

24-Hour EB Volume	20,381	24-Hour WB Volume	19,789



SEGMENT 15 - WEBB PROVIDED

Counts Unlimited, Inc.

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

City of Menifee
Holland Road
W/ Sherman Road
24 Hour Directional Volume Count

MEN002
Site Code: 067-18193

Start Time	13-Mar-18 Tue	Eastboiund Morning	Eastboiund Afternoon	Hour Totals Morning	Hour Totals Afternoon	Westbound Morning	Westbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		4	64			9	84				
12:15		1	78			10	112				
12:30		2	93			8	91				
12:45		3	100	10	335	3	96	30	383	40	718
01:00		1	73			6	102				
01:15		2	93			7	93				
01:30		1	84			2	109				
01:45		3	92	7	342	5	95	20	399	27	741
02:00		0	120			4	114				
02:15		2	112			1	140				
02:30		3	134			2	119				
02:45		4	109	9	475	2	**149**	9	522	18	997
03:00		1	112			0	**178**				
03:15		5	**139**			0	**162**				
03:30		7	**149**			3	**161**				
03:45		14	**112**	27	512	8	122	11	623	38	1135
04:00		11	**116**			3	134				
04:15		27	104			4	135				
04:30		22	117			3	135				
04:45		19	109	79	446	5	109	15	513	94	959
05:00		33	115			3	144				
05:15		30	126			8	161				
05:30		30	106			13	145				
05:45		37	95	130	442	13	148	37	598	167	1040
06:00		53	83			10	158				
06:15		47	89			19	151				
06:30		72	88			14	119				
06:45		83	83	255	343	50	132	93	560	348	903
07:00		**141**	97			**110**	122				
07:15		**138**	75			**174**	109				
07:30		**145**	60			**112**	100				
07:45		**161**	54	585	286	**96**	91	492	422	1077	708
08:00		97	44			54	86				
08:15		93	26			59	69				
08:30		129	30			46	69				
08:45		98	31	417	131	66	66	225	290	642	421
09:00		81	17			51	86				
09:15		86	14			43	53				
09:30		69	18			69	53				
09:45		64	16	300	65	49	44	212	236	512	301
10:00		75	4			53	27				
10:15		88	9			60	33				
10:30		76	12			67	23				
10:45		87	8	326	33	81	25	261	108	587	141
11:00		90	9			78	25				
11:15		87	3			79	13				
11:30		72	12			85	11				
11:45		80	4	329	28	85	9	327	58	656	86
Total		2474	3438	2474	3438	1732	4712	1732	4712	4206	8150
Combined Total		5912		5912		6444		6444		12356	
AM Peak	-	07:00	-	-	-	07:00	-	-	-	-	-
Vol.	-	585	-	-	-	492	-	-	-	-	-
P.H.F.		0.908				0.707					
PM Peak	-	-	03:15	-	-	-	02:45	-	-	-	-
Vol.	-	-	516	-	-	-	650	-	-	-	-
P.H.F.			0.866				0.913				
Percentage		41.8%	58.2%			26.9%	73.1%				
ADT/AADT		ADT 12,356		AADT 12,356							

SEGMENT 16 - WEBB PROVIDED

Counts Unlimited, Inc.

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

City of Menifee
Holland Road
W/ Haun Road
24 Hour Directional Volume Count

MEN004
Site Code: 067-18193

Start Time	13-Mar-18 Tue	Eastbound Morning	Eastbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Westbound Morning	Westbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		1	71			11	99				
12:15		2	71			4	89				
12:30		5	95			7	95				
12:45		2	78	10	315	2	98	24	381	34	696
01:00		0	96			3	81				
01:15		3	60			4	83				
01:30		1	78			3	117				
01:45		0	75	4	309	6	128	16	409	20	718
02:00		1	100			1	118				
02:15		6	80			4	**151**				
02:30		5	76			4	**165**				
02:45		2	87	14	343	2	**153**	11	587	25	930
03:00		7	**135**			4	**155**				
03:15		8	**155**			2	123				
03:30		6	**111**			2	123				
03:45		15	**95**	36	496	5	128	13	529	49	1025
04:00		29	105			2	142				
04:15		30	109			3	138				
04:30		38	131			5	127				
04:45		30	108	127	453	5	128	15	535	142	988
05:00		37	94			9	127				
05:15		47	90			12	135				
05:30		43	91			15	128				
05:45		51	98	178	373	12	134	48	524	226	897
06:00		62	68			24	113				
06:15		77	90			16	139				
06:30		95	85			70	110				
06:45		**106**	67	340	310	**122**	102	232	464	572	774
07:00		**114**	50			**205**	131				
07:15		**116**	38			**134**	90				
07:30		**139**	48			**86**	91				
07:45		104	41	473	177	73	71	498	383	971	560
08:00		107	38			43	69				
08:15		106	32			58	67				
08:30		96	23			64	62				
08:45		72	16	381	109	64	56	229	254	610	363
09:00		86	17			42	55				
09:15		69	8			36	45				
09:30		63	6			47	35				
09:45		73	10	291	41	55	32	180	167	471	208
10:00		67	12			70	30				
10:15		96	3			58	16				
10:30		78	8			72	16				
10:45		77	5	318	28	72	17	272	79	590	107
11:00		77	3			68	20				
11:15		73	7			66	17				
11:30		65	2			75	9				
11:45		89	3	304	15	74	7	283	53	587	68
Total		2476	2969	2476	2969	1821	4365	1821	4365	4297	7334
Combined Total		5445		5445		6186		6186		11631	
AM Peak	-	06:45	-	-	-	06:45	-	-	-	-	-
Vol.	-	475	-	-	-	547	-	-	-	-	-
P.H.F.		0.854				0.667					
PM Peak	-	-	03:00	-	-	-	02:15	-	-	-	-
Vol.	-	-	496	-	-	-	624	-	-	-	-
P.H.F.			0.800				0.945				
Percentage		45.5%	54.5%			29.4%	70.6%				
ADT/AADT		ADT 11,631		AADT 11,631							

SEGMENT 18 - WEBB PROVIDED

Counts Unlimited, Inc.

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

City of Menifee
Holland Road
E/ Antelope Road
24 Hour Directional Volume Count

MEN011
Site Code: 067-18193

Start Time	13-Mar-18 Tue	Eastbound Morning	Eastbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Westbound Morning	Westbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		9	52			5	44				
12:15		3	45			3	47				
12:30		3	48			0	36				
12:45		1	40	16	185	1	39	9	166	25	351
01:00		7	57			2	40				
01:15		2	41			0	48				
01:30		2	48			4	46				
01:45		2	40	13	186	5	53	11	187	24	373
02:00		2	38			2	**73**				
02:15		1	52			2	**64**				
02:30		3	51			5	**52**				
02:45		3	60	9	201	0	**57**	9	246	18	447
03:00		1	59			7	61				
03:15		0	64			8	60				
03:30		0	62			22	57				
03:45		4	51	5	236	20	45	57	223	62	459
04:00		2	55			22	55				
04:15		5	57			29	47				
04:30		2	50			24	45				
04:45		7	**56**	16	218	29	37	104	184	120	402
05:00		3	**70**			25	56				
05:15		3	**73**			32	56				
05:30		8	**69**			32	61				
05:45		11	56	25	268	36	52	125	225	150	493
06:00		22	47			40	47				
06:15		22	46			61	53				
06:30		**35**	61			42	32				
06:45		**33**	54	112	208	**107**	42	250	174	362	382
07:00		**50**	46			**110**	39				
07:15		**42**	55			**80**	26				
07:30		32	51			**66**	21				
07:45		25	67	149	219	59	35	315	121	464	340
08:00		18	43			52	23				
08:15		32	36			76	20				
08:30		20	42			49	19				
08:45		17	26	87	147	49	14	226	76	313	223
09:00		19	29			47	14				
09:15		22	30			50	14				
09:30		27	15			39	8				
09:45		34	20	102	94	29	8	165	44	267	138
10:00		29	19			48	3				
10:15		32	13			52	4				
10:30		40	14			54	5				
10:45		27	7	128	53	32	5	186	17	314	70
11:00		39	6			53	2				
11:15		32	5			51	3				
11:30		35	11			49	4				
11:45		35	8	141	30	40	2	193	11	334	41
Total		803	2045	803	2045	1650	1674	1650	1674	2453	3719
Combined Total		2848		2848		3324		3324		6172	
AM Peak	-	06:30	-	-	-	06:45	-	-	-	-	-
Vol.	-	160	-	-	-	363	-	-	-	-	-
P.H.F.		0.800				0.825					
PM Peak	-	-	04:45	-	-	-	02:00	-	-	-	-
Vol.	-	-	268	-	-	-	246	-	-	-	-
P.H.F.			0.918				0.842				
Percentage		28.2%	71.8%			49.6%	50.4%				
ADT/AADT		ADT 6,172		AADT 6,172							

SEGMENT 19 - WEBB PROVIDED

Counts Unlimited, Inc.

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

City of Menifee
Holland Road
W/ Menifee Road
24 Hour Directional Volume Count

MEN012
Site Code: 067-18193

Start Time	13-Mar-18 Tue	Eastbound Morning	Eastbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Westbound Morning	Westbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		6	40			5	35				
12:15		0	28			3	36				
12:30		1	35			0	24				
12:45		1	30	8	133	0	33	8	128	16	261
01:00		4	46			1	23				
01:15		2	43			0	30				
01:30		1	63			2	**40**				
01:45		2	42	9	194	3	**55**	6	148	15	342
02:00		2	22			2	**82**				
02:15		1	48			3	**52**				
02:30		5	42			5	34				
02:45		2	51	10	163	0	49	10	217	20	380
03:00		0	44			4	49				
03:15		1	42			4	58				
03:30		1	38			13	49				
03:45		1	47	3	171	11	43	32	199	35	370
04:00		2	39			12	45				
04:15		3	34			17	38				
04:30		2	32			15	35				
04:45		7	**45**	14	150	16	31	60	149	74	299
05:00		5	**47**			13	54				
05:15		3	**52**			20	49				
05:30		9	**54**			19	44				
05:45		14	43	31	196	26	38	78	185	109	381
06:00		23	35			21	46				
06:15		22	33			41	38				
06:30		**46**	46			23	25				
06:45		**42**	40	133	154	**56**	28	141	137	274	291
07:00		**81**	29			**97**	34				
07:15		**63**	33			**95**	29				
07:30		31	33			**66**	21				
07:45		25	40	200	135	37	22	295	106	495	241
08:00		24	27			41	16				
08:15		33	26			53	16				
08:30		20	34			32	17				
08:45		16	19	93	106	32	13	158	62	251	168
09:00		19	10			27	13				
09:15		18	23			29	12				
09:30		24	8			24	5				
09:45		36	10	97	51	21	6	101	36	198	87
10:00		27	17			44	2				
10:15		28	12			40	3				
10:30		34	7			39	6				
10:45		27	3	116	39	27	1	150	12	266	51
11:00		19	7			41	0				
11:15		26	4			33	4				
11:30		21	7			35	1				
11:45		27	4	93	22	32	2	141	7	234	29
Total		807	1514	807	1514	1180	1386	1180	1386	1987	2900
Combined Total		2321		2321		2566		2566		4887	
AM Peak	-	06:30	-	-	-	06:45	-	-	-	-	-
Vol.	-	232	-	-	-	314	-	-	-	-	-
P.H.F.		0.716				0.809					
PM Peak	-	-	04:45	-	-	-	01:30	-	-	-	-
Vol.	-	-	198	-	-	-	229	-	-	-	-
P.H.F.			0.786				0.698				
Percentage		34.8%	65.2%			46.0%	54.0%				
ADT/AADT		ADT 4,887		AADT 4,887							

TRAFFIC COUNT DATA

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

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

File Name : 18_MEN MUNE AM
Site Code : 06717552
Start Date : 8/29/2017
Page No : 1

Groups Printed- Total Volume

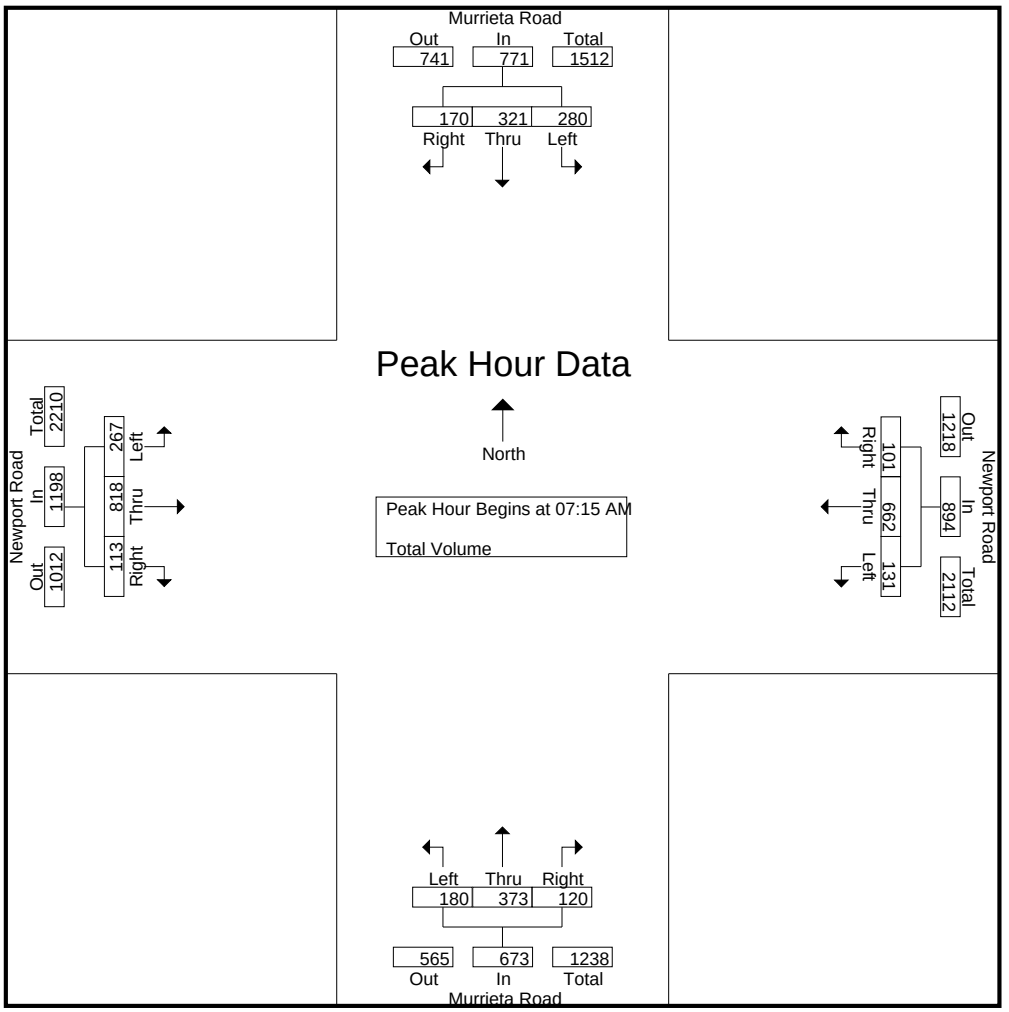
	Murrieta Road Southbound				Newport Road Westbound				Murrieta Road Northbound				Newport Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	78	100	45	223	31	151	37	219	22	47	22	91	29	196	36	261	794
07:15 AM	74	113	37	224	35	134	17	186	23	74	33	130	57	205	42	304	844
07:30 AM	73	71	38	182	38	187	26	251	50	103	32	185	66	258	31	355	973
07:45 AM	64	84	43	191	17	173	32	222	56	111	28	195	82	188	15	285	893
Total	289	368	163	820	121	645	112	878	151	335	115	601	234	847	124	1205	3504
08:00 AM	69	53	52	174	41	168	26	235	51	85	27	163	62	167	25	254	826
08:15 AM	77	78	51	206	41	142	23	206	41	75	25	141	54	201	21	276	829
08:30 AM	59	57	53	169	36	166	25	227	49	69	23	141	46	228	19	293	830
08:45 AM	69	43	62	174	29	188	26	243	35	61	26	122	50	211	8	269	808
Total	274	231	218	723	147	664	100	911	176	290	101	567	212	807	73	1092	3293
Grand Total	563	599	381	1543	268	1309	212	1789	327	625	216	1168	446	1654	197	2297	6797
Apprch %	36.5	38.8	24.7		15	73.2	11.9		28	53.5	18.5		19.4	72	8.6		
Total %	8.3	8.8	5.6	22.7	3.9	19.3	3.1	26.3	4.8	9.2	3.2	17.2	6.6	24.3	2.9	33.8	

	Murrieta Road Southbound				Newport Road Westbound				Murrieta Road Northbound				Newport Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	**74**	**113**	37	**224**	35	134	17	186	23	74	**33**	130	57	205	**42**	304	844
07:30 AM	73	71	38	182	38	**187**	26	**251**	50	103	32	185	66	**258**	31	**355**	**973**
07:45 AM	64	84	43	191	17	173	**32**	222	**56**	**111**	28	**195**	**82**	188	15	285	893
08:00 AM	69	53	**52**	174	**41**	168	26	235	51	85	27	163	62	167	25	254	826
Total Volume	280	321	170	771	131	662	101	894	180	373	120	673	267	818	113	1198	3536
% App. Total	36.3	41.6	22		14.7	74	11.3		26.7	55.4	17.8		22.3	68.3	9.4		
PHF	.946	.710	.817	.860	.799	.885	.789	.890	.804	.840	.909	.863	.814	.793	.673	.844	.909

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

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

File Name : 18_MEN MUNE AM
Site Code : 06717552
Start Date : 8/29/2017
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				07:30 AM				07:30 AM				07:00 AM			
+0 mins.	**78**	100	**45**	223	38	**187**	26	**251**	50	103	**32**	185	29	196	36	261
+15 mins.	74	**113**	37	**224**	17	173	**32**	222	**56**	**111**	28	**195**	57	205	**42**	304
+30 mins.	73	71	38	182	**41**	168	26	235	51	85	27	163	66	**258**	31	**355**
+45 mins.	64	84	43	191	41	142	23	206	41	75	25	141	**82**	188	15	285
Total Volume	289	368	163	820	137	670	107	914	198	374	112	684	234	847	124	1205
% App. Total	35.2	44.9	19.9		15	73.3	11.7		28.9	54.7	16.4		19.4	70.3	10.3	
PHF	.926	.814	.906	.915	.835	.896	.836	.910	.884	.842	.875	.877	.713	.821	.738	.849

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

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

File Name : 18_MEN MUNE PM
Site Code : 06717552
Start Date : 8/29/2017
Page No : 1

Groups Printed- Total Volume

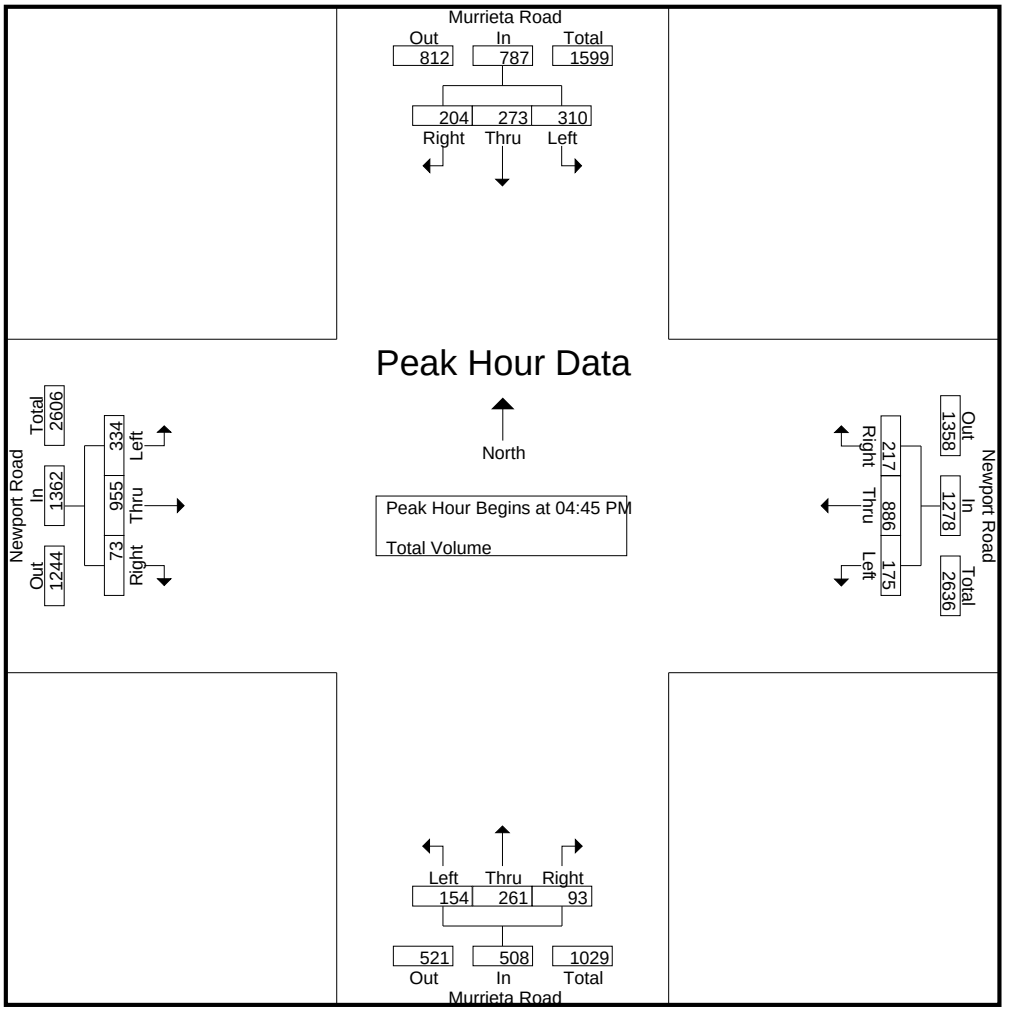
	Murrieta Road Southbound				Newport Road Westbound				Murrieta Road Northbound				Newport Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	53	79	60	192	37	243	44	324	27	96	20	143	73	214	22	309	968
04:15 PM	74	69	42	185	44	186	49	279	49	74	19	142	79	214	17	310	916
04:30 PM	72	54	53	179	34	228	50	312	36	69	16	121	66	218	9	293	905
04:45 PM	85	68	49	202	38	219	42	299	39	60	26	125	88	231	12	331	957
Total	284	270	204	758	153	876	185	1214	151	299	81	531	306	877	60	1243	3746
05:00 PM	83	61	50	194	37	224	65	326	40	58	24	122	81	224	16	321	963
05:15 PM	80	80	55	215	47	225	51	323	49	81	22	152	82	252	24	358	1048
05:30 PM	62	64	50	176	53	218	59	330	26	62	21	109	83	248	21	352	967
05:45 PM	68	47	58	173	46	227	38	311	39	57	22	118	91	242	17	350	952
Total	293	252	213	758	183	894	213	1290	154	258	89	501	337	966	78	1381	3930
Grand Total	577	522	417	1516	336	1770	398	2504	305	557	170	1032	643	1843	138	2624	7676
Apprch %	38.1	34.4	27.5		13.4	70.7	15.9		29.6	54	16.5		24.5	70.2	5.3		
Total %	7.5	6.8	5.4	19.7	4.4	23.1	5.2	32.6	4	7.3	2.2	13.4	8.4	24	1.8	34.2	

	Murrieta Road Southbound				Newport Road Westbound				Murrieta Road Northbound				Newport Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	**85**	68	49	202	38	219	42	299	39	60	**26**	125	**88**	231	12	331	957
05:00 PM	83	61	50	194	37	224	**65**	326	40	58	24	122	81	224	16	321	963
05:15 PM	80	**80**	**55**	**215**	47	**225**	51	323	**49**	**81**	22	**152**	82	**252**	**24**	**358**	**1048**
05:30 PM	62	64	50	176	**53**	218	59	**330**	26	62	21	109	83	248	21	352	967
Total Volume	310	273	204	787	175	886	217	1278	154	261	93	508	334	955	73	1362	3935
% App. Total	39.4	34.7	25.9		13.7	69.3	17		30.3	51.4	18.3		24.5	70.1	5.4		
PHF	.912	.853	.927	.915	.825	.984	.835	.968	.786	.806	.894	.836	.949	.947	.760	.951	.939

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

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

File Name : 18_MEN MUNE PM
Site Code : 06717552
Start Date : 8/29/2017
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:

	04:30 PM				05:00 PM				04:00 PM				05:00 PM			
+0 mins.	72	54	53	179	37	224	**65**	326	27	**96**	20	**143**	81	224	16	321
+15 mins.	**85**	68	49	202	47	225	51	323	**49**	74	19	142	82	**252**	**24**	**358**
+30 mins.	83	61	50	194	**53**	218	59	**330**	36	69	16	121	83	248	21	352
+45 mins.	80	**80**	**55**	**215**	46	**227**	38	311	39	60	**26**	125	**91**	242	17	350
Total Volume	320	263	207	790	183	894	213	1290	151	299	81	531	337	966	78	1381
% App. Total	40.5	33.3	26.2		14.2	69.3	16.5		28.4	56.3	15.3		24.4	69.9	5.6	
PHF	.941	.822	.941	.919	.863	.985	.819	.977	.770	.779	.779	.928	.926	.958	.813	.964

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

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

File Name : 21_MEN BRNE AM
Site Code : 06717552
Start Date : 8/29/2017
Page No : 1

Groups Printed- Total Volume

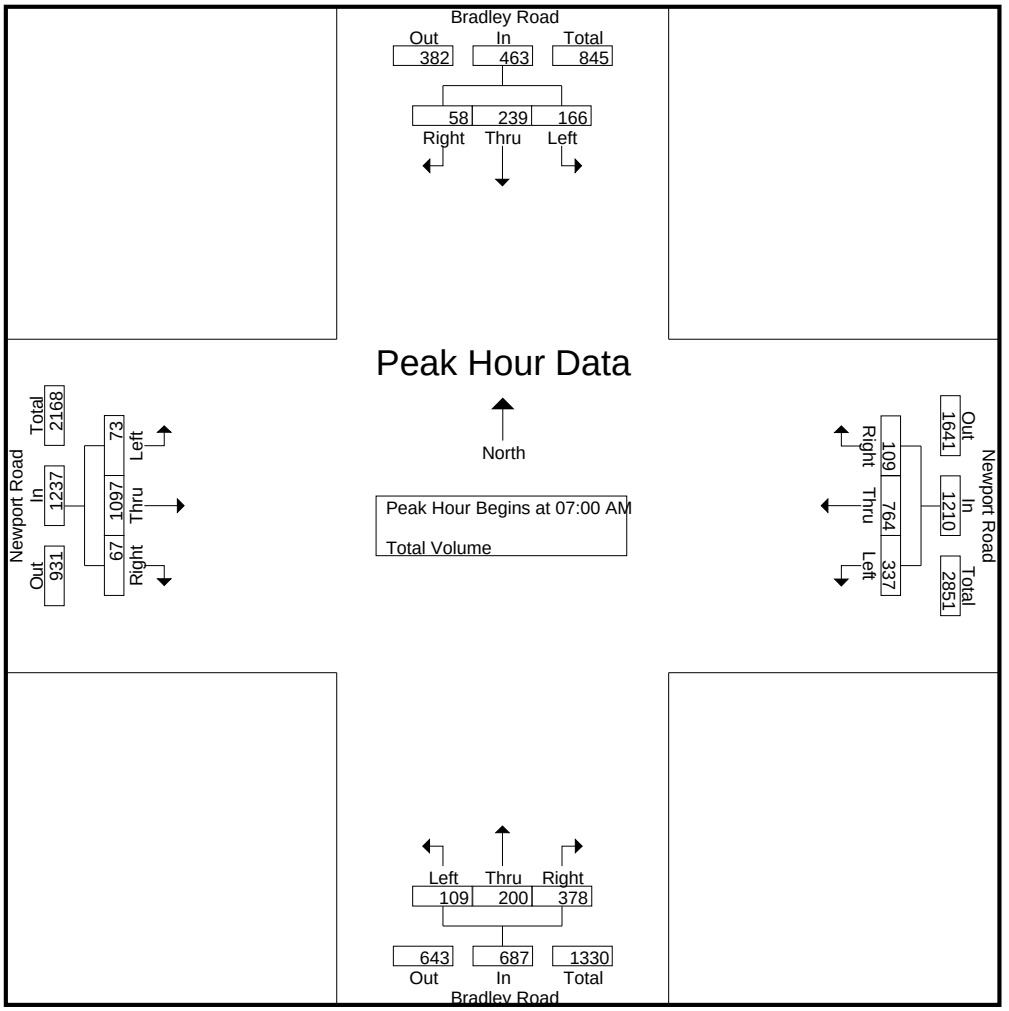
	Bradley Road Southbound				Newport Road Westbound				Bradley Road Northbound				Newport Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	38	72	13	123	88	191	23	302	16	15	67	98	13	256	18	287	810
07:15 AM	41	89	10	140	117	183	19	319	22	46	82	150	8	273	24	305	914
07:30 AM	41	54	13	108	97	208	38	343	38	75	129	242	15	315	12	342	1035
07:45 AM	46	24	22	92	35	182	29	246	33	64	100	197	37	253	13	303	838
Total	166	239	58	463	337	764	109	1210	109	200	378	687	73	1097	67	1237	3597
08:00 AM	31	38	15	84	41	212	35	288	16	34	60	110	33	215	8	256	738
08:15 AM	42	25	25	92	26	197	25	248	21	31	58	110	38	240	6	284	734
08:30 AM	44	11	35	90	16	238	49	303	37	33	47	117	53	227	9	289	799
08:45 AM	65	27	33	125	26	216	66	308	25	28	31	84	71	254	12	337	854
Total	182	101	108	391	109	863	175	1147	99	126	196	421	195	936	35	1166	3125
Grand Total	348	340	166	854	446	1627	284	2357	208	326	574	1108	268	2033	102	2403	6722
Apprch %	40.7	39.8	19.4		18.9	69	12		18.8	29.4	51.8		11.2	84.6	4.2		
Total %	5.2	5.1	2.5	12.7	6.6	24.2	4.2	35.1	3.1	4.8	8.5	16.5	4	30.2	1.5	35.7	

	Bradley Road Southbound				Newport Road Westbound				Bradley Road Northbound				Newport Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	38	72	13	123	88	191	23	302	16	15	67	98	13	256	18	287	810
07:15 AM	41	**89**	10	**140**	**117**	183	19	319	22	46	82	150	8	273	**24**	305	914
07:30 AM	41	54	13	108	97	**208**	**38**	**343**	**38**	**75**	**129**	**242**	15	**315**	12	**342**	**1035**
07:45 AM	**46**	24	**22**	92	35	182	29	246	33	64	100	197	**37**	253	13	303	838
Total Volume	166	239	58	463	337	764	109	1210	109	200	378	687	73	1097	67	1237	3597
% App. Total	35.9	51.6	12.5		27.9	63.1	9		15.9	29.1	55		5.9	88.7	5.4		
PHF	.902	.671	.659	.827	.720	.918	.717	.882	.717	.667	.733	.710	.493	.871	.698	.904	.869

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

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

File Name : 21_MEN BRNE AM
Site Code : 06717552
Start Date : 8/29/2017
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				07:15 AM				07:00 AM			
+0 mins.	38	72	13	123	88	191	23	302	22	46	82	150	13	256	18	287
+15 mins.	41	**89**	10	**140**	**117**	183	19	319	**38**	**75**	**129**	**242**	8	273	**24**	305
+30 mins.	41	54	13	108	97	**208**	**38**	**343**	33	64	100	197	15	**315**	12	**342**
+45 mins.	**46**	24	**22**	92	35	182	29	246	16	34	60	110	**37**	253	13	303
Total Volume	166	239	58	463	337	764	109	1210	109	219	371	699	73	1097	67	1237
% App. Total	35.9	51.6	12.5		27.9	63.1	9		15.6	31.3	53.1		5.9	88.7	5.4	
PHF	.902	.671	.659	.827	.720	.918	.717	.882	.717	.730	.719	.722	.493	.871	.698	.904

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

File Name : 21_MEN BRNE MD
Site Code : 06717552
Start Date : 8/29/2017
Page No : 1

Groups Printed- Total Volume

	Bradley Road Southbound				Newport Road Westbound				Bradley Road Northbound				Newport Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:00 PM	44	42	20	106	46	169	50	265	30	53	42	125	27	217	14	258	754
02:15 PM	59	27	28	114	53	259	63	375	39	48	57	144	42	232	12	286	919
02:30 PM	53	41	38	132	68	269	49	386	27	29	42	98	56	252	16	324	940
02:45 PM	52	44	22	118	65	302	84	451	17	36	33	86	50	271	26	347	1002
Total	208	154	108	470	232	999	246	1477	113	166	174	453	175	972	68	1215	3615
03:00 PM	64	56	37	157	68	253	66	387	23	42	49	114	40	277	28	345	1003
03:15 PM	46	58	23	127	83	267	66	416	40	59	88	187	40	229	17	286	1016
03:30 PM	60	37	24	121	74	312	61	447	47	74	95	216	28	282	17	327	1111
03:45 PM	36	37	19	92	60	297	69	426	37	83	91	211	41	268	12	321	1050
Total	206	188	103	497	285	1129	262	1676	147	258	323	728	149	1056	74	1279	4180
Grand Total	414	342	211	967	517	2128	508	3153	260	424	497	1181	324	2028	142	2494	7795
Apprch %	42.8	35.4	21.8		16.4	67.5	16.1		22	35.9	42.1		13	81.3	5.7		
Total %	5.3	4.4	2.7	12.4	6.6	27.3	6.5	40.4	3.3	5.4	6.4	15.2	4.2	26	1.8	32	

	Bradley Road Southbound				Newport Road Westbound				Bradley Road Northbound				Newport Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:00 PM																	
03:00 PM	**64**	56	**37**	**157**	68	253	66	387	23	42	49	114	40	277	**28**	**345**	1003
03:15 PM	46	**58**	23	127	**83**	267	66	416	40	59	88	187	40	229	17	286	1016
03:30 PM	60	37	24	121	74	**312**	61	**447**	**47**	74	**95**	**216**	28	**282**	17	327	**1111**
03:45 PM	36	37	19	92	60	297	**69**	426	37	**83**	91	211	**41**	268	12	321	1050
Total Volume	206	188	103	497	285	1129	262	1676	147	258	323	728	149	1056	74	1279	4180
% App. Total	41.4	37.8	20.7		17	67.4	15.6		20.2	35.4	44.4		11.6	82.6	5.8		
PHF	.805	.810	.696	.791	.858	.905	.949	.937	.782	.777	.850	.843	.909	.936	.661	.927	.941

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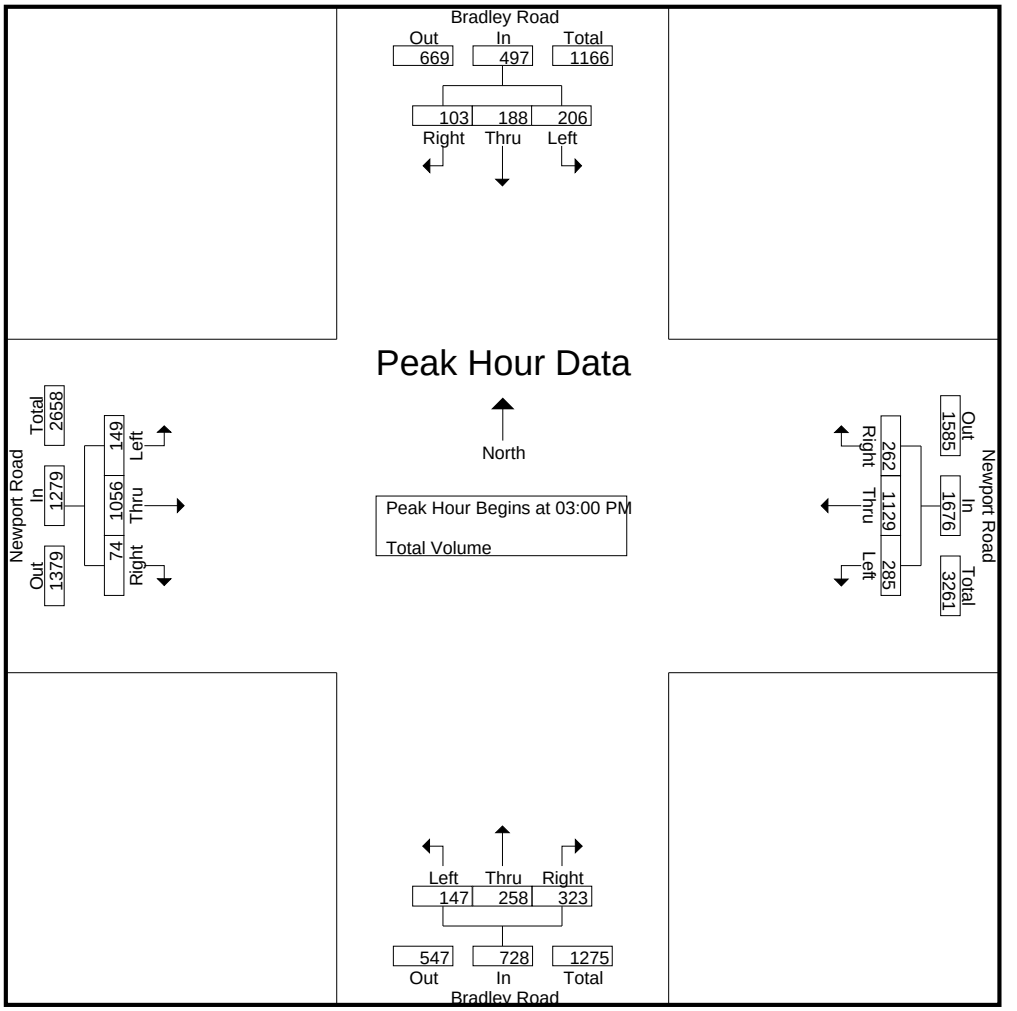
City of Menifee
N/S: Bradley Road
E/W: Newport Road
Weather: Clear

File Name : 21_MEN BRNE MD
Site Code : 06717552
Start Date : 8/29/2017
Page No : 2



Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	02:30 PM				02:45 PM				03:00 PM				02:45 PM			
+0 mins.	53	41	**38**	132	65	302	**84**	**451**	23	42	49	114	**50**	271	26	**347**
+15 mins.	52	44	22	118	68	253	66	387	40	59	88	187	40	277	**28**	345
+30 mins.	**64**	56	37	**157**	**83**	267	66	416	**47**	74	**95**	**216**	40	229	17	286
+45 mins.	46	**58**	23	127	74	**312**	61	447	37	**83**	91	211	28	**282**	17	327
Total Volume	215	199	120	534	290	1134	277	1701	147	258	323	728	158	1059	88	1305
% App. Total	40.3	37.3	22.5		17	66.7	16.3		20.2	35.4	44.4		12.1	81.1	6.7	
PHF	.840	.858	.789	.850	.873	.909	.824	.943	.782	.777	.850	.843	.790	.939	.786	.940

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

File Name : 21_MEN BRNE PM
Site Code : 06717552
Start Date : 8/29/2017
Page No : 1

Groups Printed- Total Volume

	Bradley Road Southbound				Newport Road Westbound				Bradley Road Northbound				Newport Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	44	36	29	109	55	234	49	338	29	41	46	116	37	239	15	291	854
04:15 PM	42	37	10	89	50	280	61	391	24	35	50	109	35	241	19	295	884
04:30 PM	65	36	24	125	80	265	55	400	19	29	40	88	26	251	12	289	902
04:45 PM	57	34	30	121	60	284	70	414	19	27	38	84	28	272	10	310	929
Total	208	143	93	444	245	1063	235	1543	91	132	174	397	126	1003	56	1185	3569
05:00 PM	46	37	28	111	70	316	77	463	22	24	28	74	31	291	11	333	981
05:15 PM	62	38	22	122	76	316	73	465	21	26	41	88	26	285	12	323	998
05:30 PM	60	48	24	132	78	311	62	451	23	36	53	112	35	260	15	310	1005
05:45 PM	46	32	17	95	60	267	56	383	21	22	39	82	32	248	16	296	856
Total	214	155	91	460	284	1210	268	1762	87	108	161	356	124	1084	54	1262	3840
Grand Total	422	298	184	904	529	2273	503	3305	178	240	335	753	250	2087	110	2447	7409
Apprch %	46.7	33	20.4		16	68.8	15.2		23.6	31.9	44.5		10.2	85.3	4.5		
Total %	5.7	4	2.5	12.2	7.1	30.7	6.8	44.6	2.4	3.2	4.5	10.2	3.4	28.2	1.5	33	

	Bradley Road Southbound				Newport Road Westbound				Bradley Road Northbound				Newport Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	57	34	**30**	121	60	284	70	414	19	27	38	84	28	272	10	310	929
05:00 PM	46	37	28	111	70	**316**	**77**	463	22	24	28	74	31	**291**	11	**333**	981
05:15 PM	**62**	38	22	122	76	316	73	**465**	21	26	41	88	26	285	12	323	998
05:30 PM	60	**48**	24	**132**	**78**	311	62	451	**23**	**36**	**53**	**112**	**35**	260	**15**	310	**1005**
Total Volume	225	157	104	486	284	1227	282	1793	85	113	160	358	120	1108	48	1276	3913
% App. Total	46.3	32.3	21.4		15.8	68.4	15.7		23.7	31.6	44.7		9.4	86.8	3.8		
PHF	.907	.818	.867	.920	.910	.971	.916	.964	.924	.785	.755	.799	.857	.952	.800	.958	.973

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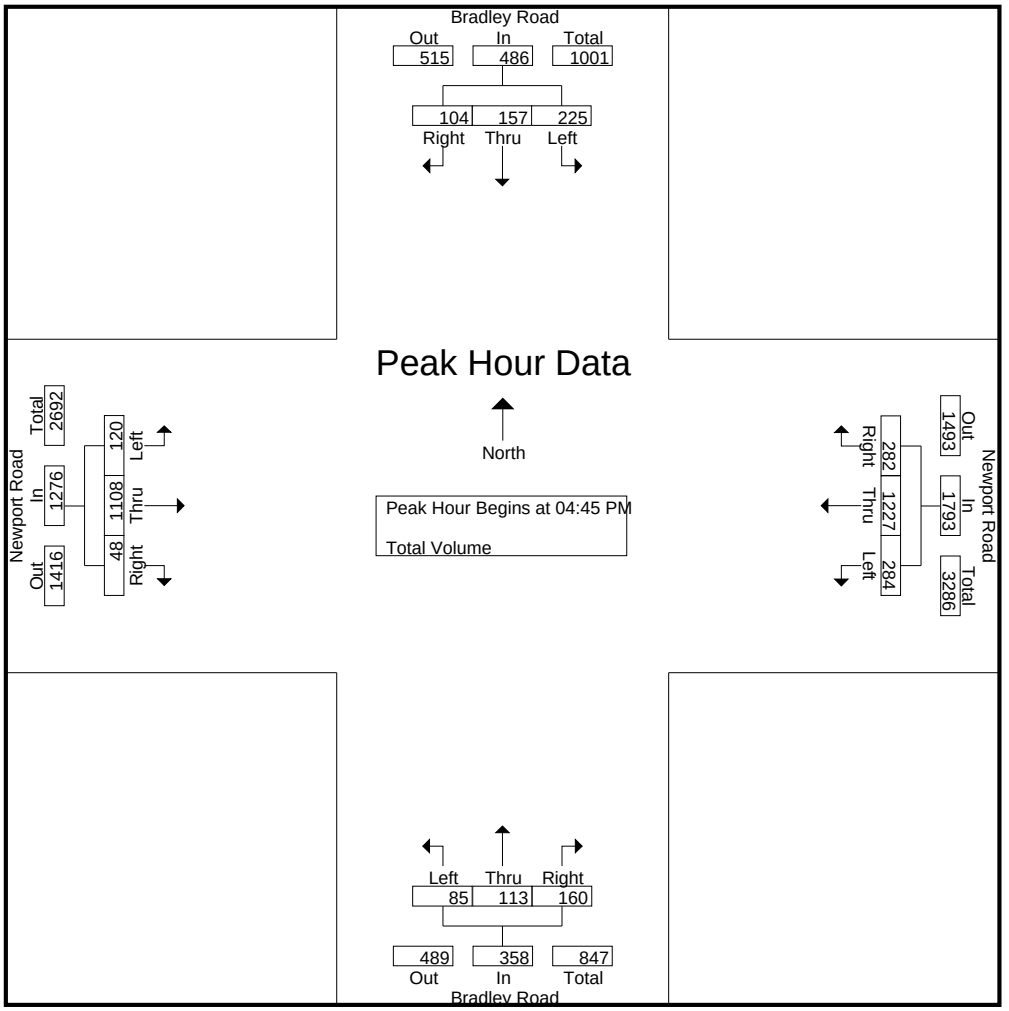
City of Menifee
N/S: Bradley Road
E/W: Newport Road
Weather: Clear

File Name : 21_MEN BRNE PM
Site Code : 06717552
Start Date : 8/29/2017
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:

	04:45 PM				04:45 PM				04:00 PM				04:45 PM			
+0 mins.	57	34	**30**	121	60	284	70	414	**29**	**41**	46	**116**	28	272	10	310
+15 mins.	46	37	28	111	70	**316**	**77**	463	24	35	**50**	109	31	**291**	11	**333**
+30 mins.	**62**	38	22	122	76	316	73	**465**	19	29	40	88	26	285	12	323
+45 mins.	60	**48**	24	**132**	**78**	311	62	451	19	27	38	84	**35**	260	**15**	310
Total Volume	225	157	104	486	284	1227	282	1793	91	132	174	397	120	1108	48	1276
% App. Total	46.3	32.3	21.4		15.8	68.4	15.7		22.9	33.2	43.8		9.4	86.8	3.8	
PHF	.907	.818	.867	.920	.910	.971	.916	.964	.784	.805	.870	.856	.857	.952	.800	.958

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

File Name : 12_MEN HANE AM
Site Code : 06717552
Start Date : 8/29/2017
Page No : 1

Groups Printed- Total Volume

	Haun Road Southbound				Newport Road Westbound				Haun Road Northbound				Newport Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	28	4	4	36	174	280	39	493	22	9	98	129	23	314	31	368	1026
07:15 AM	16	15	5	36	225	282	66	573	31	20	133	184	23	373	68	464	1257
07:30 AM	38	11	10	59	168	255	98	521	49	21	156	226	31	357	62	450	1256
07:45 AM	28	8	11	47	142	240	119	501	33	27	182	242	44	388	45	477	1267
Total	110	38	30	178	709	1057	322	2088	135	77	569	781	121	1432	206	1759	4806
08:00 AM	34	12	11	57	96	177	77	350	36	30	116	182	49	240	33	322	911
08:15 AM	33	11	20	64	92	190	72	354	21	19	74	114	50	270	35	355	887
08:30 AM	44	13	15	72	122	251	80	453	34	25	95	154	33	260	38	331	1010
08:45 AM	40	18	24	82	146	227	91	464	37	13	87	137	42	232	56	330	1013
Total	151	54	70	275	456	845	320	1621	128	87	372	587	174	1002	162	1338	3821
Grand Total	261	92	100	453	1165	1902	642	3709	263	164	941	1368	295	2434	368	3097	8627
Apprch %	57.6	20.3	22.1		31.4	51.3	17.3		19.2	12	68.8		9.5	78.6	11.9		
Total %	3	1.1	1.2	5.3	13.5	22	7.4	43	3	1.9	10.9	15.9	3.4	28.2	4.3	35.9	

	Haun Road Southbound				Newport Road Westbound				Haun Road Northbound				Newport Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	28	4	4	36	174	280	39	493	22	9	98	129	23	314	31	368	1026
07:15 AM	16	**15**	5	36	**225**	**282**	66	**573**	31	20	133	184	23	373	**68**	464	1257
07:30 AM	**38**	11	10	**59**	168	255	98	521	**49**	21	156	226	31	357	62	450	1256
07:45 AM	28	8	**11**	47	142	240	**119**	501	33	**27**	**182**	**242**	**44**	**388**	45	**477**	**1267**
Total Volume	110	38	30	178	709	1057	322	2088	135	77	569	781	121	1432	206	1759	4806
% App. Total	61.8	21.3	16.9		34	50.6	15.4		17.3	9.9	72.9		6.9	81.4	11.7		
PHF	.724	.633	.682	.754	.788	.937	.676	.911	.689	.713	.782	.807	.688	.923	.757	.922	.948

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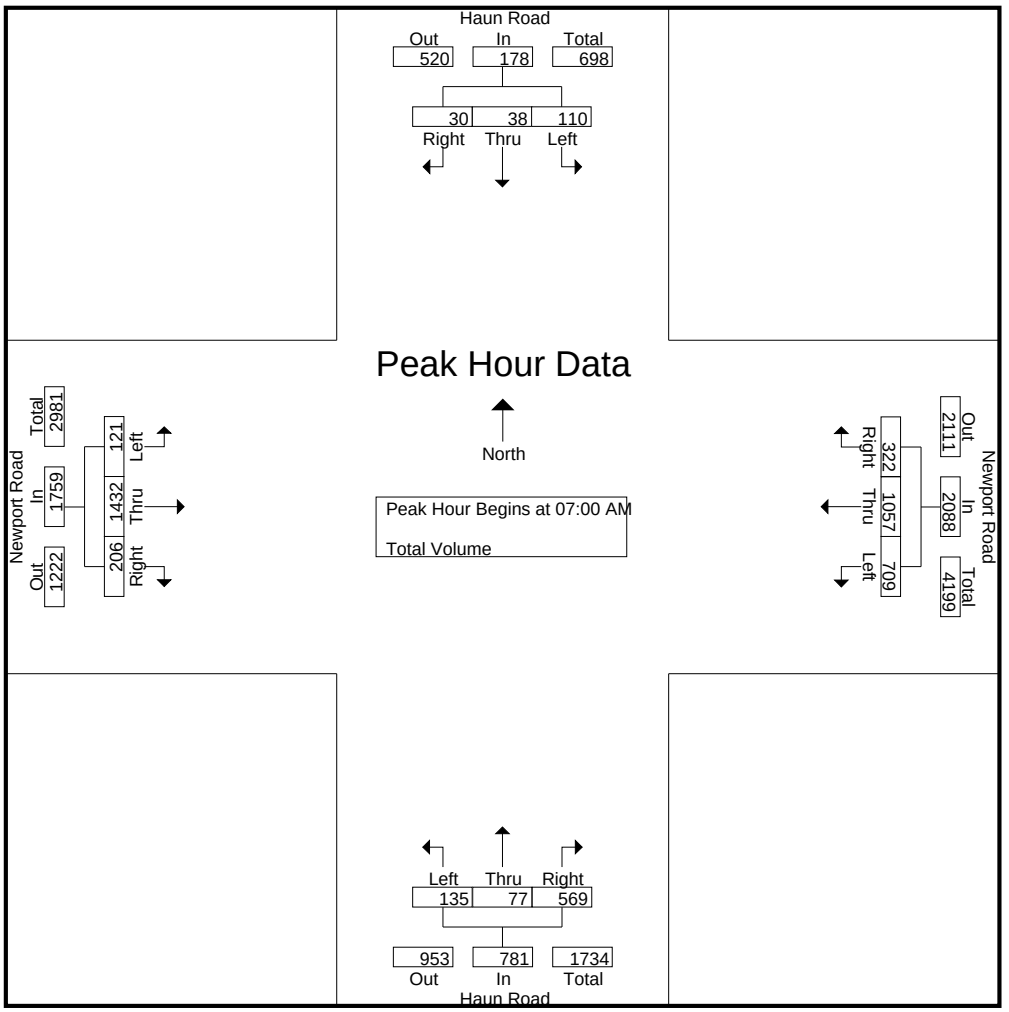
City of Menifee
N/S: Haun Road
E/W: Newport Road
Weather: Clear

File Name : 12_MEN HANE AM
Site Code : 06717552
Start Date : 8/29/2017
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:

	08:00 AM				07:00 AM				07:15 AM				07:00 AM			
+0 mins.	34	12	11	57	174	280	39	493	31	20	133	184	23	314	31	368
+15 mins.	33	11	20	64	**225**	**282**	66	**573**	**49**	21	156	226	23	373	**68**	464
+30 mins.	**44**	13	15	72	168	255	98	521	33	27	**182**	**242**	31	357	62	450
+45 mins.	40	**18**	**24**	**82**	142	240	**119**	501	36	**30**	116	182	**44**	**388**	45	**477**
Total Volume	151	54	70	275	709	1057	322	2088	149	98	587	834	121	1432	206	1759
% App. Total	54.9	19.6	25.5		34	50.6	15.4		17.9	11.8	70.4		6.9	81.4	11.7	
PHF	.858	.750	.729	.838	.788	.937	.676	.911	.760	.817	.806	.862	.688	.923	.757	.922

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

File Name : 12_MEN HANE PM
Site Code : 06717552
Start Date : 8/29/2017
Page No : 1

Groups Printed- Total Volume

	Haun Road Southbound				Newport Road Westbound				Haun Road Northbound				Newport Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	89	45	26	160	150	235	42	427	76	23	187	286	32	332	51	415	1288
04:15 PM	56	29	30	115	195	277	58	530	80	20	171	271	33	234	67	334	1250
04:30 PM	67	34	25	126	183	202	40	425	69	14	185	268	32	259	55	346	1165
04:45 PM	70	30	36	136	230	298	69	597	89	30	222	341	34	280	75	389	1463
Total	282	138	117	537	758	1012	209	1979	314	87	765	1166	131	1105	248	1484	5166
05:00 PM	83	40	29	152	228	312	56	596	79	19	192	290	37	303	75	415	1453
05:15 PM	104	33	22	159	191	287	54	532	100	25	204	329	35	296	54	385	1405
05:30 PM	80	23	22	125	240	352	39	631	76	17	195	288	26	273	56	355	1399
05:45 PM	69	31	27	127	185	236	64	485	86	14	169	269	36	304	50	390	1271
Total	336	127	100	563	844	1187	213	2244	341	75	760	1176	134	1176	235	1545	5528
Grand Total	618	265	217	1100	1602	2199	422	4223	655	162	1525	2342	265	2281	483	3029	10694
Apprch %	56.2	24.1	19.7		37.9	52.1	10		28	6.9	65.1		8.7	75.3	15.9		
Total %	5.8	2.5	2	10.3	15	20.6	3.9	39.5	6.1	1.5	14.3	21.9	2.5	21.3	4.5	28.3	

	Haun Road Southbound				Newport Road Westbound				Haun Road Northbound				Newport Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	70	30	**36**	136	230	298	**69**	597	89	**30**	**222**	**341**	34	280	**75**	389	**1463**
05:00 PM	83	**40**	29	152	228	312	56	596	79	19	192	290	**37**	**303**	75	**415**	1453
05:15 PM	**104**	33	22	**159**	191	287	54	532	**100**	25	204	329	35	296	54	385	1405
05:30 PM	80	23	22	125	**240**	**352**	39	**631**	76	17	195	288	26	273	56	355	1399
Total Volume	337	126	109	572	889	1249	218	2356	344	91	813	1248	132	1152	260	1544	5720
% App. Total	58.9	22	19.1		37.7	53	9.3		27.6	7.3	65.1		8.5	74.6	16.8		
PHF	.810	.788	.757	.899	.926	.887	.790	.933	.860	.758	.916	.915	.892	.950	.867	.930	.977

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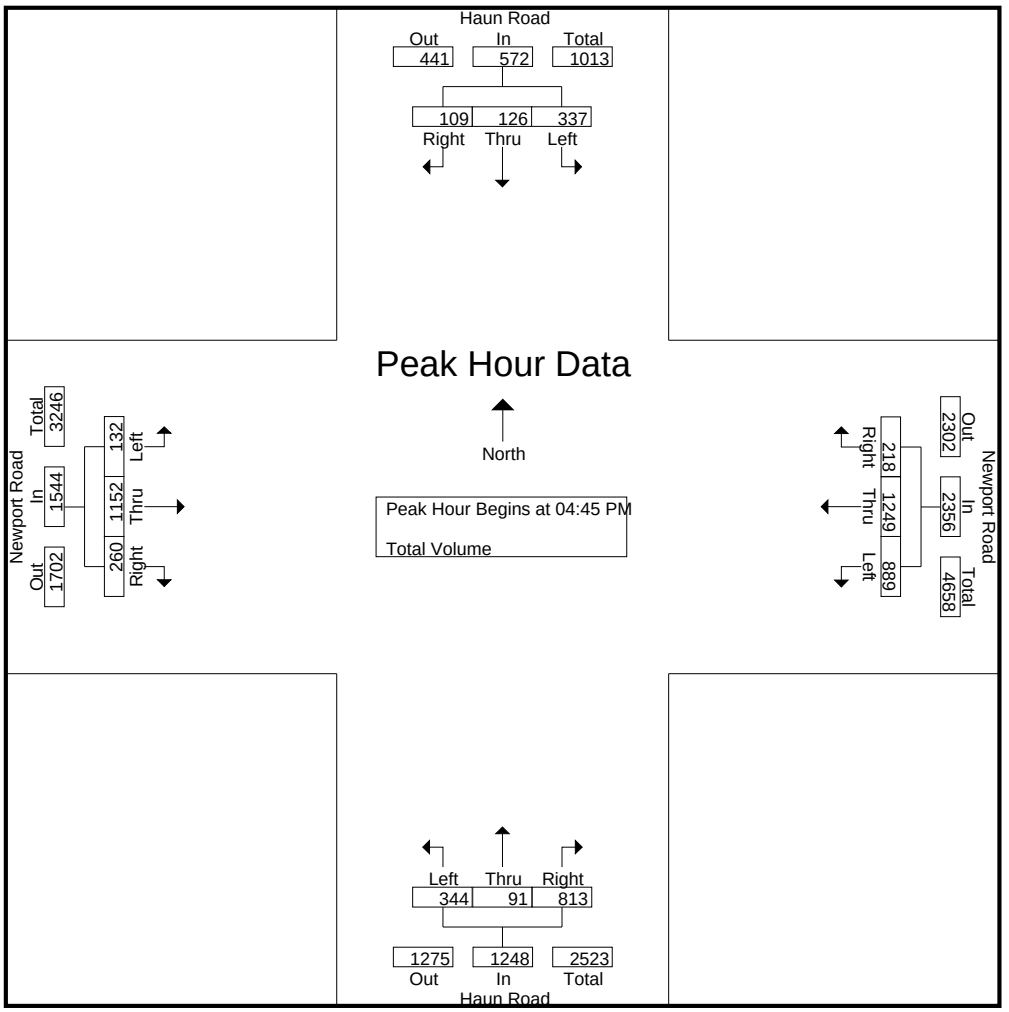
City of Menifee
N/S: Haun Road
E/W: Newport Road
Weather: Clear

File Name : 12_MEN HANE PM
Site Code : 06717552
Start Date : 8/29/2017
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:

	04:30 PM				04:45 PM				04:45 PM				05:00 PM			
+0 mins.	67	34	25	126	230	298	**69**	597	89	**30**	**222**	**341**	**37**	303	**75**	**415**
+15 mins.	70	30	**36**	136	228	312	56	596	79	19	192	290	35	296	54	385
+30 mins.	83	**40**	29	152	191	287	54	532	**100**	25	204	329	26	273	56	355
+45 mins.	**104**	33	22	**159**	**240**	**352**	39	**631**	76	17	195	288	36	**304**	50	390
Total Volume	324	137	112	573	889	1249	218	2356	344	91	813	1248	134	1176	235	1545
% App. Total	56.5	23.9	19.5		37.7	53	9.3		27.6	7.3	65.1		8.7	76.1	15.2	
PHF	.779	.856	.778	.901	.926	.887	.790	.933	.860	.758	.916	.915	.905	.967	.783	.931

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

File Name : 19_MEN 215SNE AM
Site Code : 06717552
Start Date : 8/29/2017
Page No : 1

Groups Printed- Total Volume

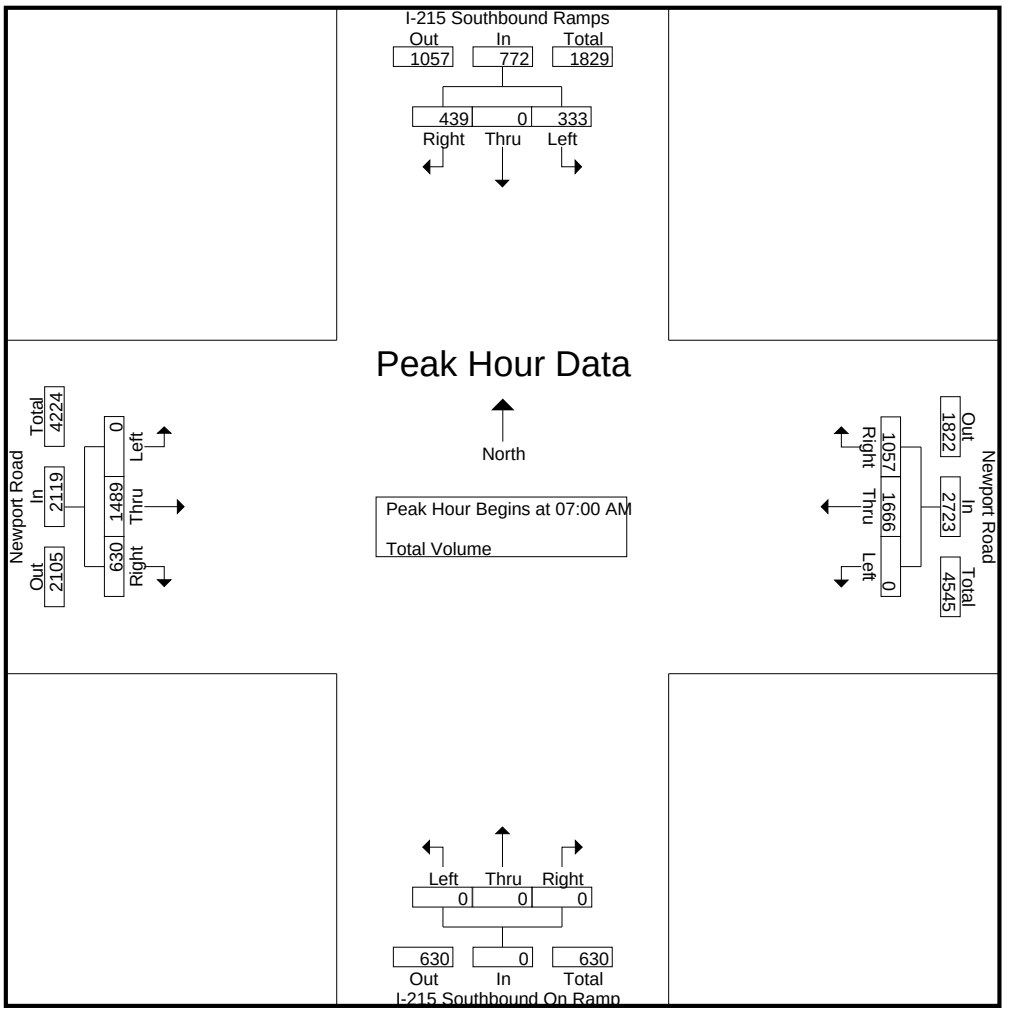
	I-215 Southbound Ramps Southbound				Newport Road Westbound				I-215 Southbound On Ramp Northbound				Newport Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	53	0	90	143	0	405	231	636	0	0	0	0	0	310	129	439	1218
07:15 AM	72	0	109	181	0	468	252	720	0	0	0	0	0	333	186	519	1420
07:30 AM	84	0	106	190	0	421	305	726	0	0	0	0	0	400	158	558	1474
07:45 AM	124	0	134	258	0	372	269	641	0	0	0	0	0	446	157	603	1502
Total	333	0	439	772	0	1666	1057	2723	0	0	0	0	0	1489	630	2119	5614
08:00 AM	78	0	101	179	0	255	250	505	0	0	0	0	0	281	117	398	1082
08:15 AM	62	0	98	160	0	259	227	486	0	0	0	0	0	255	126	381	1027
08:30 AM	76	0	110	186	0	346	235	581	0	0	0	0	0	261	129	390	1157
08:45 AM	76	0	105	181	0	359	228	587	0	0	0	0	0	256	107	363	1131
Total	292	0	414	706	0	1219	940	2159	0	0	0	0	0	1053	479	1532	4397
Grand Total	625	0	853	1478	0	2885	1997	4882	0	0	0	0	0	2542	1109	3651	10011
Apprch %	42.3	0	57.7		0	59.1	40.9		0	0	0		0	69.6	30.4		
Total %	6.2	0	8.5	14.8	0	28.8	19.9	48.8	0	0	0	0	0	25.4	11.1	36.5	

	I-215 Southbound Ramps Southbound				Newport Road Westbound				I-215 Southbound On Ramp Northbound				Newport Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	53	0	90	143	0	405	231	636	0	0	0	0	0	310	129	439	1218
07:15 AM	72	0	109	181	0	**468**	252	720	0	0	0	0	0	333	**186**	519	1420
07:30 AM	84	0	106	190	0	421	**305**	**726**	0	0	0	0	0	400	158	558	1474
07:45 AM	**124**	0	**134**	**258**	0	372	269	641	0	0	0	0	0	**446**	157	**603**	**1502**
Total Volume	333	0	439	772	0	1666	1057	2723	0	0	0	0	0	1489	630	2119	5614
% App. Total	43.1	0	56.9		0	61.2	38.8		0	0	0		0	70.3	29.7		
PHF	.671	.000	.819	.748	.000	.890	.866	.938	.000	.000	.000	.000	.000	.835	.847	.879	.934

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 : 19_MEN 215SNE AM
Site Code : 06717552
Start Date : 8/29/2017
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:

	07:15 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	72	0	109	181	0	405	231	636	0	0	0	0	0	310	129	439
+15 mins.	84	0	106	190	0	**468**	252	720	0	0	0	0	0	333	**186**	519
+30 mins.	**124**	0	**134**	**258**	0	421	**305**	**726**	0	0	0	0	0	400	158	558
+45 mins.	78	0	101	179	0	372	269	641	0	0	0	0	0	**446**	157	**603**
Total Volume	358	0	450	808	0	1666	1057	2723	0	0	0	0	0	1489	630	2119
% App. Total	44.3	0	55.7		0	61.2	38.8		0	0	0		0	70.3	29.7	
PHF	.722	.000	.840	.783	.000	.890	.866	.938	.000	.000	.000	.000	.000	.835	.847	.879

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

File Name : 19_MEN 215SNE PM
Site Code : 06717552
Start Date : 8/29/2017
Page No : 1

Groups Printed- Total Volume

	I-215 Southbound Ramps Southbound				Newport Road Westbound				I-215 Southbound On Ramp Northbound				Newport Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	83	0	106	189	0	327	137	464	0	0	0	0	0	478	130	608	1261
04:15 PM	95	0	117	212	0	421	155	576	0	0	0	0	0	393	70	463	1251
04:30 PM	99	0	96	195	0	345	155	500	0	0	0	0	0	409	93	502	1197
04:45 PM	102	0	145	247	0	440	130	570	0	0	0	0	0	442	132	574	1391
Total	379	0	464	843	0	1533	577	2110	0	0	0	0	0	1722	425	2147	5100
05:00 PM	108	0	153	261	0	426	118	544	0	0	0	0	0	456	131	587	1392
05:15 PM	109	0	128	237	0	407	113	520	0	0	0	0	0	493	103	596	1353
05:30 PM	100	0	156	256	0	448	103	551	0	0	0	0	0	453	100	553	1360
05:45 PM	103	0	93	196	0	418	151	569	0	0	0	0	0	459	74	533	1298
Total	420	0	530	950	0	1699	485	2184	0	0	0	0	0	1861	408	2269	5403
Grand Total	799	0	994	1793	0	3232	1062	4294	0	0	0	0	0	3583	833	4416	10503
Apprch %	44.6	0	55.4		0	75.3	24.7		0	0	0		0	81.1	18.9		
Total %	7.6	0	9.5	17.1	0	30.8	10.1	40.9	0	0	0	0	0	34.1	7.9	42	

	I-215 Southbound Ramps Southbound				Newport Road Westbound				I-215 Southbound On Ramp Northbound				Newport Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	102	0	145	247	0	440	**130**	**570**	0	0	0	0	0	442	**132**	574	1391
05:00 PM	108	0	153	**261**	0	426	118	544	0	0	0	0	0	456	131	587	**1392**
05:15 PM	**109**	0	128	237	0	407	113	520	0	0	0	0	0	**493**	103	**596**	1353
05:30 PM	100	0	**156**	256	0	**448**	103	551	0	0	0	0	0	453	100	553	1360
Total Volume	419	0	582	1001	0	1721	464	2185	0	0	0	0	0	1844	466	2310	5496
% App. Total	41.9	0	58.1		0	78.8	21.2		0	0	0		0	79.8	20.2		
PHF	.961	.000	.933	.959	.000	.960	.892	.958	.000	.000	.000	.000	.000	.935	.883	.969	.987

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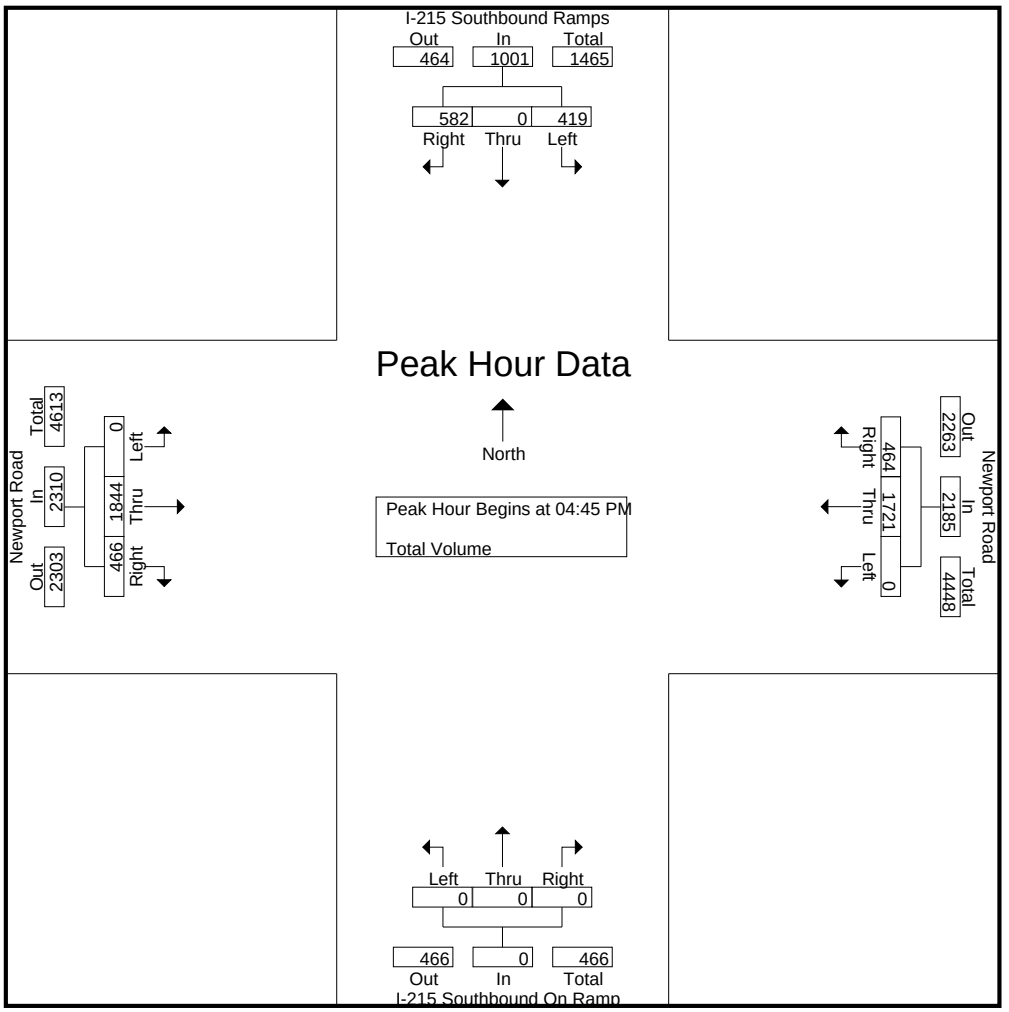
City of Menifee
N/S: I-215 Southbound Ramps
E/W: Newport Road
Weather: Clear

File Name : 19_MEN 215SNE PM
Site Code : 06717552
Start Date : 8/29/2017
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:

	04:45 PM				04:15 PM				04:00 PM				04:45 PM			
+0 mins.	102	0	145	247	0	421	**155**	**576**	0	0	0	0	0	442	**132**	574
+15 mins.	108	0	153	**261**	0	345	155	500	0	0	0	0	0	456	131	587
+30 mins.	**109**	0	128	237	0	**440**	130	570	0	0	0	0	0	**493**	103	**596**
+45 mins.	100	0	**156**	256	0	426	118	544	0	0	0	0	0	453	100	553
Total Volume	419	0	582	1001	0	1632	558	2190	0	0	0	0	0	1844	466	2310
% App. Total	41.9	0	58.1		0	74.5	25.5		0	0	0		0	79.8	20.2	
PHF	.961	.000	.933	.959	.000	.927	.900	.951	.000	.000	.000	.000	.000	.935	.883	.969

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

File Name : 20_MEN 215nNE AM
Site Code : 06717552
Start Date : 8/29/2017
Page No : 1

Groups Printed- Total Volume

	I-215 Northbound On Ramp Southbound				Newport Road Westbound				I-215 Northbound Off Ramp Northbound				Newport Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	544	129	673	92	0	124	216	0	266	96	362	1251
07:15 AM	0	0	0	0	0	645	139	784	74	0	134	208	0	321	76	397	1389
07:30 AM	0	0	0	0	0	586	98	684	133	0	129	262	0	409	70	479	1425
07:45 AM	0	0	0	0	0	538	125	663	103	0	154	257	0	460	103	563	1483
Total	0	0	0	0	0	2313	491	2804	402	0	541	943	0	1456	345	1801	5548
08:00 AM	0	0	0	0	0	428	135	563	81	0	94	175	0	272	91	363	1101
08:15 AM	0	0	0	0	0	389	111	500	101	0	92	193	0	247	69	316	1009
08:30 AM	0	0	0	0	0	478	147	625	105	0	90	195	0	264	70	334	1154
08:45 AM	0	0	0	0	0	404	111	515	181	0	90	271	0	260	71	331	1117
Total	0	0	0	0	0	1699	504	2203	468	0	366	834	0	1043	301	1344	4381
Grand Total	0	0	0	0	0	4012	995	5007	870	0	907	1777	0	2499	646	3145	9929
Apprch %	0	0	0		0	80.1	19.9		49	0	51		0	79.5	20.5		
Total %	0	0	0	0	0	40.4	10	50.4	8.8	0	9.1	17.9	0	25.2	6.5	31.7	

	I-215 Northbound On Ramp Southbound				Newport Road Westbound				I-215 Northbound Off Ramp Northbound				Newport Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	544	129	673	92	0	124	216	0	266	96	362	1251
07:15 AM	0	0	0	0	0	**645**	**139**	**784**	74	0	134	208	0	321	76	397	1389
07:30 AM	0	0	0	0	0	586	98	684	**133**	0	129	**262**	0	409	70	479	1425
07:45 AM	0	0	0	0	0	538	125	663	103	0	**154**	257	0	**460**	**103**	**563**	**1483**
Total Volume	0	0	0	0	0	2313	491	2804	402	0	541	943	0	1456	345	1801	5548
% App. Total	0	0	0		0	82.5	17.5		42.6	0	57.4		0	80.8	19.2		
PHF	.000	.000	.000	.000	.000	.897	.883	.894	.756	.000	.878	.900	.000	.791	.837	.800	.935

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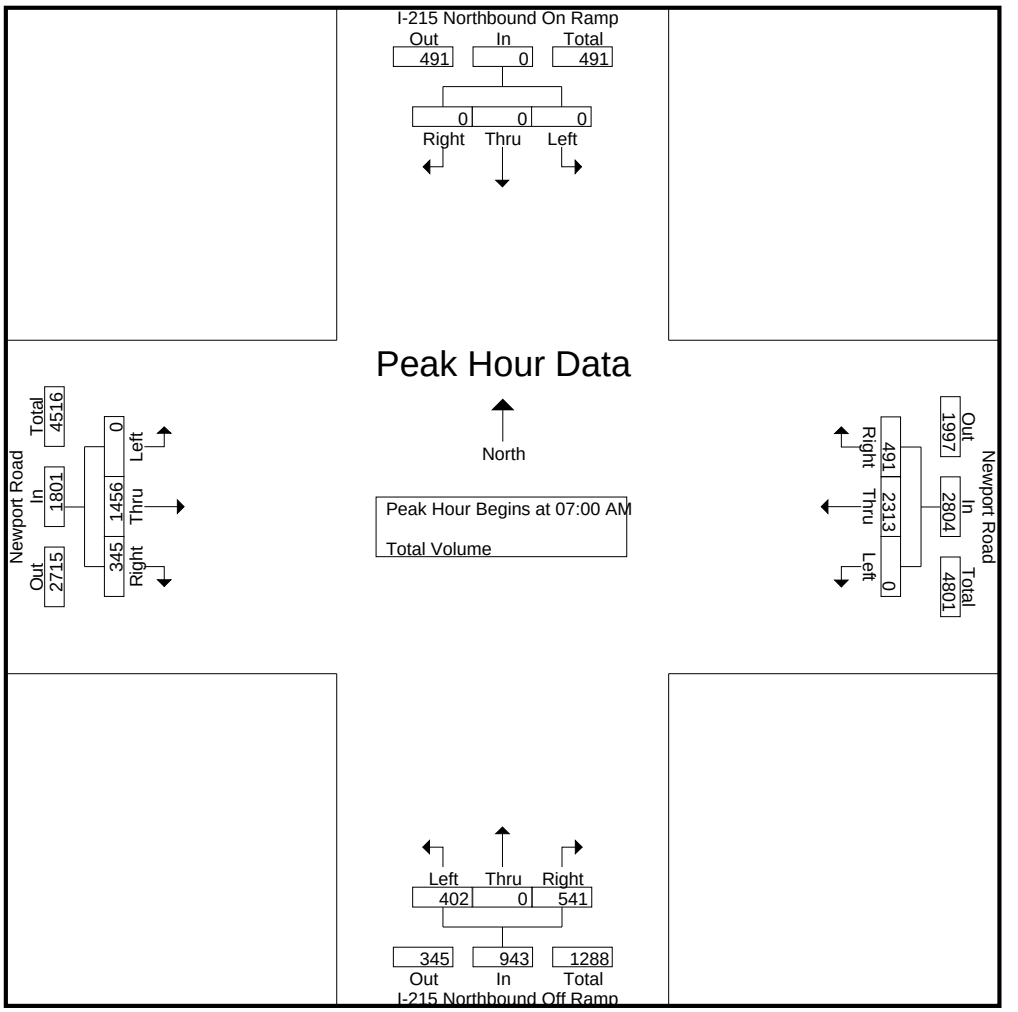
City of Menifee
N/S: I-215 Northbound Ramps
E/W: Newport Road
Weather: Clear

File Name : 20_MEN 215nNE AM
Site Code : 06717552
Start Date : 8/29/2017
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				07:15 AM			
+0 mins.	0	0	0	0	0	544	129	673	92	0	124	216	0	321	76	397
+15 mins.	0	0	0	0	0	**645**	**139**	**784**	74	0	134	208	0	409	70	479
+30 mins.	0	0	0	0	0	586	98	684	**133**	0	129	**262**	0	**460**	**103**	**563**
+45 mins.	0	0	0	0	0	538	125	663	103	0	**154**	257	0	272	91	363
Total Volume	0	0	0	0	0	2313	491	2804	402	0	541	943	0	1462	340	1802
% App. Total	0	0	0		0	82.5	17.5		42.6	0	57.4		0	81.1	18.9	
PHF	.000	.000	.000	.000	.000	.897	.883	.894	.756	.000	.878	.900	.000	.795	.825	.800

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

File Name : 20_MEN 215nNE PM
Site Code : 06717552
Start Date : 8/29/2017
Page No : 1

Groups Printed- Total Volume

	I-215 Northbound On Ramp Southbound				Newport Road Westbound				I-215 Northbound Off Ramp Northbound				Newport Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	360	110	470	104	0	177	281	0	481	75	556	1307
04:15 PM	0	0	0	0	0	413	74	487	162	0	185	347	0	436	53	489	1323
04:30 PM	0	0	0	0	0	400	121	521	116	0	163	279	0	443	59	502	1302
04:45 PM	0	0	0	0	0	399	107	506	161	0	182	343	0	482	62	544	1393
Total	0	0	0	0	0	1572	412	1984	543	0	707	1250	0	1842	249	2091	5325
05:00 PM	0	0	0	0	0	409	119	528	145	0	158	303	0	468	92	560	1391
05:15 PM	0	0	0	0	0	419	135	554	105	0	165	270	0	493	102	595	1419
05:30 PM	0	0	0	0	0	424	118	542	126	0	221	347	0	447	101	548	1437
05:45 PM	0	0	0	0	0	438	108	546	141	0	202	343	0	477	87	564	1453
Total	0	0	0	0	0	1690	480	2170	517	0	746	1263	0	1885	382	2267	5700
Grand Total	0	0	0	0	0	3262	892	4154	1060	0	1453	2513	0	3727	631	4358	11025
Apprch %	0	0	0		0	78.5	21.5		42.2	0	57.8		0	85.5	14.5		
Total %	0	0	0	0	0	29.6	8.1	37.7	9.6	0	13.2	22.8	0	33.8	5.7	39.5	

	I-215 Northbound On Ramp Southbound				Newport Road Westbound				I-215 Northbound Off Ramp Northbound				Newport Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	0	0	0	409	119	528	**145**	0	158	303	0	468	92	560	1391
05:15 PM	0	0	0	0	0	419	**135**	**554**	105	0	165	270	0	**493**	**102**	**595**	1419
05:30 PM	0	0	0	0	0	424	118	542	126	0	**221**	**347**	0	447	101	548	1437
05:45 PM	0	0	0	0	0	**438**	108	546	141	0	202	343	0	477	87	564	**1453**
Total Volume	0	0	0	0	0	1690	480	2170	517	0	746	1263	0	1885	382	2267	5700
% App. Total	0	0	0		0	77.9	22.1		40.9	0	59.1		0	83.1	16.9		
PHF	.000	.000	.000	.000	.000	.965	.889	.979	.891	.000	.844	.910	.000	.956	.936	.953	.981

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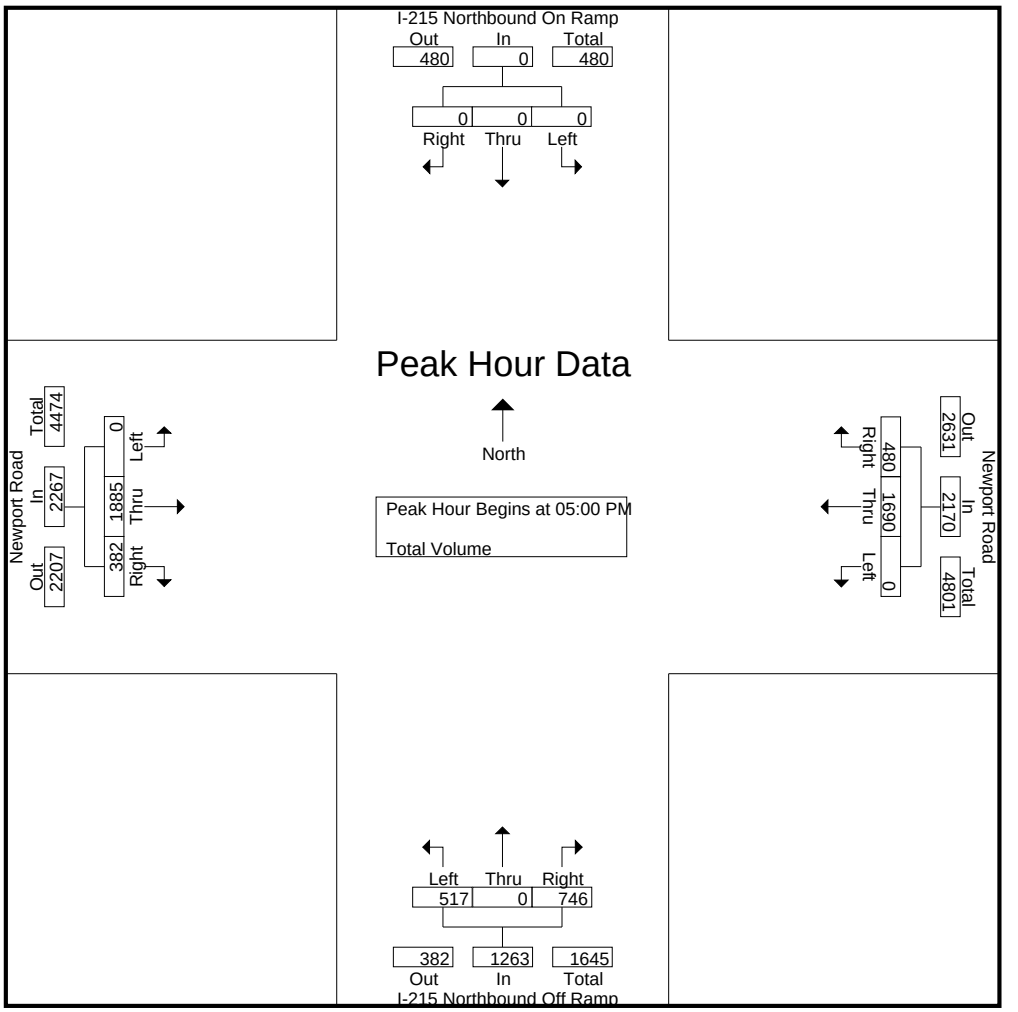
City of Menifee
N/S: I-215 Northbound Ramps
E/W: Newport Road
Weather: Clear

File Name : 20_MEN 215nNE PM
Site Code : 06717552
Start Date : 8/29/2017
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				05:00 PM				04:15 PM				05:00 PM			
+0 mins.	0	0	0	0	0	409	119	528	**162**	0	**185**	**347**	0	468	92	560
+15 mins.	0	0	0	0	0	419	**135**	**554**	116	0	163	279	0	**493**	**102**	**595**
+30 mins.	0	0	0	0	0	424	118	542	161	0	182	343	0	447	101	548
+45 mins.	0	0	0	0	0	**438**	108	546	145	0	158	303	0	477	87	564
Total Volume	0	0	0	0	0	1690	480	2170	584	0	688	1272	0	1885	382	2267
% App. Total	0	0	0		0	77.9	22.1		45.9	0	54.1		0	83.1	16.9	
PHF	.000	.000	.000	.000	.000	.965	.889	.979	.901	.000	.930	.916	.000	.956	.936	.953

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

File Name : 22_MEN ANNE AM
Site Code : 06717552
Start Date : 8/29/2017
Page No : 1

Groups Printed- Total Volume

	Antelope Road Southbound				Newport Road Westbound				Antelope Road Northbound				Newport Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	28	17	48	93	17	472	4	493	158	14	20	192	15	303	64	382	1160
07:15 AM	29	13	35	77	33	578	8	619	173	6	36	215	16	319	118	453	1364
07:30 AM	12	18	46	76	48	510	11	569	121	4	30	155	17	315	212	544	1344
07:45 AM	8	16	46	70	39	489	18	546	128	7	11	146	27	315	264	606	1368
Total	77	64	175	316	137	2049	41	2227	580	31	97	708	75	1252	658	1985	5236
08:00 AM	4	17	45	66	35	417	7	459	105	10	15	130	32	261	105	398	1053
08:15 AM	3	22	32	57	38	343	6	387	127	15	22	164	28	215	86	329	937
08:30 AM	5	13	55	73	21	427	6	454	149	9	16	174	22	252	81	355	1056
08:45 AM	4	24	46	74	46	348	9	403	122	9	16	147	24	196	94	314	938
Total	16	76	178	270	140	1535	28	1703	503	43	69	615	106	924	366	1396	3984
Grand Total	93	140	353	586	277	3584	69	3930	1083	74	166	1323	181	2176	1024	3381	9220
Apprch %	15.9	23.9	60.2		7	91.2	1.8		81.9	5.6	12.5		5.4	64.4	30.3		
Total %	1	1.5	3.8	6.4	3	38.9	0.7	42.6	11.7	0.8	1.8	14.3	2	23.6	11.1	36.7	

	Antelope Road Southbound				Newport Road Westbound				Antelope Road Northbound				Newport Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	28	17	**48**	**93**	17	472	4	493	158	**14**	20	192	15	303	64	382	1160
07:15 AM	**29**	13	35	77	33	**578**	8	**619**	**173**	6	**36**	**215**	16	**319**	118	453	1364
07:30 AM	12	**18**	46	76	**48**	510	11	569	121	4	30	155	17	315	212	544	1344
07:45 AM	8	16	46	70	39	489	**18**	546	128	7	11	146	**27**	315	**264**	**606**	**1368**
Total Volume	77	64	175	316	137	2049	41	2227	580	31	97	708	75	1252	658	1985	5236
% App. Total	24.4	20.3	55.4		6.2	92	1.8		81.9	4.4	13.7		3.8	63.1	33.1		
PHF	.664	.889	.911	.849	.714	.886	.569	.899	.838	.554	.674	.823	.694	.981	.623	.819	.957

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

File Name : 22_MEN ANNE AM
Site Code : 06717552
Start Date : 8/29/2017
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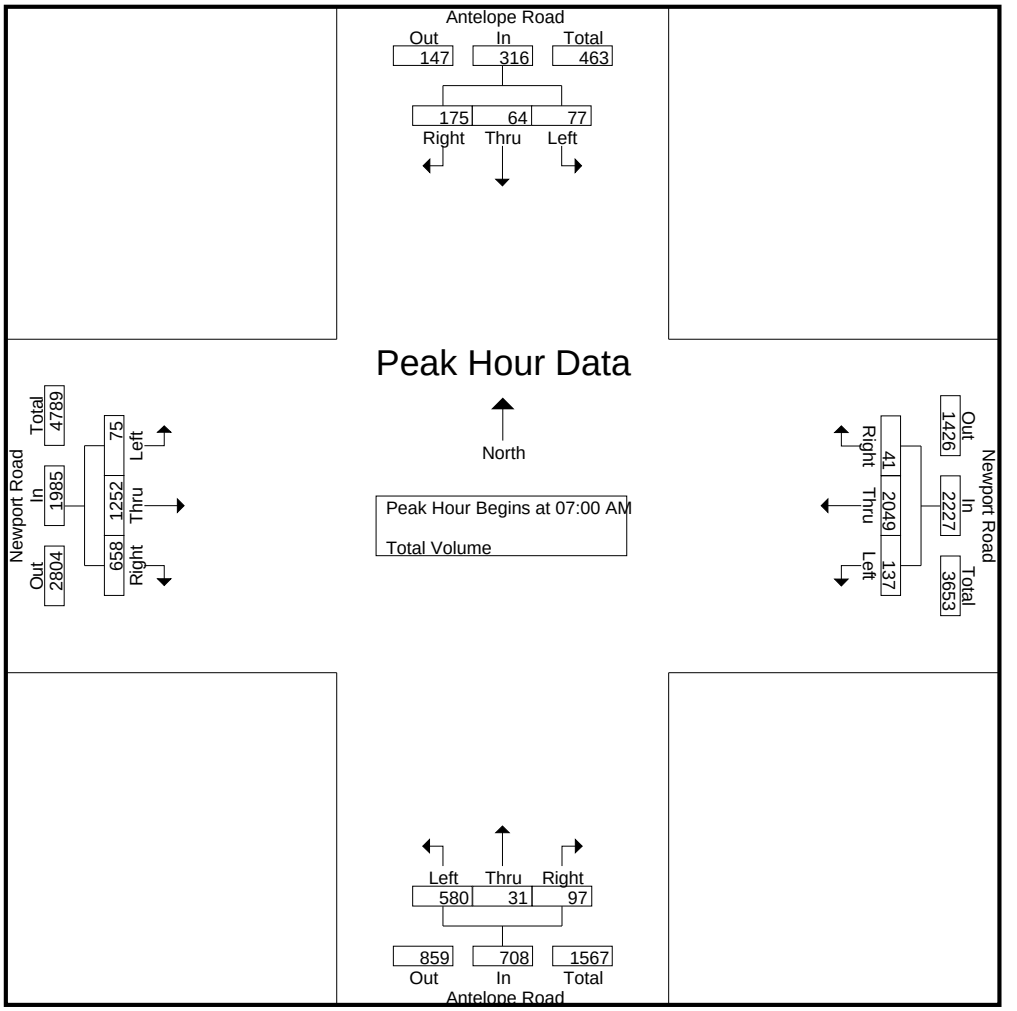

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:15 AM			
+0 mins.	28	17	**48**	**93**	17	472	4	493	158	**14**	20	192	16	**319**	118	453
+15 mins.	**29**	13	35	77	33	**578**	8	**619**	**173**	6	**36**	**215**	17	315	212	544
+30 mins.	12	**18**	46	76	**48**	510	11	569	121	4	30	155	27	315	**264**	**606**
+45 mins.	8	16	46	70	39	489	**18**	546	128	7	11	146	**32**	261	105	398
Total Volume	77	64	175	316	137	2049	41	2227	580	31	97	708	92	1210	699	2001
% App. Total	24.4	20.3	55.4		6.2	92	1.8		81.9	4.4	13.7		4.6	60.5	34.9	
PHF	.664	.889	.911	.849	.714	.886	.569	.899	.838	.554	.674	.823	.719	.948	.662	.825

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

File Name : 22_MEN ANNE PM
Site Code : 06717552
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Groups Printed- Total Volume

	Antelope Road Southbound				Newport Road Westbound				Antelope Road Northbound				Newport Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	4	16	38	58	41	283	6	330	157	21	29	207	38	440	133	611	1206
04:15 PM	6	16	42	64	28	283	3	314	160	22	44	226	52	398	149	599	1203
04:30 PM	2	14	32	48	42	325	14	381	170	20	38	228	38	384	134	556	1213
04:45 PM	1	12	37	50	34	320	7	361	154	18	41	213	58	443	176	677	1301
Total	13	58	149	220	145	1211	30	1386	641	81	152	874	186	1665	592	2443	4923
05:00 PM	8	17	49	74	36	311	3	350	182	24	50	256	36	395	138	569	1249
05:15 PM	2	26	31	59	42	378	7	427	145	28	43	216	45	461	173	679	1381
05:30 PM	8	22	33	63	42	321	8	371	193	25	54	272	34	445	166	645	1351
05:45 PM	10	13	34	57	54	342	9	405	173	31	42	246	30	460	156	646	1354
Total	28	78	147	253	174	1352	27	1553	693	108	189	990	145	1761	633	2539	5335
Grand Total	41	136	296	473	319	2563	57	2939	1334	189	341	1864	331	3426	1225	4982	10258
Apprch %	8.7	28.8	62.6		10.9	87.2	1.9		71.6	10.1	18.3		6.6	68.8	24.6		
Total %	0.4	1.3	2.9	4.6	3.1	25	0.6	28.7	13	1.8	3.3	18.2	3.2	33.4	11.9	48.6	

	Antelope Road Southbound				Newport Road Westbound				Antelope Road Northbound				Newport Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	8	17	**49**	**74**	36	311	3	350	182	24	50	256	36	395	138	569	1249
05:15 PM	2	**26**	31	59	42	**378**	7	**427**	145	28	43	216	**45**	**461**	**173**	**679**	**1381**
05:30 PM	8	22	33	63	42	321	8	371	**193**	25	**54**	**272**	34	445	166	645	1351
05:45 PM	**10**	13	34	57	**54**	342	**9**	405	173	**31**	42	246	30	460	156	646	1354
Total Volume	28	78	147	253	174	1352	27	1553	693	108	189	990	145	1761	633	2539	5335
% App. Total	11.1	30.8	58.1		11.2	87.1	1.7		70	10.9	19.1		5.7	69.4	24.9		
PHF	.700	.750	.750	.855	.806	.894	.750	.909	.898	.871	.875	.910	.806	.955	.915	.935	.966

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

File Name : 22_MEN ANNE PM
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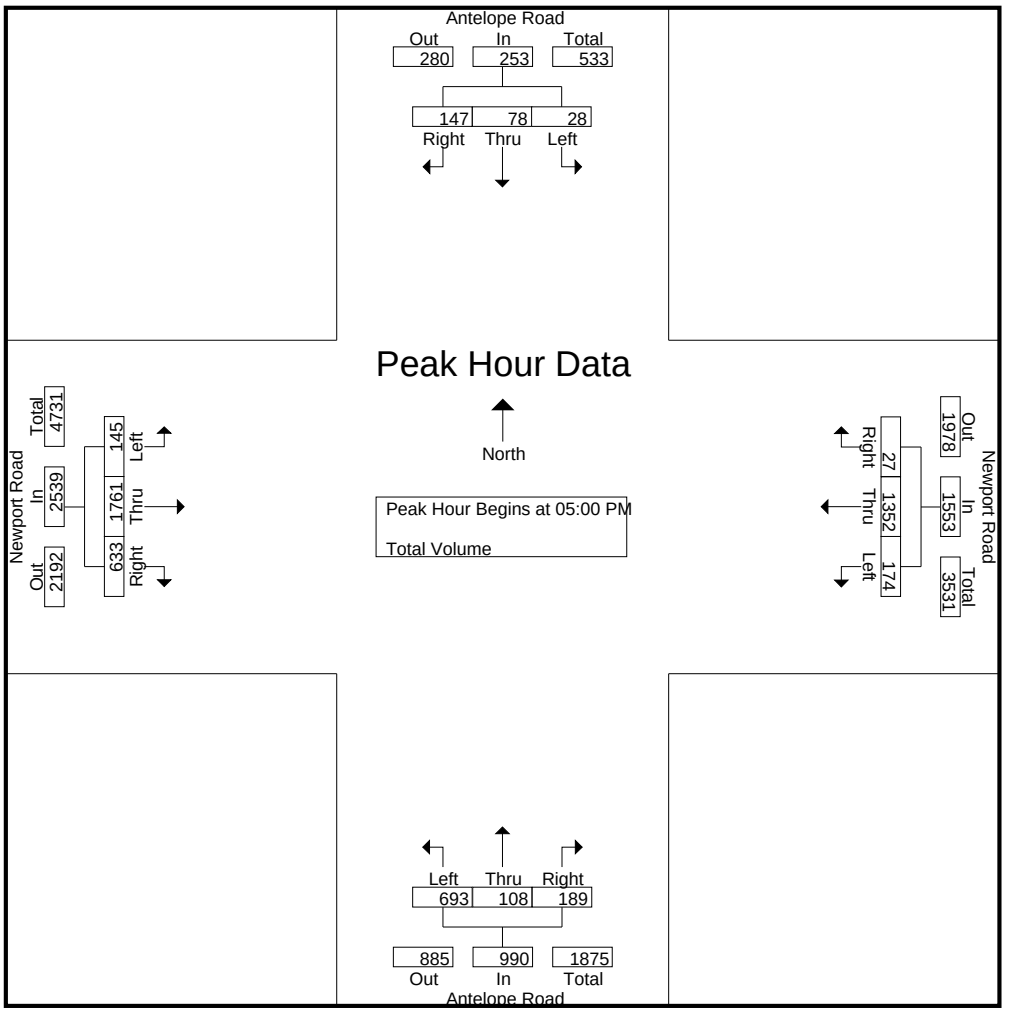

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				04:45 PM			
+0 mins.	8	17	**49**	**74**	36	311	3	350	182	24	50	256	**58**	443	**176**	677
+15 mins.	2	**26**	31	59	42	**378**	7	**427**	145	28	43	216	36	395	138	569
+30 mins.	8	22	33	63	42	321	8	371	**193**	25	**54**	**272**	45	**461**	173	**679**
+45 mins.	**10**	13	34	57	**54**	342	**9**	405	173	**31**	42	246	34	445	166	645
Total Volume	28	78	147	253	174	1352	27	1553	693	108	189	990	173	1744	653	2570
% App. Total	11.1	30.8	58.1		11.2	87.1	1.7		70	10.9	19.1		6.7	67.9	25.4	
PHF	.700	.750	.750	.855	.806	.894	.750	.909	.898	.871	.875	.910	.746	.946	.928	.946

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

File Name : 23_MEN MENE AM
Site Code : 06717552
Start Date : 8/29/2017
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Groups Printed- Total Volume

	Menifee Road Southbound				Newport Road Westbound				Menifee Road Northbound				Newport Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	14	31	86	131	21	373	16	410	60	32	30	122	53	268	36	357	1020
07:15 AM	20	65	116	201	41	333	11	385	65	57	37	159	83	210	42	335	1080
07:30 AM	21	58	108	187	66	385	11	462	52	51	40	143	48	283	34	365	1157
07:45 AM	24	86	98	208	63	324	12	399	37	36	21	94	52	241	57	350	1051
Total	79	240	408	727	191	1415	50	1656	214	176	128	518	236	1002	169	1407	4308
08:00 AM	16	45	78	139	30	317	8	355	33	39	21	93	20	215	13	248	835
08:15 AM	21	39	58	118	30	288	12	330	37	31	25	93	37	196	10	243	784
08:30 AM	22	26	73	121	15	314	11	340	47	27	27	101	27	199	15	241	803
08:45 AM	5	30	46	81	31	275	10	316	43	28	7	78	30	169	19	218	693
Total	64	140	255	459	106	1194	41	1341	160	125	80	365	114	779	57	950	3115
Grand Total	143	380	663	1186	297	2609	91	2997	374	301	208	883	350	1781	226	2357	7423
Apprch %	12.1	32	55.9		9.9	87.1	3		42.4	34.1	23.6		14.8	75.6	9.6		
Total %	1.9	5.1	8.9	16	4	35.1	1.2	40.4	5	4.1	2.8	11.9	4.7	24	3	31.8	

	Menifee Road Southbound				Newport Road Westbound				Menifee Road Northbound				Newport Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	14	31	86	131	21	373	**16**	410	60	32	30	122	53	268	36	357	1020
07:15 AM	20	65	**116**	201	41	333	11	385	**65**	**57**	37	**159**	**83**	210	42	335	1080
07:30 AM	21	58	108	187	**66**	**385**	11	**462**	52	51	**40**	143	48	**283**	34	**365**	**1157**
07:45 AM	**24**	**86**	98	**208**	63	324	12	399	37	36	21	94	52	241	**57**	350	1051
Total Volume	79	240	408	727	191	1415	50	1656	214	176	128	518	236	1002	169	1407	4308
% App. Total	10.9	33	56.1		11.5	85.4	3		41.3	34	24.7		16.8	71.2	12		
PHF	.823	.698	.879	.874	.723	.919	.781	.896	.823	.772	.800	.814	.711	.885	.741	.964	.931

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

File Name : 23_MEN MENE AM
Site Code : 06717552
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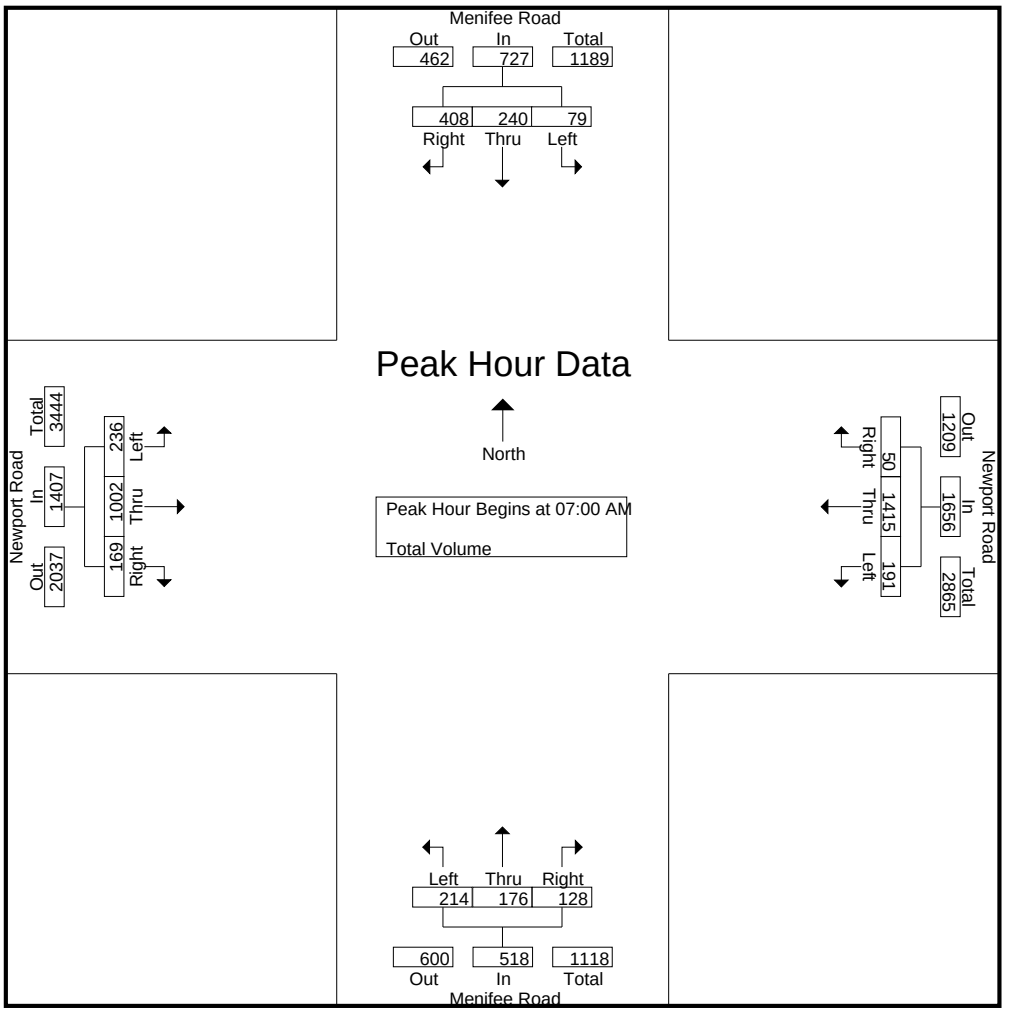

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	20	65	**116**	201	21	373	**16**	410	60	32	30	122	53	268	36	357
+15 mins.	21	58	108	187	41	333	11	385	**65**	**57**	37	**159**	**83**	210	42	335
+30 mins.	**24**	**86**	98	**208**	**66**	**385**	11	**462**	52	51	**40**	143	48	**283**	34	**365**
+45 mins.	16	45	78	139	63	324	12	399	37	36	21	94	52	241	**57**	350
Total Volume	81	254	400	735	191	1415	50	1656	214	176	128	518	236	1002	169	1407
% App. Total	11	34.6	54.4		11.5	85.4	3		41.3	34	24.7		16.8	71.2	12	
PHF	.844	.738	.862	.883	.723	.919	.781	.896	.823	.772	.800	.814	.711	.885	.741	.964

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

File Name : 23_MEN MENE MD
Site Code : 06717552
Start Date : 8/29/2017
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Groups Printed- Total Volume

	Menifee Road Southbound				Newport Road Westbound				Menifee Road Northbound				Newport Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:00 PM	37	48	25	110	62	207	28	297	15	41	66	122	33	189	10	232	761
02:15 PM	38	47	28	113	63	308	26	397	22	44	103	169	26	265	5	296	975
02:30 PM	47	47	19	113	61	271	26	358	15	26	84	125	25	227	15	267	863
02:45 PM	46	35	20	101	79	326	30	435	9	27	42	78	26	223	17	266	880
Total	168	177	92	437	265	1112	110	1487	61	138	295	494	110	904	47	1061	3479
03:00 PM	61	54	24	139	83	275	41	399	29	39	61	129	25	236	19	280	947
03:15 PM	59	69	43	171	77	318	34	429	26	42	52	120	29	199	14	242	962
03:30 PM	41	49	29	119	79	308	35	422	31	48	56	135	33	283	11	327	1003
03:45 PM	39	47	18	104	73	296	55	424	19	48	57	124	34	240	16	290	942
Total	200	219	114	533	312	1197	165	1674	105	177	226	508	121	958	60	1139	3854
Grand Total	368	396	206	970	577	2309	275	3161	166	315	521	1002	231	1862	107	2200	7333
Apprch %	37.9	40.8	21.2		18.3	73	8.7		16.6	31.4	52		10.5	84.6	4.9		
Total %	5	5.4	2.8	13.2	7.9	31.5	3.8	43.1	2.3	4.3	7.1	13.7	3.2	25.4	1.5	30	

	Menifee Road Southbound				Newport Road Westbound				Menifee Road Northbound				Newport Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:00 PM																	
03:00 PM	**61**	54	24	139	**83**	275	41	399	29	39	**61**	129	25	236	**19**	280	947
03:15 PM	59	**69**	**43**	**171**	77	**318**	34	**429**	26	42	52	120	29	199	14	242	962
03:30 PM	41	49	29	119	79	308	35	422	**31**	**48**	56	**135**	33	**283**	11	**327**	**1003**
03:45 PM	39	47	18	104	73	296	**55**	424	19	48	57	124	**34**	240	16	290	942
Total Volume	200	219	114	533	312	1197	165	1674	105	177	226	508	121	958	60	1139	3854
% App. Total	37.5	41.1	21.4		18.6	71.5	9.9		20.7	34.8	44.5		10.6	84.1	5.3		
PHF	.820	.793	.663	.779	.940	.941	.750	.976	.847	.922	.926	.941	.890	.846	.789	.871	.961

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City of Menifee
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File Name : 23_MEN MENE MD
Site Code : 06717552
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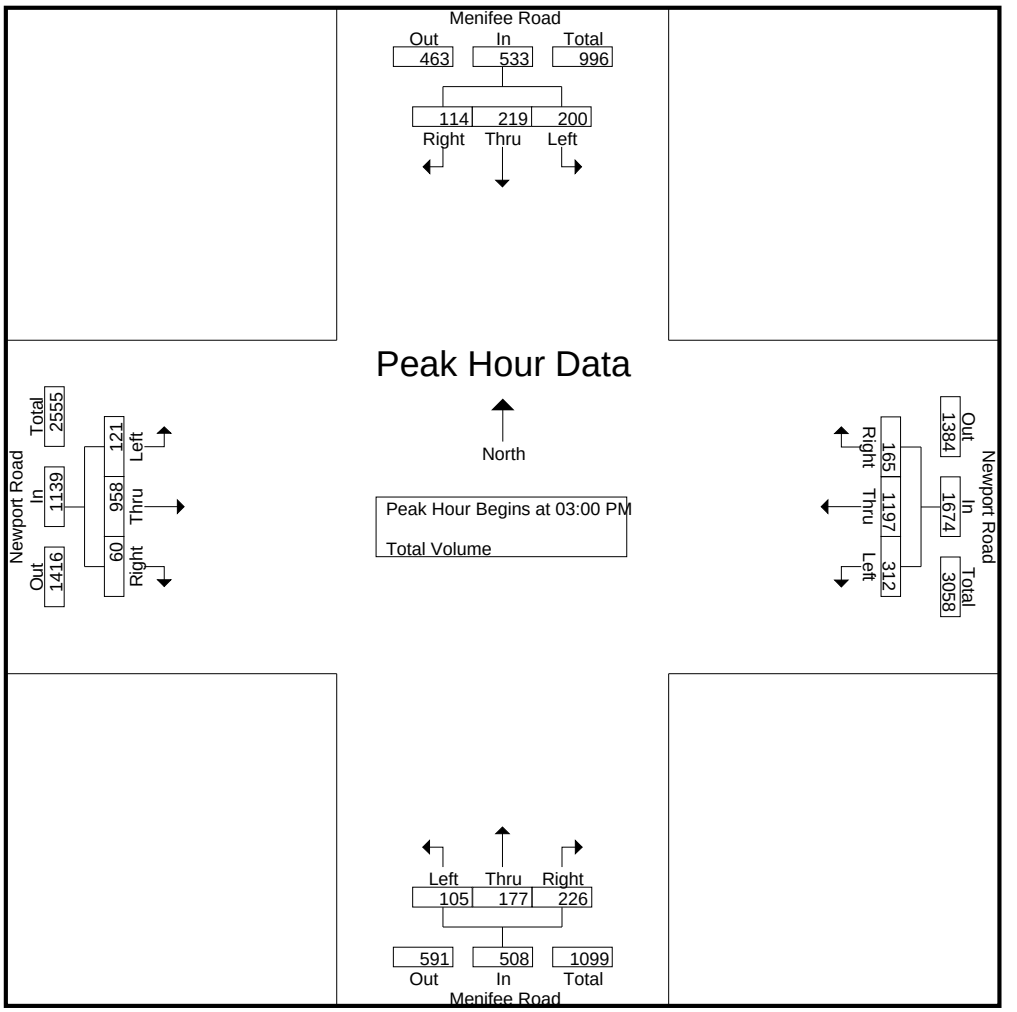

Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:00 PM				02:45 PM				03:00 PM				03:00 PM			
+0 mins.	**61**	54	24	139	79	**326**	30	**435**	29	39	**61**	129	25	236	**19**	280
+15 mins.	59	**69**	**43**	**171**	**83**	275	**41**	399	26	42	52	120	29	199	14	242
+30 mins.	41	49	29	119	77	318	34	429	**31**	**48**	56	**135**	33	**283**	11	**327**
+45 mins.	39	47	18	104	79	308	35	422	19	48	57	124	**34**	240	16	290
Total Volume	200	219	114	533	318	1227	140	1685	105	177	226	508	121	958	60	1139
% App. Total	37.5	41.1	21.4		18.9	72.8	8.3		20.7	34.8	44.5		10.6	84.1	5.3	
PHF	.820	.793	.663	.779	.958	.941	.854	.968	.847	.922	.926	.941	.890	.846	.789	.871

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City of Menifee
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File Name : 23_MEN MENE PM
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Groups Printed- Total Volume

	Menifee Road Southbound				Newport Road Westbound				Menifee Road Northbound				Newport Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	22	34	50	106	30	216	12	258	41	50	22	113	63	330	33	426	903
04:15 PM	11	35	54	100	22	222	10	254	33	70	30	133	86	318	37	441	928
04:30 PM	22	42	56	120	45	244	14	303	30	49	21	100	81	279	31	391	914
04:45 PM	10	30	52	92	34	278	15	327	35	43	26	104	85	330	37	452	975
Total	65	141	212	418	131	960	51	1142	139	212	99	450	315	1257	138	1710	3720
05:00 PM	22	41	54	117	36	277	9	322	38	52	19	109	69	339	44	452	1000
05:15 PM	17	54	52	123	37	266	12	315	37	57	31	125	90	294	46	430	993
05:30 PM	14	43	75	132	45	274	10	329	40	62	25	127	102	308	32	442	1030
05:45 PM	21	72	52	145	29	260	5	294	30	70	20	120	81	323	54	458	1017
Total	74	210	233	517	147	1077	36	1260	145	241	95	481	342	1264	176	1782	4040
Grand Total	139	351	445	935	278	2037	87	2402	284	453	194	931	657	2521	314	3492	7760
Apprch %	14.9	37.5	47.6		11.6	84.8	3.6		30.5	48.7	20.8		18.8	72.2	9		
Total %	1.8	4.5	5.7	12	3.6	26.2	1.1	31	3.7	5.8	2.5	12	8.5	32.5	4	45	

	Menifee Road Southbound				Newport Road Westbound				Menifee Road Northbound				Newport Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	**22**	41	54	117	36	**277**	9	322	38	52	19	109	69	**339**	44	452	1000
05:15 PM	17	54	52	123	37	266	**12**	315	37	57	**31**	125	90	294	46	430	993
05:30 PM	14	43	**75**	132	**45**	274	10	**329**	**40**	62	25	**127**	**102**	308	32	442	**1030**
05:45 PM	21	**72**	52	**145**	29	260	5	294	30	**70**	20	120	81	323	**54**	**458**	1017
Total Volume	74	210	233	517	147	1077	36	1260	145	241	95	481	342	1264	176	1782	4040
% App. Total	14.3	40.6	45.1		11.7	85.5	2.9		30.1	50.1	19.8		19.2	70.9	9.9		
PHF	.841	.729	.777	.891	.817	.972	.750	.957	.906	.861	.766	.947	.838	.932	.815	.973	.981

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City of Menifee
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File Name : 23_MEN MENE PM
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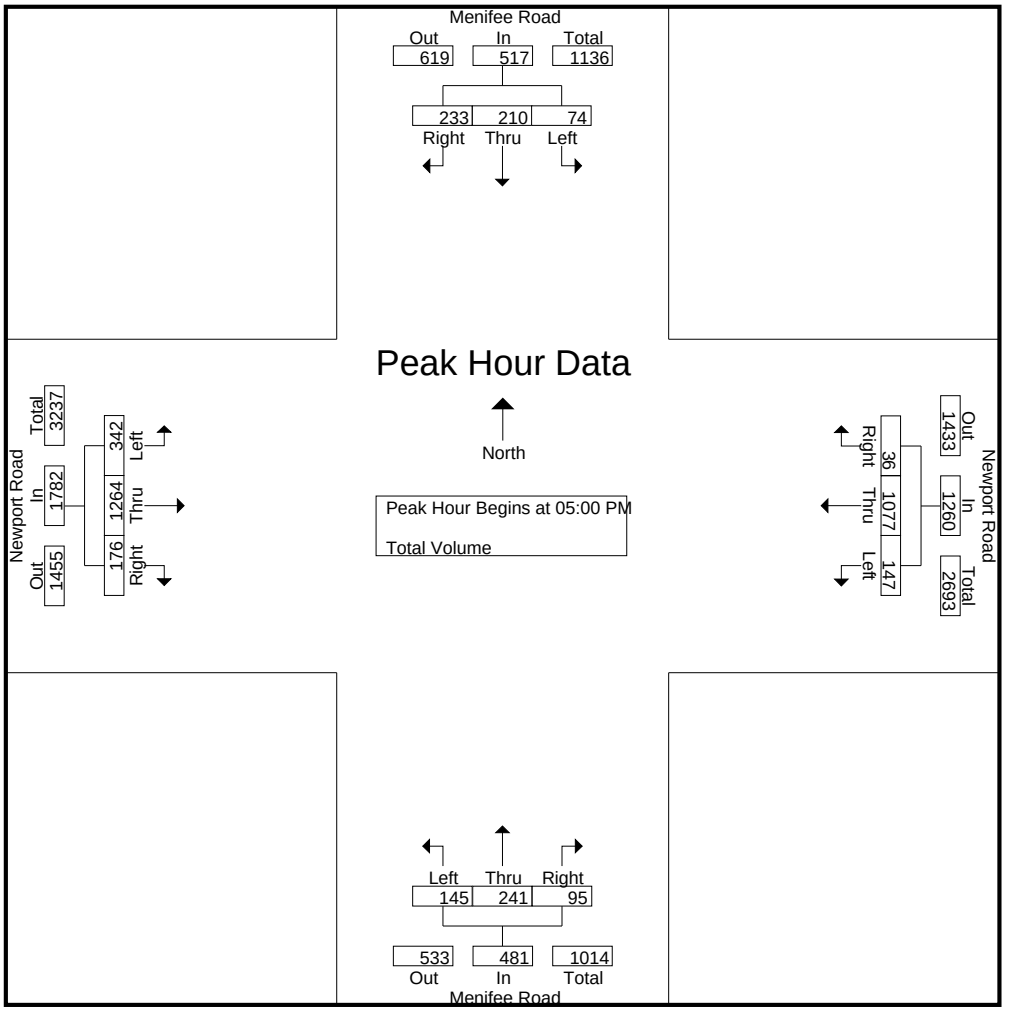

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				04:45 PM				05:00 PM				05:00 PM			
+0 mins.	**22**	41	54	117	34	**278**	**15**	327	38	52	19	109	69	**339**	44	452
+15 mins.	17	54	52	123	36	277	9	322	37	57	**31**	125	90	294	46	430
+30 mins.	14	43	**75**	132	37	266	12	315	**40**	62	25	**127**	**102**	308	32	442
+45 mins.	21	**72**	52	**145**	**45**	274	10	**329**	30	**70**	20	120	81	323	**54**	**458**
Total Volume	74	210	233	517	152	1095	46	1293	145	241	95	481	342	1264	176	1782
% App. Total	14.3	40.6	45.1		11.8	84.7	3.6		30.1	50.1	19.8		19.2	70.9	9.9	
PHF	.841	.729	.777	.891	.844	.985	.767	.983	.906	.861	.766	.947	.838	.932	.815	.973

Counts Unlimited
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City of Menifee
N/S: Bradley Road
E/W: La Piedra Road
Weather: Clear

File Name : 06_MEN BRLP AM
Site Code : 06717552
Start Date : 8/29/2017
Page No : 1

Groups Printed- Total Volume

	Bradley Road Southbound				La Piedra Road Westbound				Bradley Road Northbound				La Piedra Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	21	94	2	117	12	11	27	50	3	172	4	179	7	4	4	15	361
07:15 AM	49	152	1	202	13	18	70	101	11	193	17	221	13	8	6	27	551
07:30 AM	36	148	4	188	36	23	75	134	5	164	20	189	10	5	4	19	530
07:45 AM	31	156	2	189	8	13	17	38	1	65	13	79	5	3	4	12	318
Total	137	550	9	696	69	65	189	323	20	594	54	668	35	20	18	73	1760
08:00 AM	18	59	6	83	16	2	37	55	0	83	6	89	4	2	2	8	235
08:15 AM	10	80	2	92	15	3	25	43	1	80	4	85	3	3	3	9	229
08:30 AM	9	95	2	106	10	5	10	25	2	33	6	41	1	1	2	4	176
08:45 AM	9	54	0	63	2	3	6	11	1	44	1	46	0	3	1	4	124
Total	46	288	10	344	43	13	78	134	4	240	17	261	8	9	8	25	764
Grand Total	183	838	19	1040	112	78	267	457	24	834	71	929	43	29	26	98	2524
Apprch %	17.6	80.6	1.8		24.5	17.1	58.4		2.6	89.8	7.6		43.9	29.6	26.5		
Total %	7.3	33.2	0.8	41.2	4.4	3.1	10.6	18.1	1	33	2.8	36.8	1.7	1.1	1	3.9	

	Bradley Road Southbound				La Piedra Road Westbound				Bradley Road Northbound				La Piedra Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	21	94	2	117	12	11	27	50	3	172	4	179	7	4	4	15	361
07:15 AM	**49**	152	1	**202**	13	18	70	101	**11**	**193**	17	**221**	**13**	**8**	**6**	**27**	**551**
07:30 AM	36	148	**4**	188	**36**	**23**	**75**	**134**	5	164	**20**	189	10	5	4	19	530
07:45 AM	31	**156**	2	189	8	13	17	38	1	65	13	79	5	3	4	12	318
Total Volume	137	550	9	696	69	65	189	323	20	594	54	668	35	20	18	73	1760
% App. Total	19.7	79	1.3		21.4	20.1	58.5		3	88.9	8.1		47.9	27.4	24.7		
PHF	.699	.881	.563	.861	.479	.707	.630	.603	.455	.769	.675	.756	.673	.625	.750	.676	.799

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City of Menifee
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File Name : 06_MEN BRLP AM
Site Code : 06717552
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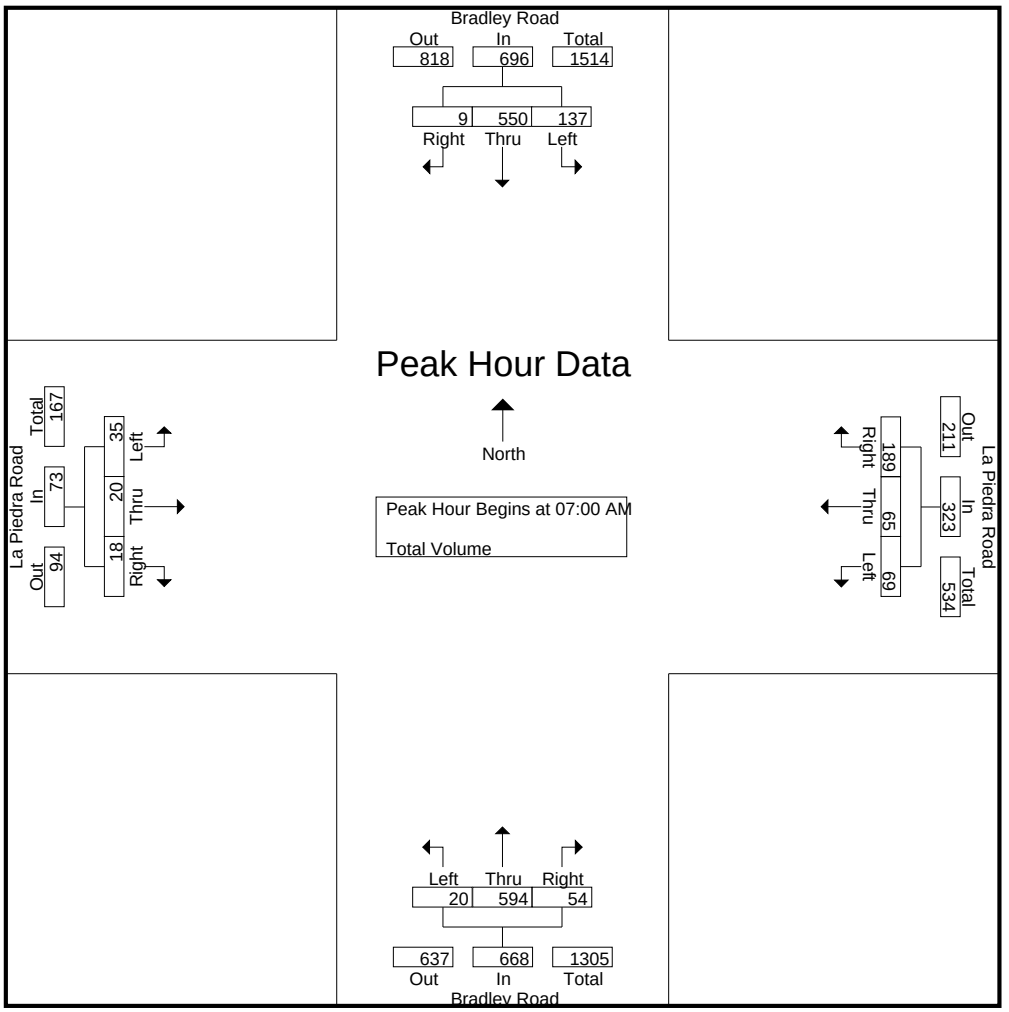

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:15 AM				07:00 AM				07:00 AM			
+0 mins.	21	94	2	117	13	18	70	101	3	172	4	179	7	4	4	15
+15 mins.	**49**	152	1	**202**	**36**	**23**	**75**	**134**	**11**	**193**	17	**221**	**13**	**8**	**6**	**27**
+30 mins.	36	148	**4**	188	8	13	17	38	5	164	**20**	189	10	5	4	19
+45 mins.	31	**156**	2	189	16	2	37	55	1	65	13	79	5	3	4	12
Total Volume	137	550	9	696	73	56	199	328	20	594	54	668	35	20	18	73
% App. Total	19.7	79	1.3		22.3	17.1	60.7		3	88.9	8.1		47.9	27.4	24.7	
PHF	.699	.881	.563	.861	.507	.609	.663	.612	.455	.769	.675	.756	.673	.625	.750	.676

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

File Name : 06_MEN BRLP MD
Site Code : 06717552
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Groups Printed- Total Volume

	Bradley Road Southbound				La Piedra Road Westbound				Bradley Road Northbound				La Piedra Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:00 PM	32	51	1	84	18	4	30	52	2	85	11	98	2	3	2	7	241
02:15 PM	20	88	3	111	9	7	50	66	6	108	6	120	4	1	4	9	306
02:30 PM	13	70	1	84	5	12	28	45	3	103	10	116	3	2	2	7	252
02:45 PM	18	49	1	68	14	5	39	58	3	127	14	144	3	3	4	10	280
Total	83	258	6	347	46	28	147	221	14	423	41	478	12	9	12	33	1079
03:00 PM	13	70	3	86	15	6	29	50	3	150	4	157	4	2	3	9	302
03:15 PM	25	204	2	231	11	3	31	45	5	133	5	143	3	2	6	11	430
03:30 PM	25	210	4	239	12	7	19	38	4	104	3	111	1	4	7	12	400
03:45 PM	14	160	3	177	6	3	14	23	7	62	9	78	1	3	3	7	285
Total	77	644	12	733	44	19	93	156	19	449	21	489	9	11	19	39	1417
Grand Total	160	902	18	1080	90	47	240	377	33	872	62	967	21	20	31	72	2496
Apprch %	14.8	83.5	1.7		23.9	12.5	63.7		3.4	90.2	6.4		29.2	27.8	43.1		
Total %	6.4	36.1	0.7	43.3	3.6	1.9	9.6	15.1	1.3	34.9	2.5	38.7	0.8	0.8	1.2	2.9	

	Bradley Road Southbound				La Piedra Road Westbound				Bradley Road Northbound				La Piedra Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:00 PM																	
03:00 PM	13	70	3	86	**15**	6	29	**50**	3	**150**	4	**157**	**4**	2	3	9	302
03:15 PM	**25**	204	2	231	11	3	**31**	45	5	133	5	143	3	2	6	11	**430**
03:30 PM	25	**210**	**4**	**239**	12	**7**	19	38	4	104	3	111	1	**4**	**7**	**12**	400
03:45 PM	14	160	3	177	6	3	14	23	**7**	62	**9**	78	1	3	3	7	285
Total Volume	77	644	12	733	44	19	93	156	19	449	21	489	9	11	19	39	1417
% App. Total	10.5	87.9	1.6		28.2	12.2	59.6		3.9	91.8	4.3		23.1	28.2	48.7		
PHF	.770	.767	.750	.767	.733	.679	.750	.780	.679	.748	.583	.779	.563	.688	.679	.813	.824

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City of Menifee
N/S: Bradley Road
E/W: La Piedra Road
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File Name : 06_MEN BRLP MD
Site Code : 06717552
Start Date : 8/29/2017
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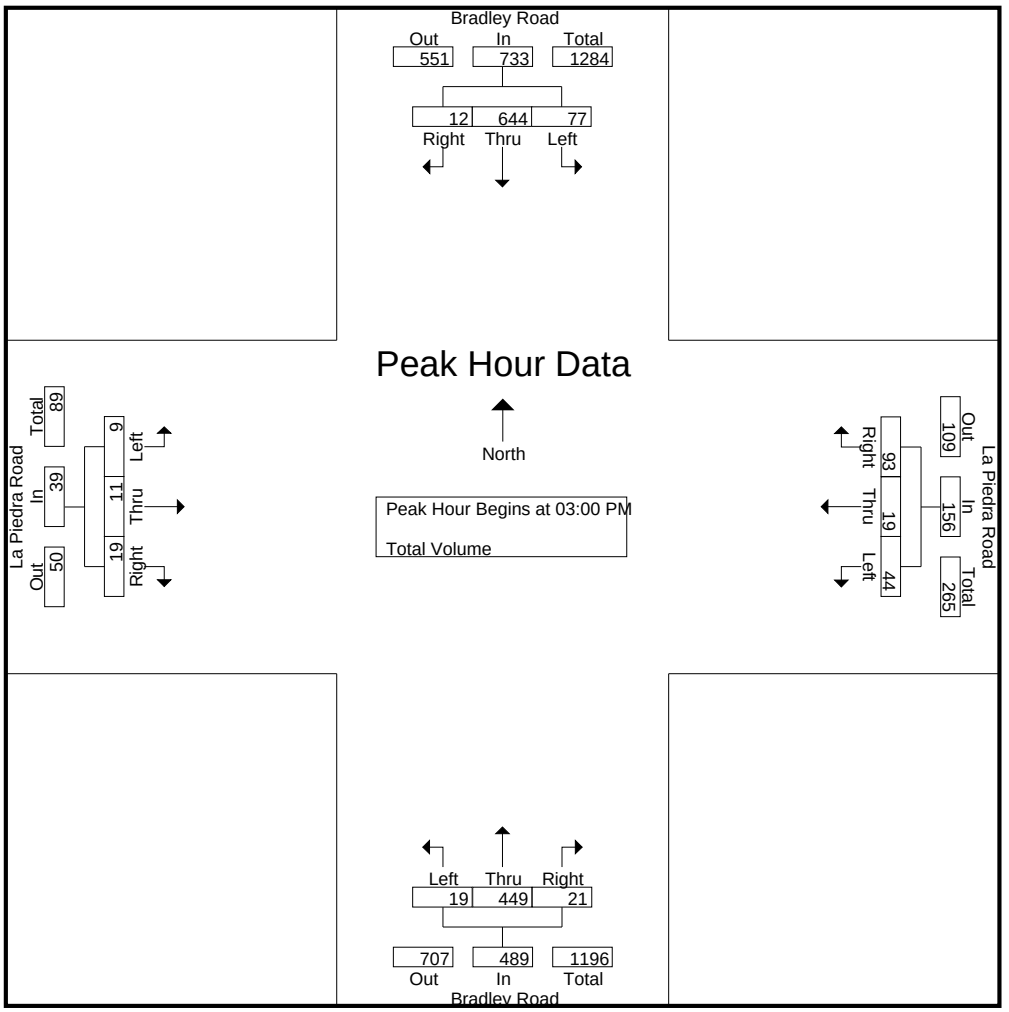

Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:00 PM				02:00 PM				02:30 PM				02:45 PM			
+0 mins.	13	70	3	86	**18**	4	30	52	3	103	10	116	3	3	4	10
+15 mins.	**25**	204	2	231	9	7	**50**	**66**	3	127	**14**	144	**4**	2	3	9
+30 mins.	25	**210**	**4**	**239**	5	**12**	28	45	3	**150**	4	**157**	3	2	6	11
+45 mins.	14	160	3	177	14	5	39	58	**5**	133	5	143	1	**4**	**7**	**12**
Total Volume	77	644	12	733	46	28	147	221	14	513	33	560	11	11	20	42
% App. Total	10.5	87.9	1.6		20.8	12.7	66.5		2.5	91.6	5.9		26.2	26.2	47.6	
PHF	.770	.767	.750	.767	.639	.583	.735	.837	.700	.855	.589	.892	.688	.688	.714	.875

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City of Menifee
N/S: Bradley Road
E/W: La Piedra Road
Weather: Clear

File Name : 06_MEN BRLP PM
Site Code : 06717552
Start Date : 8/29/2017
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Groups Printed- Total Volume

	Bradley Road Southbound				La Piedra Road Westbound				Bradley Road Northbound				La Piedra Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	11	81	1	93	5	2	11	18	4	63	6	73	0	2	1	3	187
04:15 PM	10	77	3	90	3	5	10	18	11	62	8	81	2	0	2	4	193
04:30 PM	10	63	2	75	3	2	7	12	2	76	10	88	1	2	2	5	180
04:45 PM	12	57	1	70	5	2	7	14	7	50	5	62	1	1	3	5	151
Total	43	278	7	328	16	11	35	62	24	251	29	304	4	5	8	17	711
05:00 PM	9	58	1	68	6	1	10	17	5	83	5	93	1	1	6	8	186
05:15 PM	9	74	1	84	5	1	12	18	4	84	9	97	0	1	3	4	203
05:30 PM	17	69	0	86	7	2	14	23	2	97	14	113	1	2	3	6	228
05:45 PM	14	73	1	88	6	1	13	20	3	87	8	98	2	1	2	5	211
Total	49	274	3	326	24	5	49	78	14	351	36	401	4	5	14	23	828
Grand Total	92	552	10	654	40	16	84	140	38	602	65	705	8	10	22	40	1539
Apprch %	14.1	84.4	1.5		28.6	11.4	60		5.4	85.4	9.2		20	25	55		
Total %	6	35.9	0.6	42.5	2.6	1	5.5	9.1	2.5	39.1	4.2	45.8	0.5	0.6	1.4	2.6	

	Bradley Road Southbound				La Piedra Road Westbound				Bradley Road Northbound				La Piedra Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	9	58	**1**	68	6	1	10	17	**5**	83	5	93	1	1	**6**	**8**	186
05:15 PM	9	**74**	1	84	5	1	12	18	4	84	9	97	0	1	3	4	203
05:30 PM	**17**	69	0	86	**7**	**2**	**14**	**23**	2	**97**	**14**	**113**	1	**2**	3	6	**228**
05:45 PM	14	73	1	**88**	6	1	13	20	3	87	8	98	**2**	1	2	5	211
Total Volume	49	274	3	326	24	5	49	78	14	351	36	401	4	5	14	23	828
% App. Total	15	84	0.9		30.8	6.4	62.8		3.5	87.5	9		17.4	21.7	60.9		
PHF	.721	.926	.750	.926	.857	.625	.875	.848	.700	.905	.643	.887	.500	.625	.583	.719	.908

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City of Menifee
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File Name : 06_MEN BRLP PM
Site Code : 06717552
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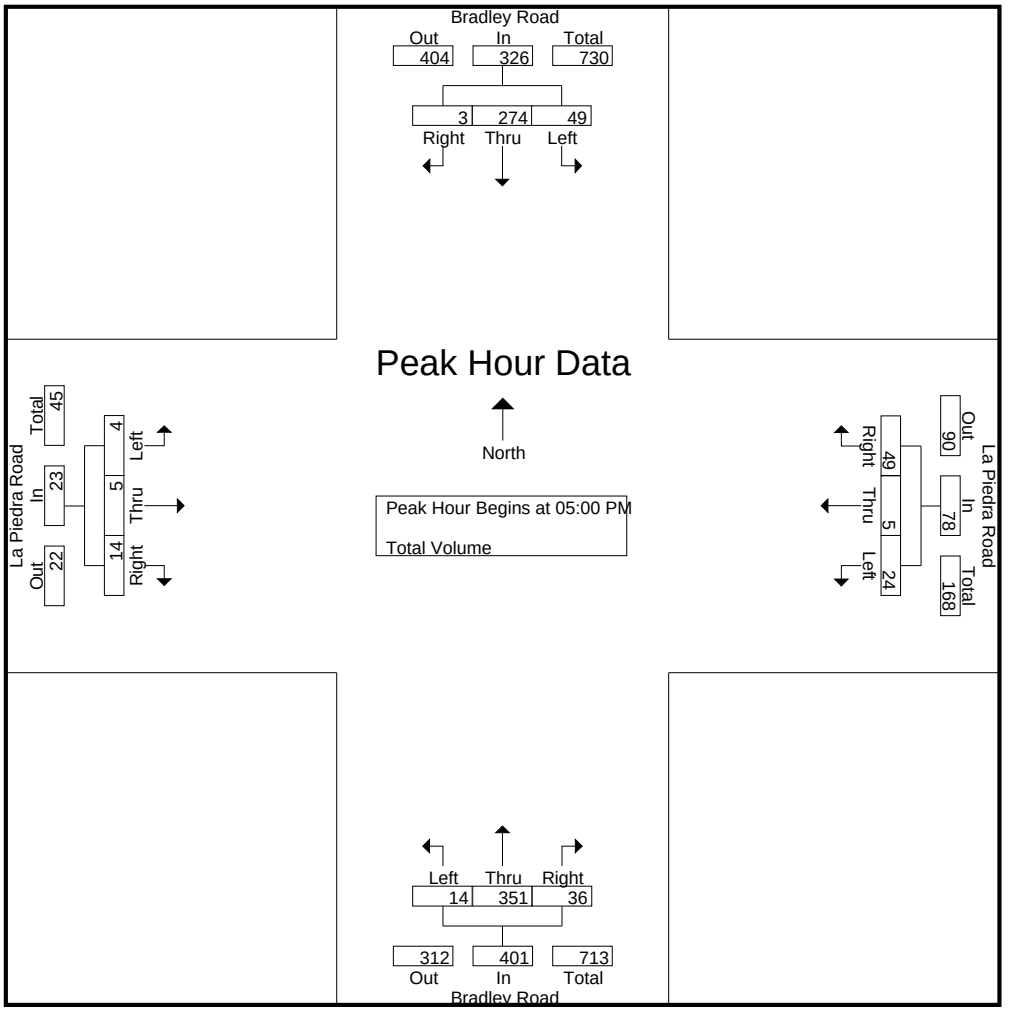

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				05:00 PM				05:00 PM				04:45 PM			
+0 mins.	11	**81**	1	**93**	6	1	10	17	**5**	83	5	93	**1**	1	3	5
+15 mins.	10	77	**3**	90	5	1	12	18	4	84	9	97	1	1	**6**	**8**
+30 mins.	10	63	2	75	**7**	**2**	**14**	**23**	2	**97**	**14**	**113**	0	1	3	4
+45 mins.	**12**	57	1	70	6	1	13	20	3	87	8	98	1	**2**	3	6
Total Volume	43	278	7	328	24	5	49	78	14	351	36	401	3	5	15	23
% App. Total	13.1	84.8	2.1		30.8	6.4	62.8		3.5	87.5	9		13	21.7	65.2	
PHF	.896	.858	.583	.882	.857	.625	.875	.848	.700	.905	.643	.887	.750	.625	.625	.719

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

File Name : 24_MEN BRHO AM
Site Code : 06717552
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Groups Printed- Total Volume

	Bradley Road Southbound				Holland Road Westbound				Bradley Road Northbound				Holland Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	21	112	22	155	51	26	18	95	8	59	35	102	10	58	44	112	464
07:15 AM	9	140	70	219	63	55	27	145	13	92	45	150	28	43	52	123	637
07:30 AM	16	130	77	223	41	44	34	119	15	84	38	137	22	36	68	126	605
07:45 AM	20	44	35	99	19	49	31	99	12	83	46	141	46	91	18	155	494
Total	66	426	204	696	174	174	110	458	48	318	164	530	106	228	182	516	2200
08:00 AM	32	26	60	118	12	40	21	73	4	22	12	38	25	79	7	111	340
08:15 AM	20	29	47	96	4	45	11	60	8	29	14	51	34	56	3	93	300
08:30 AM	15	20	19	54	10	27	18	55	4	34	14	52	46	53	6	105	266
08:45 AM	24	13	9	46	6	21	20	47	3	11	12	26	18	34	1	53	172
Total	91	88	135	314	32	133	70	235	19	96	52	167	123	222	17	362	1078
Grand Total	157	514	339	1010	206	307	180	693	67	414	216	697	229	450	199	878	3278
Apprch %	15.5	50.9	33.6		29.7	44.3	26		9.6	59.4	31		26.1	51.3	22.7		
Total %	4.8	15.7	10.3	30.8	6.3	9.4	5.5	21.1	2	12.6	6.6	21.3	7	13.7	6.1	26.8	

	Bradley Road Southbound				Holland Road Westbound				Bradley Road Northbound				Holland Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	**21**	112	22	155	51	26	18	95	8	59	35	102	10	58	44	112	464
07:15 AM	9	**140**	70	219	**63**	**55**	27	**145**	13	**92**	45	**150**	28	43	52	123	**637**
07:30 AM	16	130	**77**	**223**	41	44	**34**	119	**15**	84	38	137	22	36	**68**	126	605
07:45 AM	20	44	35	99	19	49	31	99	12	83	**46**	141	**46**	**91**	18	**155**	494
Total Volume	66	426	204	696	174	174	110	458	48	318	164	530	106	228	182	516	2200
% App. Total	9.5	61.2	29.3		38	38	24		9.1	60	30.9		20.5	44.2	35.3		
PHF	.786	.761	.662	.780	.690	.791	.809	.790	.800	.864	.891	.883	.576	.626	.669	.832	.863

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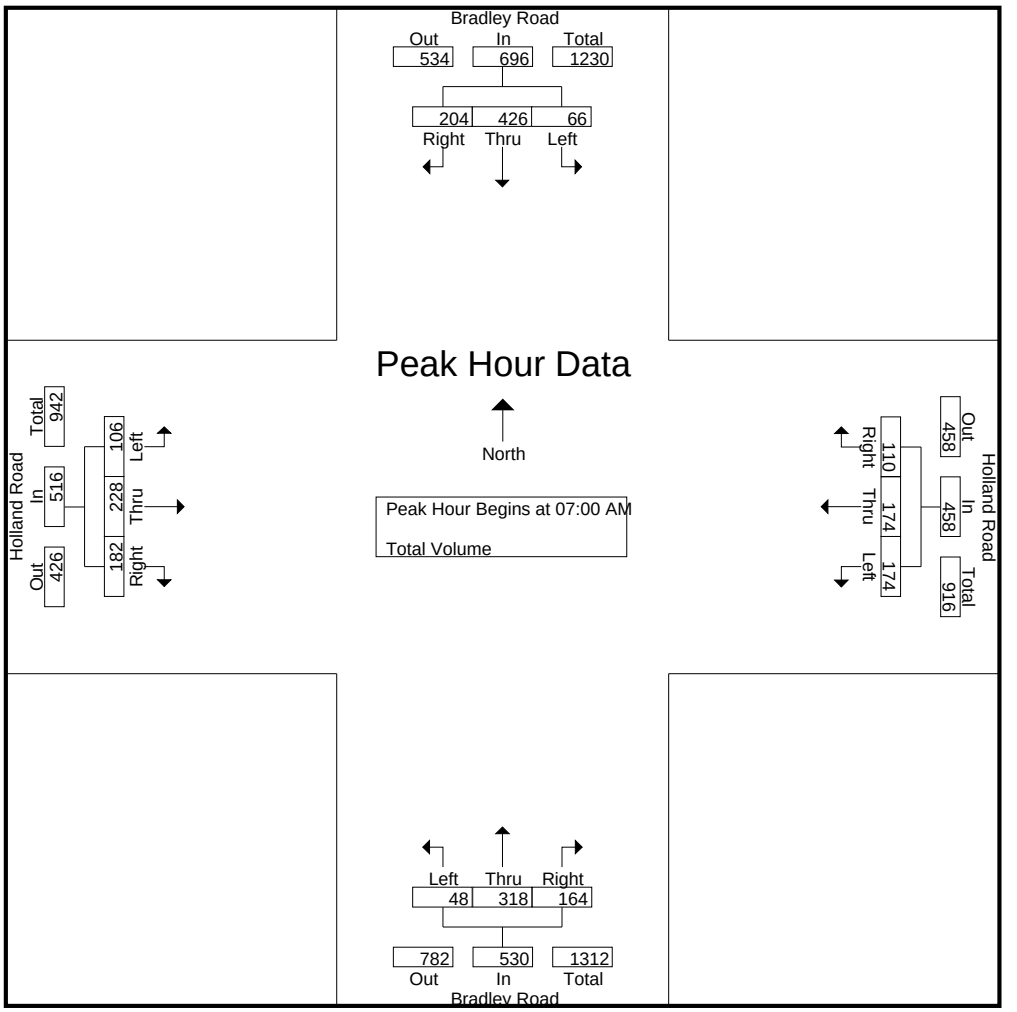

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	**21**	112	22	155	51	26	18	95	8	59	35	102	10	58	44	112
+15 mins.	9	**140**	70	219	**63**	**55**	27	**145**	13	**92**	45	**150**	28	43	52	123
+30 mins.	16	130	**77**	**223**	41	44	**34**	119	**15**	84	38	137	22	36	**68**	126
+45 mins.	20	44	35	99	19	49	31	99	12	83	**46**	141	**46**	**91**	18	**155**
Total Volume	66	426	204	696	174	174	110	458	48	318	164	530	106	228	182	516
% App. Total	9.5	61.2	29.3		38	38	24		9.1	60	30.9		20.5	44.2	35.3	
PHF	.786	.761	.662	.780	.690	.791	.809	.790	.800	.864	.891	.883	.576	.626	.669	.832

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Groups Printed- Total Volume

	Bradley Road Southbound				Holland Road Westbound				Bradley Road Northbound				Holland Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:00 PM	24	31	32	87	12	46	30	88	0	23	13	36	11	48	5	64	275
02:15 PM	36	43	59	138	8	50	29	87	12	55	15	82	22	35	7	64	371
02:30 PM	22	50	51	123	16	63	29	108	4	17	12	33	27	51	7	85	349
02:45 PM	28	50	60	138	20	91	32	143	1	10	10	21	20	67	13	100	402
Total	110	174	202	486	56	250	120	426	17	105	50	172	80	201	32	313	1397
03:00 PM	32	71	48	151	33	62	28	123	6	17	9	32	38	40	17	95	401
03:15 PM	30	45	43	118	30	57	48	135	18	100	31	149	55	47	8	110	512
03:30 PM	37	55	31	123	31	60	52	143	19	77	40	136	48	73	17	138	540
03:45 PM	14	35	18	67	17	62	31	110	13	96	47	156	35	68	14	117	450
Total	113	206	140	459	111	241	159	511	56	290	127	473	176	228	56	460	1903
Grand Total	223	380	342	945	167	491	279	937	73	395	177	645	256	429	88	773	3300
Apprch %	23.6	40.2	36.2		17.8	52.4	29.8		11.3	61.2	27.4		33.1	55.5	11.4		
Total %	6.8	11.5	10.4	28.6	5.1	14.9	8.5	28.4	2.2	12	5.4	19.5	7.8	13	2.7	23.4	

	Bradley Road Southbound				Holland Road Westbound				Bradley Road Northbound				Holland Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:00 PM																	
03:00 PM	32	**71**	**48**	**151**	**33**	**62**	28	123	6	17	9	32	38	40	**17**	95	401
03:15 PM	30	45	43	118	30	57	48	135	18	**100**	31	149	**55**	47	8	110	512
03:30 PM	**37**	55	31	123	31	60	**52**	**143**	**19**	77	40	136	48	**73**	17	**138**	**540**
03:45 PM	14	35	18	67	17	62	31	110	13	96	**47**	**156**	35	68	14	117	450
Total Volume	113	206	140	459	111	241	159	511	56	290	127	473	176	228	56	460	1903
% App. Total	24.6	44.9	30.5		21.7	47.2	31.1		11.8	61.3	26.8		38.3	49.6	12.2		
PHF	.764	.725	.729	.760	.841	.972	.764	.893	.737	.725	.676	.758	.800	.781	.824	.833	.881

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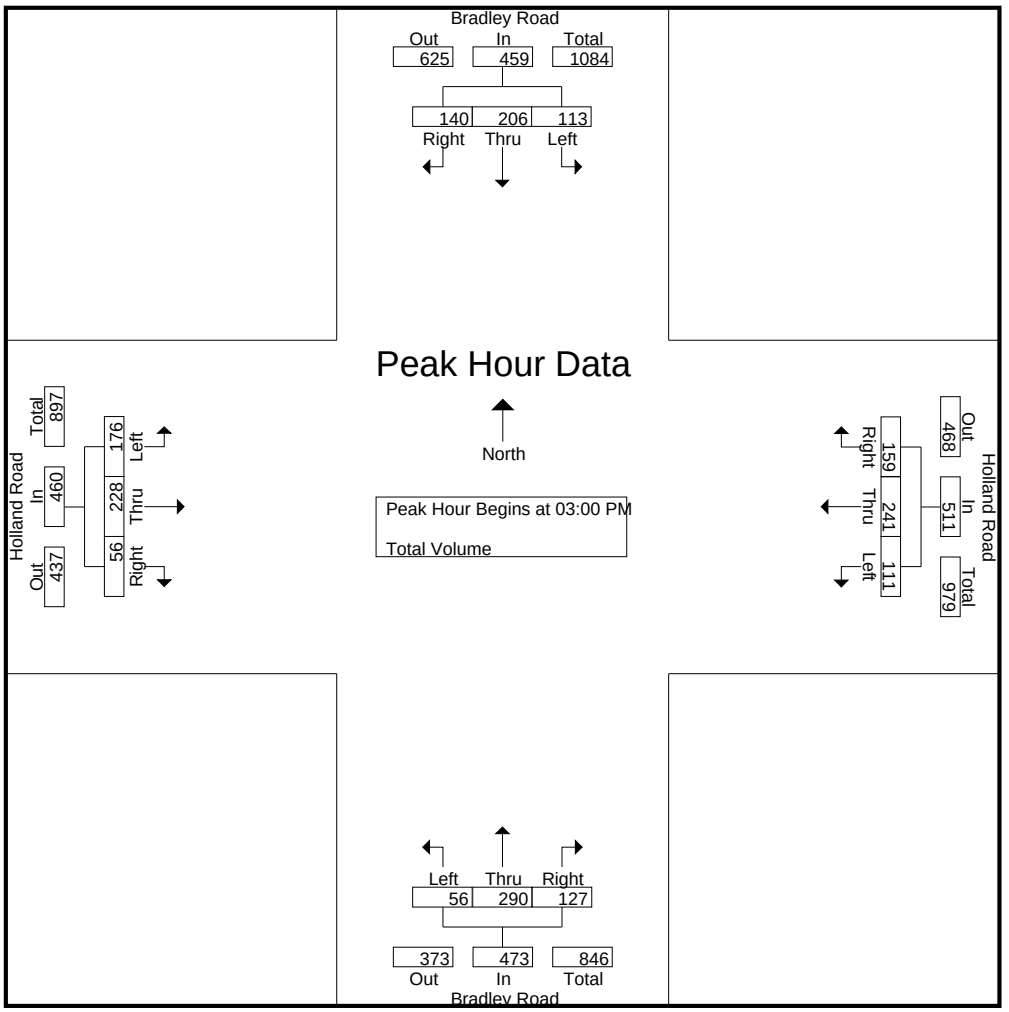
City of Menifee
N/S: Bradley Road
E/W: Holland Road
Weather: Clear

File Name : 24_MEN BRHO MD
Site Code : 06717552
Start Date : 8/29/2017
Page No : 2



Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	02:15 PM				02:45 PM				03:00 PM				03:00 PM			
+0 mins.	**36**	43	59	138	20	**91**	32	**143**	6	17	9	32	38	40	**17**	95
+15 mins.	22	50	51	123	**33**	62	28	123	18	**100**	31	149	**55**	47	8	110
+30 mins.	28	50	**60**	138	30	57	48	135	**19**	77	40	136	48	**73**	17	**138**
+45 mins.	32	**71**	48	**151**	31	60	**52**	143	13	96	**47**	**156**	35	68	14	117
Total Volume	118	214	218	550	114	270	160	544	56	290	127	473	176	228	56	460
% App. Total	21.5	38.9	39.6		21	49.6	29.4		11.8	61.3	26.8		38.3	49.6	12.2	
PHF	.819	.754	.908	.911	.864	.742	.769	.951	.737	.725	.676	.758	.800	.781	.824	.833

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

File Name : 24_MEN BRHO PM
Site Code : 06717552
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Groups Printed- Total Volume

	Bradley Road Southbound				Holland Road Westbound				Bradley Road Northbound				Holland Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	18	30	14	62	12	71	20	103	7	48	20	75	16	59	5	80	320
04:15 PM	22	19	21	62	12	73	27	112	13	38	22	73	16	43	6	65	312
04:30 PM	11	30	24	65	15	66	30	111	4	26	14	44	12	63	8	83	303
04:45 PM	20	17	17	54	14	56	37	107	6	26	12	44	6	50	2	58	263
Total	71	96	76	243	53	266	114	433	30	138	68	236	50	215	21	286	1198
05:00 PM	26	32	16	74	12	69	29	110	4	23	18	45	11	41	13	65	294
05:15 PM	20	38	19	77	19	61	30	110	6	37	14	57	17	46	15	78	322
05:30 PM	26	61	13	100	17	65	37	119	6	27	18	51	16	46	11	73	343
05:45 PM	15	44	19	78	16	73	37	126	6	37	18	61	17	47	9	73	338
Total	87	175	67	329	64	268	133	465	22	124	68	214	61	180	48	289	1297
Grand Total	158	271	143	572	117	534	247	898	52	262	136	450	111	395	69	575	2495
Apprch %	27.6	47.4	25		13	59.5	27.5		11.6	58.2	30.2		19.3	68.7	12		
Total %	6.3	10.9	5.7	22.9	4.7	21.4	9.9	36	2.1	10.5	5.5	18	4.4	15.8	2.8	23	

	Bradley Road Southbound				Holland Road Westbound				Bradley Road Northbound				Holland Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	**26**	32	16	74	12	69	29	110	4	23	**18**	45	11	41	13	65	294
05:15 PM	20	38	**19**	77	**19**	61	30	110	**6**	**37**	14	57	**17**	46	**15**	**78**	322
05:30 PM	26	**61**	13	**100**	17	65	**37**	119	6	27	18	51	16	46	11	73	**343**
05:45 PM	15	44	19	78	16	**73**	37	**126**	6	37	18	**61**	17	**47**	9	73	338
Total Volume	87	175	67	329	64	268	133	465	22	124	68	214	61	180	48	289	1297
% App. Total	26.4	53.2	20.4		13.8	57.6	28.6		10.3	57.9	31.8		21.1	62.3	16.6		
PHF	.837	.717	.882	.823	.842	.918	.899	.923	.917	.838	.944	.877	.897	.957	.800	.926	.945

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Weather: Clear

File Name : 24_MEN BRHO PM
Site Code : 06717552
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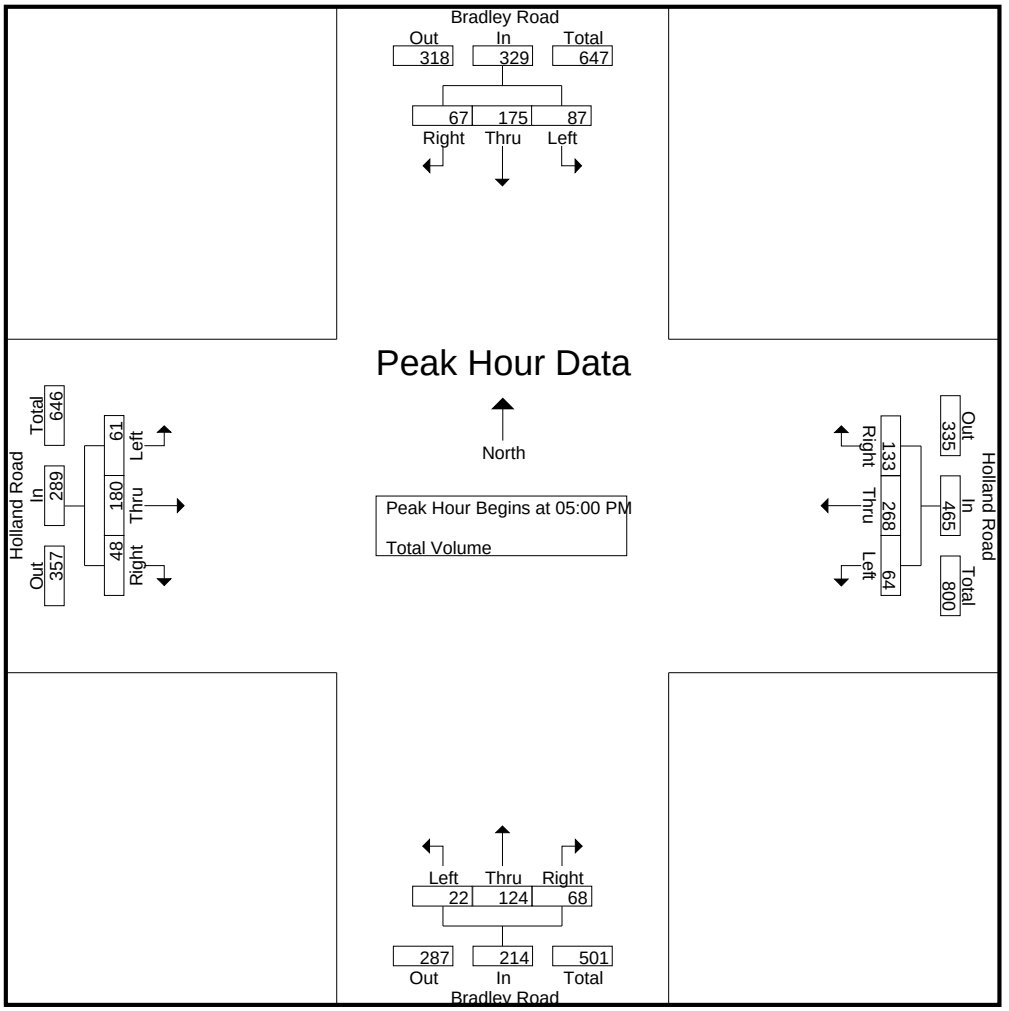

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				04:00 PM				05:00 PM			
+0 mins.	**26**	32	16	74	12	69	29	110	7	**48**	20	**75**	11	41	13	65
+15 mins.	20	38	**19**	77	**19**	61	30	110	**13**	38	**22**	73	**17**	46	**15**	**78**
+30 mins.	26	**61**	13	**100**	17	65	**37**	119	4	26	14	44	16	46	11	73
+45 mins.	15	44	19	78	16	**73**	37	**126**	6	26	12	44	17	**47**	9	73
Total Volume	87	175	67	329	64	268	133	465	30	138	68	236	61	180	48	289
% App. Total	26.4	53.2	20.4		13.8	57.6	28.6		12.7	58.5	28.8		21.1	62.3	16.6	
PHF	.837	.717	.882	.823	.842	.918	.899	.923	.577	.719	.773	.787	.897	.957	.800	.926

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City of Menifee
N/S: Sherman Road
E/W: La Piedra Road
Weather: Clear

File Name : 05_MEN SHLP AM
Site Code : 06717552
Start Date : 8/29/2017
Page No : 1

Groups Printed- Total Volume

	Sherman Road Southbound			La Piedra Road Westbound			Sherman Road Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	34	0	34	0	28	28	0	0	0	62
07:15 AM	59	1	60	0	56	56	0	1	1	117
07:30 AM	25	1	26	0	64	64	1	0	1	91
07:45 AM	7	0	7	1	40	41	0	0	0	48
Total	125	2	127	1	188	189	1	1	2	318
08:00 AM	13	0	13	0	13	13	0	0	0	26
08:15 AM	1	0	1	0	1	1	0	1	1	3
08:30 AM	1	0	1	0	4	4	0	0	0	5
08:45 AM	1	0	1	0	7	7	0	0	0	8
Total	16	0	16	0	25	25	0	1	1	42
Grand Total	141	2	143	1	213	214	1	2	3	360
Apprch %	98.6	1.4		0.5	99.5		33.3	66.7		
Total %	39.2	0.6	39.7	0.3	59.2	59.4	0.3	0.6	0.8	

	Sherman Road Southbound			La Piedra Road Westbound			Sherman Road Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	34	0	34	0	28	28	0	0	0	62
07:15 AM	**59**	**1**	**60**	0	56	56	0	**1**	**1**	**117**
07:30 AM	25	1	26	0	**64**	**64**	**1**	0	1	91
07:45 AM	7	0	7	**1**	40	41	0	0	0	48
Total Volume	125	2	127	1	188	189	1	1	2	318
% App. Total	98.4	1.6		0.5	99.5		50	50		
PHF	.530	.500	.529	.250	.734	.738	.250	.250	.500	.679

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City of Menifee
N/S: Sherman Road
E/W: La Piedra Road
Weather: Clear

File Name : 05_MEN SHLP AM
Site Code : 06717552
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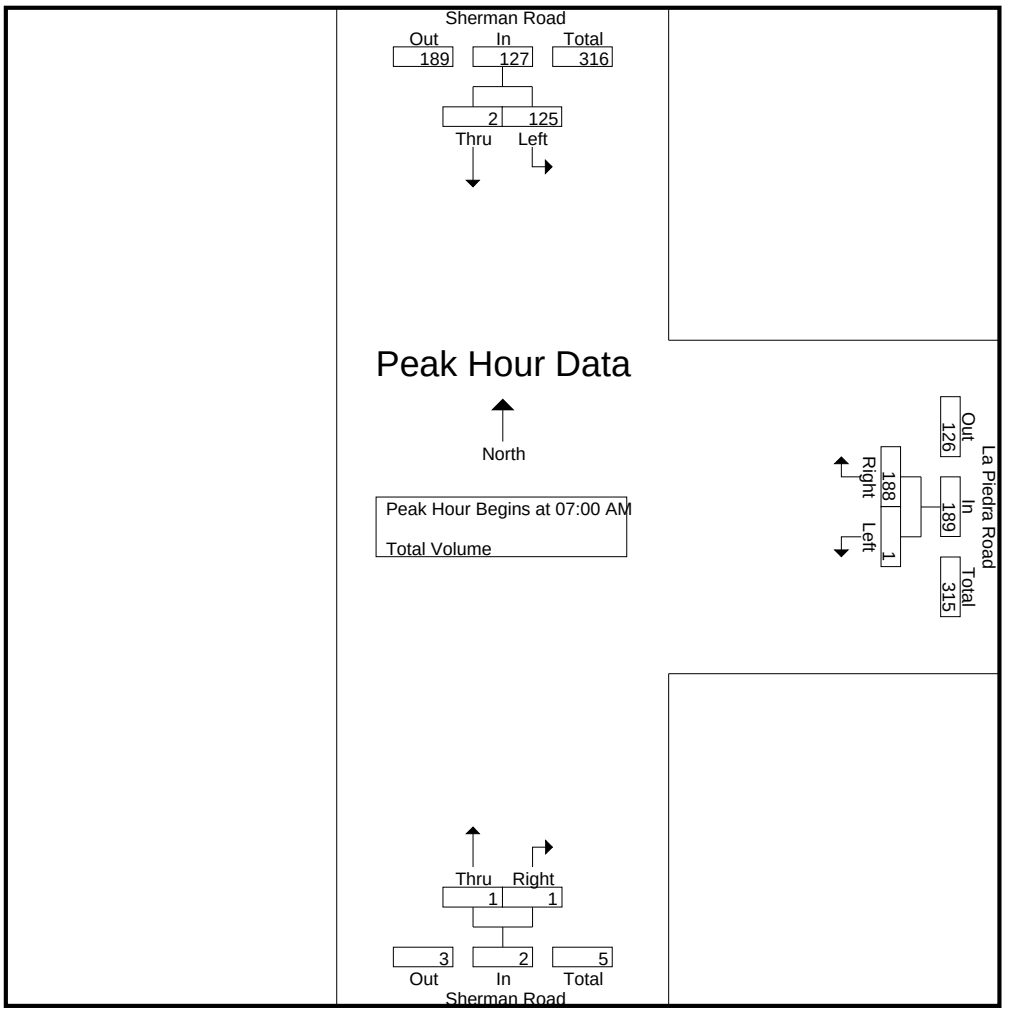

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	34	0	34	0	28	28	0	0	0
+15 mins.	**59**	**1**	**60**	0	56	56	0	**1**	**1**
+30 mins.	25	1	26	0	**64**	**64**	**1**	0	1
+45 mins.	7	0	7	**1**	40	41	0	0	0
Total Volume	125	2	127	1	188	189	1	1	2
% App. Total	98.4	1.6		0.5	99.5		50	50	
PHF	.530	.500	.529	.250	.734	.738	.250	.250	.500

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

File Name : 05_MEN SHLP MD
Site Code : 06717552
Start Date : 8/29/2017
Page No : 1

Groups Printed- Total Volume

	Sherman Road Southbound			La Piedra Road Westbound			Sherman Road Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
02:00 PM	0	0	0	29	1	30	0	19	19	49
02:15 PM	0	0	0	23	2	25	0	30	30	55
02:30 PM	2	0	2	26	0	26	0	28	28	56
02:45 PM	5	0	5	31	0	31	0	19	19	55
Total	7	0	7	109	3	112	0	96	96	215
03:00 PM	0	0	0	23	0	23	0	23	23	46
03:15 PM	1	0	1	11	0	11	1	7	8	20
03:30 PM	0	0	0	18	0	18	0	17	17	35
03:45 PM	0	0	0	18	0	18	0	8	8	26
Total	1	0	1	70	0	70	1	55	56	127
Grand Total	8	0	8	179	3	182	1	151	152	342
Apprch %	100	0		98.4	1.6		0.7	99.3		
Total %	2.3	0	2.3	52.3	0.9	53.2	0.3	44.2	44.4	

	Sherman Road Southbound			La Piedra Road Westbound			Sherman Road Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 02:00 PM										
02:00 PM	0	0	0	29	1	30	0	19	19	49
02:15 PM	0	0	0	23	**2**	25	0	**30**	**30**	55
02:30 PM	2	0	2	26	0	26	0	28	28	**56**
02:45 PM	**5**	0	**5**	**31**	0	**31**	0	19	19	55
Total Volume	7	0	7	109	3	112	0	96	96	215
% App. Total	100	0		97.3	2.7		0	100		
PHF	.350	.000	.350	.879	.375	.903	.000	.800	.800	.960

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City of Menifee
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Weather: Clear

File Name : 05_MEN SHLP MD
Site Code : 06717552
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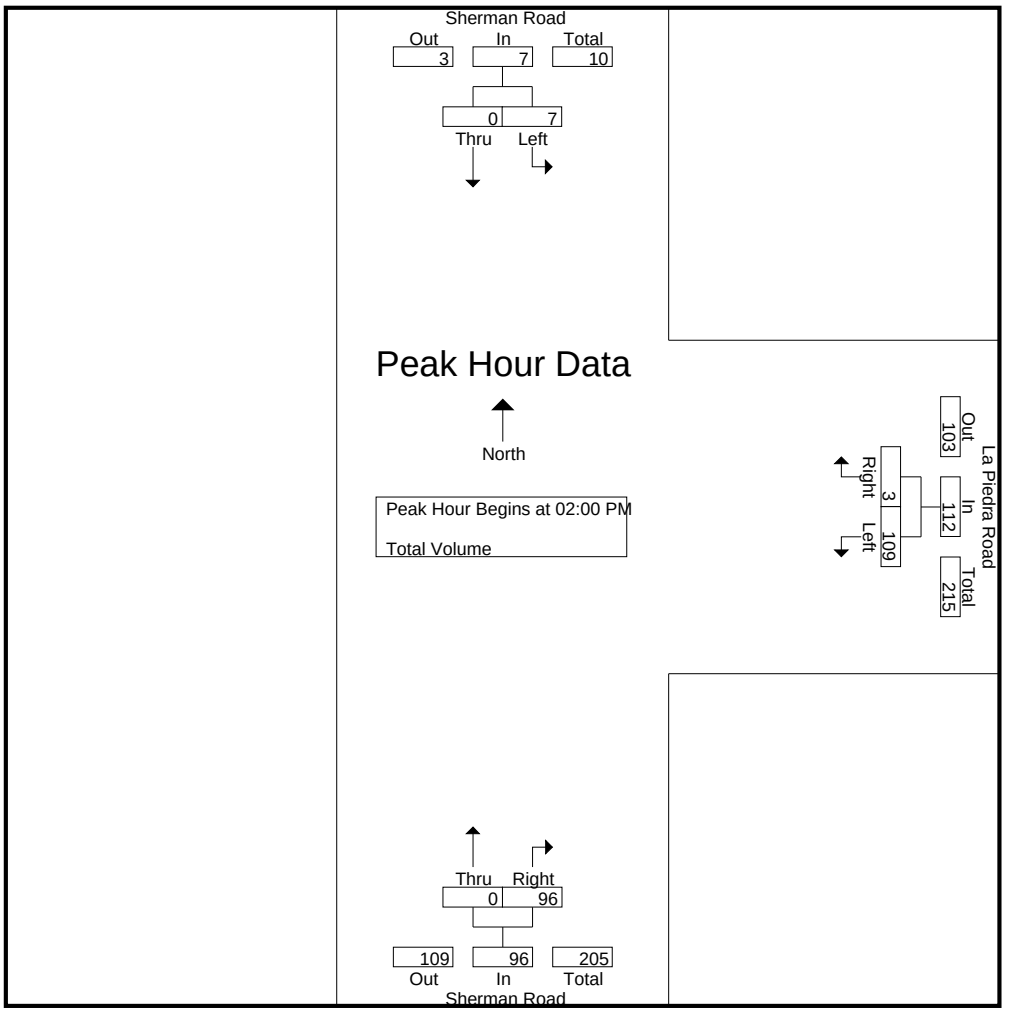

Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	02:30 PM			02:00 PM			02:15 PM		
+0 mins.	2	0	2	29	1	30	0	**30**	**30**
+15 mins.	**5**	0	**5**	23	**2**	25	0	28	28
+30 mins.	0	0	0	26	0	26	0	19	19
+45 mins.	1	0	1	**31**	0	**31**	0	23	23
Total Volume	8	0	8	109	3	112	0	100	100
% App. Total	100	0		97.3	2.7		0	100	
PHF	.400	.000	.400	.879	.375	.903	.000	.833	.833

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City of Menifee
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Weather: Clear

File Name : 05_MEN SHLP PM
Site Code : 06717552
Start Date : 8/29/2017
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Groups Printed- Total Volume

	Sherman Road Southbound			La Piedra Road Westbound			Sherman Road Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	15	4	19	0	5	5	24
04:15 PM	2	0	2	19	1	20	0	7	7	29
04:30 PM	2	0	2	13	0	13	0	5	5	20
04:45 PM	0	0	0	15	0	15	0	7	7	22
Total	4	0	4	62	5	67	0	24	24	95
05:00 PM	0	0	0	16	1	17	0	8	8	25
05:15 PM	1	0	1	13	0	13	0	4	4	18
05:30 PM	0	0	0	12	0	12	0	4	4	16
05:45 PM	0	0	0	4	0	4	0	1	1	5
Total	1	0	1	45	1	46	0	17	17	64
Grand Total	5	0	5	107	6	113	0	41	41	159
Apprch %	100	0		94.7	5.3		0	100		
Total %	3.1	0	3.1	67.3	3.8	71.1	0	25.8	25.8	

	Sherman Road Southbound			La Piedra Road Westbound			Sherman Road Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:15 PM										
04:15 PM	**2**	0	**2**	**19**	**1**	**20**	0	7	7	**29**
04:30 PM	2	0	2	13	0	13	0	5	5	20
04:45 PM	0	0	0	15	0	15	0	7	7	22
05:00 PM	0	0	0	16	1	17	0	**8**	**8**	25
Total Volume	4	0	4	63	2	65	0	27	27	96
% App. Total	100	0		96.9	3.1		0	100		
PHF	.500	.000	.500	.829	.500	.813	.000	.844	.844	.828

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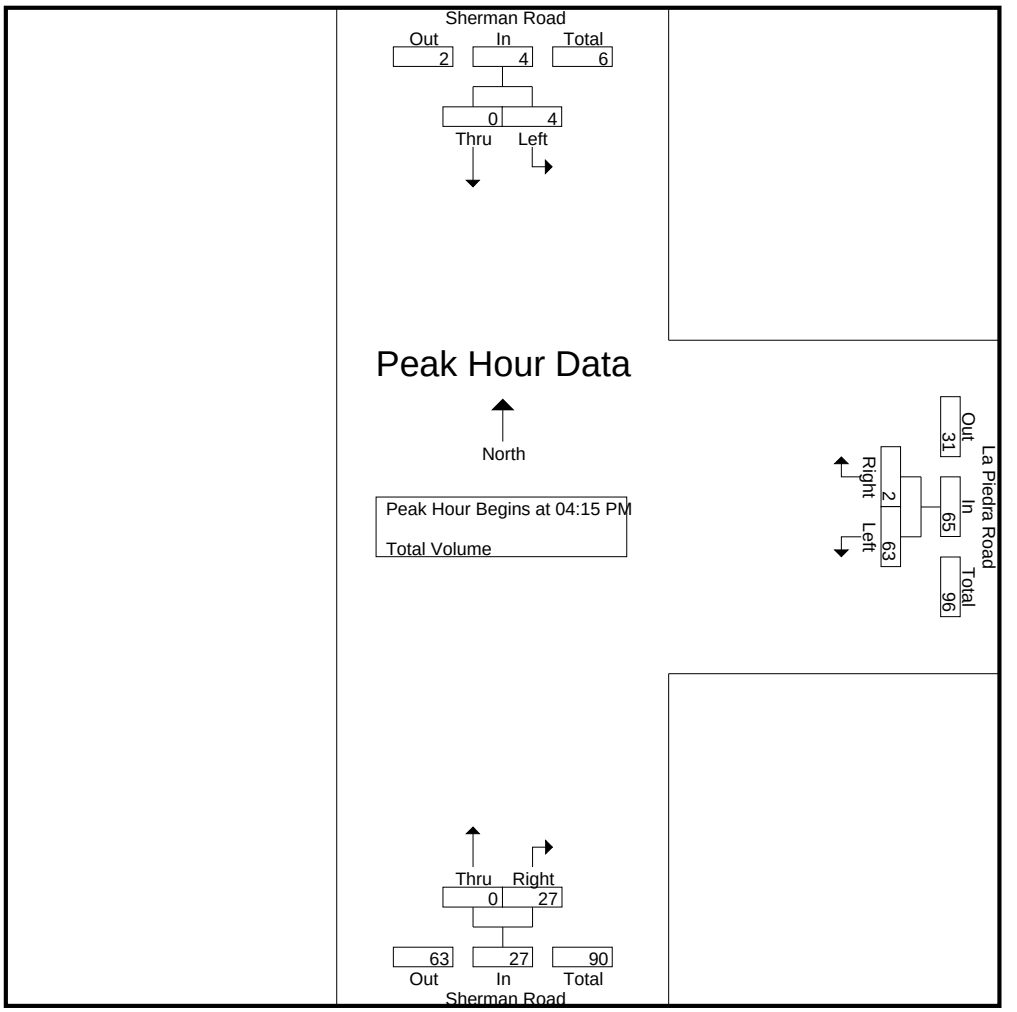

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM			04:00 PM			04:15 PM		
+0 mins.	0	0	0	15	**4**	19	0	7	7
+15 mins.	**2**	0	**2**	**19**	1	**20**	0	5	5
+30 mins.	2	0	2	13	0	13	0	7	7
+45 mins.	0	0	0	15	0	15	0	**8**	**8**
Total Volume	4	0	4	62	5	67	0	27	27
% App. Total	100	0		92.5	7.5		0	100	
PHF	.500	.000	.500	.816	.313	.838	.000	.844	.844

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City of Menifee
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Weather: Clear

File Name : 01_MEN SHHO AM
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Groups Printed- Total Volume

	Sherman Road Southbound				Holland Road Westbound				Sherman Road Northbound				Holland Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	6	6	2	96	36	134	1	0	11	12	33	118	1	152	304
07:15 AM	1	0	8	9	2	161	51	214	2	0	6	8	37	114	0	151	382
07:30 AM	1	0	8	9	1	119	15	135	1	0	3	4	24	114	4	142	290
07:45 AM	0	0	4	4	1	88	8	97	0	1	6	7	28	154	0	182	290
Total	2	0	26	28	6	464	110	580	4	1	26	31	122	500	5	627	1266
08:00 AM	1	0	13	14	1	51	4	56	1	0	4	5	9	118	0	127	202
08:15 AM	1	0	5	6	0	57	2	59	1	0	2	3	1	99	0	100	168
08:30 AM	1	0	1	2	5	50	3	58	1	0	2	3	2	90	0	92	155
08:45 AM	0	0	0	0	0	46	2	48	0	0	3	3	6	80	1	87	138
Total	3	0	19	22	6	204	11	221	3	0	11	14	18	387	1	406	663
Grand Total	5	0	45	50	12	668	121	801	7	1	37	45	140	887	6	1033	1929
Apprch %	10	0	90		1.5	83.4	15.1		15.6	2.2	82.2		13.6	85.9	0.6		
Total %	0.3	0	2.3	2.6	0.6	34.6	6.3	41.5	0.4	0.1	1.9	2.3	7.3	46	0.3	53.6	

	Sherman Road Southbound				Holland Road Westbound				Sherman Road Northbound				Holland Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	6	6	**2**	96	36	134	1	0	**11**	**12**	33	118	1	152	304
07:15 AM	**1**	0	**8**	**9**	2	**161**	**51**	**214**	**2**	0	6	8	**37**	114	0	151	**382**
07:30 AM	1	0	8	9	1	119	15	135	1	0	3	4	24	114	**4**	142	290
07:45 AM	0	0	4	4	1	88	8	97	0	**1**	6	7	28	**154**	0	**182**	290
Total Volume	2	0	26	28	6	464	110	580	4	1	26	31	122	500	5	627	1266
% App. Total	7.1	0	92.9		1	80	19		12.9	3.2	83.9		19.5	79.7	0.8		
PHF	.500	.000	.813	.778	.750	.720	.539	.678	.500	.250	.591	.646	.824	.812	.313	.861	.829

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

File Name : 01_MEN SHHO AM
Site Code : 06717552
Start Date : 8/29/2017
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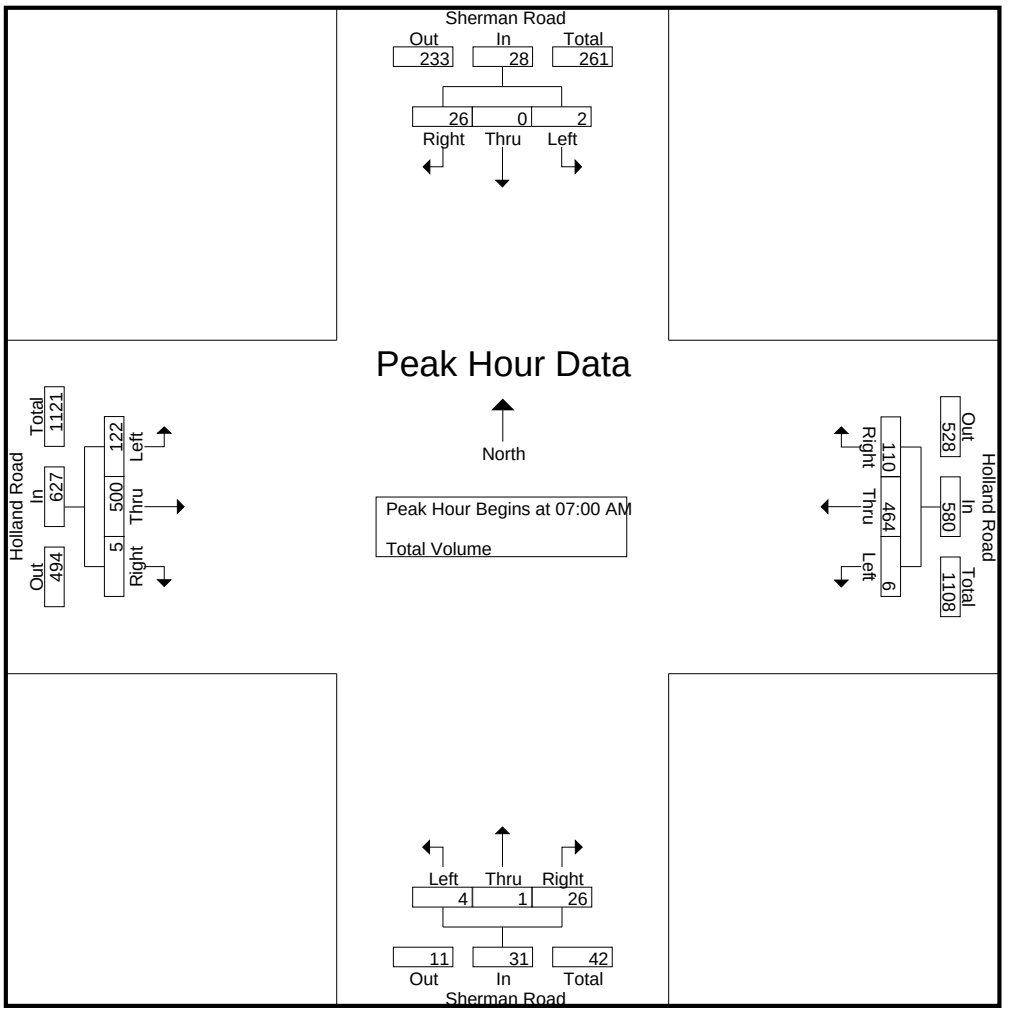

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	**1**	0	8	9	**2**	96	36	134	1	0	**11**	**12**	33	118	1	152
+15 mins.	1	0	8	9	2	**161**	**51**	**214**	**2**	0	6	8	**37**	114	0	151
+30 mins.	0	0	4	4	1	119	15	135	1	0	3	4	24	114	**4**	142
+45 mins.	1	0	**13**	**14**	1	88	8	97	0	**1**	6	7	28	**154**	0	**182**
Total Volume	3	0	33	36	6	464	110	580	4	1	26	31	122	500	5	627
% App. Total	8.3	0	91.7		1	80	19		12.9	3.2	83.9		19.5	79.7	0.8	
PHF	.750	.000	.635	.643	.750	.720	.539	.678	.500	.250	.591	.646	.824	.812	.313	.861

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

File Name : 01_MEN SHHO MD
Site Code : 06717552
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Groups Printed- Total Volume

	Sherman Road Southbound				Holland Road Westbound				Sherman Road Northbound				Holland Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:00 PM	1	1	8	10	4	88	10	102	1	0	4	5	26	60	2	88	205
02:15 PM	2	0	7	9	4	92	13	109	1	0	4	5	17	98	2	117	240
02:30 PM	0	0	8	8	3	102	18	123	2	2	2	6	21	78	0	99	236
02:45 PM	1	0	19	20	8	146	13	167	1	0	2	3	29	83	0	112	302
Total	4	1	42	47	19	428	54	501	5	2	12	19	93	319	4	416	983
03:00 PM	4	1	15	20	3	127	7	137	0	0	1	1	9	64	2	75	233
03:15 PM	2	0	11	13	8	145	6	159	3	0	4	7	3	121	0	124	303
03:30 PM	3	0	11	14	6	123	5	134	1	0	3	4	8	138	2	148	300
03:45 PM	1	0	11	12	6	104	4	114	2	0	5	7	12	113	2	127	260
Total	10	1	48	59	23	499	22	544	6	0	13	19	32	436	6	474	1096
Grand Total	14	2	90	106	42	927	76	1045	11	2	25	38	125	755	10	890	2079
Apprch %	13.2	1.9	84.9		4	88.7	7.3		28.9	5.3	65.8		14	84.8	1.1		
Total %	0.7	0.1	4.3	5.1	2	44.6	3.7	50.3	0.5	0.1	1.2	1.8	6	36.3	0.5	42.8	

	Sherman Road Southbound				Holland Road Westbound				Sherman Road Northbound				Holland Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 02:45 PM																	
02:45 PM	1	0	**19**	**20**	**8**	**146**	**13**	**167**	1	0	2	3	**29**	83	0	112	302
03:00 PM	**4**	**1**	15	20	3	127	7	137	0	0	1	1	9	64	**2**	75	233
03:15 PM	2	0	11	13	8	145	6	159	**3**	0	**4**	**7**	3	121	0	124	**303**
03:30 PM	3	0	11	14	6	123	5	134	1	0	3	4	8	**138**	2	**148**	300
Total Volume	10	1	56	67	25	541	31	597	5	0	10	15	49	406	4	459	1138
% App. Total	14.9	1.5	83.6		4.2	90.6	5.2		33.3	0	66.7		10.7	88.5	0.9		
PHF	.625	.250	.737	.838	.781	.926	.596	.894	.417	.000	.625	.536	.422	.736	.500	.775	.939

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

File Name : 01_MEN SHHO MD
Site Code : 06717552
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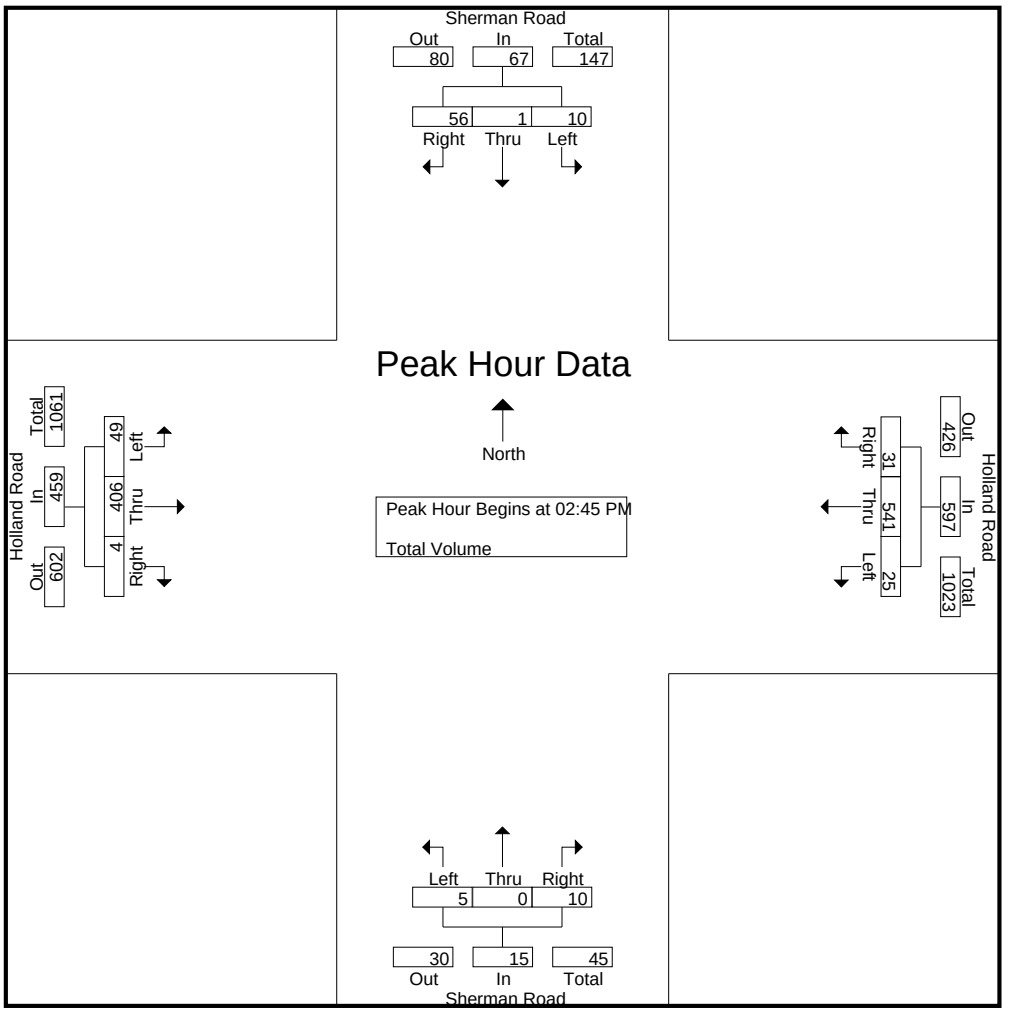

Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	02:45 PM				02:45 PM				02:00 PM				03:00 PM			
+0 mins.	1	0	**19**	**20**	**8**	**146**	**13**	**167**	1	0	**4**	5	9	64	**2**	75
+15 mins.	**4**	**1**	15	20	3	127	7	137	1	0	4	5	3	121	0	124
+30 mins.	2	0	11	13	8	145	6	159	**2**	**2**	2	**6**	8	**138**	2	**148**
+45 mins.	3	0	11	14	6	123	5	134	1	0	2	3	**12**	113	2	127
Total Volume	10	1	56	67	25	541	31	597	5	2	12	19	32	436	6	474
% App. Total	14.9	1.5	83.6		4.2	90.6	5.2		26.3	10.5	63.2		6.8	92	1.3	
PHF	.625	.250	.737	.838	.781	.926	.596	.894	.625	.250	.750	.792	.667	.790	.750	.801

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

File Name : 01_MEN SHHO PM
Site Code : 06717552
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Groups Printed- Total Volume

	Sherman Road Southbound				Holland Road Westbound				Sherman Road Northbound				Holland Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	1	14	15	4	105	2	111	1	1	5	7	4	104	1	109	242
04:15 PM	2	0	7	9	10	123	2	135	0	0	3	3	4	77	0	81	228
04:30 PM	0	0	6	6	5	118	2	125	0	0	3	3	3	96	0	99	233
04:45 PM	0	0	10	10	5	107	2	114	1	0	5	6	11	75	0	86	216
Total	2	1	37	40	24	453	8	485	2	1	16	19	22	352	1	375	919
05:00 PM	2	0	11	13	6	130	8	144	0	0	7	7	4	89	0	93	257
05:15 PM	2	0	10	12	4	115	0	119	1	1	2	4	0	83	1	84	219
05:30 PM	1	0	5	6	5	123	5	133	2	0	3	5	0	95	0	95	239
05:45 PM	1	0	5	6	10	131	4	145	2	0	7	9	0	93	3	96	256
Total	6	0	31	37	25	499	17	541	5	1	19	25	4	360	4	368	971
Grand Total	8	1	68	77	49	952	25	1026	7	2	35	44	26	712	5	743	1890
Apprch %	10.4	1.3	88.3		4.8	92.8	2.4		15.9	4.5	79.5		3.5	95.8	0.7		
Total %	0.4	0.1	3.6	4.1	2.6	50.4	1.3	54.3	0.4	0.1	1.9	2.3	1.4	37.7	0.3	39.3	

	Sherman Road Southbound				Holland Road Westbound				Sherman Road Northbound				Holland Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	**2**	0	**11**	**13**	6	130	**8**	144	0	0	**7**	7	**4**	89	0	93	**257**
05:15 PM	2	0	10	12	4	115	0	119	1	**1**	2	4	0	83	1	84	219
05:30 PM	1	0	5	6	5	123	5	133	**2**	0	3	5	0	**95**	0	95	239
05:45 PM	1	0	5	6	**10**	**131**	4	**145**	2	0	7	**9**	0	93	**3**	**96**	256
Total Volume	6	0	31	37	25	499	17	541	5	1	19	25	4	360	4	368	971
% App. Total	16.2	0	83.8		4.6	92.2	3.1		20	4	76		1.1	97.8	1.1		
PHF	.750	.000	.705	.712	.625	.952	.531	.933	.625	.250	.679	.694	.250	.947	.333	.958	.945

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

File Name : 01_MEN SHHO PM
Site Code : 06717552
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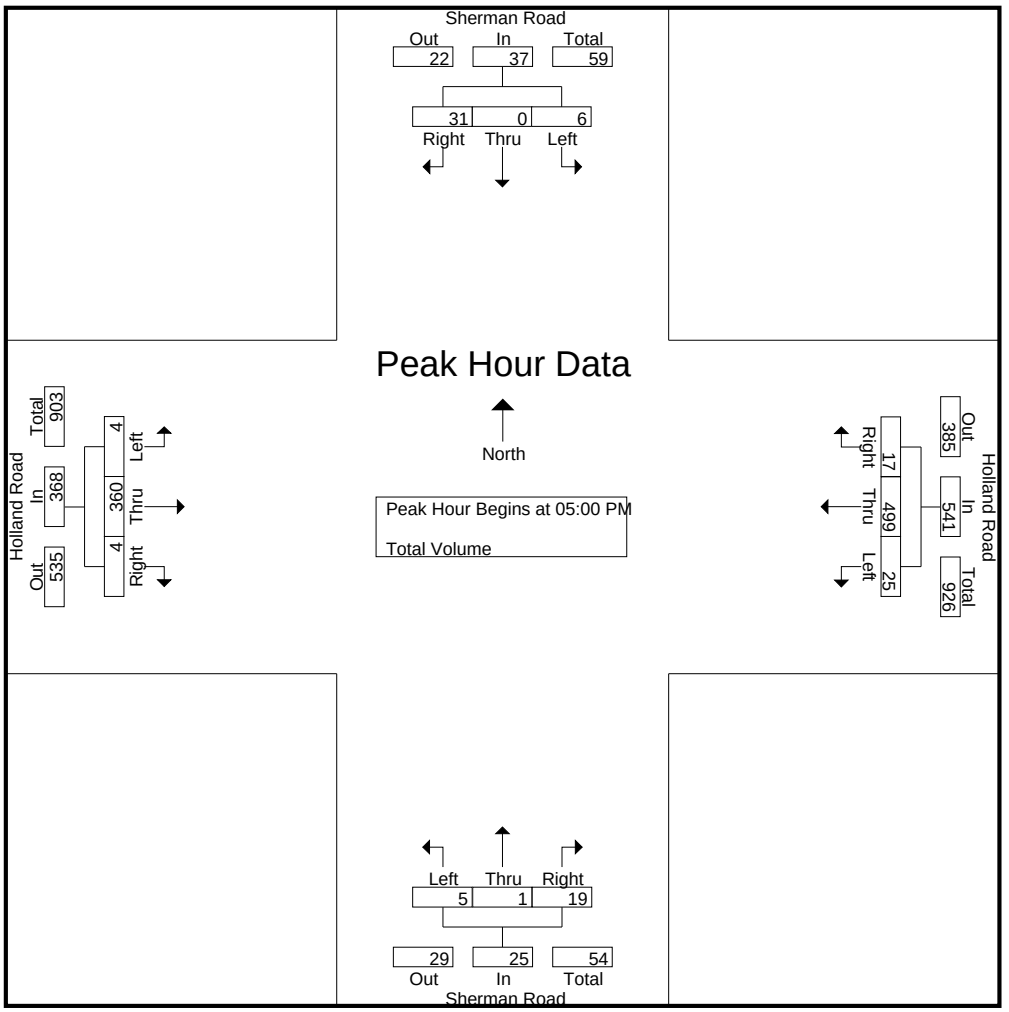

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				05:00 PM				05:00 PM				04:00 PM			
+0 mins.	0	0	6	6	6	130	**8**	144	0	0	**7**	7	4	**104**	**1**	**109**
+15 mins.	0	0	10	10	4	115	0	119	1	**1**	2	4	4	77	0	81
+30 mins.	**2**	0	**11**	**13**	5	123	5	133	**2**	0	3	5	3	96	0	99
+45 mins.	2	0	10	12	**10**	**131**	4	**145**	2	0	7	**9**	**11**	75	0	86
Total Volume	4	0	37	41	25	499	17	541	5	1	19	25	22	352	1	375
% App. Total	9.8	0	90.2		4.6	92.2	3.1		20	4	76		5.9	93.9	0.3	
PHF	.500	.000	.841	.788	.625	.952	.531	.933	.625	.250	.679	.694	.500	.846	.250	.860

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City of Menifee
N/S: Haun Road
E/W: Village Road/Market Place Drive
Weather: Clear

File Name : 11_MEN HADMN AM
Site Code : 06717552
Start Date : 8/29/2017
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Groups Printed- Total Volume

	Haun Road Southbound				Village Drive Westbound				Haun Road Northbound				Market Place Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	18	169	4	191	3	4	10	17	0	108	3	111	1	1	0	2	321
07:15 AM	18	277	9	304	2	0	15	17	4	186	8	198	2	0	1	3	522
07:30 AM	37	191	15	243	2	0	19	21	1	192	10	203	10	1	4	15	482
07:45 AM	43	134	18	195	2	1	24	27	4	229	8	241	6	3	1	10	473
Total	116	771	46	933	9	5	68	82	9	715	29	753	19	5	6	30	1798
08:00 AM	38	83	7	128	5	1	12	18	0	148	3	151	8	1	0	9	306
08:15 AM	34	77	8	119	2	0	21	23	2	92	5	99	8	2	3	13	254
08:30 AM	70	85	14	169	1	1	27	29	5	106	3	114	8	1	2	11	323
08:45 AM	69	112	24	205	3	1	29	33	5	107	3	115	8	1	0	9	362
Total	211	357	53	621	11	3	89	103	12	453	14	479	32	5	5	42	1245
Grand Total	327	1128	99	1554	20	8	157	185	21	1168	43	1232	51	10	11	72	3043
Apprch %	21	72.6	6.4		10.8	4.3	84.9		1.7	94.8	3.5		70.8	13.9	15.3		
Total %	10.7	37.1	3.3	51.1	0.7	0.3	5.2	6.1	0.7	38.4	1.4	40.5	1.7	0.3	0.4	2.4	

	Haun Road Southbound				Village Drive Westbound				Haun Road Northbound				Market Place Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	18	169	4	191	**3**	**4**	10	17	0	108	3	111	1	1	0	2	321
07:15 AM	18	**277**	9	**304**	2	0	15	17	**4**	186	8	198	2	0	1	3	**522**
07:30 AM	37	191	15	243	2	0	19	21	1	192	**10**	203	**10**	1	**4**	**15**	482
07:45 AM	**43**	134	**18**	195	2	1	**24**	**27**	4	**229**	8	**241**	6	**3**	1	10	473
Total Volume	116	771	46	933	9	5	68	82	9	715	29	753	19	5	6	30	1798
% App. Total	12.4	82.6	4.9		11	6.1	82.9		1.2	95	3.9		63.3	16.7	20		
PHF	.674	.696	.639	.767	.750	.313	.708	.759	.563	.781	.725	.781	.475	.417	.375	.500	.861

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City of Menifee
N/S: Haun Road
E/W: Village Road/Market Place Drive
Weather: Clear

File Name : 11_MEN HADMN AM
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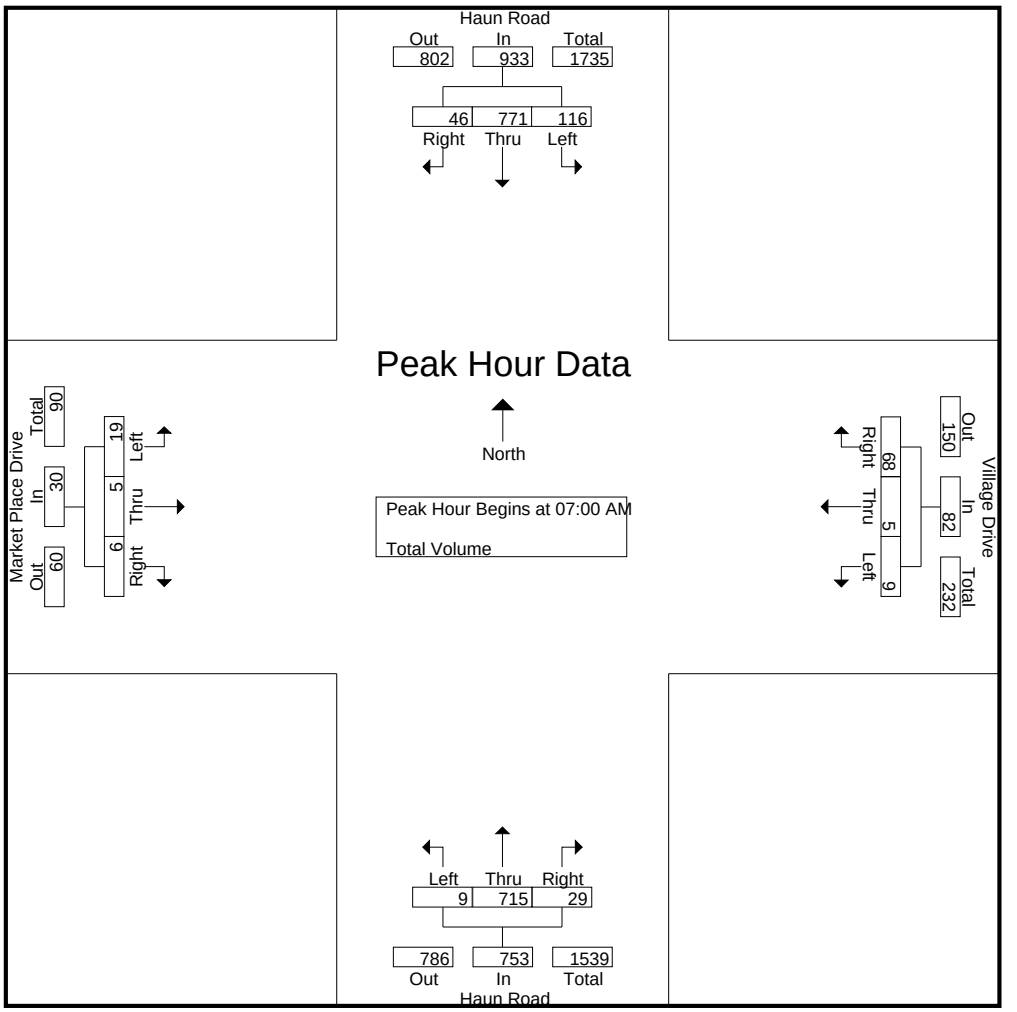

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				08:00 AM				07:15 AM				07:30 AM			
+0 mins.	18	169	4	191	**5**	**1**	12	18	**4**	186	8	198	**10**	1	**4**	**15**
+15 mins.	18	**277**	9	**304**	2	0	21	23	1	192	**10**	203	6	**3**	1	10
+30 mins.	37	191	15	243	1	1	27	29	4	**229**	8	**241**	8	1	0	9
+45 mins.	**43**	134	**18**	195	3	1	**29**	**33**	0	148	3	151	8	2	3	13
Total Volume	116	771	46	933	11	3	89	103	9	755	29	793	32	7	8	47
% App. Total	12.4	82.6	4.9		10.7	2.9	86.4		1.1	95.2	3.7		68.1	14.9	17	
PHF	.674	.696	.639	.767	.550	.750	.767	.780	.563	.824	.725	.823	.800	.583	.500	.783

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City of Menifee
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Weather: Clear

File Name : 11_MEN HADMN PM
Site Code : 06717552
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Groups Printed- Total Volume

	Haun Road Southbound				Village Drive Westbound				Haun Road Northbound				Market Place Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	96	103	44	243	5	4	61	70	4	165	11	180	56	8	18	82	575
04:15 PM	111	108	54	273	12	8	70	90	8	153	2	163	45	5	7	57	583
04:30 PM	97	107	51	255	8	7	78	93	4	134	2	140	56	10	8	74	562
04:45 PM	127	134	57	318	10	5	82	97	9	203	5	217	54	3	4	61	693
Total	431	452	206	1089	35	24	291	350	25	655	20	700	211	26	37	274	2413
05:00 PM	119	154	55	328	4	10	81	95	8	172	5	185	49	5	10	64	672
05:15 PM	105	119	45	269	3	9	99	111	17	161	6	184	51	10	6	67	631
05:30 PM	111	123	67	301	10	5	101	116	13	145	5	163	49	9	9	67	647
05:45 PM	108	122	48	278	6	14	68	88	7	166	13	186	47	9	9	65	617
Total	443	518	215	1176	23	38	349	410	45	644	29	718	196	33	34	263	2567
Grand Total	874	970	421	2265	58	62	640	760	70	1299	49	1418	407	59	71	537	4980
Apprch %	38.6	42.8	18.6		7.6	8.2	84.2		4.9	91.6	3.5		75.8	11	13.2		
Total %	17.6	19.5	8.5	45.5	1.2	1.2	12.9	15.3	1.4	26.1	1	28.5	8.2	1.2	1.4	10.8	

	Haun Road Southbound				Village Drive Westbound				Haun Road Northbound				Market Place Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	**127**	134	57	318	**10**	5	82	97	9	**203**	5	**217**	**54**	3	4	61	**693**
05:00 PM	119	**154**	55	**328**	4	**10**	81	95	8	172	5	185	49	5	**10**	64	672
05:15 PM	105	119	45	269	3	9	99	111	**17**	161	**6**	184	51	**10**	6	**67**	631
05:30 PM	111	123	**67**	301	10	5	**101**	**116**	13	145	5	163	49	9	9	67	647
Total Volume	462	530	224	1216	27	29	363	419	47	681	21	749	203	27	29	259	2643
% App. Total	38	43.6	18.4		6.4	6.9	86.6		6.3	90.9	2.8		78.4	10.4	11.2		
PHF	.909	.860	.836	.927	.675	.725	.899	.903	.691	.839	.875	.863	.940	.675	.725	.966	.953

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City of Menifee
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File Name : 11_MEN HADMN PM
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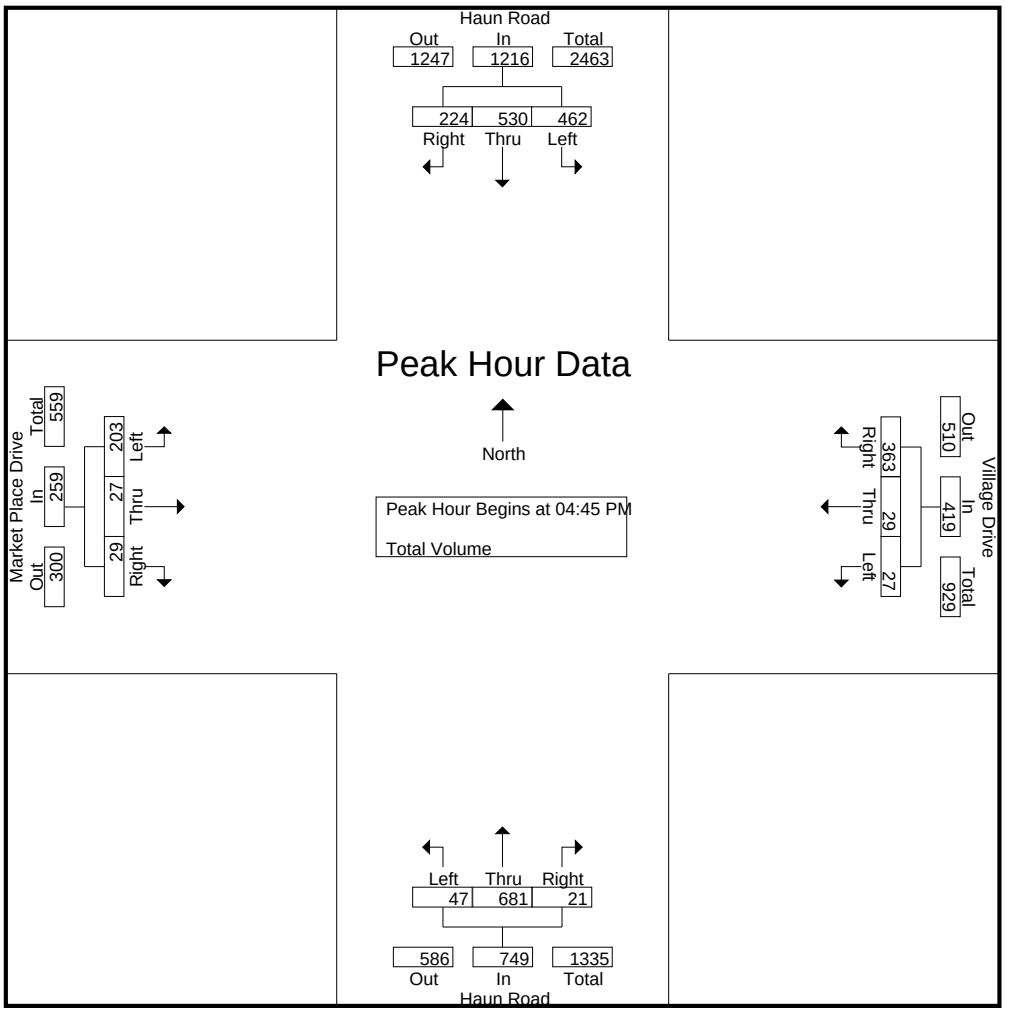

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:00 PM			
+0 mins.	**127**	134	57	318	**10**	5	82	97	9	**203**	5	**217**	**56**	8	**18**	**82**
+15 mins.	119	**154**	55	**328**	4	**10**	81	95	8	172	5	185	45	5	7	57
+30 mins.	105	119	45	269	3	9	99	111	**17**	161	**6**	184	56	**10**	8	74
+45 mins.	111	123	**67**	301	10	5	**101**	**116**	13	145	5	163	54	3	4	61
Total Volume	462	530	224	1216	27	29	363	419	47	681	21	749	211	26	37	274
% App. Total	38	43.6	18.4		6.4	6.9	86.6		6.3	90.9	2.8		77	9.5	13.5	
PHF	.909	.860	.836	.927	.675	.725	.899	.903	.691	.839	.875	.863	.942	.650	.514	.835

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City of Menifee
N/S: Haun Road
E/W: Countryside Marketplace South DW
Weather: Clear

File Name : 10_MEN HADMS AM
Site Code : 06717552
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Groups Printed- Total Volume

	Haun Road Southbound				Countryside Marketplace South Driveway Westbound				Haun Road Northbound				Aldi's South Driveway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	8	163	0	171	0	0	11	11	0	100	1	101	0	0	1	1	284
07:15 AM	18	299	0	317	0	0	9	9	3	178	3	184	0	0	1	1	511
07:30 AM	27	173	0	200	1	0	16	17	3	184	5	192	0	0	4	4	413
07:45 AM	33	115	0	148	3	0	22	25	1	229	6	236	2	0	3	5	414
Total	86	750	0	836	4	0	58	62	7	691	15	713	2	0	9	11	1622
08:00 AM	27	78	0	105	1	1	24	26	3	137	12	152	1	0	3	4	287
08:15 AM	26	69	0	95	0	0	28	28	2	76	10	88	0	0	2	2	213
08:30 AM	46	63	0	109	1	0	31	32	4	86	3	93	1	2	2	5	239
08:45 AM	44	78	0	122	0	0	29	29	7	86	6	99	0	0	3	3	253
Total	143	288	0	431	2	1	112	115	16	385	31	432	2	2	10	14	992
Grand Total	229	1038	0	1267	6	1	170	177	23	1076	46	1145	4	2	19	25	2614
Apprch %	18.1	81.9	0		3.4	0.6	96		2	94	4		16	8	76		
Total %	8.8	39.7	0	48.5	0.2	0	6.5	6.8	0.9	41.2	1.8	43.8	0.2	0.1	0.7	1	

	Haun Road Southbound				Countryside Marketplace South Driveway Westbound				Haun Road Northbound				Aldi's South Driveway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	18	**299**	0	**317**	0	0	9	9	**3**	178	3	184	0	0	1	1	**511**
07:30 AM	27	173	0	200	1	0	16	17	3	184	5	192	0	0	**4**	4	413
07:45 AM	**33**	115	0	148	**3**	0	22	25	1	**229**	6	**236**	**2**	0	3	**5**	414
08:00 AM	27	78	0	105	1	**1**	**24**	**26**	3	137	**12**	152	1	0	3	4	287
Total Volume	105	665	0	770	5	1	71	77	10	728	26	764	3	0	11	14	1625
% App. Total	13.6	86.4	0		6.5	1.3	92.2		1.3	95.3	3.4		21.4	0	78.6		
PHF	.795	.556	.000	.607	.417	.250	.740	.740	.833	.795	.542	.809	.375	.000	.688	.700	.795

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File Name : 10_MEN HADMS AM
Site Code : 06717552
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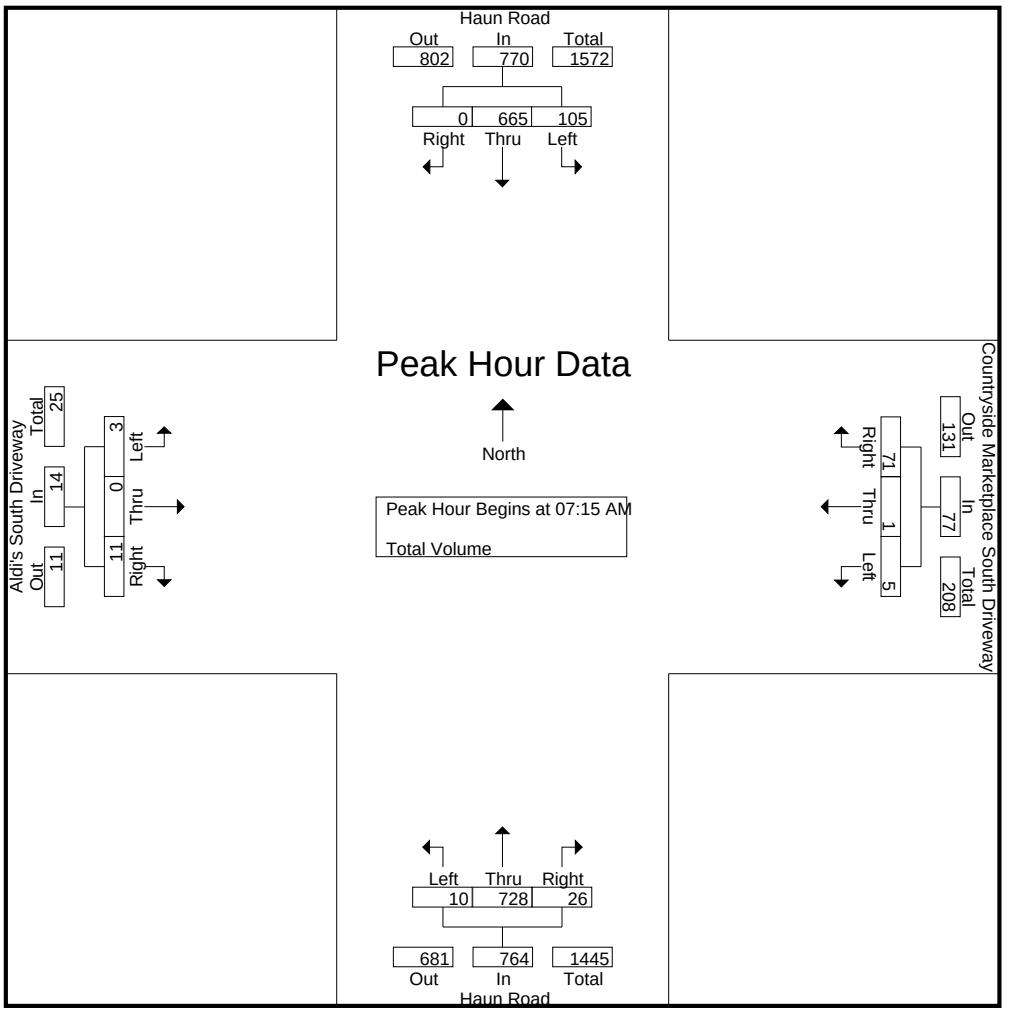

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				08:00 AM				07:15 AM				07:45 AM			
+0 mins.	8	163	0	171	**1**	**1**	24	26	**3**	178	3	184	**2**	0	**3**	**5**
+15 mins.	18	**299**	0	**317**	0	0	28	28	3	184	5	192	1	0	3	4
+30 mins.	27	173	0	200	1	0	**31**	**32**	1	**229**	6	**236**	0	0	2	2
+45 mins.	**33**	115	0	148	0	0	29	29	3	137	**12**	152	1	**2**	2	5
Total Volume	86	750	0	836	2	1	112	115	10	728	26	764	4	2	10	16
% App. Total	10.3	89.7	0		1.7	0.9	97.4		1.3	95.3	3.4		25	12.5	62.5	
PHF	.652	.627	.000	.659	.500	.250	.903	.898	.833	.795	.542	.809	.500	.250	.833	.800

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City of Menifee
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Weather: Clear

File Name : 10_MEN HADMS PM
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Groups Printed- Total Volume

	Haun Road Southbound				Countryside Marketplace South Driveway Westbound				Haun Road Northbound				Aldi's South Driveway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	39	118	0	157	11	2	57	70	14	128	15	157	9	1	14	24	408
04:15 PM	56	96	0	152	17	1	66	84	18	96	15	129	11	4	13	28	393
04:30 PM	57	93	0	150	11	5	51	67	15	101	10	126	11	2	10	23	366
04:45 PM	72	89	0	161	5	1	64	70	18	125	20	163	10	1	18	29	423
Total	224	396	0	620	44	9	238	291	65	450	60	575	41	8	55	104	1590
05:00 PM	64	108	0	172	9	1	63	73	14	123	19	156	10	3	11	24	425
05:15 PM	73	76	0	149	9	4	72	85	6	108	16	130	3	2	12	17	381
05:30 PM	70	87	0	157	16	1	59	76	13	122	14	149	4	1	22	27	409
05:45 PM	67	88	0	155	14	5	86	105	16	103	15	134	6	2	13	21	415
Total	274	359	0	633	48	11	280	339	49	456	64	569	23	8	58	89	1630
Grand Total	498	755	0	1253	92	20	518	630	114	906	124	1144	64	16	113	193	3220
Apprch %	39.7	60.3	0		14.6	3.2	82.2		10	79.2	10.8		33.2	8.3	58.5		
Total %	15.5	23.4	0	38.9	2.9	0.6	16.1	19.6	3.5	28.1	3.9	35.5	2	0.5	3.5	6	

	Haun Road Southbound				Countryside Marketplace South Driveway Westbound				Haun Road Northbound				Aldi's South Driveway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	72	89	0	161	5	1	64	70	**18**	**125**	**20**	**163**	**10**	1	18	**29**	423
05:00 PM	64	**108**	0	**172**	9	1	63	73	14	123	19	156	10	**3**	11	24	**425**
05:15 PM	**73**	76	0	149	9	**4**	**72**	**85**	6	108	16	130	3	2	12	17	381
05:30 PM	70	87	0	157	**16**	1	59	76	13	122	14	149	4	1	**22**	27	409
Total Volume	279	360	0	639	39	7	258	304	51	478	69	598	27	7	63	97	1638
% App. Total	43.7	56.3	0		12.8	2.3	84.9		8.5	79.9	11.5		27.8	7.2	64.9		
PHF	.955	.833	.000	.929	.609	.438	.896	.894	.708	.956	.863	.917	.675	.583	.716	.836	.964

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City of Menifee
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File Name : 10_MEN HADMS PM
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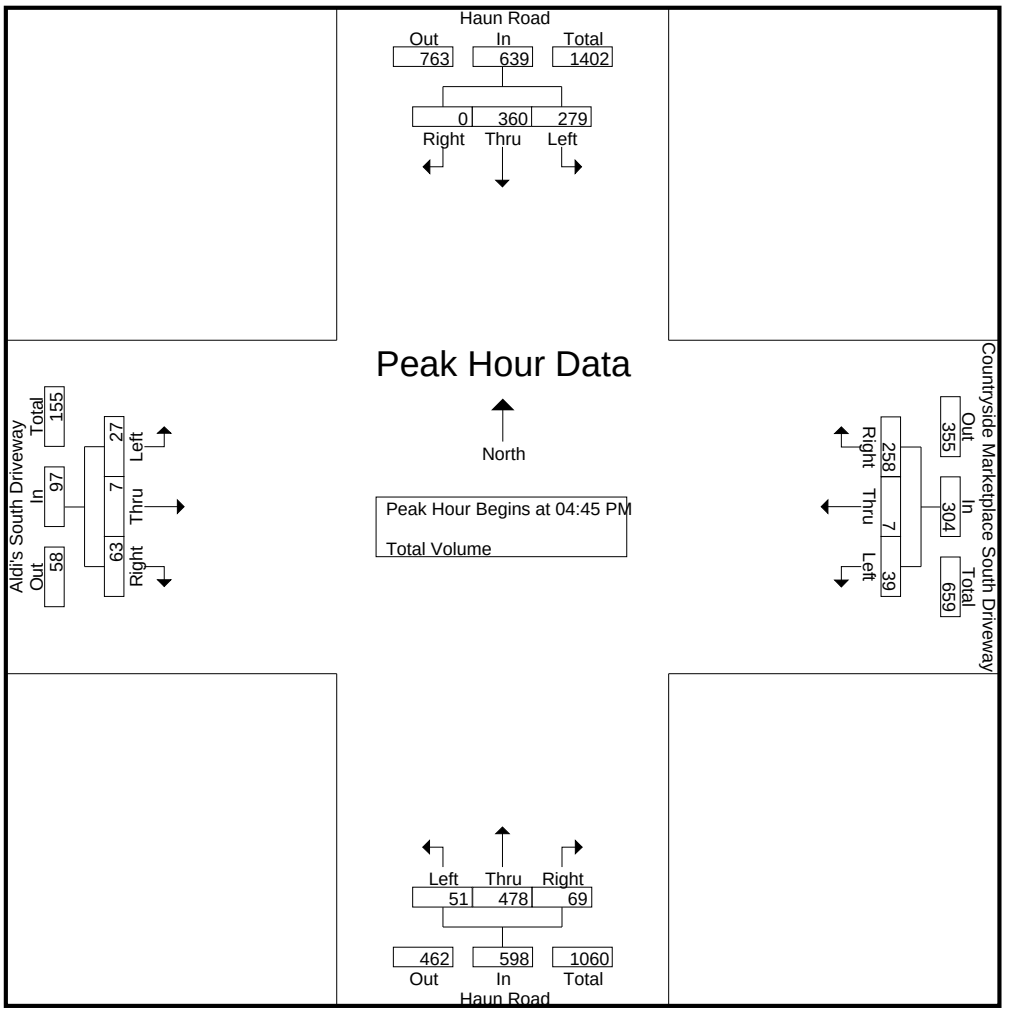

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				05:00 PM				04:45 PM				04:00 PM			
+0 mins.	72	89	0	161	9	1	63	73	**18**	**125**	**20**	**163**	9	1	14	24
+15 mins.	64	**108**	0	**172**	9	4	72	85	14	123	19	156	**11**	**4**	13	28
+30 mins.	**73**	76	0	149	**16**	1	59	76	6	108	16	130	11	2	10	23
+45 mins.	70	87	0	157	14	**5**	**86**	**105**	13	122	14	149	10	1	**18**	**29**
Total Volume	279	360	0	639	48	11	280	339	51	478	69	598	41	8	55	104
% App. Total	43.7	56.3	0		14.2	3.2	82.6		8.5	79.9	11.5		39.4	7.7	52.9	
PHF	.955	.833	.000	.929	.750	.550	.814	.807	.708	.956	.863	.917	.932	.500	.764	.897

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City of Menifee
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Site Code : 06717552
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Groups Printed- Total Volume

	Haun Road Southbound				La Piedra Road Westbound				Haun Road Northbound				La Piedra Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	4	68	56	128	4	2	0	6	3	74	8	85	18	2	14	34	253
07:15 AM	13	120	131	264	5	0	3	8	10	83	13	106	80	11	53	144	522
07:30 AM	6	94	95	195	6	8	3	17	7	99	10	116	58	14	37	109	437
07:45 AM	5	42	52	99	8	4	4	16	4	156	15	175	53	10	30	93	383
Total	28	324	334	686	23	14	10	47	24	412	46	482	209	37	134	380	1595
08:00 AM	3	35	24	62	6	1	3	10	2	94	19	115	40	4	15	59	246
08:15 AM	10	36	7	53	16	2	7	25	1	73	18	92	11	0	4	15	185
08:30 AM	3	38	3	44	10	1	9	20	1	65	19	85	6	0	4	10	159
08:45 AM	4	39	10	53	12	0	8	20	0	57	11	68	5	0	1	6	147
Total	20	148	44	212	44	4	27	75	4	289	67	360	62	4	24	90	737
Grand Total	48	472	378	898	67	18	37	122	28	701	113	842	271	41	158	470	2332
Apprch %	5.3	52.6	42.1		54.9	14.8	30.3		3.3	83.3	13.4		57.7	8.7	33.6		
Total %	2.1	20.2	16.2	38.5	2.9	0.8	1.6	5.2	1.2	30.1	4.8	36.1	11.6	1.8	6.8	20.2	

	Haun Road Southbound				La Piedra Road Westbound				Haun Road Northbound				La Piedra Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	4	68	56	128	4	2	0	6	3	74	8	85	18	2	14	34	253
07:15 AM	**13**	**120**	**131**	**264**	5	0	3	8	**10**	83	13	106	**80**	11	**53**	**144**	**522**
07:30 AM	6	94	95	195	6	**8**	3	**17**	7	99	10	116	58	**14**	37	109	437
07:45 AM	5	42	52	99	**8**	4	**4**	16	4	**156**	**15**	**175**	53	10	30	93	383
Total Volume	28	324	334	686	23	14	10	47	24	412	46	482	209	37	134	380	1595
% App. Total	4.1	47.2	48.7		48.9	29.8	21.3		5	85.5	9.5		55	9.7	35.3		
PHF	.538	.675	.637	.650	.719	.438	.625	.691	.600	.660	.767	.689	.653	.661	.632	.660	.764

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City of Menifee
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File Name : 09_MEN HALP AM
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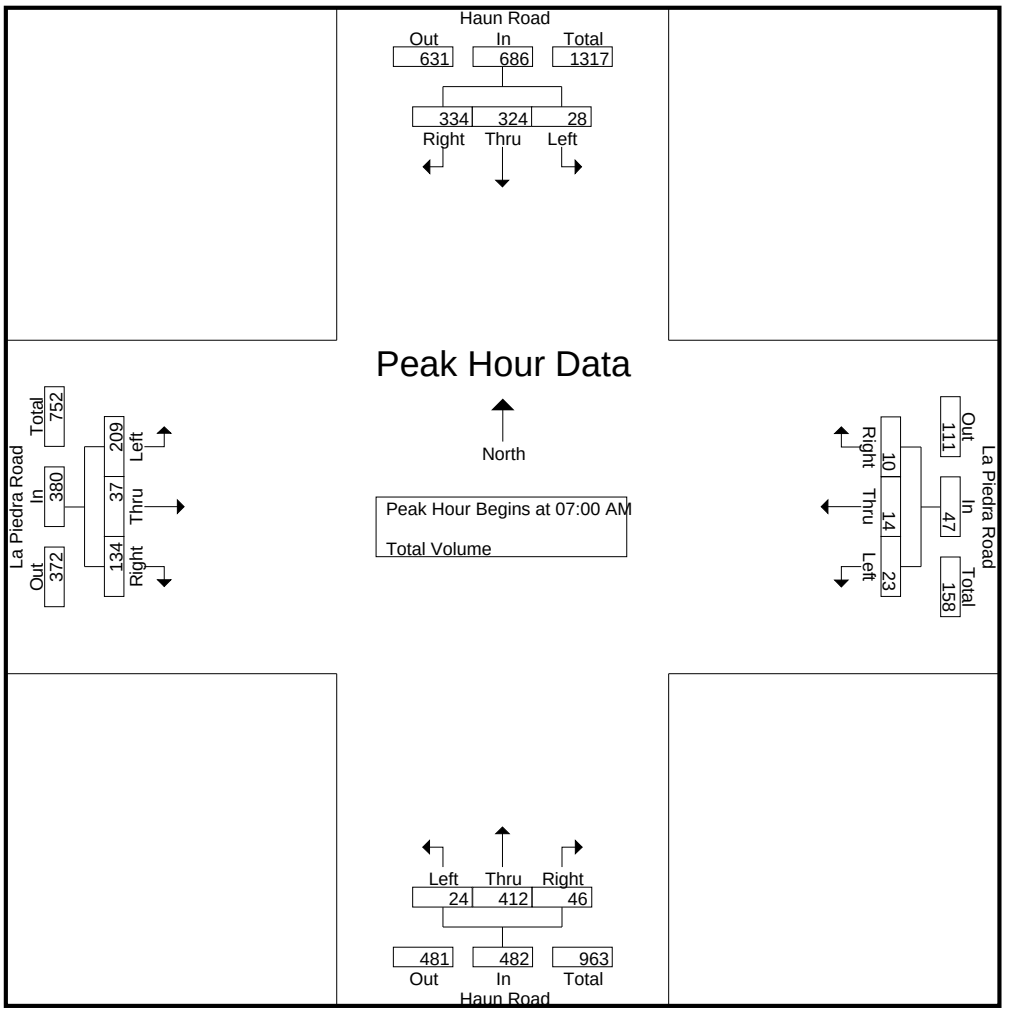

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				08:00 AM				07:15 AM				07:15 AM			
+0 mins.	4	68	56	128	6	1	3	10	**10**	83	13	106	**80**	11	**53**	**144**
+15 mins.	**13**	**120**	**131**	**264**	**16**	**2**	7	**25**	7	99	10	116	58	**14**	37	109
+30 mins.	6	94	95	195	10	1	**9**	20	4	**156**	15	**175**	53	10	30	93
+45 mins.	5	42	52	99	12	0	8	20	2	94	**19**	115	40	4	15	59
Total Volume	28	324	334	686	44	4	27	75	23	432	57	512	231	39	135	405
% App. Total	4.1	47.2	48.7		58.7	5.3	36		4.5	84.4	11.1		57	9.6	33.3	
PHF	.538	.675	.637	.650	.688	.500	.750	.750	.575	.692	.750	.731	.722	.696	.637	.703

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Groups Printed- Total Volume

	Haun Road Southbound				La Piedra Road Westbound				Haun Road Northbound				La Piedra Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:00 PM	5	59	39	103	22	6	16	44	8	65	22	95	6	1	6	13	255
02:15 PM	2	60	41	103	24	4	14	42	4	79	23	106	35	10	29	74	325
02:30 PM	1	75	44	120	29	13	15	57	3	73	24	100	39	9	28	76	353
02:45 PM	12	92	49	153	32	11	9	52	5	83	26	114	48	7	29	84	403
Total	20	286	173	479	107	34	54	195	20	300	95	415	128	27	92	247	1336
03:00 PM	2	92	23	117	33	7	19	59	1	56	23	80	44	11	25	80	336
03:15 PM	3	97	14	114	32	6	12	50	3	140	25	168	18	5	10	33	365
03:30 PM	4	79	21	104	31	4	7	42	1	168	23	192	25	6	5	36	374
03:45 PM	5	86	21	112	24	4	7	35	1	138	22	161	21	4	2	27	335
Total	14	354	79	447	120	21	45	186	6	502	93	601	108	26	42	176	1410
Grand Total	34	640	252	926	227	55	99	381	26	802	188	1016	236	53	134	423	2746
Apprch %	3.7	69.1	27.2		59.6	14.4	26		2.6	78.9	18.5		55.8	12.5	31.7		
Total %	1.2	23.3	9.2	33.7	8.3	2	3.6	13.9	0.9	29.2	6.8	37	8.6	1.9	4.9	15.4	

	Haun Road Southbound				La Piedra Road Westbound				Haun Road Northbound				La Piedra Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 02:45 PM																	
02:45 PM	**12**	92	**49**	**153**	32	**11**	9	52	**5**	83	**26**	114	**48**	7	**29**	**84**	**403**
03:00 PM	2	92	23	117	**33**	7	**19**	**59**	1	56	23	80	44	**11**	25	80	336
03:15 PM	3	**97**	14	114	32	6	12	50	3	140	25	168	18	5	10	33	365
03:30 PM	4	79	21	104	31	4	7	42	1	**168**	23	**192**	25	6	5	36	374
Total Volume	21	360	107	488	128	28	47	203	10	447	97	554	135	29	69	233	1478
% App. Total	4.3	73.8	21.9		63.1	13.8	23.2		1.8	80.7	17.5		57.9	12.4	29.6		
PHF	.438	.928	.546	.797	.970	.636	.618	.860	.500	.665	.933	.721	.703	.659	.595	.693	.917

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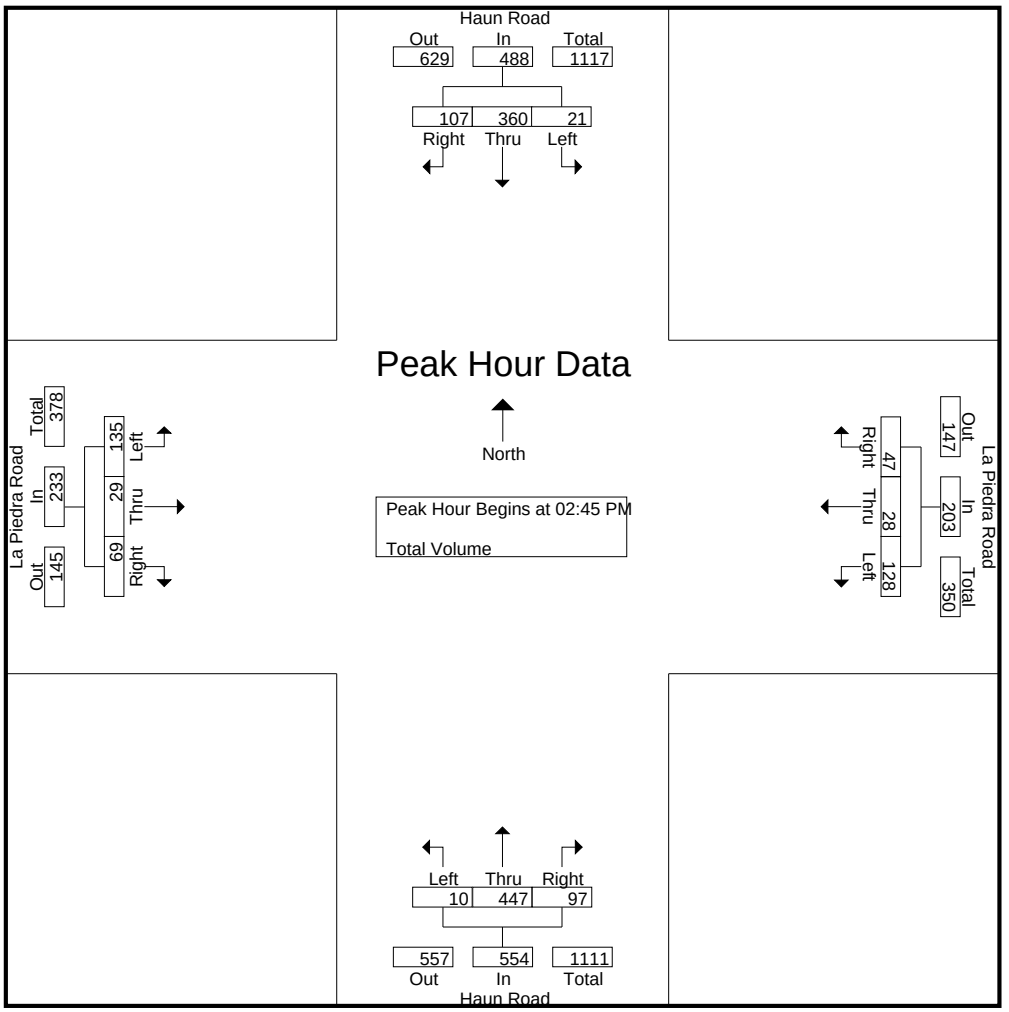

Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	02:30 PM				02:30 PM				03:00 PM				02:15 PM			
+0 mins.	1	75	44	120	29	**13**	15	57	1	56	23	80	35	10	**29**	74
+15 mins.	**12**	92	**49**	**153**	32	11	9	52	**3**	140	**25**	168	39	9	28	76
+30 mins.	2	92	23	117	**33**	7	**19**	**59**	1	**168**	23	**192**	**48**	7	29	**84**
+45 mins.	3	**97**	14	114	32	6	12	50	1	138	22	161	44	**11**	25	80
Total Volume	18	356	130	504	126	37	55	218	6	502	93	601	166	37	111	314
% App. Total	3.6	70.6	25.8		57.8	17	25.2		1	83.5	15.5		52.9	11.8	35.4	
PHF	.375	.918	.663	.824	.955	.712	.724	.924	.500	.747	.930	.783	.865	.841	.957	.935

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Groups Printed- Total Volume

	Haun Road Southbound				La Piedra Road Westbound				Haun Road Northbound				La Piedra Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	5	92	13	110	28	2	9	39	0	101	23	124	15	3	8	26	299
04:15 PM	3	97	15	115	40	1	11	52	0	76	29	105	17	2	2	21	293
04:30 PM	2	79	13	94	24	1	7	32	2	83	21	106	15	1	7	23	255
04:45 PM	5	73	13	91	21	2	7	30	0	83	20	103	40	4	14	58	282
Total	15	341	54	410	113	6	34	153	2	343	93	438	87	10	31	128	1129
05:00 PM	3	94	15	112	22	4	13	39	1	83	20	104	16	1	15	32	287
05:15 PM	4	81	9	94	20	3	11	34	0	80	18	98	9	4	3	16	242
05:30 PM	7	88	7	102	22	3	16	41	1	96	18	115	7	1	1	9	267
05:45 PM	1	86	2	89	22	2	10	34	2	94	23	119	1	0	1	2	244
Total	15	349	33	397	86	12	50	148	4	353	79	436	33	6	20	59	1040
Grand Total	30	690	87	807	199	18	84	301	6	696	172	874	120	16	51	187	2169
Apprch %	3.7	85.5	10.8		66.1	6	27.9		0.7	79.6	19.7		64.2	8.6	27.3		
Total %	1.4	31.8	4	37.2	9.2	0.8	3.9	13.9	0.3	32.1	7.9	40.3	5.5	0.7	2.4	8.6	

	Haun Road Southbound				La Piedra Road Westbound				Haun Road Northbound				La Piedra Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	**5**	92	13	110	28	**2**	9	39	0	**101**	23	**124**	15	3	8	26	**299**
04:15 PM	3	**97**	**15**	**115**	**40**	1	**11**	**52**	0	76	**29**	105	17	2	2	21	293
04:30 PM	2	79	13	94	24	1	7	32	**2**	83	21	106	15	1	7	23	255
04:45 PM	5	73	13	91	21	2	7	30	0	83	20	103	**40**	**4**	**14**	**58**	282
Total Volume	15	341	54	410	113	6	34	153	2	343	93	438	87	10	31	128	1129
% App. Total	3.7	83.2	13.2		73.9	3.9	22.2		0.5	78.3	21.2		68	7.8	24.2		
PHF	.750	.879	.900	.891	.706	.750	.773	.736	.250	.849	.802	.883	.544	.625	.554	.552	.944

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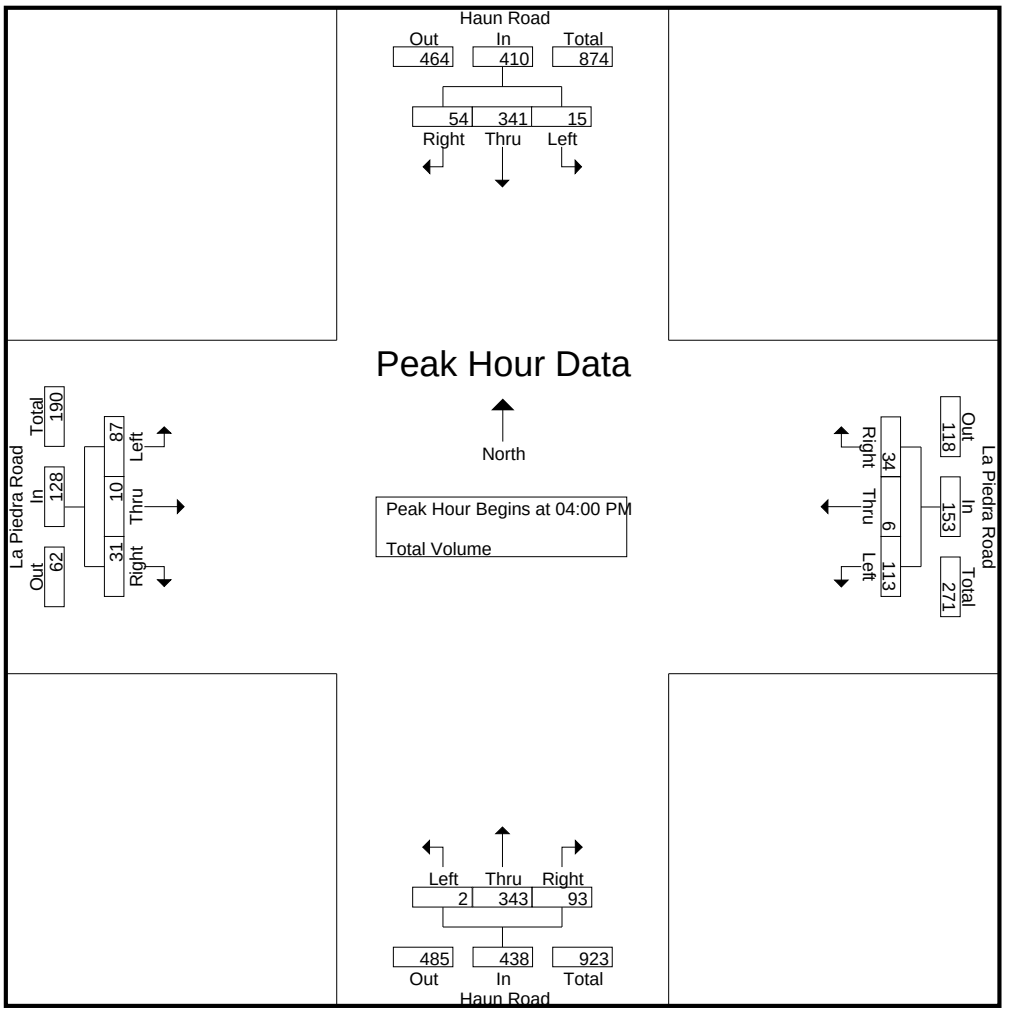
City of Menifee
N/S: Haun Road
E/W: La Piedra Road
Weather: Clear

File Name : 09_MEN HALP PM
Site Code : 06717552
Start Date : 8/29/2017
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:

	04:15 PM				04:00 PM				04:00 PM				04:15 PM			
+0 mins.	3	**97**	**15**	**115**	28	**2**	9	39	0	**101**	23	**124**	17	2	2	21
+15 mins.	2	79	13	94	**40**	1	**11**	**52**	0	76	**29**	105	15	1	7	23
+30 mins.	**5**	73	13	91	24	1	7	32	**2**	83	21	106	**40**	**4**	14	**58**
+45 mins.	3	94	15	112	21	2	7	30	0	83	20	103	16	1	**15**	32
Total Volume	13	343	56	412	113	6	34	153	2	343	93	438	88	8	38	134
% App. Total	3.2	83.3	13.6		73.9	3.9	22.2		0.5	78.3	21.2		65.7	6	28.4	
PHF	.650	.884	.933	.896	.706	.750	.773	.736	.250	.849	.802	.883	.550	.500	.633	.578

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

File Name : 08_MEN HAHO AM
Site Code : 06717552
Start Date : 8/29/2017
Page No : 1

Groups Printed- Total Volume

	Haun Road Southbound				Holland Road Westbound				Haun Road Northbound				Holland Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	1	24	58	83	0	2	0	2	72	24	0	96	61	0	62	123	304
07:15 AM	1	63	113	177	0	1	3	4	99	41	1	141	61	0	61	122	444
07:30 AM	4	56	91	151	0	1	2	3	48	59	0	107	61	0	60	121	382
07:45 AM	3	36	51	90	0	2	2	4	44	63	1	108	109	2	45	156	358
Total	9	179	313	501	0	6	7	13	263	187	2	452	292	2	228	522	1488
08:00 AM	2	25	29	56	1	0	0	1	30	36	1	67	73	2	44	119	243
08:15 AM	1	23	37	61	1	3	2	6	19	34	0	53	52	2	54	108	228
08:30 AM	0	21	31	52	0	1	2	3	24	25	0	49	59	0	40	99	203
08:45 AM	0	27	27	54	0	0	1	1	24	29	0	53	42	1	41	84	192
Total	3	96	124	223	2	4	5	11	97	124	1	222	226	5	179	410	866
Grand Total	12	275	437	724	2	10	12	24	360	311	3	674	518	7	407	932	2354
Apprch %	1.7	38	60.4		8.3	41.7	50		53.4	46.1	0.4		55.6	0.8	43.7		
Total %	0.5	11.7	18.6	30.8	0.1	0.4	0.5	1	15.3	13.2	0.1	28.6	22	0.3	17.3	39.6	

	Haun Road Southbound				Holland Road Westbound				Haun Road Northbound				Holland Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	1	24	58	83	0	**2**	0	2	72	24	0	96	61	0	**62**	123	304
07:15 AM	1	**63**	**113**	**177**	0	1	**3**	**4**	**99**	41	**1**	**141**	61	0	61	122	**444**
07:30 AM	**4**	56	91	151	0	1	2	3	48	59	0	107	61	0	60	121	382
07:45 AM	3	36	51	90	0	2	2	4	44	**63**	1	108	**109**	**2**	45	**156**	358
Total Volume	9	179	313	501	0	6	7	13	263	187	2	452	292	2	228	522	1488
% App. Total	1.8	35.7	62.5		0	46.2	53.8		58.2	41.4	0.4		55.9	0.4	43.7		
PHF	.563	.710	.692	.708	.000	.750	.583	.813	.664	.742	.500	.801	.670	.250	.919	.837	.838

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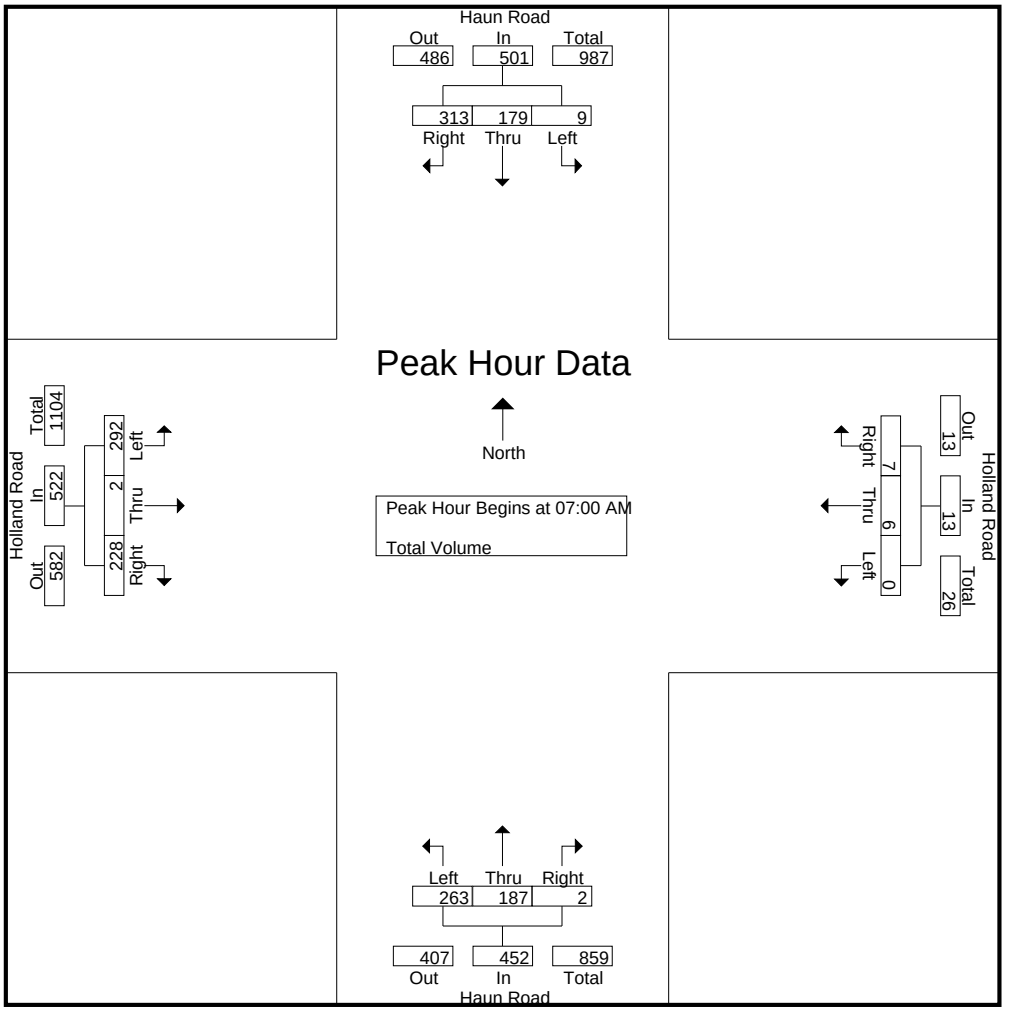
City of Menifee
N/S: Haun Road
E/W: Holland Road
Weather: Clear

File Name : 08_MEN HAHO AM
Site Code : 06717552
Start Date : 8/29/2017
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				07:30 AM				07:00 AM				07:00 AM			
+0 mins.	1	24	58	83	0	1	**2**	3	72	24	0	96	61	0	**62**	123
+15 mins.	1	**63**	**113**	**177**	0	2	2	4	**99**	41	**1**	**141**	61	0	61	122
+30 mins.	**4**	56	91	151	**1**	0	0	1	48	59	0	107	61	0	60	121
+45 mins.	3	36	51	90	1	**3**	2	**6**	44	**63**	1	108	**109**	**2**	45	**156**
Total Volume	9	179	313	501	2	6	6	14	263	187	2	452	292	2	228	522
% App. Total	1.8	35.7	62.5		14.3	42.9	42.9		58.2	41.4	0.4		55.9	0.4	43.7	
PHF	.563	.710	.692	.708	.500	.500	.750	.583	.664	.742	.500	.801	.670	.250	.919	.837

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

File Name : 08_MEN HAHO MD
Site Code : 06717552
Start Date : 8/29/2017
Page No : 1

Groups Printed- Total Volume

	Haun Road Southbound				Holland Road Westbound				Haun Road Northbound				Holland Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:00 PM	0	42	43	85	1	2	2	5	63	56	0	119	38	1	28	67	276
02:15 PM	1	54	68	123	0	0	0	0	42	54	2	98	54	0	46	100	321
02:30 PM	2	62	76	140	2	1	2	5	45	46	0	91	53	1	32	86	322
02:45 PM	3	78	108	189	0	2	2	4	66	55	0	121	54	0	30	84	398
Total	6	236	295	537	3	5	6	14	216	211	2	429	199	2	136	337	1317
03:00 PM	1	71	82	154	2	0	1	3	51	41	1	93	39	2	30	71	321
03:15 PM	1	48	92	141	0	1	7	8	76	81	0	157	91	1	25	117	423
03:30 PM	1	42	70	113	0	2	4	6	64	100	3	167	93	1	44	138	424
03:45 PM	0	56	53	109	1	0	1	2	56	42	0	98	101	0	25	126	335
Total	3	217	297	517	3	3	13	19	247	264	4	515	324	4	124	452	1503
Grand Total	9	453	592	1054	6	8	19	33	463	475	6	944	523	6	260	789	2820
Apprch %	0.9	43	56.2		18.2	24.2	57.6		49	50.3	0.6		66.3	0.8	33		
Total %	0.3	16.1	21	37.4	0.2	0.3	0.7	1.2	16.4	16.8	0.2	33.5	18.5	0.2	9.2	28	

	Haun Road Southbound				Holland Road Westbound				Haun Road Northbound				Holland Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 02:45 PM																	
02:45 PM	**3**	**78**	**108**	**189**	0	**2**	2	4	66	55	0	121	54	0	30	84	398
03:00 PM	1	71	82	154	**2**	0	1	3	51	41	1	93	39	**2**	30	71	321
03:15 PM	1	48	92	141	0	1	**7**	**8**	**76**	81	0	157	91	1	25	117	423
03:30 PM	1	42	70	113	0	2	4	6	64	**100**	**3**	**167**	**93**	1	**44**	**138**	**424**
Total Volume	6	239	352	597	2	5	14	21	257	277	4	538	277	4	129	410	1566
% App. Total	1	40	59		9.5	23.8	66.7		47.8	51.5	0.7		67.6	1	31.5		
PHF	.500	.766	.815	.790	.250	.625	.500	.656	.845	.693	.333	.805	.745	.500	.733	.743	.923

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

File Name : 08_MEN HAHO MD
Site Code : 06717552
Start Date : 8/29/2017
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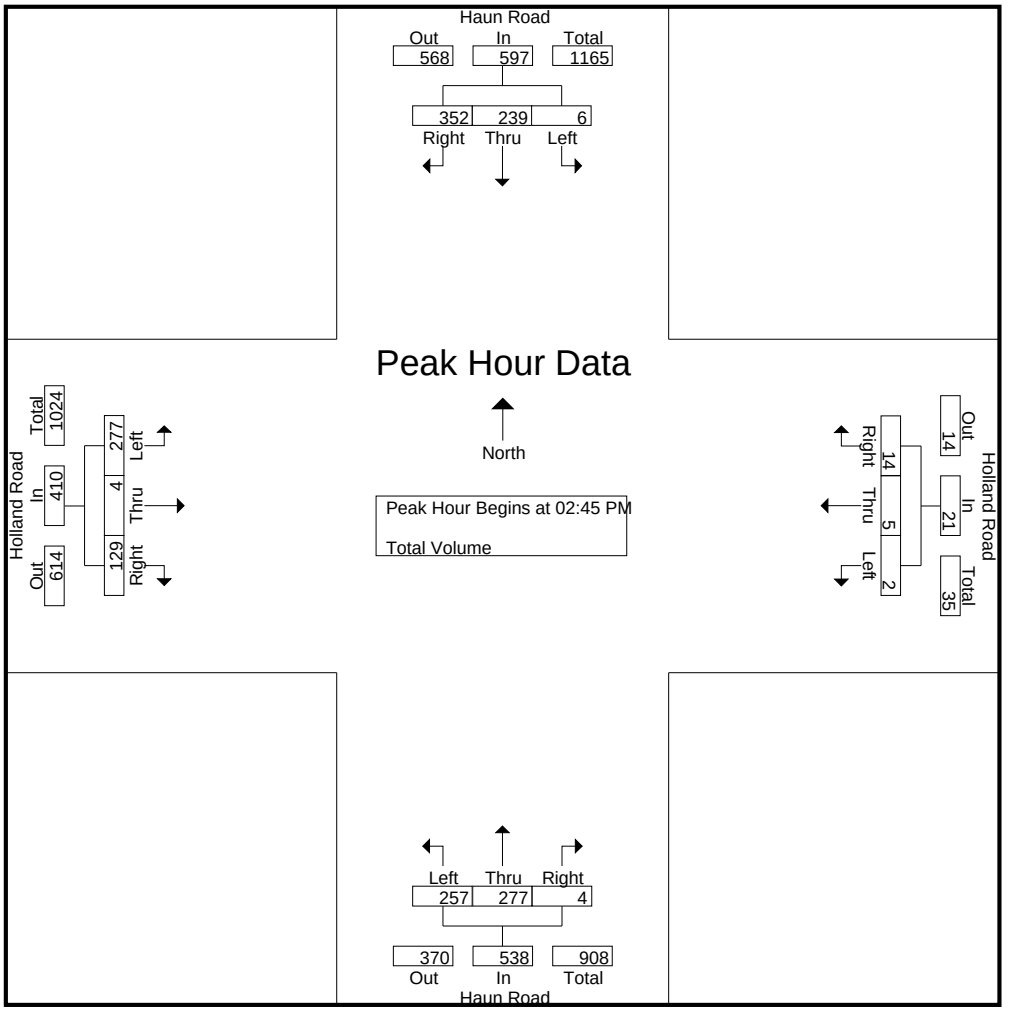

Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	02:30 PM				02:45 PM				02:45 PM				03:00 PM			
+0 mins.	2	62	76	140	0	**2**	2	4	66	55	0	121	39	**2**	30	71
+15 mins.	**3**	**78**	**108**	**189**	**2**	0	1	3	51	41	1	93	91	1	25	117
+30 mins.	1	71	82	154	0	1	**7**	**8**	**76**	81	0	157	93	1	**44**	**138**
+45 mins.	1	48	92	141	0	2	4	6	64	**100**	**3**	**167**	**101**	0	25	126
Total Volume	7	259	358	624	2	5	14	21	257	277	4	538	324	4	124	452
% App. Total	1.1	41.5	57.4		9.5	23.8	66.7		47.8	51.5	0.7		71.7	0.9	27.4	
PHF	.583	.830	.829	.825	.250	.625	.500	.656	.845	.693	.333	.805	.802	.500	.705	.819

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

File Name : 08_MEN HAHO PM
Site Code : 06717552
Start Date : 8/29/2017
Page No : 1

Groups Printed- Total Volume

	Haun Road Southbound				Holland Road Westbound				Haun Road Northbound				Holland Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	1	61	66	128	0	0	1	1	50	46	0	96	74	0	38	112	337
04:15 PM	1	61	78	140	0	0	0	0	61	56	0	117	55	0	29	84	341
04:30 PM	1	40	69	110	0	0	1	1	56	40	0	96	63	0	32	95	302
04:45 PM	0	52	54	106	1	0	1	2	59	49	0	108	53	0	26	79	295
Total	3	214	267	484	1	0	3	4	226	191	0	417	245	0	125	370	1275
05:00 PM	1	51	77	129	0	1	1	2	67	47	0	114	57	1	39	97	342
05:15 PM	0	48	57	105	0	0	0	0	63	49	0	112	51	0	37	88	305
05:30 PM	0	43	65	108	0	2	2	4	69	46	0	115	67	4	36	107	334
05:45 PM	0	38	73	111	0	0	1	1	74	60	0	134	61	0	36	97	343
Total	1	180	272	453	0	3	4	7	273	202	0	475	236	5	148	389	1324
Grand Total	4	394	539	937	1	3	7	11	499	393	0	892	481	5	273	759	2599
Apprch %	0.4	42	57.5		9.1	27.3	63.6		55.9	44.1	0		63.4	0.7	36		
Total %	0.2	15.2	20.7	36.1	0	0.1	0.3	0.4	19.2	15.1	0	34.3	18.5	0.2	10.5	29.2	

	Haun Road Southbound				Holland Road Westbound				Haun Road Northbound				Holland Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	**1**	**51**	**77**	**129**	0	1	1	2	67	47	0	114	57	1	**39**	97	342
05:15 PM	0	48	57	105	0	0	0	0	63	49	0	112	51	0	37	88	305
05:30 PM	0	43	65	108	0	**2**	**2**	**4**	69	46	0	115	**67**	**4**	36	**107**	334
05:45 PM	0	38	73	111	0	0	1	1	**74**	**60**	0	**134**	61	0	36	97	**343**
Total Volume	1	180	272	453	0	3	4	7	273	202	0	475	236	5	148	389	1324
% App. Total	0.2	39.7	60		0	42.9	57.1		57.5	42.5	0		60.7	1.3	38		
PHF	.250	.882	.883	.878	.000	.375	.500	.438	.922	.842	.000	.886	.881	.313	.949	.909	.965

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

File Name : 08_MEN HAHO PM
Site Code : 06717552
Start Date : 8/29/2017
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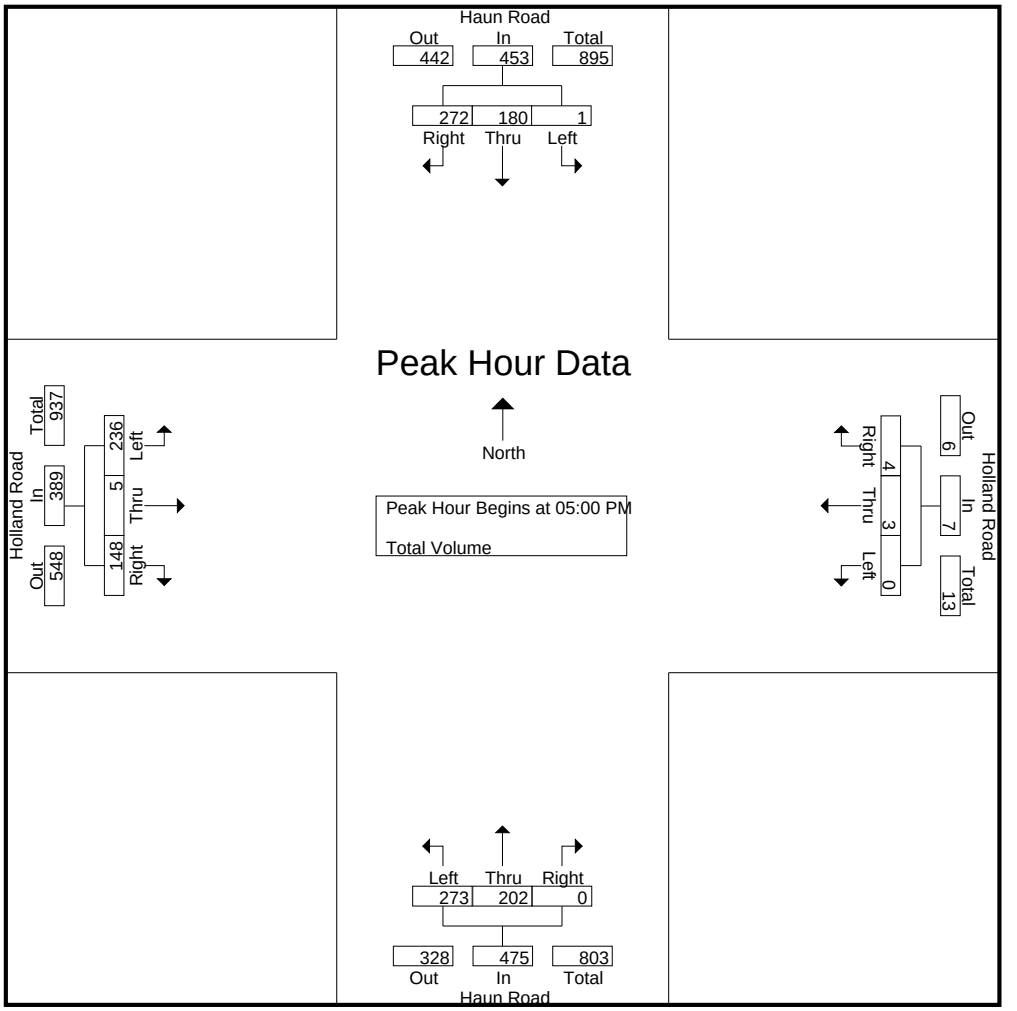

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:15 PM				04:45 PM				05:00 PM				05:00 PM			
+0 mins.	**1**	**61**	**78**	**140**	**1**	0	1	2	67	47	0	114	57	1	**39**	97
+15 mins.	1	40	69	110	0	1	1	2	63	49	0	112	51	0	37	88
+30 mins.	0	52	54	106	0	0	0	0	69	46	0	115	**67**	**4**	36	**107**
+45 mins.	1	51	77	129	0	**2**	**2**	**4**	**74**	**60**	0	**134**	61	0	36	97
Total Volume	3	204	278	485	1	3	4	8	273	202	0	475	236	5	148	389
% App. Total	0.6	42.1	57.3		12.5	37.5	50		57.5	42.5	0		60.7	1.3	38	
PHF	.750	.836	.891	.866	.250	.375	.500	.500	.922	.842	.000	.886	.881	.313	.949	.909

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City of Menifee
N/S: Haun Road/Zeiders Road
E/W: Scott Road
Weather: Clear

File Name : 07_MEN HASC AM
Site Code : 06717552
Start Date : 8/29/2017
Page No : 1

Groups Printed- Total Volume

	Haun Road Southbound				Scott Road Westbound				Zeiders Road Northbound				Scott Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	114	8	8	130	9	77	144	230	5	31	4	40	20	111	1	132	532
07:15 AM	136	12	11	159	16	84	194	294	6	47	6	59	29	122	1	152	664
07:30 AM	151	15	12	178	11	92	89	192	8	25	7	40	12	85	2	99	509
07:45 AM	127	10	8	145	17	88	58	163	4	9	7	20	5	105	5	115	443
Total	528	45	39	612	53	341	485	879	23	112	24	159	66	423	9	498	2148
08:00 AM	99	6	9	114	8	74	42	124	6	1	7	14	13	102	6	121	373
08:15 AM	94	5	8	107	6	64	33	103	7	1	5	13	13	95	4	112	335
08:30 AM	59	2	14	75	13	76	40	129	3	3	3	9	10	111	2	123	336
08:45 AM	66	5	6	77	14	88	36	138	2	3	7	12	10	98	5	113	340
Total	318	18	37	373	41	302	151	494	18	8	22	48	46	406	17	469	1384
Grand Total	846	63	76	985	94	643	636	1373	41	120	46	207	112	829	26	967	3532
Apprch %	85.9	6.4	7.7		6.8	46.8	46.3		19.8	58	22.2		11.6	85.7	2.7		
Total %	24	1.8	2.2	27.9	2.7	18.2	18	38.9	1.2	3.4	1.3	5.9	3.2	23.5	0.7	27.4	

	Haun Road Southbound				Scott Road Westbound				Zeiders Road Northbound				Scott Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	114	8	8	130	9	77	144	230	5	31	4	40	20	111	1	132	532
07:15 AM	136	12	11	159	16	84	**194**	**294**	6	**47**	6	**59**	**29**	**122**	1	**152**	**664**
07:30 AM	**151**	**15**	**12**	**178**	11	**92**	89	192	**8**	25	**7**	40	12	85	2	99	509
07:45 AM	127	10	8	145	**17**	88	58	163	4	9	7	20	5	105	**5**	115	443
Total Volume	528	45	39	612	53	341	485	879	23	112	24	159	66	423	9	498	2148
% App. Total	86.3	7.4	6.4		6	38.8	55.2		14.5	70.4	15.1		13.3	84.9	1.8		
PHF	.874	.750	.813	.860	.779	.927	.625	.747	.719	.596	.857	.674	.569	.867	.450	.819	.809

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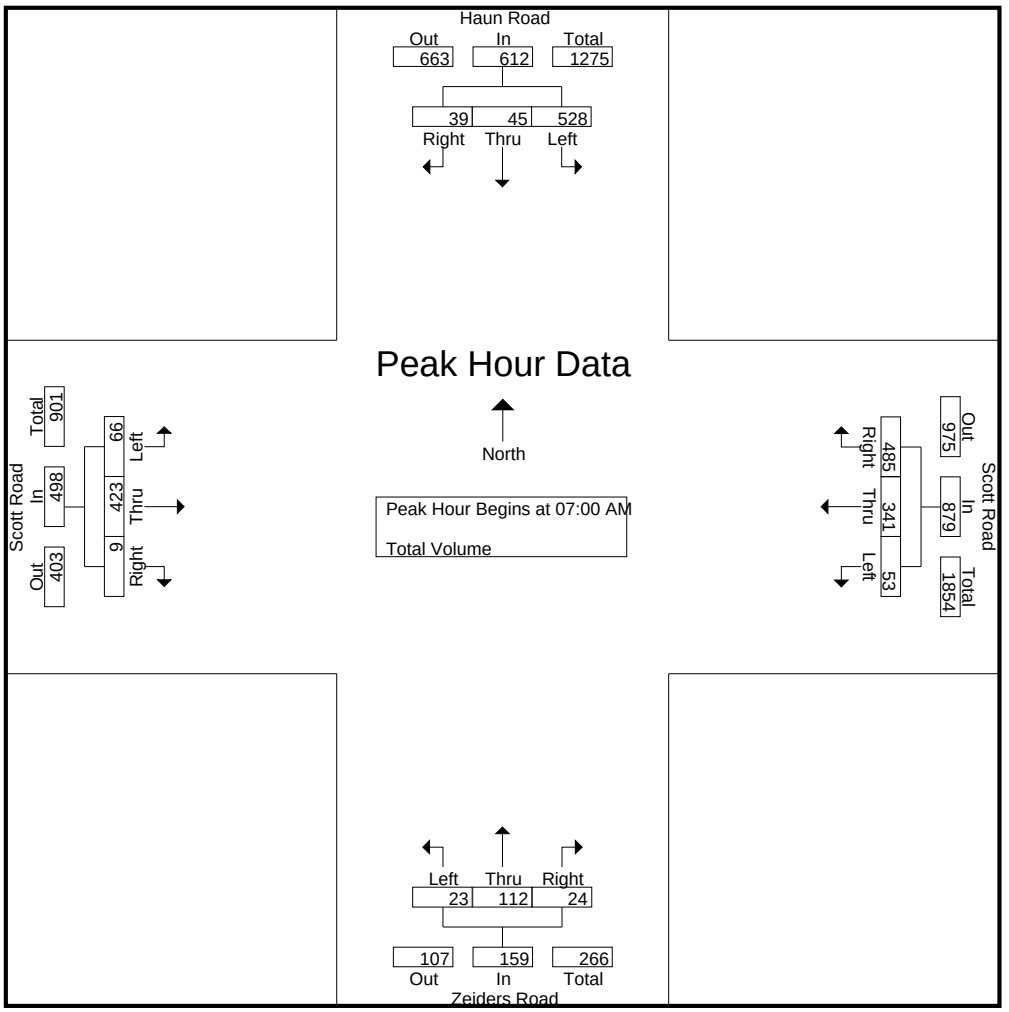
City of Menifee
N/S: Haun Road/Zeiders Road
E/W: Scott Road
Weather: Clear

File Name : 07_MEN HASC AM
Site Code : 06717552
Start Date : 8/29/2017
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.	114	8	8	130	9	77	144	230	5	31	4	40	20	111	1	132
+15 mins.	136	12	11	159	16	84	**194**	**294**	6	**47**	6	**59**	**29**	**122**	1	**152**
+30 mins.	**151**	**15**	**12**	**178**	11	**92**	89	192	**8**	25	**7**	40	12	85	2	99
+45 mins.	127	10	8	145	**17**	88	58	163	4	9	7	20	5	105	**5**	115
Total Volume	528	45	39	612	53	341	485	879	23	112	24	159	66	423	9	498
% App. Total	86.3	7.4	6.4		6	38.8	55.2		14.5	70.4	15.1		13.3	84.9	1.8	
PHF	.874	.750	.813	.860	.779	.927	.625	.747	.719	.596	.857	.674	.569	.867	.450	.819

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City of Menifee
N/S: Haun Road/Zeiders Road
E/W: Scott Road
Weather: Clear

File Name : 07_MEN HASC PM
Site Code : 06717552
Start Date : 8/29/2017
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Groups Printed- Total Volume

	Haun Road Southbound				Scott Road Westbound				Zeiders Road Northbound				Scott Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	93	7	12	112	14	112	87	213	7	9	15	31	6	80	1	87	443
04:15 PM	72	9	13	94	15	94	82	191	9	10	6	25	11	89	4	104	414
04:30 PM	69	9	16	94	11	101	74	186	9	8	8	25	10	97	5	112	417
04:45 PM	85	9	8	102	25	104	93	222	4	15	13	32	10	94	2	106	462
Total	319	34	49	402	65	411	336	812	29	42	42	113	37	360	12	409	1736
05:00 PM	77	6	15	98	10	107	117	234	10	12	11	33	8	106	3	117	482
05:15 PM	92	1	4	97	17	116	108	241	8	6	6	20	7	127	6	140	498
05:30 PM	71	9	9	89	12	113	124	249	11	17	6	34	7	89	5	101	473
05:45 PM	79	3	15	97	16	105	118	239	4	16	9	29	17	113	6	136	501
Total	319	19	43	381	55	441	467	963	33	51	32	116	39	435	20	494	1954
Grand Total	638	53	92	783	120	852	803	1775	62	93	74	229	76	795	32	903	3690
Apprch %	81.5	6.8	11.7		6.8	48	45.2		27.1	40.6	32.3		8.4	88	3.5		
Total %	17.3	1.4	2.5	21.2	3.3	23.1	21.8	48.1	1.7	2.5	2	6.2	2.1	21.5	0.9	24.5	

	Haun Road Southbound				Scott Road Westbound				Zeiders Road Northbound				Scott Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	77	6	**15**	**98**	10	107	117	234	10	12	**11**	33	8	106	3	117	482
05:15 PM	**92**	1	4	97	**17**	**116**	108	241	8	6	6	20	7	**127**	**6**	**140**	498
05:30 PM	71	**9**	9	89	12	113	**124**	**249**	**11**	**17**	6	**34**	7	89	5	101	473
05:45 PM	79	3	15	97	16	105	118	239	4	16	9	29	**17**	113	6	136	**501**
Total Volume	319	19	43	381	55	441	467	963	33	51	32	116	39	435	20	494	1954
% App. Total	83.7	5	11.3		5.7	45.8	48.5		28.4	44	27.6		7.9	88.1	4		
PHF	.867	.528	.717	.972	.809	.950	.942	.967	.750	.750	.727	.853	.574	.856	.833	.882	.975

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City of Menifee
N/S: Haun Road/Zeiders Road
E/W: Scott Road
Weather: Clear

File Name : 07_MEN HASC PM
Site Code : 06717552
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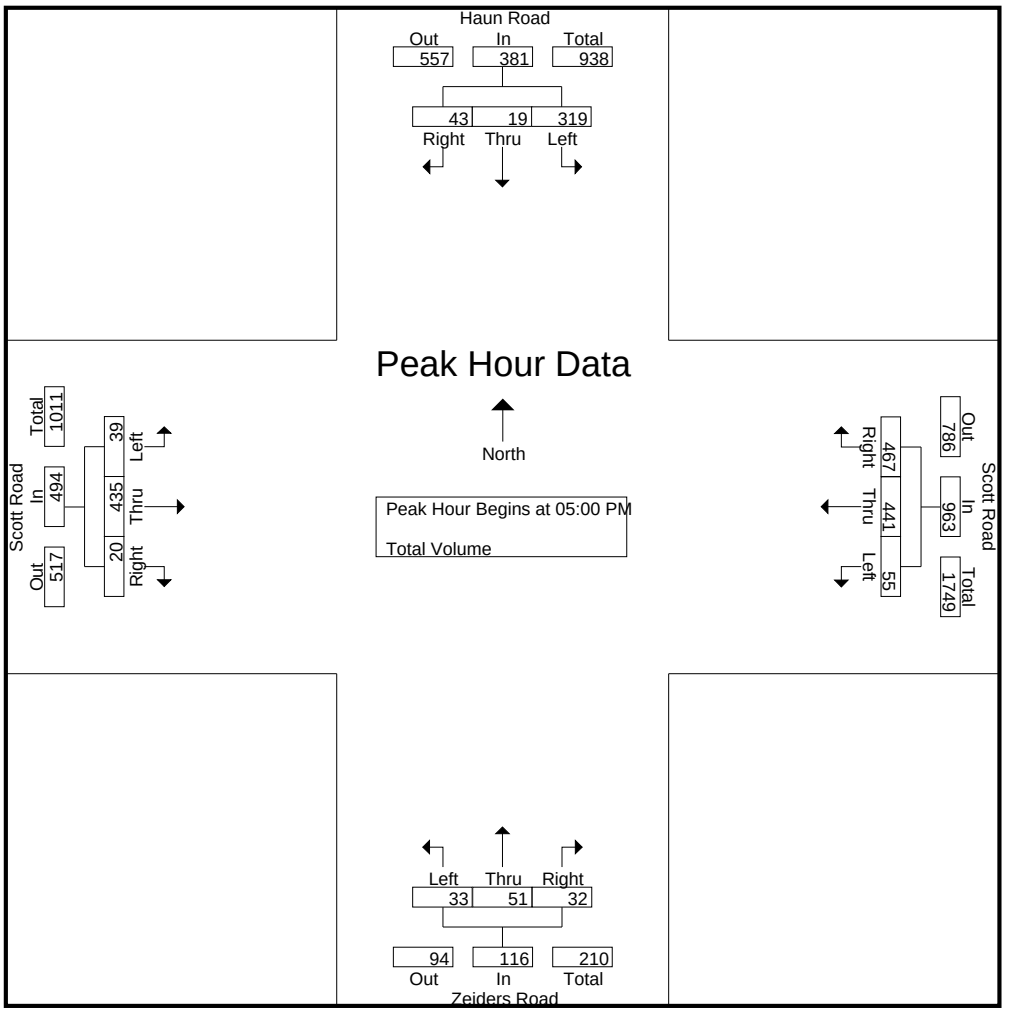

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				05:00 PM				04:45 PM				05:00 PM			
+0 mins.	**93**	7	12	**112**	10	107	117	234	4	15	**13**	32	8	106	3	117
+15 mins.	72	**9**	13	94	**17**	**116**	108	241	10	12	11	33	7	**127**	**6**	**140**
+30 mins.	69	9	**16**	94	12	113	**124**	**249**	8	6	6	20	7	89	5	101
+45 mins.	85	9	8	102	16	105	118	239	**11**	**17**	6	**34**	**17**	113	6	136
Total Volume	319	34	49	402	55	441	467	963	33	50	36	119	39	435	20	494
% App. Total	79.4	8.5	12.2		5.7	45.8	48.5		27.7	42	30.3		7.9	88.1	4	
PHF	.858	.944	.766	.897	.809	.950	.942	.967	.750	.735	.692	.875	.574	.856	.833	.882

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

File Name : 25_MEN 215SSC AM
Site Code : 06717552
Start Date : 8/29/2017
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Groups Printed- Total Volume

	I-215 Southbound Off Ramp Southbound				Scott Road Westbound				I-215 Southbound On Ramp Northbound				Scott Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	69	0	36	105	47	198	0	245	0	0	0	0	0	109	73	182	532
07:15 AM	72	0	35	107	65	206	0	271	0	0	0	0	0	144	103	247	625
07:30 AM	70	0	41	111	110	144	0	254	0	0	0	0	0	113	90	203	568
07:45 AM	94	0	34	128	102	134	0	236	0	0	0	0	0	126	97	223	587
Total	305	0	146	451	324	682	0	1006	0	0	0	0	0	492	363	855	2312
08:00 AM	86	0	24	110	108	108	0	216	0	0	0	0	0	118	89	207	533
08:15 AM	80	0	16	96	149	89	0	238	0	0	0	0	0	93	83	176	510
08:30 AM	67	0	26	93	135	104	0	239	0	0	0	0	0	87	90	177	509
08:45 AM	70	0	32	102	117	111	0	228	0	0	0	0	0	84	62	146	476
Total	303	0	98	401	509	412	0	921	0	0	0	0	0	382	324	706	2028
Grand Total	608	0	244	852	833	1094	0	1927	0	0	0	0	0	874	687	1561	4340
Apprch %	71.4	0	28.6		43.2	56.8	0		0	0	0		0	56	44		
Total %	14	0	5.6	19.6	19.2	25.2	0	44.4	0	0	0	0	0	20.1	15.8	36	

	I-215 Southbound Off Ramp Southbound				Scott Road Westbound				I-215 Southbound On Ramp Northbound				Scott Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	72	0	35	107	65	**206**	0	**271**	0	0	0	0	0	**144**	**103**	**247**	**625**
07:30 AM	70	0	**41**	111	**110**	144	0	254	0	0	0	0	0	113	90	203	568
07:45 AM	**94**	0	34	**128**	102	134	0	236	0	0	0	0	0	126	97	223	587
08:00 AM	86	0	24	110	108	108	0	216	0	0	0	0	0	118	89	207	533
Total Volume	322	0	134	456	385	592	0	977	0	0	0	0	0	501	379	880	2313
% App. Total	70.6	0	29.4		39.4	60.6	0		0	0	0		0	56.9	43.1		
PHF	.856	.000	.817	.891	.875	.718	.000	.901	.000	.000	.000	.000	.000	.870	.920	.891	.925

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

File Name : 25_MEN 215SSC AM
Site Code : 06717552
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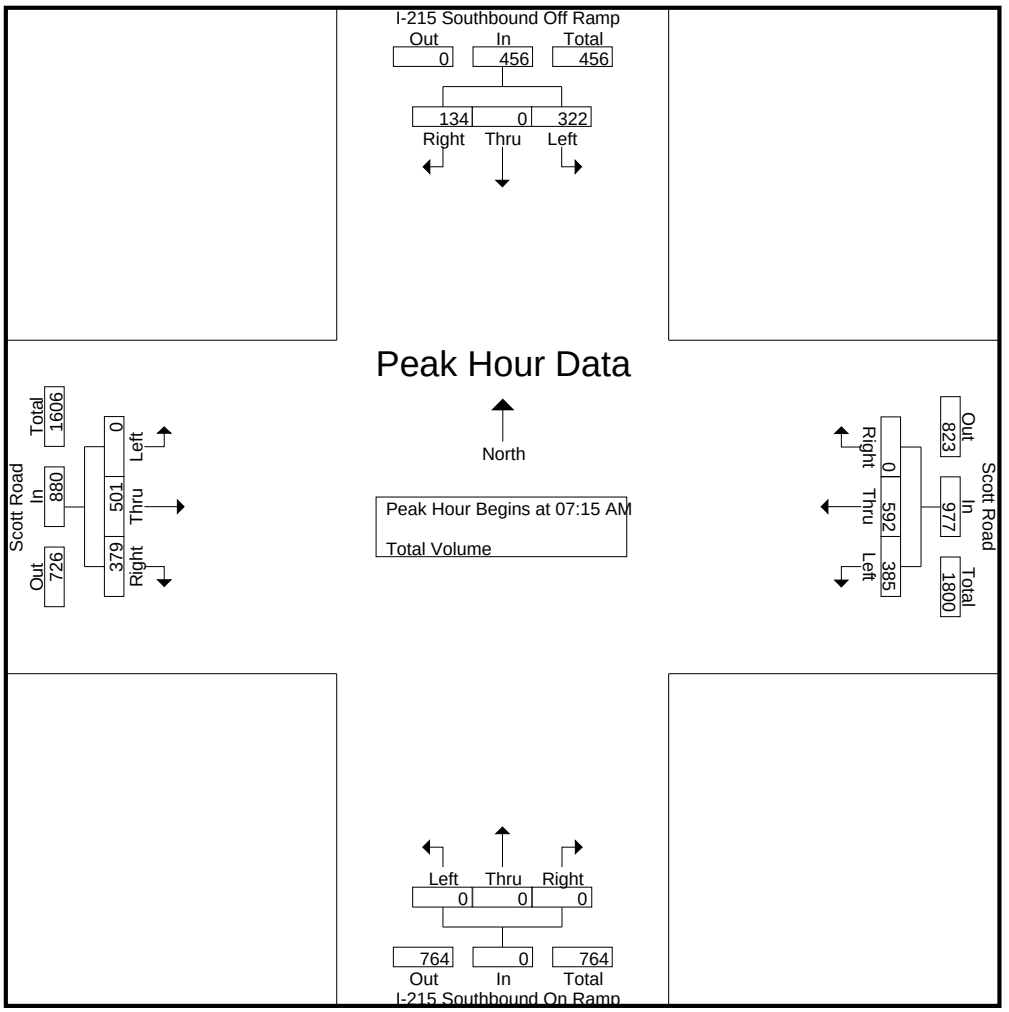

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:00 AM				07:00 AM				07:15 AM			
+0 mins.	72	0	35	107	47	198	0	245	0	0	0	0	0	**144**	**103**	**247**
+15 mins.	70	0	**41**	111	65	**206**	0	**271**	0	0	0	0	0	113	90	203
+30 mins.	**94**	0	34	**128**	**110**	144	0	254	0	0	0	0	0	126	97	223
+45 mins.	86	0	24	110	102	134	0	236	0	0	0	0	0	118	89	207
Total Volume	322	0	134	456	324	682	0	1006	0	0	0	0	0	501	379	880
% App. Total	70.6	0	29.4		32.2	67.8	0		0	0	0		0	56.9	43.1	
PHF	.856	.000	.817	.891	.736	.828	.000	.928	.000	.000	.000	.000	.000	.870	.920	.891

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City of Menifee
N/S: I-215 Southbound Ramps
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Weather: Clear

File Name : 25_MEN 215SSC PM
Site Code : 06717552
Start Date : 8/29/2017
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Groups Printed- Total Volume

	I-215 Southbound Off Ramp Southbound				Scott Road Westbound				I-215 Southbound On Ramp Northbound				Scott Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	102	0	33	135	102	157	0	259	0	0	0	0	0	114	55	169	563
04:15 PM	99	0	45	144	108	195	0	303	0	0	0	0	0	131	49	180	627
04:30 PM	101	0	47	148	103	149	0	252	0	0	0	0	0	118	55	173	573
04:45 PM	90	0	30	120	100	179	0	279	0	0	0	0	0	134	79	213	612
Total	392	0	155	547	413	680	0	1093	0	0	0	0	0	497	238	735	2375
05:00 PM	89	0	27	116	85	171	0	256	0	0	0	0	0	115	43	158	530
05:15 PM	101	1	32	134	84	164	0	248	0	0	0	0	0	117	66	183	565
05:30 PM	108	0	38	146	80	197	0	277	0	0	0	0	0	122	47	169	592
05:45 PM	94	0	37	131	90	184	0	274	0	0	0	0	0	103	61	164	569
Total	392	1	134	527	339	716	0	1055	0	0	0	0	0	457	217	674	2256
Grand Total	784	1	289	1074	752	1396	0	2148	0	0	0	0	0	954	455	1409	4631
Apprch %	73	0.1	26.9		35	65	0		0	0	0		0	67.7	32.3		
Total %	16.9	0	6.2	23.2	16.2	30.1	0	46.4	0	0	0	0	0	20.6	9.8	30.4	

	I-215 Southbound Off Ramp Southbound				Scott Road Westbound				I-215 Southbound On Ramp Northbound				Scott Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	**102**	0	33	135	102	157	0	259	0	0	0	0	0	114	55	169	563
04:15 PM	99	0	45	144	**108**	**195**	0	**303**	0	0	0	0	0	131	49	180	**627**
04:30 PM	101	0	**47**	**148**	103	149	0	252	0	0	0	0	0	118	55	173	573
04:45 PM	90	0	30	120	100	179	0	279	0	0	0	0	0	**134**	**79**	**213**	612
Total Volume	392	0	155	547	413	680	0	1093	0	0	0	0	0	497	238	735	2375
% App. Total	71.7	0	28.3		37.8	62.2	0		0	0	0		0	67.6	32.4		
PHF	.961	.000	.824	.924	.956	.872	.000	.902	.000	.000	.000	.000	.000	.927	.753	.863	.947

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City of Menifee
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E/W: Scott Road
Weather: Clear

File Name : 25_MEN 215SSC PM
Site Code : 06717552
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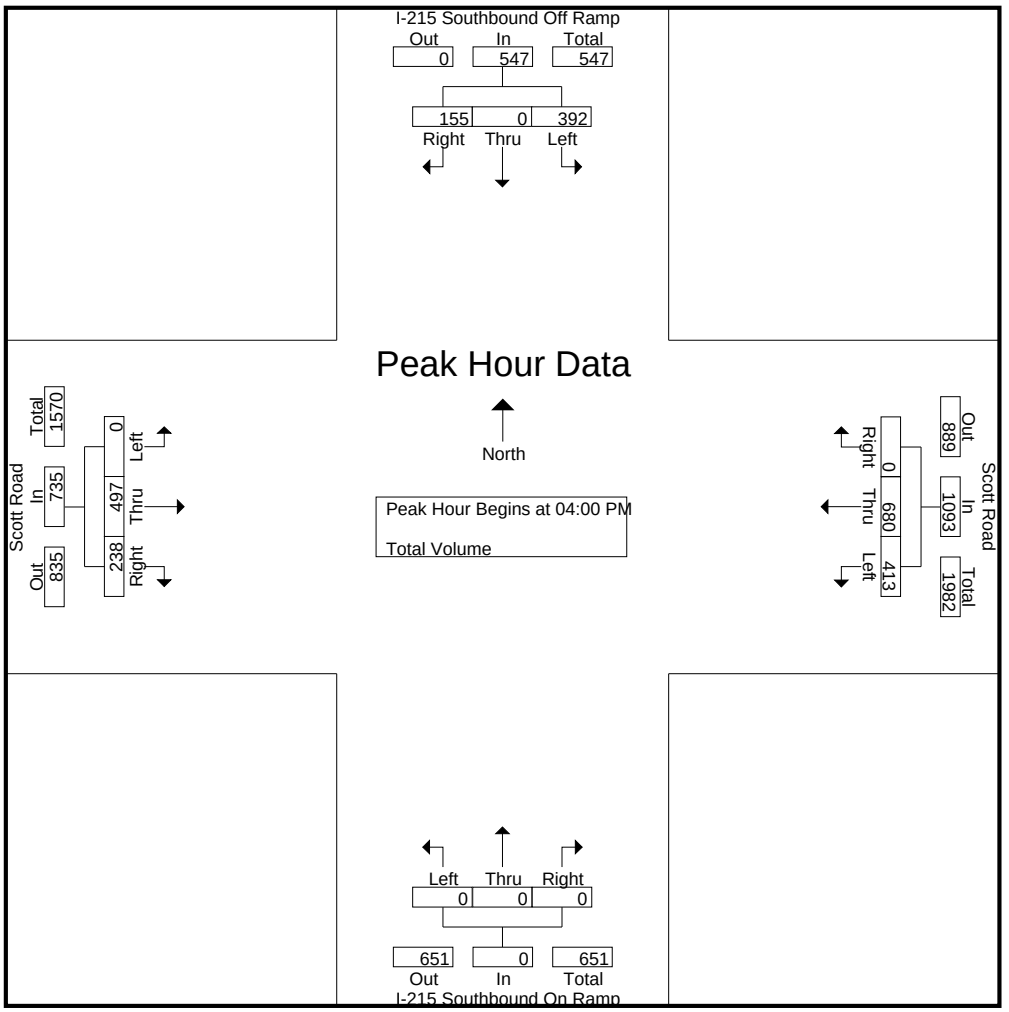

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:00 PM				04:00 PM				04:00 PM			
+0 mins.	**102**	0	33	135	102	157	0	259	0	0	0	0	0	114	55	169
+15 mins.	99	0	45	144	**108**	**195**	0	**303**	0	0	0	0	0	131	49	180
+30 mins.	101	0	**47**	**148**	103	149	0	252	0	0	0	0	0	118	55	173
+45 mins.	90	0	30	120	100	179	0	279	0	0	0	0	0	**134**	**79**	**213**
Total Volume	392	0	155	547	413	680	0	1093	0	0	0	0	0	497	238	735
% App. Total	71.7	0	28.3		37.8	62.2	0		0	0	0		0	67.6	32.4	
PHF	.961	.000	.824	.924	.956	.872	.000	.902	.000	.000	.000	.000	.000	.927	.753	.863

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City of Menifee
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E/W: Scott Road
Weather: Clear

File Name : 26_MEN 215NSC AM
Site Code : 06717552
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Groups Printed- Total Volume

	I-215 Northbound On Ramp Southbound				Scott Road Westbound				I-215 Northbound Off Ramp Northbound				Scott Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	187	127	314	60	0	82	142	27	159	0	186	642
07:15 AM	0	0	0	0	0	192	125	317	82	0	96	178	28	189	0	217	712
07:30 AM	0	0	0	0	0	208	103	311	56	0	84	140	12	173	0	185	636
07:45 AM	0	0	0	0	0	207	110	317	37	0	110	147	16	201	0	217	681
Total	0	0	0	0	0	794	465	1259	235	0	372	607	83	722	0	805	2671
08:00 AM	0	0	0	0	0	181	101	282	38	0	71	109	30	173	0	203	594
08:15 AM	0	0	0	0	0	189	94	283	39	0	74	113	15	164	0	179	575
08:30 AM	0	0	0	0	0	201	95	296	35	0	106	141	27	131	0	158	595
08:45 AM	0	0	0	0	0	200	100	300	30	1	82	113	14	145	0	159	572
Total	0	0	0	0	0	771	390	1161	142	1	333	476	86	613	0	699	2336
Grand Total	0	0	0	0	0	1565	855	2420	377	1	705	1083	169	1335	0	1504	5007
Apprch %	0	0	0		0	64.7	35.3		34.8	0.1	65.1		11.2	88.8	0		
Total %	0	0	0	0	0	31.3	17.1	48.3	7.5	0	14.1	21.6	3.4	26.7	0	30	

	I-215 Northbound On Ramp Southbound				Scott Road Westbound				I-215 Northbound Off Ramp Northbound				Scott Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	187	**127**	314	60	0	82	142	27	159	0	186	642
07:15 AM	0	0	0	0	0	192	125	**317**	**82**	0	96	**178**	**28**	189	0	**217**	**712**
07:30 AM	0	0	0	0	0	**208**	103	311	56	0	84	140	12	173	0	185	636
07:45 AM	0	0	0	0	0	207	110	317	37	0	**110**	147	16	**201**	0	217	681
Total Volume	0	0	0	0	0	794	465	1259	235	0	372	607	83	722	0	805	2671
% App. Total	0	0	0		0	63.1	36.9		38.7	0	61.3		10.3	89.7	0		
PHF	.000	.000	.000	.000	.000	.954	.915	.993	.716	.000	.845	.853	.741	.898	.000	.927	.938

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

File Name : 26_MEN 215NSC AM
Site Code : 06717552
Start Date : 8/29/2017
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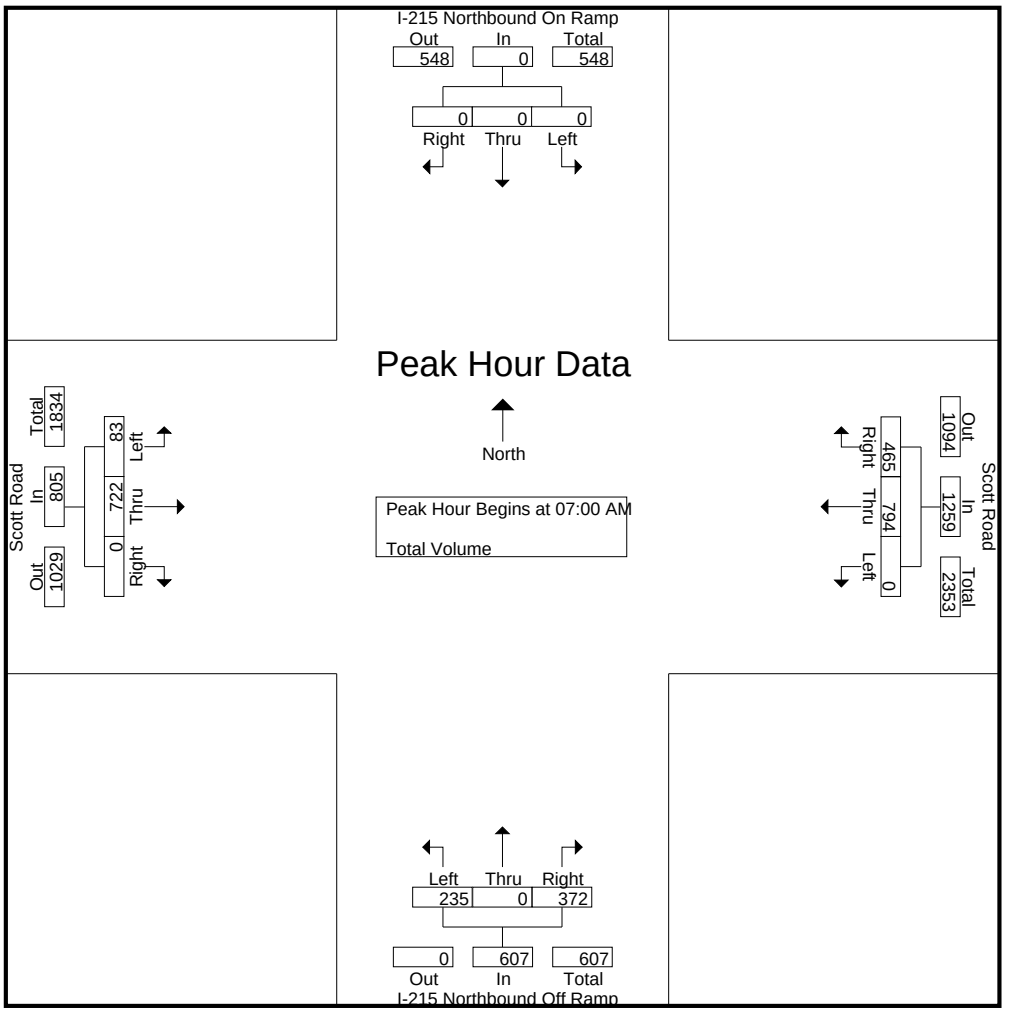

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:15 AM			
+0 mins.	0	0	0	0	0	187	**127**	314	60	0	82	142	28	189	0	**217**
+15 mins.	0	0	0	0	0	192	125	**317**	**82**	0	96	**178**	12	173	0	185
+30 mins.	0	0	0	0	0	**208**	103	311	56	0	84	140	16	**201**	0	217
+45 mins.	0	0	0	0	0	207	110	317	37	0	**110**	147	**30**	173	0	203
Total Volume	0	0	0	0	0	794	465	1259	235	0	372	607	86	736	0	822
% App. Total	0	0	0		0	63.1	36.9		38.7	0	61.3		10.5	89.5	0	
PHF	.000	.000	.000	.000	.000	.954	.915	.993	.716	.000	.845	.853	.717	.915	.000	.947

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

File Name : 26_MEN 215NSC PM
Site Code : 06717552
Start Date : 8/29/2017
Page No : 1

Groups Printed- Total Volume

	I-215 Northbound On Ramp Southbound				Scott Road Westbound				I-215 Northbound Off Ramp Northbound				Scott Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	187	123	310	75	0	112	187	14	205	0	219	716
04:15 PM	0	0	0	0	0	195	91	286	104	0	127	231	17	215	0	232	749
04:30 PM	0	0	0	0	0	190	93	283	71	1	132	204	15	207	0	222	709
04:45 PM	0	0	0	0	0	187	88	275	95	0	119	214	24	204	0	228	717
Total	0	0	0	0	0	759	395	1154	345	1	490	836	70	831	0	901	2891
05:00 PM	0	0	0	0	0	179	95	274	82	0	119	201	17	195	0	212	687
05:15 PM	0	0	0	0	0	190	118	308	64	0	113	177	13	211	0	224	709
05:30 PM	0	0	0	0	0	206	81	287	80	0	112	192	19	213	0	232	711
05:45 PM	0	0	0	0	0	173	102	275	102	0	138	240	11	188	0	199	714
Total	0	0	0	0	0	748	396	1144	328	0	482	810	60	807	0	867	2821
Grand Total	0	0	0	0	0	1507	791	2298	673	1	972	1646	130	1638	0	1768	5712
Apprch %	0	0	0		0	65.6	34.4		40.9	0.1	59.1		7.4	92.6	0		
Total %	0	0	0	0	0	26.4	13.8	40.2	11.8	0	17	28.8	2.3	28.7	0	31	

	I-215 Northbound On Ramp Southbound				Scott Road Westbound				I-215 Northbound Off Ramp Northbound				Scott Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	0	0	0	187	**123**	**310**	75	0	112	187	14	205	0	219	716
04:15 PM	0	0	0	0	0	**195**	91	286	**104**	0	127	**231**	17	**215**	0	**232**	**749**
04:30 PM	0	0	0	0	0	190	93	283	71	**1**	**132**	204	15	207	0	222	709
04:45 PM	0	0	0	0	0	187	88	275	95	0	119	214	**24**	204	0	228	717
Total Volume	0	0	0	0	0	759	395	1154	345	1	490	836	70	831	0	901	2891
% App. Total	0	0	0		0	65.8	34.2		41.3	0.1	58.6		7.8	92.2	0		
PHF	.000	.000	.000	.000	.000	.973	.803	.931	.829	.250	.928	.905	.729	.966	.000	.971	.965

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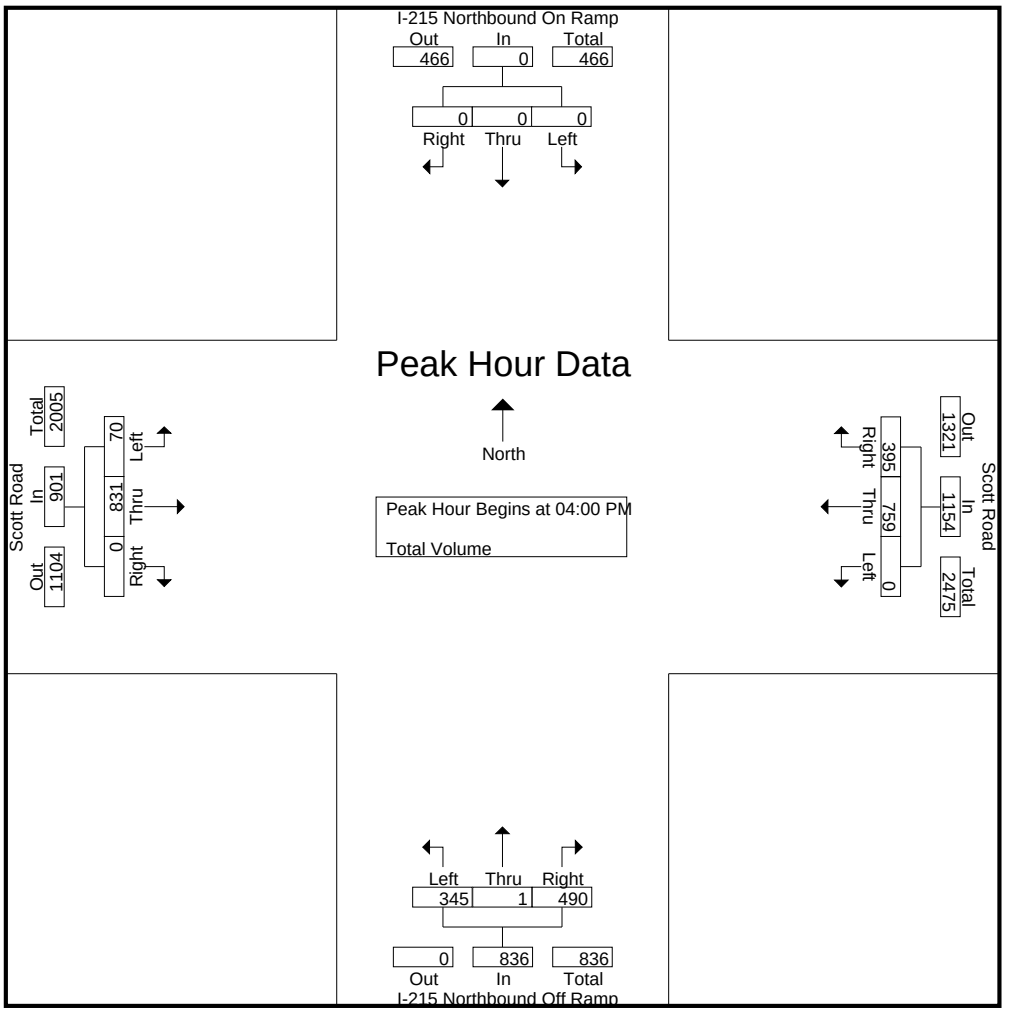
City of Menifee
N/S: I-215 Northbound Ramps
E/W: Scott Road
Weather: Clear

File Name : 26_MEN 215NSC PM
Site Code : 06717552
Start Date : 8/29/2017
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	0	0	0	0	187	**123**	**310**	**104**	0	127	**231**	14	205	0	219
+15 mins.	0	0	0	0	0	**195**	91	286	71	**1**	**132**	204	17	**215**	0	**232**
+30 mins.	0	0	0	0	0	190	93	283	95	0	119	214	15	207	0	222
+45 mins.	0	0	0	0	0	187	88	275	82	0	119	201	**24**	204	0	228
Total Volume	0	0	0	0	0	759	395	1154	352	1	497	850	70	831	0	901
% App. Total	0	0	0		0	65.8	34.2		41.4	0.1	58.5		7.8	92.2	0	
PHF	.000	.000	.000	.000	.000	.973	.803	.931	.846	.250	.941	.920	.729	.966	.000	.971

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

File Name : 17_MEN ANSC AM
Site Code : 06717552
Start Date : 8/29/2017
Page No : 1

Groups Printed- Total Volume

	Antelope Road Southbound				Scott Road Westbound				Antelope Road Northbound				Scott Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	7	44	89	140	2	171	5	178	93	21	23	137	49	144	80	273	728
07:15 AM	8	32	98	138	3	175	4	182	68	29	25	122	60	171	73	304	746
07:30 AM	11	42	87	140	6	124	20	150	90	58	20	168	60	150	45	255	713
07:45 AM	14	62	95	171	13	170	17	200	59	44	20	123	80	159	79	318	812
Total	40	180	369	589	24	640	46	710	310	152	88	550	249	624	277	1150	2999
08:00 AM	5	46	73	124	8	146	12	166	51	46	20	117	43	158	66	267	674
08:15 AM	10	45	75	130	17	144	11	172	63	40	17	120	46	144	66	256	678
08:30 AM	11	34	80	125	25	147	5	177	66	34	14	114	52	115	66	233	649
08:45 AM	8	36	60	104	21	188	13	222	71	30	15	116	51	130	69	250	692
Total	34	161	288	483	71	625	41	737	251	150	66	467	192	547	267	1006	2693
Grand Total	74	341	657	1072	95	1265	87	1447	561	302	154	1017	441	1171	544	2156	5692
Apprch %	6.9	31.8	61.3		6.6	87.4	6		55.2	29.7	15.1		20.5	54.3	25.2		
Total %	1.3	6	11.5	18.8	1.7	22.2	1.5	25.4	9.9	5.3	2.7	17.9	7.7	20.6	9.6	37.9	

	Antelope Road Southbound				Scott Road Westbound				Antelope Road Northbound				Scott Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	7	44	89	140	2	171	5	178	**93**	21	23	137	49	144	**80**	273	728
07:15 AM	8	32	**98**	138	3	**175**	4	182	68	29	**25**	122	60	**171**	73	304	746
07:30 AM	11	42	87	140	6	124	**20**	150	90	**58**	20	**168**	60	150	45	255	713
07:45 AM	**14**	**62**	95	**171**	**13**	170	17	**200**	59	44	20	123	**80**	159	79	**318**	**812**
Total Volume	40	180	369	589	24	640	46	710	310	152	88	550	249	624	277	1150	2999
% App. Total	6.8	30.6	62.6		3.4	90.1	6.5		56.4	27.6	16		21.7	54.3	24.1		
PHF	.714	.726	.941	.861	.462	.914	.575	.888	.833	.655	.880	.818	.778	.912	.866	.904	.923

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

File Name : 17_MEN ANSC AM
Site Code : 06717552
Start Date : 8/29/2017
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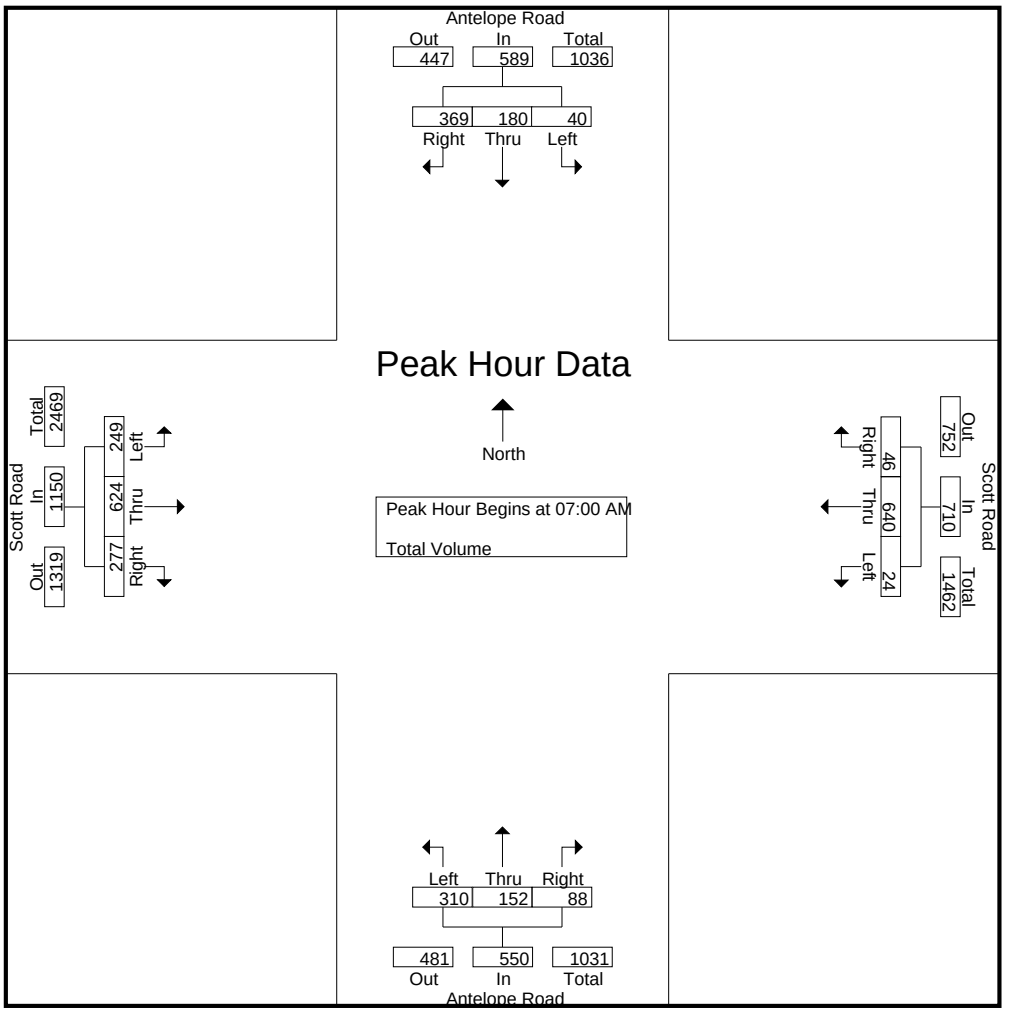

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				08:00 AM				07:00 AM				07:00 AM			
+0 mins.	7	44	89	140	8	146	12	166	**93**	21	23	137	49	144	**80**	273
+15 mins.	8	32	**98**	138	17	144	11	172	68	29	**25**	122	60	**171**	73	304
+30 mins.	11	42	87	140	**25**	147	5	177	90	**58**	20	**168**	60	150	45	255
+45 mins.	**14**	**62**	95	**171**	21	**188**	**13**	**222**	59	44	20	123	**80**	159	79	**318**
Total Volume	40	180	369	589	71	625	41	737	310	152	88	550	249	624	277	1150
% App. Total	6.8	30.6	62.6		9.6	84.8	5.6		56.4	27.6	16		21.7	54.3	24.1	
PHF	.714	.726	.941	.861	.710	.831	.788	.830	.833	.655	.880	.818	.778	.912	.866	.904

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

File Name : 17_MEN ANSC PM
Site Code : 06717552
Start Date : 8/29/2017
Page No : 1

Groups Printed- Total Volume

	Antelope Road Southbound				Scott Road Westbound				Antelope Road Northbound				Scott Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	21	40	72	133	17	127	4	148	86	64	37	187	58	180	76	314	782
04:15 PM	19	26	80	125	25	109	8	142	74	55	30	159	64	174	70	308	734
04:30 PM	15	33	73	121	23	127	7	157	89	69	34	192	67	209	81	357	827
04:45 PM	15	30	56	101	14	137	9	160	87	65	32	184	46	200	65	311	756
Total	70	129	281	480	79	500	28	607	336	253	133	722	235	763	292	1290	3099
05:00 PM	18	49	65	132	19	131	14	164	94	59	60	213	65	197	81	343	852
05:15 PM	17	37	81	135	9	140	14	163	97	62	45	204	68	201	63	332	834
05:30 PM	15	47	73	135	19	111	11	141	106	93	35	234	60	182	73	315	825
05:45 PM	9	34	60	103	13	126	15	154	95	73	49	217	78	197	66	341	815
Total	59	167	279	505	60	508	54	622	392	287	189	868	271	777	283	1331	3326
Grand Total	129	296	560	985	139	1008	82	1229	728	540	322	1590	506	1540	575	2621	6425
Apprch %	13.1	30.1	56.9		11.3	82	6.7		45.8	34	20.3		19.3	58.8	21.9		
Total %	2	4.6	8.7	15.3	2.2	15.7	1.3	19.1	11.3	8.4	5	24.7	7.9	24	8.9	40.8	

	Antelope Road Southbound				Scott Road Westbound				Antelope Road Northbound				Scott Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	**18**	**49**	65	132	**19**	131	14	**164**	94	59	**60**	213	65	197	**81**	**343**	**852**
05:15 PM	17	37	**81**	**135**	9	**140**	14	163	97	62	45	204	68	**201**	63	332	834
05:30 PM	15	47	73	135	19	111	11	141	**106**	**93**	35	**234**	60	182	73	315	825
05:45 PM	9	34	60	103	13	126	**15**	154	95	73	49	217	**78**	197	66	341	815
Total Volume	59	167	279	505	60	508	54	622	392	287	189	868	271	777	283	1331	3326
% App. Total	11.7	33.1	55.2		9.6	81.7	8.7		45.2	33.1	21.8		20.4	58.4	21.3		
PHF	.819	.852	.861	.935	.789	.907	.900	.948	.925	.772	.788	.927	.869	.966	.873	.970	.976

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

File Name : 17_MEN ANSC PM
Site Code : 06717552
Start Date : 8/29/2017
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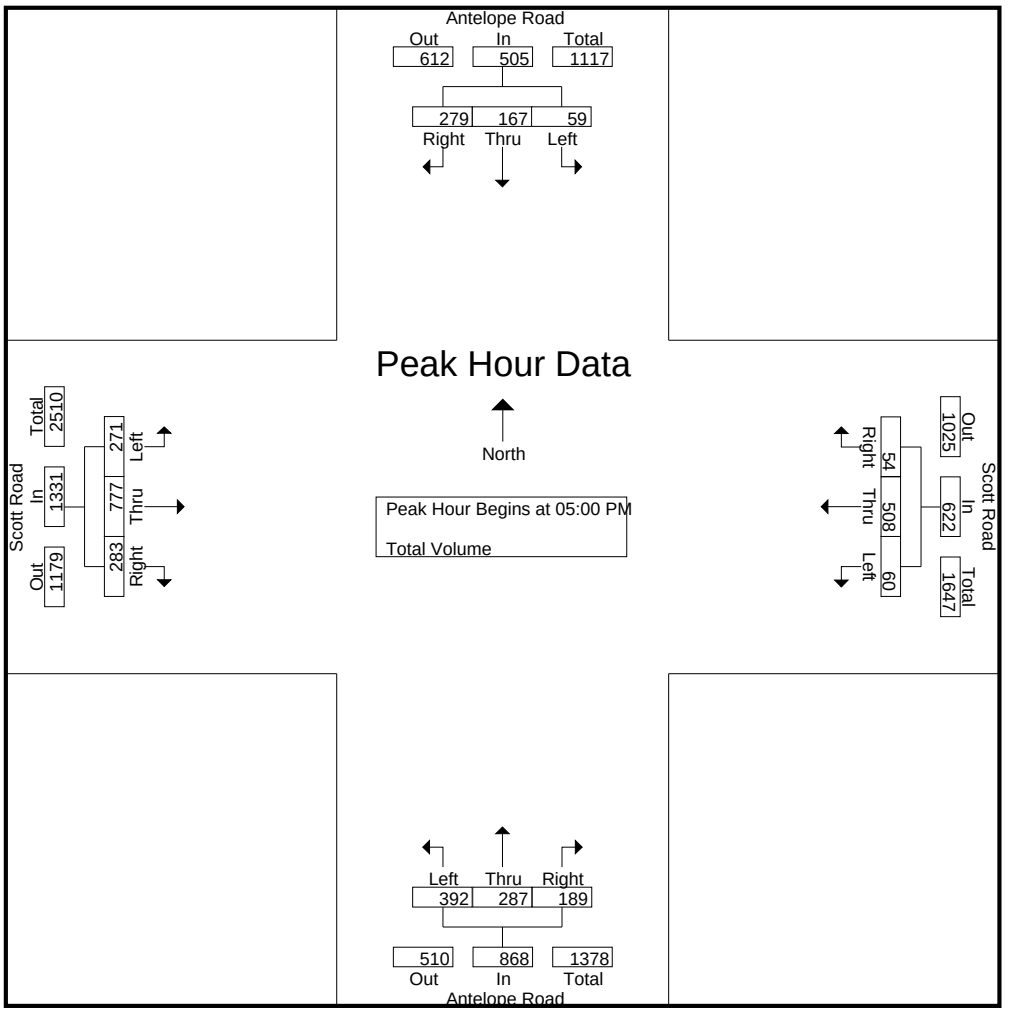

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				04:30 PM				05:00 PM				04:30 PM			
+0 mins.	**18**	**49**	65	132	**23**	127	7	157	94	59	**60**	213	67	**209**	**81**	**357**
+15 mins.	17	37	**81**	**135**	14	137	9	160	97	62	45	204	46	200	65	311
+30 mins.	15	47	73	135	19	131	**14**	**164**	**106**	**93**	35	**234**	65	197	81	343
+45 mins.	9	34	60	103	9	**140**	14	163	95	73	49	217	**68**	201	63	332
Total Volume	59	167	279	505	65	535	44	644	392	287	189	868	246	807	290	1343
% App. Total	11.7	33.1	55.2		10.1	83.1	6.8		45.2	33.1	21.8		18.3	60.1	21.6	
PHF	.819	.852	.861	.935	.707	.955	.786	.982	.925	.772	.788	.927	.904	.965	.895	.940

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

File Name : 13_MEN ANAL AM
Site Code : 06717552
Start Date : 8/29/2017
Page No : 1

Groups Printed- Total Volume

	Antelope Road Southbound			Albion Lane Westbound			Antelope Road Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	3	59	62	0	12	12	139	1	140	214
07:15 AM	2	77	79	2	7	9	140	3	143	231
07:30 AM	9	99	108	4	9	13	171	2	173	294
07:45 AM	16	89	105	3	6	9	207	3	210	324
Total	30	324	354	9	34	43	657	9	666	1063
08:00 AM	4	81	85	0	7	7	129	4	133	225
08:15 AM	8	106	114	6	10	16	172	1	173	303
08:30 AM	2	98	100	1	10	11	142	2	144	255
08:45 AM	9	78	87	1	5	6	118	0	118	211
Total	23	363	386	8	32	40	561	7	568	994
Grand Total	53	687	740	17	66	83	1218	16	1234	2057
Apprch %	7.2	92.8		20.5	79.5		98.7	1.3		
Total %	2.6	33.4	36	0.8	3.2	4	59.2	0.8	60	

	Antelope Road Southbound			Albion Lane Westbound			Antelope Road Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	9	99	108	4	9	13	171	2	173	294
07:45 AM	**16**	89	105	3	6	9	**207**	3	**210**	**324**
08:00 AM	4	81	85	0	7	7	129	**4**	133	225
08:15 AM	8	**106**	**114**	**6**	**10**	**16**	172	1	173	303
Total Volume	37	375	412	13	32	45	679	10	689	1146
% App. Total	9	91		28.9	71.1		98.5	1.5		
PHF	.578	.884	.904	.542	.800	.703	.820	.625	.820	.884

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

File Name : 13_MEN ANAL AM
Site Code : 06717552
Start Date : 8/29/2017
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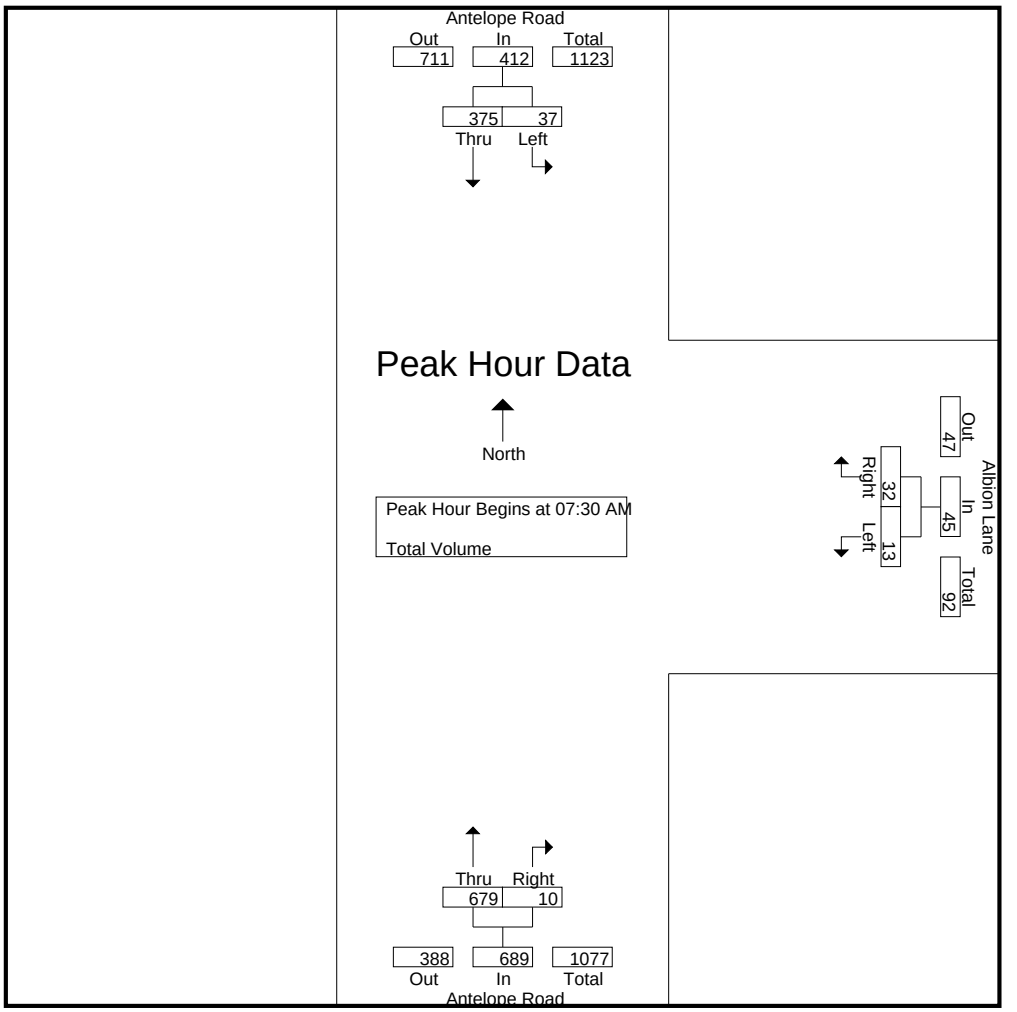

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM			07:30 AM			07:30 AM		
+0 mins.	9	99	108	4	9	13	171	2	173
+15 mins.	**16**	89	105	3	6	9	**207**	3	**210**
+30 mins.	4	81	85	0	7	7	129	**4**	133
+45 mins.	8	**106**	**114**	**6**	**10**	**16**	172	1	173
Total Volume	37	375	412	13	32	45	679	10	689
% App. Total	9	91		28.9	71.1		98.5	1.5	
PHF	.578	.884	.904	.542	.800	.703	.820	.625	.820

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

File Name : 13_MEN ANAL PM
Site Code : 06717552
Start Date : 8/29/2017
Page No : 1

Groups Printed- Total Volume

	Antelope Road Southbound			Albion Lane Westbound			Antelope Road Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	9	163	172	5	5	10	97	4	101	283
04:15 PM	12	163	175	4	8	12	110	4	114	301
04:30 PM	8	135	143	2	10	12	119	2	121	276
04:45 PM	16	162	178	1	12	13	128	3	131	322
Total	45	623	668	12	35	47	454	13	467	1182
05:00 PM	12	166	178	1	11	12	119	3	122	312
05:15 PM	12	158	170	2	10	12	100	2	102	284
05:30 PM	10	156	166	5	4	9	150	5	155	330
05:45 PM	16	135	151	3	9	12	161	5	166	329
Total	50	615	665	11	34	45	530	15	545	1255
Grand Total	95	1238	1333	23	69	92	984	28	1012	2437
Apprch %	7.1	92.9		25	75		97.2	2.8		
Total %	3.9	50.8	54.7	0.9	2.8	3.8	40.4	1.1	41.5	

	Antelope Road Southbound			Albion Lane Westbound			Antelope Road Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 05:00 PM										
05:00 PM	12	**166**	**178**	1	**11**	**12**	119	3	122	312
05:15 PM	12	158	170	2	10	12	100	2	102	284
05:30 PM	10	156	166	**5**	4	9	150	**5**	155	**330**
05:45 PM	**16**	135	151	3	9	12	**161**	5	**166**	329
Total Volume	50	615	665	11	34	45	530	15	545	1255
% App. Total	7.5	92.5		24.4	75.6		97.2	2.8		
PHF	.781	.926	.934	.550	.773	.938	.823	.750	.821	.951

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

File Name : 13_MEN ANAL PM
Site Code : 06717552
Start Date : 8/29/2017
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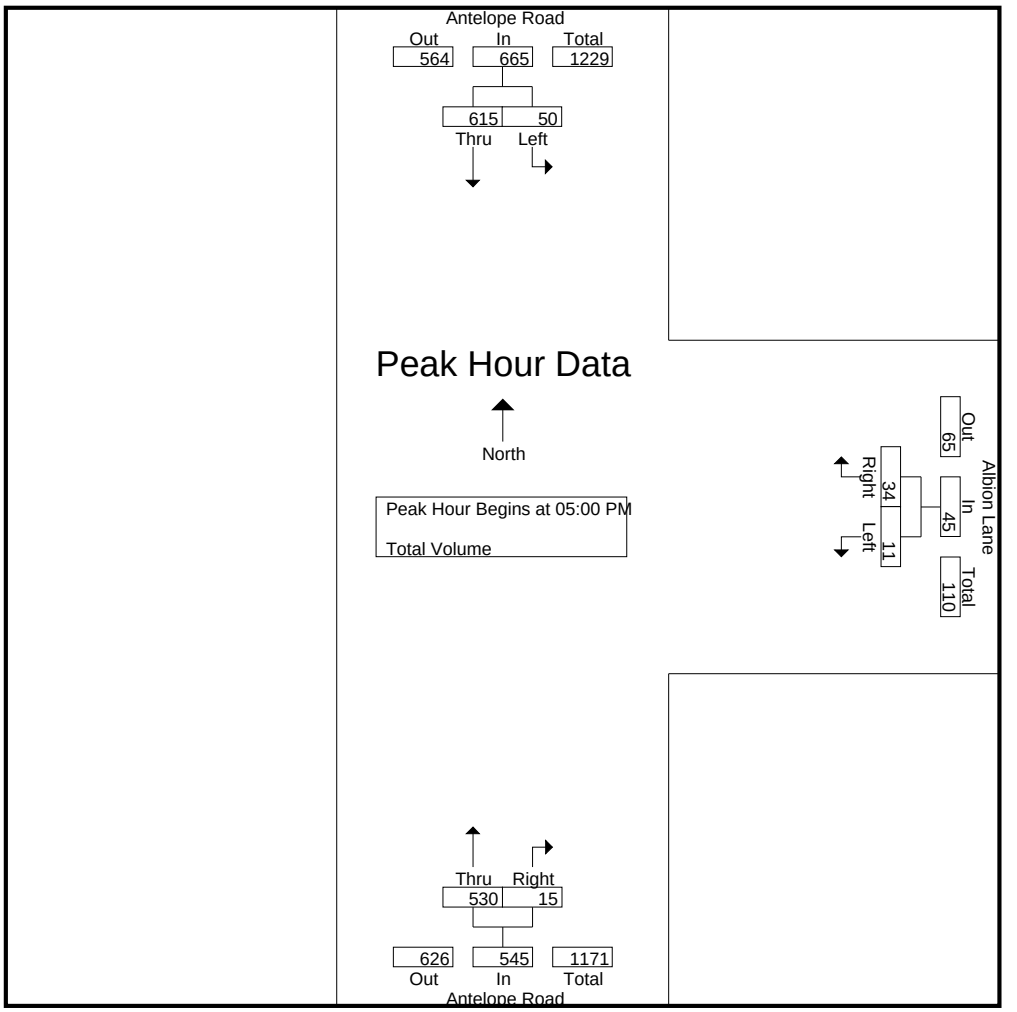

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM			04:15 PM			05:00 PM		
+0 mins.	**16**	162	**178**	**4**	8	12	119	3	122
+15 mins.	12	**166**	178	2	10	12	100	2	102
+30 mins.	12	158	170	1	**12**	**13**	150	**5**	155
+45 mins.	10	156	166	1	11	12	**161**	5	**166**
Total Volume	50	642	692	8	41	49	530	15	545
% App. Total	7.2	92.8		16.3	83.7		97.2	2.8	
PHF	.781	.967	.972	.500	.854	.942	.823	.750	.821

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(951) 268-6268

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

File Name : 02_MEN HAHO AM
Site Code : 06717552
Start Date : 8/29/2017
Page No : 1

Groups Printed- Total Volume

	Hanover Lane Southbound				Holland Road Westbound				Hanover Lane Northbound				Holland Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	5	0	3	8	1	88	0	89	8	0	6	14	1	38	1	40	151
07:15 AM	7	0	3	10	3	76	1	80	5	0	13	18	1	37	5	43	151
07:30 AM	8	0	4	12	7	89	5	101	7	0	1	8	3	36	3	42	163
07:45 AM	6	0	2	8	2	68	10	80	5	0	2	7	2	28	1	31	126
Total	26	0	12	38	13	321	16	350	25	0	22	47	7	139	10	156	591
08:00 AM	0	0	2	2	0	47	7	54	7	1	2	10	1	23	4	28	94
08:15 AM	2	0	3	5	2	52	4	58	4	2	1	7	1	29	6	36	106
08:30 AM	1	1	3	5	2	55	2	59	2	1	1	4	1	19	3	23	91
08:45 AM	2	1	1	4	2	51	2	55	3	2	1	6	2	20	2	24	89
Total	5	2	9	16	6	205	15	226	16	6	5	27	5	91	15	111	380
Grand Total	31	2	21	54	19	526	31	576	41	6	27	74	12	230	25	267	971
Apprch %	57.4	3.7	38.9		3.3	91.3	5.4		55.4	8.1	36.5		4.5	86.1	9.4		
Total %	3.2	0.2	2.2	5.6	2	54.2	3.2	59.3	4.2	0.6	2.8	7.6	1.2	23.7	2.6	27.5	

	Hanover Lane Southbound				Holland Road Westbound				Hanover Lane Northbound				Holland Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	5	0	3	8	1	88	0	89	**8**	0	6	14	1	**38**	1	40	151
07:15 AM	7	0	3	10	3	76	1	80	5	0	**13**	**18**	1	37	**5**	**43**	151
07:30 AM	**8**	0	**4**	**12**	**7**	**89**	5	**101**	7	0	1	8	**3**	36	3	42	**163**
07:45 AM	6	0	2	8	2	68	**10**	80	5	0	2	7	2	28	1	31	126
Total Volume	26	0	12	38	13	321	16	350	25	0	22	47	7	139	10	156	591
% App. Total	68.4	0	31.6		3.7	91.7	4.6		53.2	0	46.8		4.5	89.1	6.4		
PHF	.813	.000	.750	.792	.464	.902	.400	.866	.781	.000	.423	.653	.583	.914	.500	.907	.906

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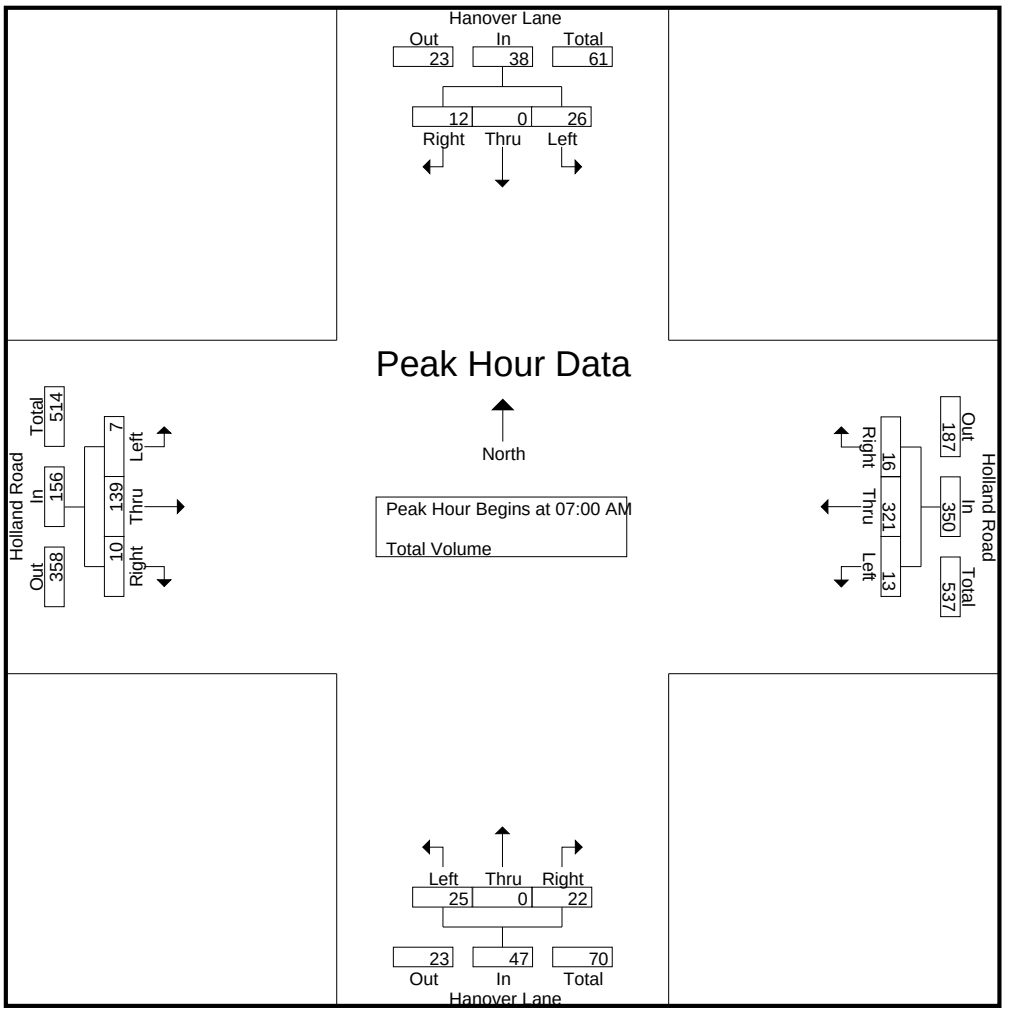

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	5	0	3	8	1	88	0	89	**8**	0	6	14	1	**38**	1	40
+15 mins.	7	0	3	10	3	76	1	80	5	0	**13**	**18**	1	37	**5**	**43**
+30 mins.	**8**	0	**4**	**12**	**7**	**89**	5	**101**	7	0	1	8	**3**	36	3	42
+45 mins.	6	0	2	8	2	68	**10**	80	5	0	2	7	2	28	1	31
Total Volume	26	0	12	38	13	321	16	350	25	0	22	47	7	139	10	156
% App. Total	68.4	0	31.6		3.7	91.7	4.6		53.2	0	46.8		4.5	89.1	6.4	
PHF	.813	.000	.750	.792	.464	.902	.400	.866	.781	.000	.423	.653	.583	.914	.500	.907

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Groups Printed- Total Volume

	Hanover Lane Southbound				Holland Road Westbound				Hanover Lane Northbound				Holland Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:00 PM	2	1	3	6	1	39	2	42	0	0	4	4	2	42	1	45	97
02:15 PM	1	0	3	4	10	76	3	89	4	0	7	11	1	26	3	30	134
02:30 PM	4	0	4	8	5	44	3	52	6	1	2	9	1	37	3	41	110
02:45 PM	3	0	4	7	2	40	0	42	2	2	0	4	4	35	3	42	95
Total	10	1	14	25	18	199	8	225	12	3	13	28	8	140	10	158	436
03:00 PM	3	2	4	9	1	38	2	41	4	1	2	7	1	43	4	48	105
03:15 PM	7	0	6	13	1	51	1	53	3	0	1	4	7	42	8	57	127
03:30 PM	0	0	4	4	1	30	3	34	3	1	0	4	2	39	8	49	91
03:45 PM	0	1	4	5	1	36	6	43	5	1	0	6	4	62	6	72	126
Total	10	3	18	31	4	155	12	171	15	3	3	21	14	186	26	226	449
Grand Total	20	4	32	56	22	354	20	396	27	6	16	49	22	326	36	384	885
Apprch %	35.7	7.1	57.1		5.6	89.4	5.1		55.1	12.2	32.7		5.7	84.9	9.4		
Total %	2.3	0.5	3.6	6.3	2.5	40	2.3	44.7	3.1	0.7	1.8	5.5	2.5	36.8	4.1	43.4	

	Hanover Lane Southbound				Holland Road Westbound				Hanover Lane Northbound				Holland Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:00 PM																	
03:00 PM	3	**2**	4	9	**1**	38	2	41	4	**1**	**2**	**7**	1	43	4	48	105
03:15 PM	**7**	0	**6**	**13**	1	**51**	1	**53**	3	0	1	4	**7**	42	**8**	57	**127**
03:30 PM	0	0	4	4	1	30	3	34	3	1	0	4	2	39	8	49	91
03:45 PM	0	1	4	5	1	36	**6**	43	**5**	1	0	6	4	**62**	6	**72**	126
Total Volume	10	3	18	31	4	155	12	171	15	3	3	21	14	186	26	226	449
% App. Total	32.3	9.7	58.1		2.3	90.6	7		71.4	14.3	14.3		6.2	82.3	11.5		
PHF	.357	.375	.750	.596	1.00	.760	.500	.807	.750	.750	.375	.750	.500	.750	.813	.785	.884

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File Name : 02_MEN HAHO MD
Site Code : 06717552
Start Date : 8/29/2017
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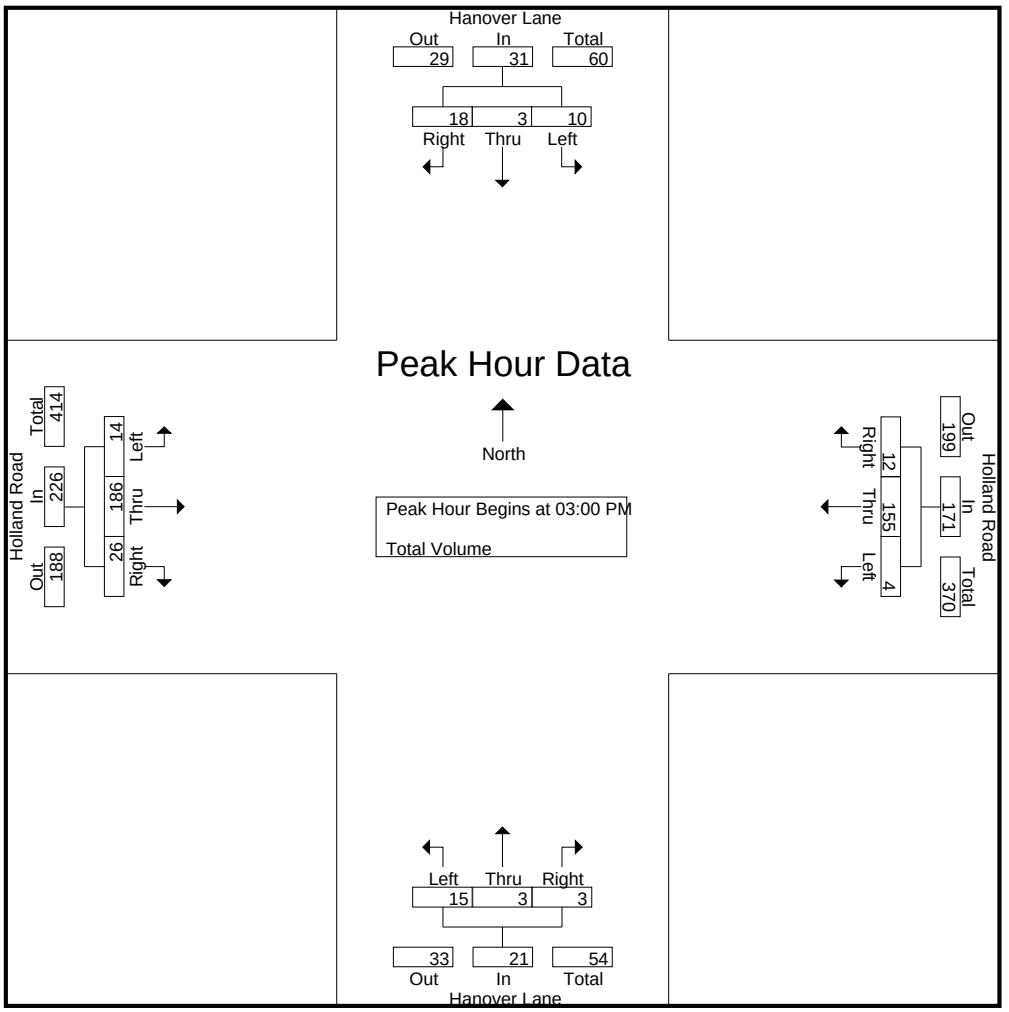

Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	02:30 PM				02:00 PM				02:15 PM				03:00 PM			
+0 mins.	4	0	4	8	1	39	2	42	4	0	**7**	**11**	1	43	4	48
+15 mins.	3	0	4	7	**10**	**76**	**3**	**89**	**6**	1	2	9	**7**	42	**8**	57
+30 mins.	3	**2**	4	9	5	44	3	52	2	**2**	0	4	2	39	8	49
+45 mins.	**7**	0	**6**	**13**	2	40	0	42	4	1	2	7	4	**62**	6	**72**
Total Volume	17	2	18	37	18	199	8	225	16	4	11	31	14	186	26	226
% App. Total	45.9	5.4	48.6		8	88.4	3.6		51.6	12.9	35.5		6.2	82.3	11.5	
PHF	.607	.250	.750	.712	.450	.655	.667	.632	.667	.500	.393	.705	.500	.750	.813	.785

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City of Menifee
N/S: Hanover Lane
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Weather: Clear

File Name : 02_MEN HAHO PM
Site Code : 06717552
Start Date : 8/29/2017
Page No : 1

Groups Printed- Total Volume

	Hanover Lane Southbound				Holland Road Westbound				Hanover Lane Northbound				Holland Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	4	0	6	10	1	21	3	25	5	0	0	5	2	46	5	53	93
04:15 PM	1	0	3	4	2	29	4	35	3	0	3	6	3	61	7	71	116
04:30 PM	2	0	2	4	1	32	3	36	4	0	1	5	3	50	8	61	106
04:45 PM	3	0	9	12	1	41	6	48	5	1	0	6	5	42	3	50	116
Total	10	0	20	30	5	123	16	144	17	1	4	22	13	199	23	235	431
05:00 PM	0	0	4	4	2	35	2	39	1	0	0	1	2	68	3	73	117
05:15 PM	1	0	6	7	0	31	4	35	4	0	3	7	4	61	6	71	120
05:30 PM	3	1	6	10	1	36	10	47	5	2	0	7	1	60	6	67	131
05:45 PM	3	2	3	8	2	46	2	50	5	1	2	8	3	49	3	55	121
Total	7	3	19	29	5	148	18	171	15	3	5	23	10	238	18	266	489
Grand Total	17	3	39	59	10	271	34	315	32	4	9	45	23	437	41	501	920
Apprch %	28.8	5.1	66.1		3.2	86	10.8		71.1	8.9	20		4.6	87.2	8.2		
Total %	1.8	0.3	4.2	6.4	1.1	29.5	3.7	34.2	3.5	0.4	1	4.9	2.5	47.5	4.5	54.5	

	Hanover Lane Southbound				Holland Road Westbound				Hanover Lane Northbound				Holland Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	4	4	**2**	35	2	39	1	0	0	1	2	**68**	3	**73**	117
05:15 PM	1	0	**6**	7	0	31	4	35	4	0	**3**	7	**4**	61	**6**	71	120
05:30 PM	**3**	1	6	**10**	1	36	**10**	47	**5**	**2**	0	7	1	60	6	67	**131**
05:45 PM	3	**2**	3	8	2	**46**	2	**50**	5	1	2	**8**	3	49	3	55	121
Total Volume	7	3	19	29	5	148	18	171	15	3	5	23	10	238	18	266	489
% App. Total	24.1	10.3	65.5		2.9	86.5	10.5		65.2	13	21.7		3.8	89.5	6.8		
PHF	.583	.375	.792	.725	.625	.804	.450	.855	.750	.375	.417	.719	.625	.875	.750	.911	.933

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City of Menifee
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File Name : 02_MEN HAHO PM
Site Code : 06717552
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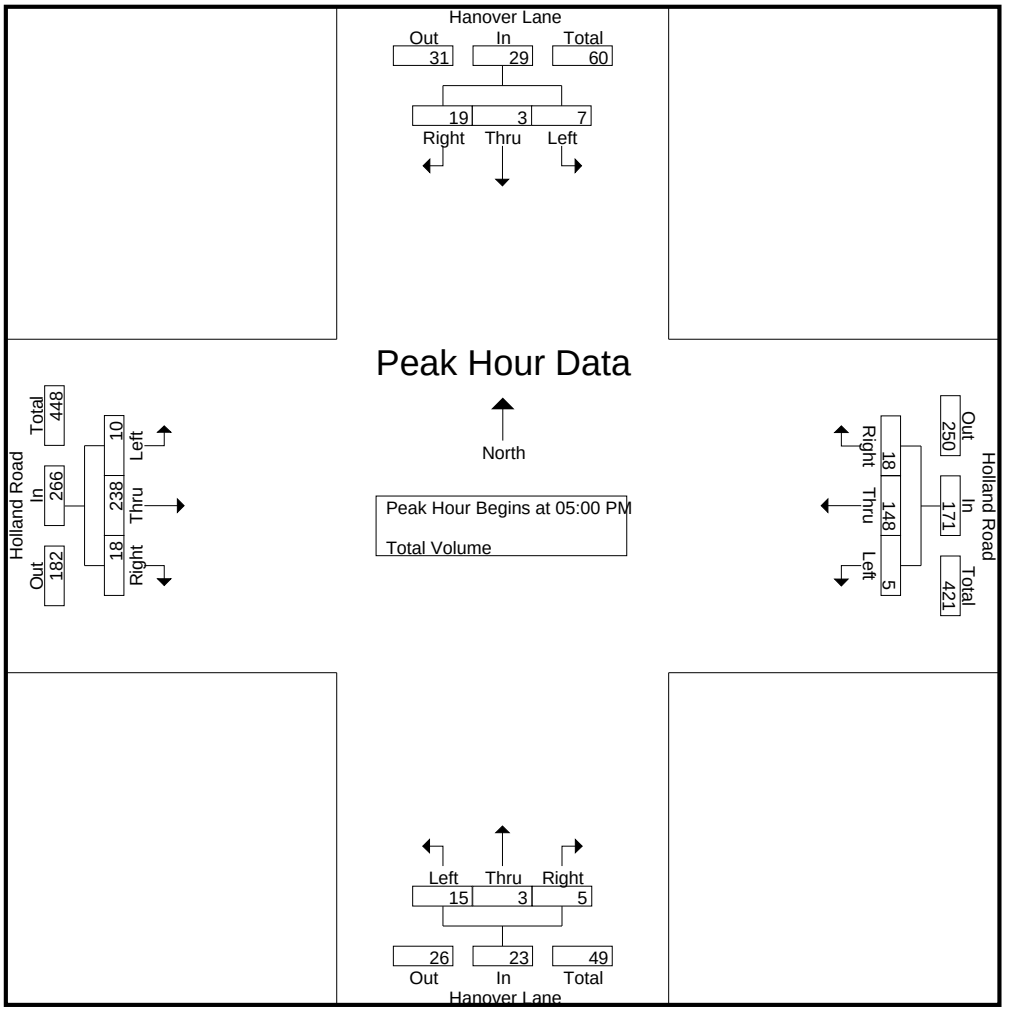

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	**3**	0	**9**	**12**	**2**	35	2	39	1	0	0	1	2	**68**	3	**73**
+15 mins.	0	0	4	4	0	31	4	35	4	0	**3**	7	**4**	61	**6**	71
+30 mins.	1	0	6	7	1	36	**10**	47	**5**	**2**	0	7	1	60	6	67
+45 mins.	3	**1**	6	10	2	**46**	2	**50**	5	1	2	**8**	3	49	3	55
Total Volume	7	1	25	33	5	148	18	171	15	3	5	23	10	238	18	266
% App. Total	21.2	3	75.8		2.9	86.5	10.5		65.2	13	21.7		3.8	89.5	6.8	
PHF	.583	.250	.694	.688	.625	.804	.450	.855	.750	.375	.417	.719	.625	.875	.750	.911

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

File Name : 03_MEN PAHO AM
Site Code : 06717552
Start Date : 8/29/2017
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Groups Printed- Total Volume

	Palomar Road Southbound				Holland Road Westbound				Palomar Road Northbound				Holland Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	1	14	15	2	62	0	64	10	0	6	16	2	43	3	48	143
07:15 AM	0	0	8	8	10	71	0	81	11	3	31	45	2	54	2	58	192
07:30 AM	0	0	10	10	9	83	0	92	7	0	5	12	0	42	2	44	158
07:45 AM	0	1	3	4	9	62	1	72	10	1	8	19	2	29	5	36	131
Total	0	2	35	37	30	278	1	309	38	4	50	92	6	168	12	186	624
08:00 AM	0	0	5	5	4	36	0	40	12	0	8	20	0	24	2	26	91
08:15 AM	0	0	9	9	3	45	0	48	3	2	3	8	3	27	2	32	97
08:30 AM	0	3	4	7	2	44	0	46	8	1	3	12	3	18	1	22	87
08:45 AM	0	1	4	5	2	42	0	44	10	0	0	10	2	20	1	23	82
Total	0	4	22	26	11	167	0	178	33	3	14	50	8	89	6	103	357
Grand Total	0	6	57	63	41	445	1	487	71	7	64	142	14	257	18	289	981
Apprch %	0	9.5	90.5		8.4	91.4	0.2		50	4.9	45.1		4.8	88.9	6.2		
Total %	0	0.6	5.8	6.4	4.2	45.4	0.1	49.6	7.2	0.7	6.5	14.5	1.4	26.2	1.8	29.5	

	Palomar Road Southbound				Holland Road Westbound				Palomar Road Northbound				Holland Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	**1**	**14**	**15**	2	62	0	64	10	0	6	16	**2**	43	3	48	143
07:15 AM	0	0	8	8	**10**	71	0	81	**11**	**3**	**31**	**45**	2	**54**	2	**58**	**192**
07:30 AM	0	0	10	10	9	**83**	0	**92**	7	0	5	12	0	42	2	44	158
07:45 AM	0	1	3	4	9	62	**1**	72	10	1	8	19	2	29	**5**	36	131
Total Volume	0	2	35	37	30	278	1	309	38	4	50	92	6	168	12	186	624
% App. Total	0	5.4	94.6		9.7	90	0.3		41.3	4.3	54.3		3.2	90.3	6.5		
PHF	.000	.500	.625	.617	.750	.837	.250	.840	.864	.333	.403	.511	.750	.778	.600	.802	.813

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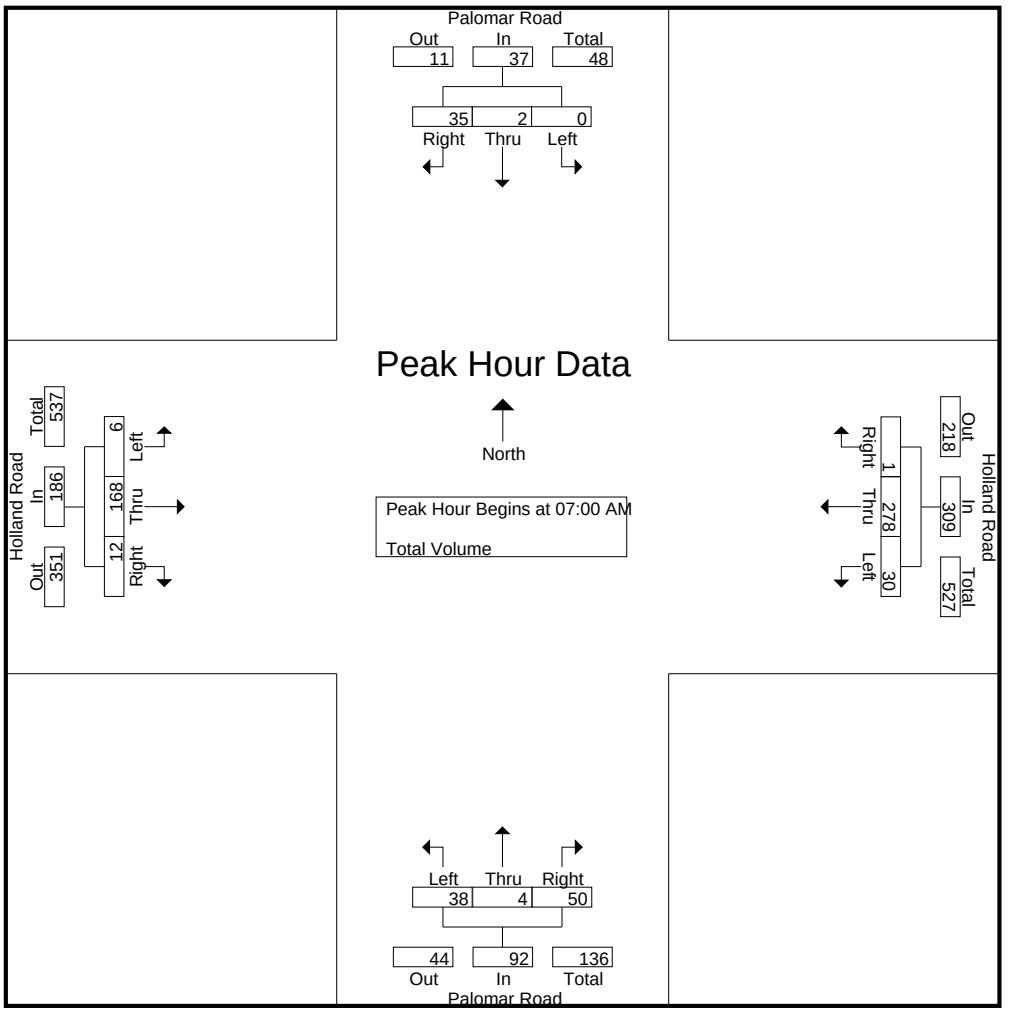

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:15 AM				07:00 AM			
+0 mins.	0	**1**	**14**	**15**	2	62	0	64	11	**3**	**31**	**45**	**2**	43	3	48
+15 mins.	0	0	8	8	**10**	71	0	81	7	0	5	12	2	**54**	2	**58**
+30 mins.	0	0	10	10	9	**83**	0	**92**	10	1	8	19	0	42	2	44
+45 mins.	0	1	3	4	9	62	**1**	72	**12**	0	8	20	2	29	**5**	36
Total Volume	0	2	35	37	30	278	1	309	40	4	52	96	6	168	12	186
% App. Total	0	5.4	94.6		9.7	90	0.3		41.7	4.2	54.2		3.2	90.3	6.5	
PHF	.000	.500	.625	.617	.750	.837	.250	.840	.833	.333	.419	.533	.750	.778	.600	.802

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Groups Printed- Total Volume

	Palomar Road Southbound				Holland Road Westbound				Palomar Road Northbound				Holland Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:00 PM	0	1	3	4	12	36	0	48	4	0	5	9	4	39	8	51	112
02:15 PM	0	1	4	5	19	76	0	95	10	0	6	16	3	27	1	31	147
02:30 PM	0	0	2	2	7	44	0	51	6	0	0	6	2	39	4	45	104
02:45 PM	1	0	2	3	4	32	0	36	4	0	8	12	3	26	8	37	88
Total	1	2	11	14	42	188	0	230	24	0	19	43	12	131	21	164	451
03:00 PM	4	9	10	23	4	27	1	32	5	6	3	14	7	38	3	48	117
03:15 PM	3	6	13	22	6	36	1	43	6	3	1	10	3	40	7	50	125
03:30 PM	0	1	3	4	6	21	0	27	7	0	1	8	1	29	9	39	78
03:45 PM	1	0	3	4	2	35	1	38	6	0	0	6	12	45	5	62	110
Total	8	16	29	53	18	119	3	140	24	9	5	38	23	152	24	199	430
Grand Total	9	18	40	67	60	307	3	370	48	9	24	81	35	283	45	363	881
Apprch %	13.4	26.9	59.7		16.2	83	0.8		59.3	11.1	29.6		9.6	78	12.4		
Total %	1	2	4.5	7.6	6.8	34.8	0.3	42	5.4	1	2.7	9.2	4	32.1	5.1	41.2	

	Palomar Road Southbound				Holland Road Westbound				Palomar Road Northbound				Holland Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 02:15 PM																	
02:15 PM	0	1	4	5	**19**	**76**	0	**95**	**10**	0	6	**16**	3	27	1	31	**147**
02:30 PM	0	0	2	2	7	44	0	51	6	0	0	6	2	**39**	4	45	104
02:45 PM	1	0	2	3	4	32	0	36	4	0	**8**	12	3	26	**8**	37	88
03:00 PM	**4**	**9**	**10**	**23**	4	27	**1**	32	5	**6**	3	14	**7**	38	3	**48**	117
Total Volume	5	10	18	33	34	179	1	214	25	6	17	48	15	130	16	161	456
% App. Total	15.2	30.3	54.5		15.9	83.6	0.5		52.1	12.5	35.4		9.3	80.7	9.9		
PHF	.313	.278	.450	.359	.447	.589	.250	.563	.625	.250	.531	.750	.536	.833	.500	.839	.776

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

File Name : 03_MEN PAHO MD
Site Code : 06717552
Start Date : 8/29/2017
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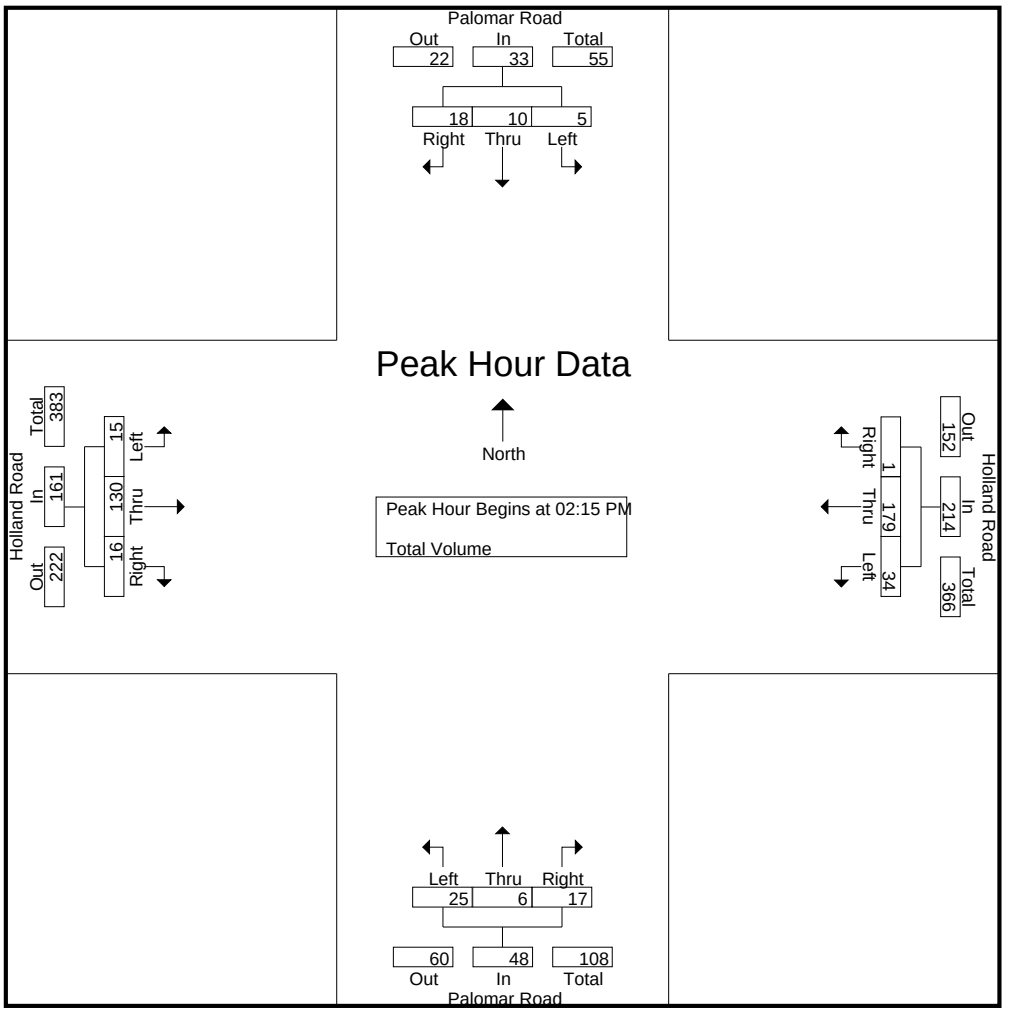

Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:00 PM				02:00 PM				02:15 PM				03:00 PM			
+0 mins.	**4**	**9**	10	**23**	12	36	0	48	**10**	0	6	**16**	7	38	3	48
+15 mins.	3	6	**13**	22	**19**	**76**	0	**95**	6	0	0	6	3	40	7	50
+30 mins.	0	1	3	4	7	44	0	51	4	0	**8**	12	1	29	**9**	39
+45 mins.	1	0	3	4	4	32	0	36	5	**6**	3	14	**12**	**45**	5	**62**
Total Volume	8	16	29	53	42	188	0	230	25	6	17	48	23	152	24	199
% App. Total	15.1	30.2	54.7		18.3	81.7	0		52.1	12.5	35.4		11.6	76.4	12.1	
PHF	.500	.444	.558	.576	.553	.618	.000	.605	.625	.250	.531	.750	.479	.844	.667	.802

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

File Name : 03_MEN PAHO PM
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Groups Printed- Total Volume

	Palomar Road Southbound				Holland Road Westbound				Palomar Road Northbound				Holland Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	1	1	3	19	0	22	3	1	4	8	5	38	8	51	82
04:15 PM	0	1	3	4	1	26	0	27	6	0	4	10	7	47	10	64	105
04:30 PM	0	0	2	2	5	31	0	36	7	0	4	11	3	43	7	53	102
04:45 PM	0	0	3	3	5	37	0	42	5	0	3	8	8	30	9	47	100
Total	0	1	9	10	14	113	0	127	21	1	15	37	23	158	34	215	389
05:00 PM	0	0	0	0	5	35	0	40	3	0	3	6	5	48	13	66	112
05:15 PM	0	1	3	4	3	31	1	35	3	0	3	6	10	53	4	67	112
05:30 PM	0	0	5	5	2	36	0	38	7	1	1	9	4	52	6	62	114
05:45 PM	1	0	5	6	1	36	1	38	9	0	0	9	7	41	7	55	108
Total	1	1	13	15	11	138	2	151	22	1	7	30	26	194	30	250	446
Grand Total	1	2	22	25	25	251	2	278	43	2	22	67	49	352	64	465	835
Apprch %	4	8	88		9	90.3	0.7		64.2	3	32.8		10.5	75.7	13.8		
Total %	0.1	0.2	2.6	3	3	30.1	0.2	33.3	5.1	0.2	2.6	8	5.9	42.2	7.7	55.7	

	Palomar Road Southbound				Holland Road Westbound				Palomar Road Northbound				Holland Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	0	0	**5**	35	0	**40**	3	0	**3**	6	5	48	**13**	66	112
05:15 PM	0	**1**	3	4	3	31	**1**	35	3	0	3	6	**10**	**53**	4	**67**	112
05:30 PM	0	0	**5**	5	2	**36**	0	38	7	**1**	1	**9**	4	52	6	62	**114**
05:45 PM	**1**	0	5	**6**	1	36	1	38	**9**	0	0	9	7	41	7	55	108
Total Volume	1	1	13	15	11	138	2	151	22	1	7	30	26	194	30	250	446
% App. Total	6.7	6.7	86.7		7.3	91.4	1.3		73.3	3.3	23.3		10.4	77.6	12		
PHF	.250	.250	.650	.625	.550	.958	.500	.944	.611	.250	.583	.833	.650	.915	.577	.933	.978

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

File Name : 03_MEN PAHO PM
Site Code : 06717552
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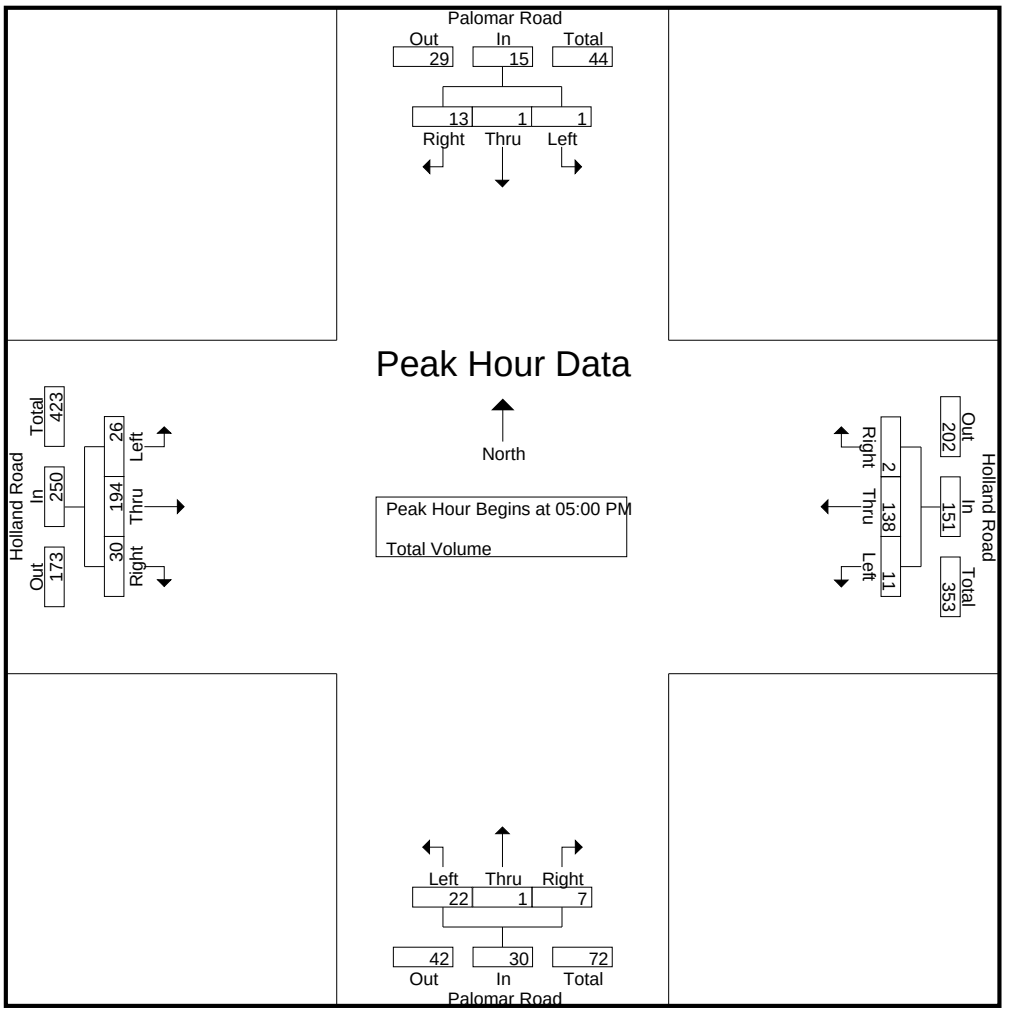

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				04:45 PM				04:00 PM				05:00 PM			
+0 mins.	0	0	0	0	**5**	**37**	0	**42**	3	**1**	**4**	8	5	48	**13**	66
+15 mins.	0	**1**	3	4	5	35	0	40	6	0	4	10	**10**	**53**	4	**67**
+30 mins.	0	0	**5**	5	3	31	**1**	35	**7**	0	4	**11**	4	52	6	62
+45 mins.	**1**	0	5	**6**	2	36	0	38	5	0	3	8	7	41	7	55
Total Volume	1	1	13	15	15	139	1	155	21	1	15	37	26	194	30	250
% App. Total	6.7	6.7	86.7		9.7	89.7	0.6		56.8	2.7	40.5		10.4	77.6	12	
PHF	.250	.250	.650	.625	.750	.939	.250	.923	.750	.250	.938	.841	.650	.915	.577	.933

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

File Name : 04_MEN MEHO AM
Site Code : 06717552
Start Date : 8/29/2017
Page No : 1

Groups Printed- Total Volume

	Menifee Road Southbound				Holland Road Westbound				Menifee Road Northbound				Holland Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	28	40	8	76	10	41	24	75	11	64	17	92	25	22	3	50	293
07:15 AM	41	49	28	118	22	40	41	103	8	99	42	149	57	25	3	85	455
07:30 AM	34	78	36	148	39	52	62	153	11	96	39	146	30	25	1	56	503
07:45 AM	12	94	28	134	13	23	21	57	14	88	7	109	16	7	11	34	334
Total	115	261	100	476	84	156	148	388	44	347	105	496	128	79	18	225	1585
08:00 AM	8	65	16	89	9	17	14	40	9	100	2	111	15	12	5	32	272
08:15 AM	7	109	21	137	1	16	20	37	13	111	4	128	15	12	11	38	340
08:30 AM	12	107	20	139	1	16	22	39	10	87	2	99	7	12	3	22	299
08:45 AM	12	48	12	72	2	14	7	23	13	29	1	43	5	14	3	22	160
Total	39	329	69	437	13	63	63	139	45	327	9	381	42	50	22	114	1071
Grand Total	154	590	169	913	97	219	211	527	89	674	114	877	170	129	40	339	2656
Apprch %	16.9	64.6	18.5		18.4	41.6	40		10.1	76.9	13		50.1	38.1	11.8		
Total %	5.8	22.2	6.4	34.4	3.7	8.2	7.9	19.8	3.4	25.4	4.3	33	6.4	4.9	1.5	12.8	

	Menifee Road Southbound				Holland Road Westbound				Menifee Road Northbound				Holland Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	28	40	8	76	10	41	24	75	11	64	17	92	25	22	3	50	293
07:15 AM	**41**	49	28	118	22	40	41	103	8	**99**	**42**	**149**	**57**	**25**	3	**85**	455
07:30 AM	34	78	**36**	**148**	**39**	**52**	**62**	**153**	11	96	39	146	30	25	1	56	**503**
07:45 AM	12	**94**	28	134	13	23	21	57	**14**	88	7	109	16	7	**11**	34	334
Total Volume	115	261	100	476	84	156	148	388	44	347	105	496	128	79	18	225	1585
% App. Total	24.2	54.8	21		21.6	40.2	38.1		8.9	70	21.2		56.9	35.1	8		
PHF	.701	.694	.694	.804	.538	.750	.597	.634	.786	.876	.625	.832	.561	.790	.409	.662	.788

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

File Name : 04_MEN MEHO AM
Site Code : 06717552
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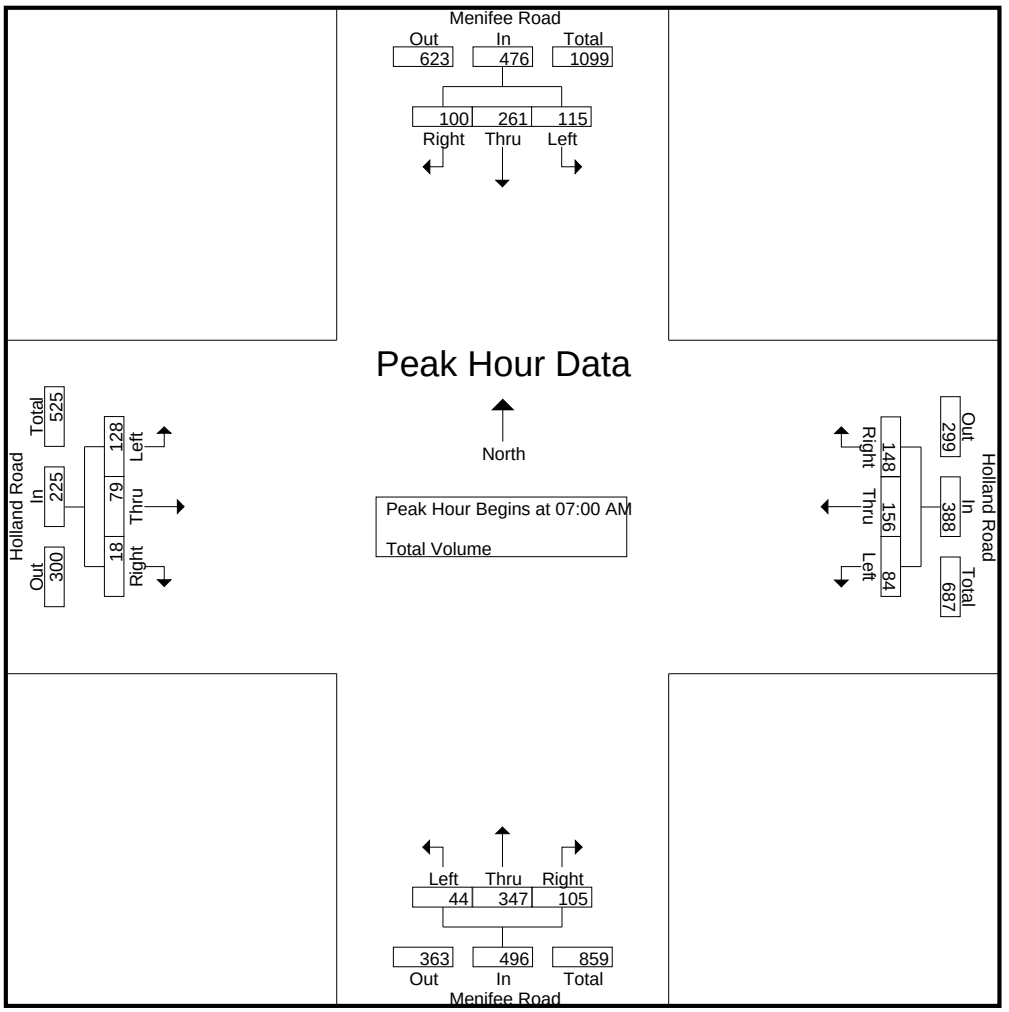

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:00 AM				07:15 AM				07:00 AM			
+0 mins.	**34**	78	**36**	**148**	10	41	24	75	8	99	**42**	**149**	25	22	3	50
+15 mins.	12	94	28	134	22	40	41	103	11	96	39	146	**57**	**25**	3	**85**
+30 mins.	8	65	16	89	**39**	**52**	**62**	**153**	**14**	88	7	109	30	25	1	56
+45 mins.	7	**109**	21	137	13	23	21	57	9	**100**	2	111	16	7	**11**	34
Total Volume	61	346	101	508	84	156	148	388	42	383	90	515	128	79	18	225
% App. Total	12	68.1	19.9		21.6	40.2	38.1		8.2	74.4	17.5		56.9	35.1	8	
PHF	.449	.794	.701	.858	.538	.750	.597	.634	.750	.958	.536	.864	.561	.790	.409	.662

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

File Name : 04_MEN MEHO MD
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Groups Printed- Total Volume

	Menifee Road Southbound				Holland Road Westbound				Menifee Road Northbound				Holland Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:00 PM	25	50	28	103	25	22	36	83	3	54	22	79	24	18	3	45	310
02:15 PM	21	74	41	136	52	44	64	160	12	66	16	94	17	17	4	38	428
02:30 PM	12	35	23	70	3	27	22	52	4	87	3	94	10	15	11	36	252
02:45 PM	9	35	12	56	4	17	21	42	5	88	7	100	15	15	3	33	231
Total	67	194	104	365	84	110	143	337	24	295	48	367	66	65	21	152	1221
03:00 PM	19	127	11	157	2	12	16	30	9	105	3	117	12	21	9	42	346
03:15 PM	14	140	18	172	2	19	16	37	6	67	9	82	11	22	17	50	341
03:30 PM	19	59	15	93	2	12	11	25	6	54	11	71	10	12	7	29	218
03:45 PM	16	55	10	81	10	22	18	50	5	57	6	68	9	26	14	49	248
Total	68	381	54	503	16	65	61	142	26	283	29	338	42	81	47	170	1153
Grand Total	135	575	158	868	100	175	204	479	50	578	77	705	108	146	68	322	2374
Apprch %	15.6	66.2	18.2		20.9	36.5	42.6		7.1	82	10.9		33.5	45.3	21.1		
Total %	5.7	24.2	6.7	36.6	4.2	7.4	8.6	20.2	2.1	24.3	3.2	29.7	4.5	6.1	2.9	13.6	

	Menifee Road Southbound				Holland Road Westbound				Menifee Road Northbound				Holland Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 02:15 PM																	
02:15 PM	**21**	74	**41**	136	**52**	**44**	**64**	**160**	**12**	66	**16**	94	**17**	17	4	38	**428**
02:30 PM	12	35	23	70	3	27	22	52	4	87	3	94	10	15	**11**	36	252
02:45 PM	9	35	12	56	4	17	21	42	5	88	7	100	15	15	3	33	231
03:00 PM	19	**127**	11	**157**	2	12	16	30	9	**105**	3	**117**	12	**21**	9	**42**	346
Total Volume	61	271	87	419	61	100	123	284	30	346	29	405	54	68	27	149	1257
% App. Total	14.6	64.7	20.8		21.5	35.2	43.3		7.4	85.4	7.2		36.2	45.6	18.1		
PHF	.726	.533	.530	.667	.293	.568	.480	.444	.625	.824	.453	.865	.794	.810	.614	.887	.734

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City of Menifee
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Weather: Clear

File Name : 04_MEN MEHO MD
Site Code : 06717552
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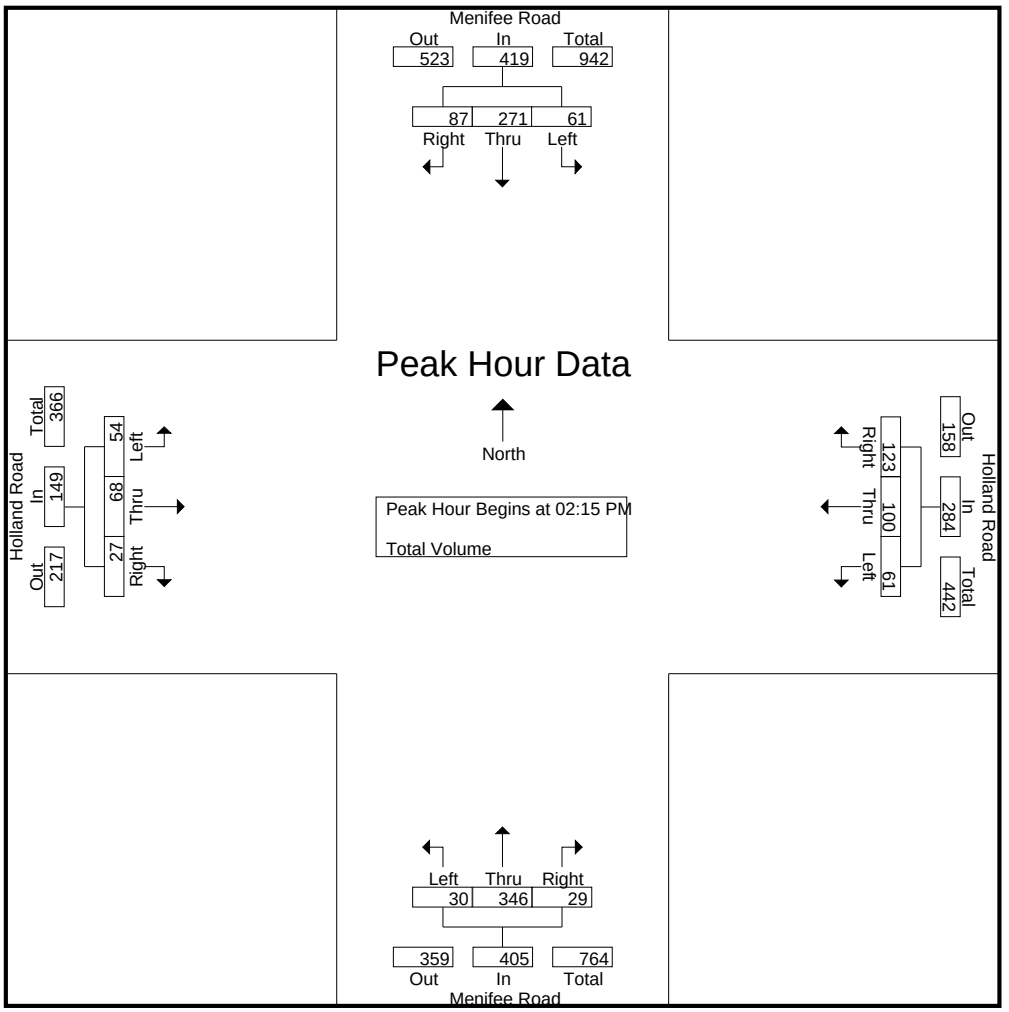

Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:00 PM				02:00 PM				02:15 PM				03:00 PM			
+0 mins.	**19**	127	11	157	25	22	36	83	**12**	66	**16**	94	**12**	21	9	42
+15 mins.	14	**140**	**18**	**172**	**52**	**44**	**64**	**160**	4	87	3	94	11	22	**17**	**50**
+30 mins.	19	59	15	93	3	27	22	52	5	88	7	100	10	12	7	29
+45 mins.	16	55	10	81	4	17	21	42	9	**105**	3	**117**	9	**26**	14	49
Total Volume	68	381	54	503	84	110	143	337	30	346	29	405	42	81	47	170
% App. Total	13.5	75.7	10.7		24.9	32.6	42.4		7.4	85.4	7.2		24.7	47.6	27.6	
PHF	.895	.680	.750	.731	.404	.625	.559	.527	.625	.824	.453	.865	.875	.779	.691	.850

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City of Menifee
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Weather: Clear

File Name : 04_MEN MEHO PM
Site Code : 06717552
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Groups Printed- Total Volume

	Menifee Road Southbound				Holland Road Westbound				Menifee Road Northbound				Holland Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	17	57	11	85	2	8	11	21	3	57	8	68	14	22	3	39	213
04:15 PM	10	43	14	67	7	10	11	28	4	52	9	65	12	23	14	49	209
04:30 PM	15	55	17	87	2	9	11	22	8	48	7	63	11	24	8	43	215
04:45 PM	15	49	18	82	2	17	14	33	9	47	10	66	9	10	10	29	210
Total	57	204	60	321	13	44	47	104	24	204	34	262	46	79	35	160	847
05:00 PM	14	48	14	76	0	17	13	30	8	64	10	82	11	19	13	43	231
05:15 PM	18	59	17	94	2	12	22	36	9	65	6	80	10	23	17	50	260
05:30 PM	10	55	16	81	2	17	18	37	4	69	10	83	15	28	9	52	253
05:45 PM	22	60	9	91	3	11	11	25	12	81	8	101	8	21	6	35	252
Total	64	222	56	342	7	57	64	128	33	279	34	346	44	91	45	180	996
Grand Total	121	426	116	663	20	101	111	232	57	483	68	608	90	170	80	340	1843
Apprch %	18.3	64.3	17.5		8.6	43.5	47.8		9.4	79.4	11.2		26.5	50	23.5		
Total %	6.6	23.1	6.3	36	1.1	5.5	6	12.6	3.1	26.2	3.7	33	4.9	9.2	4.3	18.4	

	Menifee Road Southbound				Holland Road Westbound				Menifee Road Northbound				Holland Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	14	48	14	76	0	**17**	13	30	8	64	**10**	82	11	19	13	43	231
05:15 PM	18	59	**17**	**94**	2	12	**22**	36	9	65	6	80	10	23	**17**	50	**260**
05:30 PM	10	55	16	81	2	17	18	**37**	4	69	10	83	**15**	**28**	9	**52**	253
05:45 PM	**22**	**60**	9	91	**3**	11	11	25	**12**	**81**	8	**101**	8	21	6	35	252
Total Volume	64	222	56	342	7	57	64	128	33	279	34	346	44	91	45	180	996
% App. Total	18.7	64.9	16.4		5.5	44.5	50		9.5	80.6	9.8		24.4	50.6	25		
PHF	.727	.925	.824	.910	.583	.838	.727	.865	.688	.861	.850	.856	.733	.813	.662	.865	.958

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City of Menifee
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File Name : 04_MEN MEHO PM
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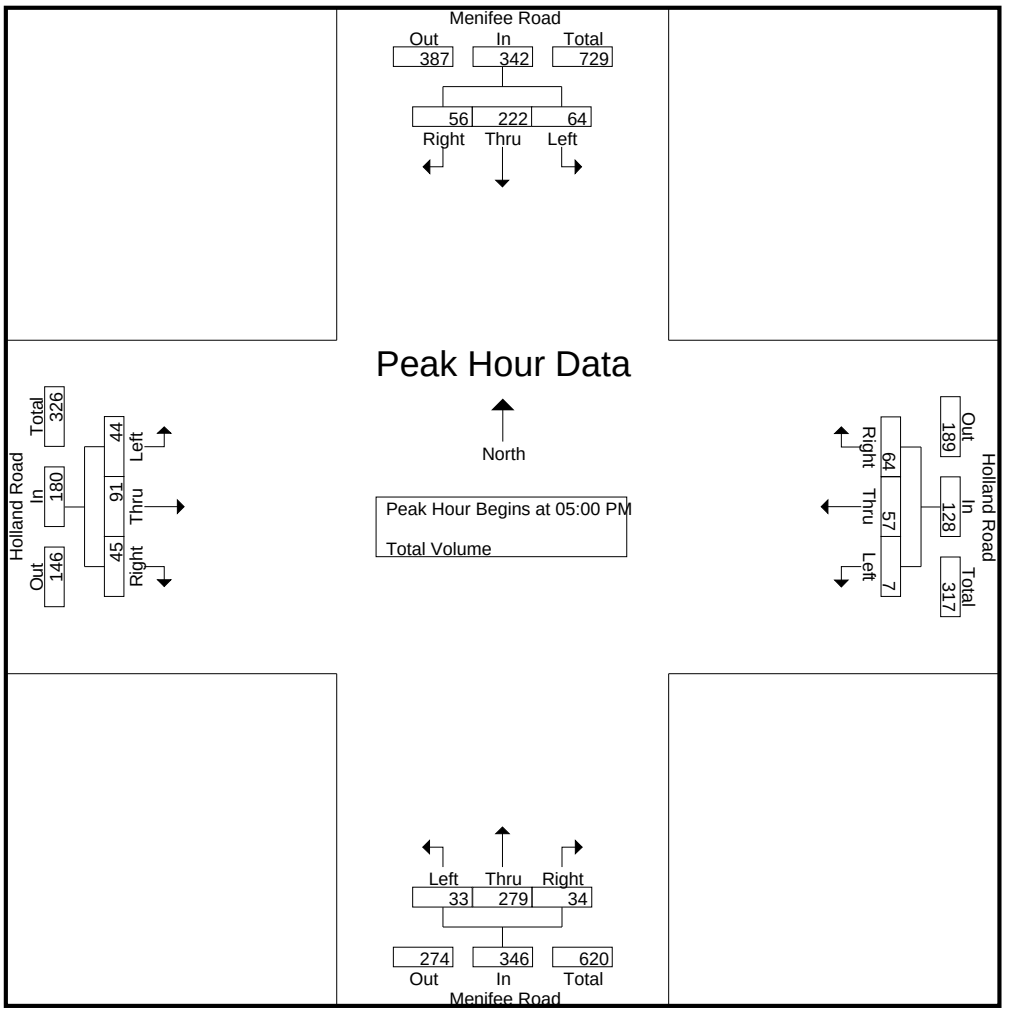

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				04:45 PM				05:00 PM				05:00 PM			
+0 mins.	14	48	14	76	**2**	**17**	14	33	8	64	**10**	82	11	19	13	43
+15 mins.	18	59	**17**	**94**	0	17	13	30	9	65	6	80	10	23	**17**	50
+30 mins.	10	55	16	81	2	12	**22**	36	4	69	10	83	**15**	**28**	9	**52**
+45 mins.	**22**	**60**	9	91	2	17	18	**37**	**12**	**81**	8	**101**	8	21	6	35
Total Volume	64	222	56	342	6	63	67	136	33	279	34	346	44	91	45	180
% App. Total	18.7	64.9	16.4		4.4	46.3	49.3		9.5	80.6	9.8		24.4	50.6	25	
PHF	.727	.925	.824	.910	.750	.926	.761	.919	.688	.861	.850	.856	.733	.813	.662	.865

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

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

File Name : 14_MEN ANHO AM
Site Code : 06717552
Start Date : 8/29/2017
Page No : 1

Groups Printed- Total Volume

	Antelope Road Southbound			Holland Road Westbound			Antelope Road Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	15	45	60	36	67	103	70	19	89	252
07:15 AM	26	51	77	32	51	83	93	10	103	263
07:30 AM	25	78	103	45	52	97	116	9	125	325
07:45 AM	25	70	95	35	42	77	174	8	182	354
Total	91	244	335	148	212	360	453	46	499	1194
08:00 AM	19	62	81	16	43	59	93	11	104	244
08:15 AM	23	92	115	23	41	64	126	11	137	316
08:30 AM	19	77	96	22	40	62	100	5	105	263
08:45 AM	19	60	79	16	43	59	77	6	83	221
Total	80	291	371	77	167	244	396	33	429	1044
Grand Total	171	535	706	225	379	604	849	79	928	2238
Apprch %	24.2	75.8		37.3	62.7		91.5	8.5		
Total %	7.6	23.9	31.5	10.1	16.9	27	37.9	3.5	41.5	

	Antelope Road Southbound			Holland Road Westbound			Antelope Road Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	**25**	78	103	**45**	**52**	**97**	116	9	125	325
07:45 AM	25	70	95	35	42	77	**174**	8	**182**	**354**
08:00 AM	19	62	81	16	43	59	93	**11**	104	244
08:15 AM	23	**92**	**115**	23	41	64	126	11	137	316
Total Volume	92	302	394	119	178	297	509	39	548	1239
% App. Total	23.4	76.6		40.1	59.9		92.9	7.1		
PHF	.920	.821	.857	.661	.856	.765	.731	.886	.753	.875

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City of Menifee
N/S: Antelope Road
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File Name : 14_MEN ANHO AM
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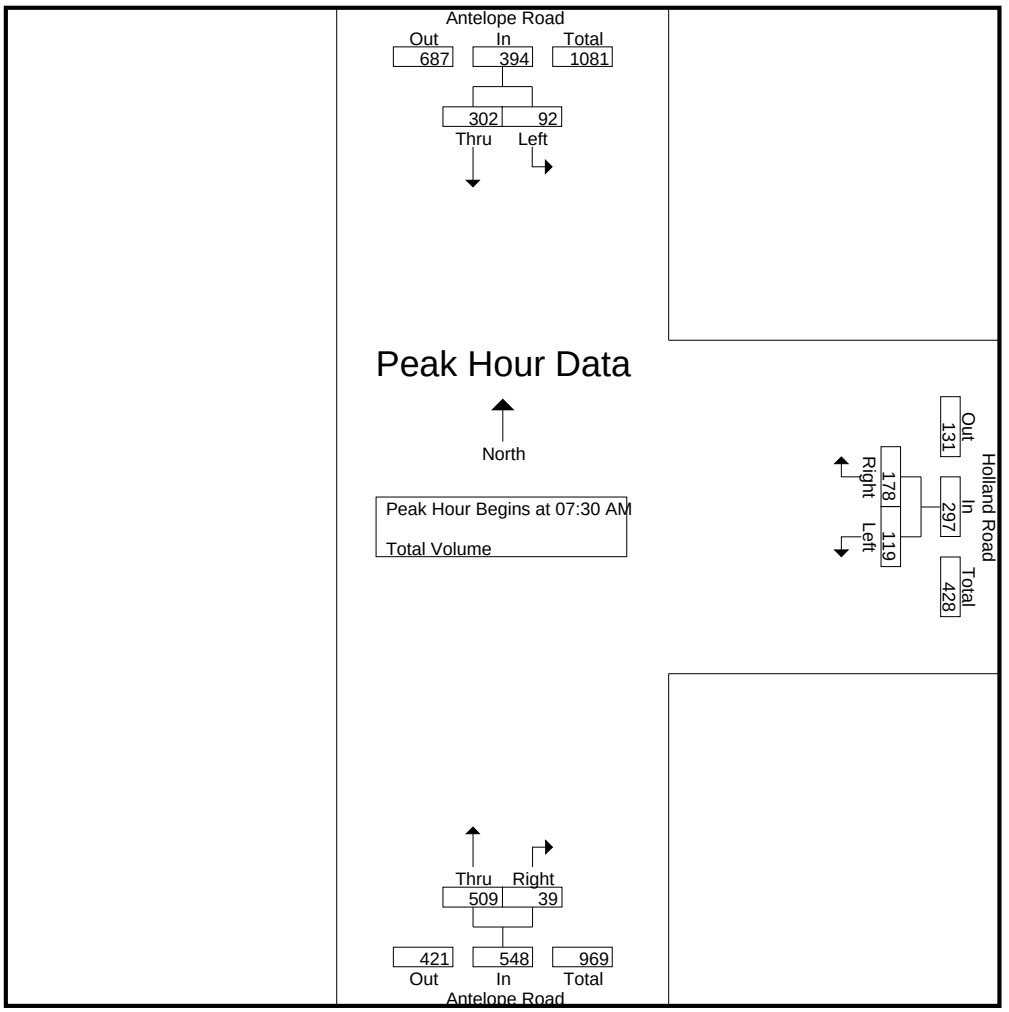

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM			07:00 AM			07:30 AM		
+0 mins.	**25**	78	103	36	**67**	**103**	116	9	125
+15 mins.	25	70	95	32	51	83	**174**	8	**182**
+30 mins.	19	62	81	**45**	52	97	93	**11**	104
+45 mins.	23	**92**	**115**	35	42	77	126	11	137
Total Volume	92	302	394	148	212	360	509	39	548
% App. Total	23.4	76.6		41.1	58.9		92.9	7.1	
PHF	.920	.821	.857	.822	.791	.874	.731	.886	.753

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

File Name : 14_MEN ANHO PM
Site Code : 06717552
Start Date : 8/29/2017
Page No : 1

Groups Printed- Total Volume

	Antelope Road Southbound			Holland Road Westbound			Antelope Road Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	44	121	165	14	19	33	84	17	101	299
04:15 PM	49	109	158	17	18	35	86	21	107	300
04:30 PM	42	96	138	10	29	39	88	23	111	288
04:45 PM	41	118	159	21	30	51	94	18	112	322
Total	176	444	620	62	96	158	352	79	431	1209
05:00 PM	54	111	165	15	28	43	92	18	110	318
05:15 PM	49	110	159	24	20	44	81	29	110	313
05:30 PM	55	108	163	19	32	51	121	20	141	355
05:45 PM	33	102	135	13	45	58	116	21	137	330
Total	191	431	622	71	125	196	410	88	498	1316
Grand Total	367	875	1242	133	221	354	762	167	929	2525
Apprch %	29.5	70.5		37.6	62.4		82	18		
Total %	14.5	34.7	49.2	5.3	8.8	14	30.2	6.6	36.8	

	Antelope Road Southbound			Holland Road Westbound			Antelope Road Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 05:00 PM										
05:00 PM	54	**111**	**165**	15	28	43	92	18	110	318
05:15 PM	49	110	159	**24**	20	44	81	**29**	110	313
05:30 PM	**55**	108	163	19	32	51	**121**	20	**141**	**355**
05:45 PM	33	102	135	13	**45**	**58**	116	21	137	330
Total Volume	191	431	622	71	125	196	410	88	498	1316
% App. Total	30.7	69.3		36.2	63.8		82.3	17.7		
PHF	.868	.971	.942	.740	.694	.845	.847	.759	.883	.927

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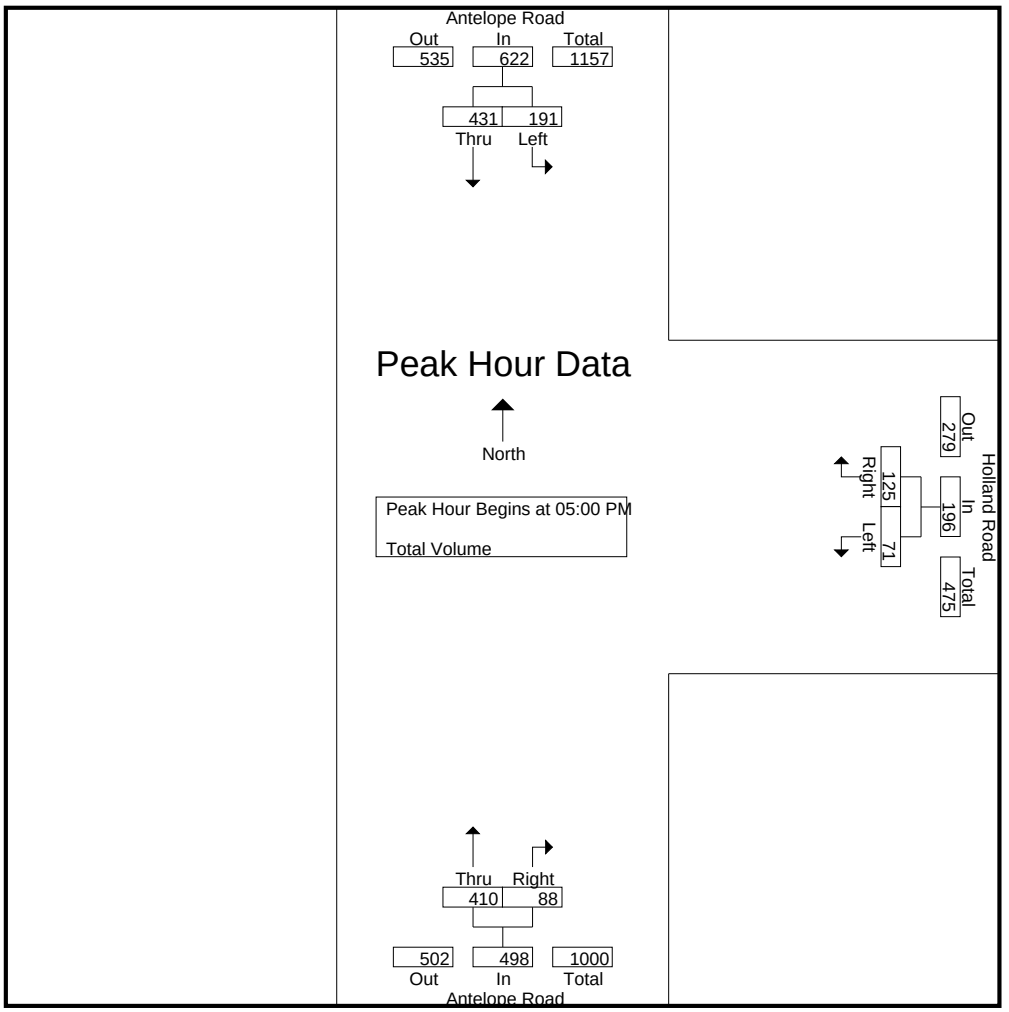
Weather: Clear

File Name : 14_MEN ANHO PM
Site Code : 06717552
Start Date : 8/29/2017
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:

	04:45 PM			05:00 PM			05:00 PM		
+0 mins.	41	**118**	159	15	28	43	92	18	110
+15 mins.	54	111	**165**	**24**	20	44	81	**29**	110
+30 mins.	49	110	159	19	32	51	**121**	20	**141**
+45 mins.	**55**	108	163	13	**45**	**58**	116	21	137
Total Volume	199	447	646	71	125	196	410	88	498
% App. Total	30.8	69.2		36.2	63.8		82.3	17.7	
PHF	.905	.947	.979	.740	.694	.845	.847	.759	.883

Signal Warrant Worksheets
Appendix D

ALBERT A.
WEBB
ASSOCIATES

EXISTING CONDITIONS
SIGNAL WARRANT WORKSHEETS

Signal Warrants Report For Intersection 10: Town Center Dr-Sherman Rd (NS) / La Piedra Rd (EW)

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	Yes
Population < 10,000	Yes
Warrant Factor	70%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	2	189	127	0
2	2	181	122	0
3	2	178	119	0
4	2	151	102	0
5	2	144	97	0
6	1	129	86	0
7	1	119	80	0
8	1	113	76	0
9	1	91	61	0
10	1	85	57	0
11	1	85	57	0
12	1	81	55	0
13	1	74	50	0
14	1	68	46	0
15	1	68	46	0
16	1	66	44	0
17	0	38	25	0
18	0	21	14	0
19	0	19	13	0
20	0	8	5	0
21	0	6	4	0
22	0	6	4	0
23	0	4	3	0
24	0	4	3	0

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	5	191	5	127	No	No	No	No	No	No	No	No	No	No
2	5	183	5	122	No	No	No	No	No	No	No	No	No	No
3	5	180	5	119	No	No	No	No	No	No	No	No	No	No
4	5	153	5	102	No	No	No	No	No	No	No	No	No	No
5	5	146	5	97	No	No	No	No	No	No	No	No	No	No
6	5	130	5	86	No	No	No	No	No	No	No	No	No	No
7	5	120	5	80	No	No	No	No	No	No	No	No	No	No
8	5	114	5	76	No	No	No	No	No	No	No	No	No	No
9	5	92	5	61	No	No	No	No	No	No	No	No	No	No
10	5	86	5	57	No	No	No	No	No	No	No	No	No	No
11	5	86	5	57	No	No	No	No	No	No	No	No	No	No
12	5	82	5	55	No	No	No	No	No	No	No	No	No	No
13	5	75	5	50	No	No	No	No	No	No	No	No	No	No
14	5	69	5	46	No	No	No	No	No	No	No	No	No	No
15	5	69	5	46	No	No	No	No	No	No	No	No	No	No
16	5	67	5	44	No	No	No	No	No	No	No	No	No	No
17	5	38	5	25	No	No	No	No	No	No	No	No	No	No
18	5	21	5	14	No	No	No	No	No	No	No	No	No	No
19	5	19	5	13	No	No	No	No	No	No	No	No	No	No
20	5	8	5	5	No	No	No	No	No	No	No	No	No	No
21	5	6	5	4	No	No	No	No	No	No	No	No	No	No
22	5	6	5	4	No	No	No	No	No	No	No	No	No	No
23	5	4	5	3	No	No	No	No	No	No	No	No	No	No
24	5	4	5	3	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	10.8	
Number of Lanes on Minor Street Approach	3	2
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:22	0:00
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	127	0
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	318	318
Number of Approaches on Intersection	4	4
Total Volume Condition Met	No	No
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 11: Town Center Dr-Sherman Rd (NS)/Holland Rd (EW)

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	E, W
Minor Approaches	N, S
Speed > 40mph	Yes
Population < 10,000	No
Warrant Factor	70%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	E	W	N	S
1	580	627	28	31
2	557	602	27	30
3	545	589	26	29
4	464	502	22	25
5	441	477	21	24
6	394	426	19	21
7	365	395	18	20
8	348	376	17	19
9	278	301	13	15
10	261	282	13	14
11	261	282	13	14
12	249	270	12	13
13	226	245	11	12
14	209	226	10	11
15	209	226	10	11
16	203	219	10	11
17	116	125	6	6
18	64	69	3	3
19	58	63	3	3
20	23	25	1	1
21	17	19	1	1
22	17	19	1	1
23	12	13	1	1
24	12	13	1	1

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	4	1207	2	59	No	No	No	No	No	No	No	No	No	No
2	4	1159	2	57	No	No	No	No	No	No	No	No	No	No
3	4	1134	2	55	No	No	No	No	No	No	No	No	No	No
4	4	966	2	47	No	No	No	No	No	No	No	No	No	No
5	4	918	2	45	No	No	No	No	No	No	No	No	No	No
6	4	820	2	40	No	No	No	No	No	No	No	No	No	No
7	4	760	2	38	No	No	No	No	No	No	No	No	No	No
8	4	724	2	36	No	No	No	No	No	No	No	No	No	No
9	4	579	2	28	No	No	No	No	No	No	No	No	No	No
10	4	543	2	27	No	No	No	No	No	No	No	No	No	No
11	4	543	2	27	No	No	No	No	No	No	No	No	No	No
12	4	519	2	25	No	No	No	No	No	No	No	No	No	No
13	4	471	2	23	No	No	No	No	No	No	No	No	No	No
14	4	435	2	21	No	No	No	No	No	No	No	No	No	No
15	4	435	2	21	No	No	No	No	No	No	No	No	No	No
16	4	422	2	21	No	No	No	No	No	No	No	No	No	No
17	4	241	2	12	No	No	No	No	No	No	No	No	No	No
18	4	133	2	6	No	No	No	No	No	No	No	No	No	No
19	4	121	2	6	No	No	No	No	No	No	No	No	No	No
20	4	48	2	2	No	No	No	No	No	No	No	No	No	No
21	4	36	2	2	No	No	No	No	No	No	No	No	No	No
22	4	36	2	2	No	No	No	No	No	No	No	No	No	No
23	4	25	2	2	No	No	No	No	No	No	No	No	No	No
24	4	25	2	2	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	N	S
Total Stopped Delay Per Vehicle on Minor Approach (s)	15.1	21.4
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:07	0:11
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	28	31
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	1266	1266
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 15: Haun Road (NS) / Holland Road (EW)

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	Yes
#2	Four Hour Vehicular Volume	Yes
#3	Peak Hour	Yes

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	Yes
Population < 10,000	No
Warrant Factor	70%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	501	452	13	522
2	481	434	12	501
3	471	425	12	491
4	401	362	10	418
5	381	344	10	397
6	341	307	9	355
7	316	285	8	329
8	301	271	8	313
9	240	217	6	251
10	225	203	6	235
11	225	203	6	235
12	215	194	6	224
13	195	176	5	204
14	180	163	5	188
15	180	163	5	188
16	175	158	5	183
17	100	90	3	104
18	55	50	1	57
19	50	45	1	52
20	20	18	1	21
21	15	14	0	16
22	15	14	0	16
23	10	9	0	10
24	10	9	0	10

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	5	953	4	535	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	5	915	4	513	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	5	896	4	503	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
4	5	763	4	428	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
5	5	725	4	407	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
6	5	648	4	364	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes
7	5	601	4	337	Yes	Yes	Yes	Yes	No	No	No	Yes	Yes	Yes
8	5	572	4	321	No	Yes	Yes	Yes	No	No	No	Yes	Yes	No
9	5	457	4	257	No	No	Yes	Yes	No	No	No	No	No	No
10	5	428	4	241	No	No	Yes	Yes	No	No	No	No	No	No
11	5	428	4	241	No	No	Yes	Yes	No	No	No	No	No	No
12	5	409	4	230	No	No	No	Yes	No	No	No	No	No	No
13	5	371	4	209	No	No	No	Yes	No	No	No	No	No	No
14	5	343	4	193	No	No	No	Yes	No	No	No	No	No	No
15	5	343	4	193	No	No	No	Yes	No	No	No	No	No	No
16	5	333	4	188	No	No	No	No	No	No	No	No	No	No
17	5	190	4	107	No	No	No	No	No	No	No	No	No	No
18	5	105	4	58	No	No	No	No	No	No	No	No	No	No
19	5	95	4	53	No	No	No	No	No	No	No	No	No	No
20	5	38	4	22	No	No	No	No	No	No	No	No	No	No
21	5	29	4	16	No	No	No	No	No	No	No	No	No	No
22	5	29	4	16	No	No	No	No	No	No	No	No	No	No
23	5	19	4	10	No	No	No	No	No	No	No	No	No	No
24	5	19	4	10	No	No	No	No	No	No	No	No	No	No
Hours Met					7	8	11	15	2	5	6	8	8	7

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	13.2	27.9
Number of Lanes on Minor Street Approach	1	3
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:02	4:02
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	13	522
High Minor Volume Condition Met	No	Yes
Total Entering Volume on All Approaches During Same Hour	1488	1488
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 10: Town Center Dr-Sherman Rd (NS) / La Piedra Rd (EW)

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	Yes
Population < 10,000	Yes
Warrant Factor	70%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	7	96	112	0
2	7	92	108	0
3	7	90	105	0
4	6	77	90	0
5	5	73	85	0
6	5	65	76	0
7	4	60	71	0
8	4	58	67	0
9	3	46	54	0
10	3	43	50	0
11	3	43	50	0
12	3	41	48	0
13	3	37	44	0
14	3	35	40	0
15	3	35	40	0
16	2	34	39	0
17	1	19	22	0
18	1	11	12	0
19	1	10	11	0
20	0	4	4	0
21	0	3	3	0
22	0	3	3	0
23	0	2	2	0
24	0	2	2	0

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	5	103	5	112	No	No	No	No	No	No	No	No	No	No
2	5	99	5	108	No	No	No	No	No	No	No	No	No	No
3	5	97	5	105	No	No	No	No	No	No	No	No	No	No
4	5	83	5	90	No	No	No	No	No	No	No	No	No	No
5	5	78	5	85	No	No	No	No	No	No	No	No	No	No
6	5	70	5	76	No	No	No	No	No	No	No	No	No	No
7	5	64	5	71	No	No	No	No	No	No	No	No	No	No
8	5	62	5	67	No	No	No	No	No	No	No	No	No	No
9	5	49	5	54	No	No	No	No	No	No	No	No	No	No
10	5	46	5	50	No	No	No	No	No	No	No	No	No	No
11	5	46	5	50	No	No	No	No	No	No	No	No	No	No
12	5	44	5	48	No	No	No	No	No	No	No	No	No	No
13	5	40	5	44	No	No	No	No	No	No	No	No	No	No
14	5	38	5	40	No	No	No	No	No	No	No	No	No	No
15	5	38	5	40	No	No	No	No	No	No	No	No	No	No
16	5	36	5	39	No	No	No	No	No	No	No	No	No	No
17	5	20	5	22	No	No	No	No	No	No	No	No	No	No
18	5	12	5	12	No	No	No	No	No	No	No	No	No	No
19	5	11	5	11	No	No	No	No	No	No	No	No	No	No
20	5	4	5	4	No	No	No	No	No	No	No	No	No	No
21	5	3	5	3	No	No	No	No	No	No	No	No	No	No
22	5	3	5	3	No	No	No	No	No	No	No	No	No	No
23	5	2	5	2	No	No	No	No	No	No	No	No	No	No
24	5	2	5	2	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	9	
Number of Lanes on Minor Street Approach	3	2
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:16	0:00
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	112	0
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	215	215
Number of Approaches on Intersection	4	4
Total Volume Condition Met	No	No
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 11: Town Center Dr-Sherman Rd (NS)/Holland Rd (EW)

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	E, W
Minor Approaches	N, S
Speed > 40mph	Yes
Population < 10,000	No
Warrant Factor	70%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	E	W	N	S
1	597	459	67	15
2	573	441	64	14
3	561	431	63	14
4	478	367	54	12
5	454	349	51	11
6	406	312	46	10
7	376	289	42	9
8	358	275	40	9
9	287	220	32	7
10	269	207	30	7
11	269	207	30	7
12	257	197	29	6
13	233	179	26	6
14	215	165	24	5
15	215	165	24	5
16	209	161	23	5
17	119	92	13	3
18	66	50	7	2
19	60	46	7	2
20	24	18	3	1
21	18	14	2	0
22	18	14	2	0
23	12	9	1	0
24	12	9	1	0

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	4	1056	2	82	No	No	No	No	No	Yes	Yes	Yes	Yes	No
2	4	1014	2	78	No	No	No	No	No	Yes	Yes	Yes	Yes	No
3	4	992	2	77	No	No	No	No	No	Yes	Yes	Yes	Yes	No
4	4	845	2	66	No	No	No	No	No	No	Yes	Yes	No	No
5	4	803	2	62	No	No	No	No	No	No	No	Yes	No	No
6	4	718	2	56	No	No	No	No	No	No	No	Yes	No	No
7	4	665	2	51	No	No	No	No	No	No	No	Yes	No	No
8	4	633	2	49	No	No	No	No	No	No	No	No	No	No
9	4	507	2	39	No	No	No	No	No	No	No	No	No	No
10	4	476	2	37	No	No	No	No	No	No	No	No	No	No
11	4	476	2	37	No	No	No	No	No	No	No	No	No	No
12	4	454	2	35	No	No	No	No	No	No	No	No	No	No
13	4	412	2	32	No	No	No	No	No	No	No	No	No	No
14	4	380	2	29	No	No	No	No	No	No	No	No	No	No
15	4	380	2	29	No	No	No	No	No	No	No	No	No	No
16	4	370	2	28	No	No	No	No	No	No	No	No	No	No
17	4	211	2	16	No	No	No	No	No	No	No	No	No	No
18	4	116	2	9	No	No	No	No	No	No	No	No	No	No
19	4	106	2	9	No	No	No	No	No	No	No	No	No	No
20	4	42	2	4	No	No	No	No	No	No	No	No	No	No
21	4	32	2	2	No	No	No	No	No	No	No	No	No	No
22	4	32	2	2	No	No	No	No	No	No	No	No	No	No
23	4	21	2	1	No	No	No	No	No	No	No	No	No	No
24	4	21	2	1	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	3	4	7	3	0

Warrant 3 Condition A

Orientation	N	S
Total Stopped Delay Per Vehicle on Minor Approach (s)	17	18
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:18	0:04
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	67	15
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	1138	1138
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 15: Haun Road (NS) / Holland Road (EW)

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	Yes
#2	Four Hour Vehicular Volume	Yes
#3	Peak Hour	Yes

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	Yes
Population < 10,000	No
Warrant Factor	70%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	597	538	21	410
2	573	516	20	394
3	561	506	20	385
4	478	430	17	328
5	454	409	16	312
6	406	366	14	279
7	376	339	13	258
8	358	323	13	246
9	287	258	10	197
10	269	242	9	185
11	269	242	9	185
12	257	231	9	176
13	233	210	8	160
14	215	194	8	148
15	215	194	8	148
16	209	188	7	144
17	119	108	4	82
18	66	59	2	45
19	60	54	2	41
20	24	22	1	16
21	18	16	1	12
22	18	16	1	12
23	12	11	0	8
24	12	11	0	8

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	5	1135	4	431	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	5	1089	4	414	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	5	1067	4	405	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4	5	908	4	345	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
5	5	863	4	328	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
6	5	772	4	293	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
7	5	715	4	271	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes
8	5	681	4	259	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	No
9	5	545	4	207	No	Yes	Yes	Yes	No	No	No	Yes	No	No
10	5	511	4	194	No	Yes	Yes	Yes	No	No	No	Yes	No	No
11	5	511	4	194	No	Yes	Yes	Yes	No	No	No	Yes	No	No
12	5	488	4	185	No	Yes	Yes	Yes	No	No	No	No	No	No
13	5	443	4	168	No	No	Yes	Yes	No	No	No	No	No	No
14	5	409	4	156	No	No	No	Yes	No	No	No	No	No	No
15	5	409	4	156	No	No	No	Yes	No	No	No	No	No	No
16	5	397	4	151	No	No	No	Yes	No	No	No	No	No	No
17	5	227	4	86	No	No	No	No	No	No	No	No	No	No
18	5	125	4	47	No	No	No	No	No	No	No	No	No	No
19	5	114	4	43	No	No	No	No	No	No	No	No	No	No
20	5	46	4	17	No	No	No	No	No	No	No	No	No	No
21	5	34	4	13	No	No	No	No	No	No	No	No	No	No
22	5	34	4	13	No	No	No	No	No	No	No	No	No	No
23	5	23	4	8	No	No	No	No	No	No	No	No	No	No
24	5	23	4	8	No	No	No	No	No	No	No	No	No	No
Hours Met					8	12	13	16	4	6	8	11	8	7

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	13	22.7
Number of Lanes on Minor Street Approach	1	3
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:04	2:34
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	21	410
High Minor Volume Condition Met	No	Yes
Total Entering Volume on All Approaches During Same Hour	1566	1566
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

EXISTING PLUS PROJECT CONDITIONS
SIGNAL WARRANT WORKSHEETS

Signal Warrants Report For Intersection 10: Town Center Dr-Sherman Rd (NS) / La Piedra Rd (EW)

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	Yes
Population < 10,000	Yes
Warrant Factor	70%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	2	189	142	30
2	2	181	136	29
3	2	178	133	28
4	2	151	114	24
5	2	144	108	23
6	1	129	97	20
7	1	119	89	19
8	1	113	85	18
9	1	91	68	14
10	1	85	64	14
11	1	85	64	14
12	1	81	61	13
13	1	74	55	12
14	1	68	51	11
15	1	68	51	11
16	1	66	50	11
17	0	38	28	6
18	0	21	16	3
19	0	19	14	3
20	0	8	6	1
21	0	6	4	1
22	0	6	4	1
23	0	4	3	1
24	0	4	3	1

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	5	191	5	172	No	No	No	No	No	No	No	No	No	No
2	5	183	5	165	No	No	No	No	No	No	No	No	No	No
3	5	180	5	161	No	No	No	No	No	No	No	No	No	No
4	5	153	5	138	No	No	No	No	No	No	No	No	No	No
5	5	146	5	131	No	No	No	No	No	No	No	No	No	No
6	5	130	5	117	No	No	No	No	No	No	No	No	No	No
7	5	120	5	108	No	No	No	No	No	No	No	No	No	No
8	5	114	5	103	No	No	No	No	No	No	No	No	No	No
9	5	92	5	82	No	No	No	No	No	No	No	No	No	No
10	5	86	5	78	No	No	No	No	No	No	No	No	No	No
11	5	86	5	78	No	No	No	No	No	No	No	No	No	No
12	5	82	5	74	No	No	No	No	No	No	No	No	No	No
13	5	75	5	67	No	No	No	No	No	No	No	No	No	No
14	5	69	5	62	No	No	No	No	No	No	No	No	No	No
15	5	69	5	62	No	No	No	No	No	No	No	No	No	No
16	5	67	5	61	No	No	No	No	No	No	No	No	No	No
17	5	38	5	34	No	No	No	No	No	No	No	No	No	No
18	5	21	5	19	No	No	No	No	No	No	No	No	No	No
19	5	19	5	17	No	No	No	No	No	No	No	No	No	No
20	5	8	5	7	No	No	No	No	No	No	No	No	No	No
21	5	6	5	5	No	No	No	No	No	No	No	No	No	No
22	5	6	5	5	No	No	No	No	No	No	No	No	No	No
23	5	4	5	4	No	No	No	No	No	No	No	No	No	No
24	5	4	5	4	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	10.8	9
Number of Lanes on Minor Street Approach	3	2
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:25	0:04
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	142	30
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	363	363
Number of Approaches on Intersection	4	4
Total Volume Condition Met	No	No
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 11: Town Center Dr-Sherman Rd (NS)/Holland Rd (EW)

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	E, W
Minor Approaches	N, S
Speed > 40mph	Yes
Population < 10,000	No
Warrant Factor	70%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	E	W	N	S
1	610	688	28	31
2	586	660	27	30
3	573	647	26	29
4	488	550	22	25
5	464	523	21	24
6	415	468	19	21
7	384	433	18	20
8	366	413	17	19
9	293	330	13	15
10	275	310	13	14
11	275	310	13	14
12	262	296	12	13
13	238	268	11	12
14	220	248	10	11
15	220	248	10	11
16	214	241	10	11
17	122	138	6	6
18	67	76	3	3
19	61	69	3	3
20	24	28	1	1
21	18	21	1	1
22	18	21	1	1
23	12	14	1	1
24	12	14	1	1

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	4	1298	2	59	No	No	No	No	No	No	No	No	No	No
2	4	1246	2	57	No	No	No	No	No	No	No	No	No	No
3	4	1220	2	55	No	No	No	No	No	No	No	No	No	No
4	4	1038	2	47	No	No	No	No	No	No	No	No	No	No
5	4	987	2	45	No	No	No	No	No	No	No	No	No	No
6	4	883	2	40	No	No	No	No	No	No	No	No	No	No
7	4	817	2	38	No	No	No	No	No	No	No	No	No	No
8	4	779	2	36	No	No	No	No	No	No	No	No	No	No
9	4	623	2	28	No	No	No	No	No	No	No	No	No	No
10	4	585	2	27	No	No	No	No	No	No	No	No	No	No
11	4	585	2	27	No	No	No	No	No	No	No	No	No	No
12	4	558	2	25	No	No	No	No	No	No	No	No	No	No
13	4	506	2	23	No	No	No	No	No	No	No	No	No	No
14	4	468	2	21	No	No	No	No	No	No	No	No	No	No
15	4	468	2	21	No	No	No	No	No	No	No	No	No	No
16	4	455	2	21	No	No	No	No	No	No	No	No	No	No
17	4	260	2	12	No	No	No	No	No	No	No	No	No	No
18	4	143	2	6	No	No	No	No	No	No	No	No	No	No
19	4	130	2	6	No	No	No	No	No	No	No	No	No	No
20	4	52	2	2	No	No	No	No	No	No	No	No	No	No
21	4	39	2	2	No	No	No	No	No	No	No	No	No	No
22	4	39	2	2	No	No	No	No	No	No	No	No	No	No
23	4	26	2	2	No	No	No	No	No	No	No	No	No	No
24	4	26	2	2	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	N	S
Total Stopped Delay Per Vehicle on Minor Approach (s)	16.3	24.8
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:07	0:12
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	28	31
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	1357	1357
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 15: Haun Road (NS) / Holland Road (EW)

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	Yes
#2	Four Hour Vehicular Volume	Yes
#3	Peak Hour	Yes

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	Yes
Population < 10,000	No
Warrant Factor	70%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	567	525	13	583
2	544	504	12	560
3	533	494	12	548
4	454	420	10	466
5	431	399	10	443
6	386	357	9	396
7	357	331	8	367
8	340	315	8	350
9	272	252	6	280
10	255	236	6	262
11	255	236	6	262
12	244	226	6	251
13	221	205	5	227
14	204	189	5	210
15	204	189	5	210
16	198	184	5	204
17	113	105	3	117
18	62	58	1	64
19	57	53	1	58
20	23	21	1	23
21	17	16	0	17
22	17	16	0	17
23	11	11	0	12
24	11	11	0	12

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	5	1092	4	596	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	5	1048	4	572	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	5	1027	4	560	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4	5	874	4	476	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
5	5	830	4	453	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
6	5	743	4	405	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
7	5	688	4	375	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes
8	5	655	4	358	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes
9	5	524	4	286	No	Yes	Yes	Yes	No	No	No	Yes	Yes	No
10	5	491	4	268	No	Yes	Yes	Yes	No	No	No	No	Yes	No
11	5	491	4	268	No	Yes	Yes	Yes	No	No	No	No	Yes	No
12	5	470	4	257	No	No	Yes	Yes	No	No	No	No	Yes	No
13	5	426	4	232	No	No	Yes	Yes	No	No	No	No	No	No
14	5	393	4	215	No	No	No	Yes	No	No	No	No	No	No
15	5	393	4	215	No	No	No	Yes	No	No	No	No	No	No
16	5	382	4	209	No	No	No	Yes	No	No	No	No	No	No
17	5	218	4	120	No	No	No	No	No	No	No	No	No	No
18	5	120	4	65	No	No	No	No	No	No	No	No	No	No
19	5	110	4	59	No	No	No	No	No	No	No	No	No	No
20	5	44	4	24	No	No	No	No	No	No	No	No	No	No
21	5	33	4	17	No	No	No	No	No	No	No	No	No	No
22	5	33	4	17	No	No	No	No	No	No	No	No	No	No
23	5	22	4	12	No	No	No	No	No	No	No	No	No	No
24	5	22	4	12	No	No	No	No	No	No	No	No	No	No
Hours Met					8	11	13	16	3	6	8	9	12	8

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	14	56
Number of Lanes on Minor Street Approach	1	3
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:03	9:03
Delay Condition Met	No	Yes
Volume on Minor Street Approach During Same Hour	13	583
High Minor Volume Condition Met	No	Yes
Total Entering Volume on All Approaches During Same Hour	1688	1688
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	Yes
Warrant Met for Intersection	**Yes**	

Signal Warrants Report For Intersection 21: Haun Rd (NS)/Driveway 2 (EW)

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	Yes
#2	Four Hour Vehicular Volume	Yes
#3	Peak Hour	Yes

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E
Speed > 40mph	Yes
Population < 10,000	No
Warrant Factor	70%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	N	S	E
1	974	632	163
2	935	607	156
3	916	594	153
4	779	506	130
5	740	480	124
6	662	430	111
7	614	398	103
8	584	379	98
9	468	303	78
10	438	284	73
11	438	284	73
12	419	272	70
13	380	246	64
14	351	228	59
15	351	228	59
16	341	221	57
17	195	126	33
18	107	70	18
19	97	63	16
20	39	25	7
21	29	19	5
22	29	19	5
23	19	13	3
24	19	13	3

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	6	1606	2	163	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	6	1542	2	156	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	6	1510	2	153	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4	6	1285	2	130	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
5	6	1220	2	124	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
6	6	1092	2	111	No	No	No	No	Yes	Yes	Yes	Yes	Yes	No
7	6	1012	2	103	No	No	No	No	Yes	Yes	Yes	Yes	Yes	No
8	6	963	2	98	No	No	No	No	No	Yes	Yes	Yes	Yes	No
9	6	771	2	78	No	No	No	No	No	No	Yes	Yes	No	No
10	6	722	2	73	No	No	No	No	No	No	Yes	Yes	No	No
11	6	722	2	73	No	No	No	No	No	No	Yes	Yes	No	No
12	6	691	2	70	No	No	No	No	No	No	Yes	Yes	No	No
13	6	626	2	64	No	No	No	No	No	No	No	Yes	No	No
14	6	579	2	59	No	No	No	No	No	No	No	Yes	No	No
15	6	579	2	59	No	No	No	No	No	No	No	Yes	No	No
16	6	562	2	57	No	No	No	No	No	No	No	Yes	No	No
17	6	321	2	33	No	No	No	No	No	No	No	No	No	No
18	6	177	2	18	No	No	No	No	No	No	No	No	No	No
19	6	160	2	16	No	No	No	No	No	No	No	No	No	No
20	6	64	2	7	No	No	No	No	No	No	No	No	No	No
21	6	48	2	5	No	No	No	No	No	No	No	No	No	No
22	6	48	2	5	No	No	No	No	No	No	No	No	No	No
23	6	32	2	3	No	No	No	No	No	No	No	No	No	No
24	6	32	2	3	No	No	No	No	No	No	No	No	No	No
Hours Met					0	1	3	5	7	8	12	16	8	5

Warrant 3 Condition A

Orientation	E
Total Stopped Delay Per Vehicle on Minor Approach (s)	502.4
Number of Lanes on Minor Street Approach	2
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	22:44
Delay Condition Met	Yes
Volume on Minor Street Approach During Same Hour	163
High Minor Volume Condition Met	Yes
Total Entering Volume on All Approaches During Same Hour	1769
Number of Approaches on Intersection	3
Total Volume Condition Met	Yes
Warrant Met for Approach	Yes
Warrant Met for Intersection	**Yes**

Signal Warrants Report For Intersection 10: Town Center Dr-Sherman Rd (NS) / La Piedra Rd (EW)

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	Yes
Population < 10,000	Yes
Warrant Factor	70%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	7	96	144	22
2	7	92	138	21
3	7	90	135	21
4	6	77	115	18
5	5	73	109	17
6	5	65	98	15
7	4	60	91	14
8	4	58	86	13
9	3	46	69	11
10	3	43	65	10
11	3	43	65	10
12	3	41	62	9
13	3	37	56	9
14	3	35	52	8
15	3	35	52	8
16	2	34	50	8
17	1	19	29	4
18	1	11	16	2
19	1	10	14	2
20	0	4	6	1
21	0	3	4	1
22	0	3	4	1
23	0	2	3	0
24	0	2	3	0

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	5	103	5	166	No	No	No	No	No	No	No	No	No	No
2	5	99	5	159	No	No	No	No	No	No	No	No	No	No
3	5	97	5	156	No	No	No	No	No	No	No	No	No	No
4	5	83	5	133	No	No	No	No	No	No	No	No	No	No
5	5	78	5	126	No	No	No	No	No	No	No	No	No	No
6	5	70	5	113	No	No	No	No	No	No	No	No	No	No
7	5	64	5	105	No	No	No	No	No	No	No	No	No	No
8	5	62	5	99	No	No	No	No	No	No	No	No	No	No
9	5	49	5	80	No	No	No	No	No	No	No	No	No	No
10	5	46	5	75	No	No	No	No	No	No	No	No	No	No
11	5	46	5	75	No	No	No	No	No	No	No	No	No	No
12	5	44	5	71	No	No	No	No	No	No	No	No	No	No
13	5	40	5	65	No	No	No	No	No	No	No	No	No	No
14	5	38	5	60	No	No	No	No	No	No	No	No	No	No
15	5	38	5	60	No	No	No	No	No	No	No	No	No	No
16	5	36	5	58	No	No	No	No	No	No	No	No	No	No
17	5	20	5	33	No	No	No	No	No	No	No	No	No	No
18	5	12	5	18	No	No	No	No	No	No	No	No	No	No
19	5	11	5	16	No	No	No	No	No	No	No	No	No	No
20	5	4	5	7	No	No	No	No	No	No	No	No	No	No
21	5	3	5	5	No	No	No	No	No	No	No	No	No	No
22	5	3	5	5	No	No	No	No	No	No	No	No	No	No
23	5	2	5	3	No	No	No	No	No	No	No	No	No	No
24	5	2	5	3	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	8.8	8
Number of Lanes on Minor Street Approach	3	2
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:21	0:02
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	144	22
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	269	269
Number of Approaches on Intersection	4	4
Total Volume Condition Met	No	No
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 11: Town Center Dr-Sherman Rd (NS)/Holland Rd (EW)

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	E, W
Minor Approaches	N, S
Speed > 40mph	Yes
Population < 10,000	No
Warrant Factor	70%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	E	W	N	S
1	661	504	67	15
2	635	484	64	14
3	621	474	63	14
4	529	403	54	12
5	502	383	51	11
6	449	343	46	10
7	416	318	42	9
8	397	302	40	9
9	317	242	32	7
10	297	227	30	7
11	297	227	30	7
12	284	217	29	6
13	258	197	26	6
14	238	181	24	5
15	238	181	24	5
16	231	176	23	5
17	132	101	13	3
18	73	55	7	2
19	66	50	7	2
20	26	20	3	1
21	20	15	2	0
22	20	15	2	0
23	13	10	1	0
24	13	10	1	0

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	4	1165	2	82	No	No	No	No	No	Yes	Yes	Yes	Yes	No
2	4	1119	2	78	No	No	No	No	No	Yes	Yes	Yes	Yes	No
3	4	1095	2	77	No	No	No	No	No	Yes	Yes	Yes	Yes	No
4	4	932	2	66	No	No	No	No	No	No	Yes	Yes	No	No
5	4	885	2	62	No	No	No	No	No	No	No	Yes	No	No
6	4	792	2	56	No	No	No	No	No	No	No	Yes	No	No
7	4	734	2	51	No	No	No	No	No	No	No	Yes	No	No
8	4	699	2	49	No	No	No	No	No	No	No	No	No	No
9	4	559	2	39	No	No	No	No	No	No	No	No	No	No
10	4	524	2	37	No	No	No	No	No	No	No	No	No	No
11	4	524	2	37	No	No	No	No	No	No	No	No	No	No
12	4	501	2	35	No	No	No	No	No	No	No	No	No	No
13	4	455	2	32	No	No	No	No	No	No	No	No	No	No
14	4	419	2	29	No	No	No	No	No	No	No	No	No	No
15	4	419	2	29	No	No	No	No	No	No	No	No	No	No
16	4	407	2	28	No	No	No	No	No	No	No	No	No	No
17	4	233	2	16	No	No	No	No	No	No	No	No	No	No
18	4	128	2	9	No	No	No	No	No	No	No	No	No	No
19	4	116	2	9	No	No	No	No	No	No	No	No	No	No
20	4	46	2	4	No	No	No	No	No	No	No	No	No	No
21	4	35	2	2	No	No	No	No	No	No	No	No	No	No
22	4	35	2	2	No	No	No	No	No	No	No	No	No	No
23	4	23	2	1	No	No	No	No	No	No	No	No	No	No
24	4	23	2	1	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	3	4	7	3	0

Warrant 3 Condition A

Orientation	N	S
Total Stopped Delay Per Vehicle on Minor Approach (s)	19.2	20.5
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:21	0:05
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	67	15
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	1247	1247
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 15: Haun Road (NS) / Holland Road (EW)

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	Yes
#2	Four Hour Vehicular Volume	Yes
#3	Peak Hour	Yes

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	Yes
Population < 10,000	No
Warrant Factor	70%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	737	592	21	455
2	708	568	20	437
3	693	556	20	428
4	590	474	17	364
5	560	450	16	346
6	501	403	14	309
7	464	373	13	287
8	442	355	13	273
9	354	284	10	218
10	332	266	9	205
11	332	266	9	205
12	317	255	9	196
13	287	231	8	177
14	265	213	8	164
15	265	213	8	164
16	258	207	7	159
17	147	118	4	91
18	81	65	2	50
19	74	59	2	46
20	29	24	1	18
21	22	18	1	14
22	22	18	1	14
23	15	12	0	9
24	15	12	0	9

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	5	1329	4	476	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	5	1276	4	457	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	5	1249	4	448	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4	5	1064	4	381	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
5	5	1010	4	362	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
6	5	904	4	323	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
7	5	837	4	300	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
8	5	797	4	286	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
9	5	638	4	228	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	No
10	5	598	4	214	No	Yes	Yes	Yes	No	No	No	Yes	Yes	No
11	5	598	4	214	No	Yes	Yes	Yes	No	No	No	Yes	Yes	No
12	5	572	4	205	No	Yes	Yes	Yes	No	No	No	Yes	Yes	No
13	5	518	4	185	No	Yes	Yes	Yes	No	No	No	Yes	No	No
14	5	478	4	172	No	No	Yes	Yes	No	No	No	No	No	No
15	5	478	4	172	No	No	Yes	Yes	No	No	No	No	No	No
16	5	465	4	166	No	No	Yes	Yes	No	No	No	No	No	No
17	5	265	4	95	No	No	No	No	No	No	No	No	No	No
18	5	146	4	52	No	No	No	No	No	No	No	No	No	No
19	5	133	4	48	No	No	No	No	No	No	No	No	No	No
20	5	53	4	19	No	No	No	No	No	No	No	No	No	No
21	5	40	4	15	No	No	No	No	No	No	No	No	No	No
22	5	40	4	15	No	No	No	No	No	No	No	No	No	No
23	5	27	4	9	No	No	No	No	No	No	No	No	No	No
24	5	27	4	9	No	No	No	No	No	No	No	No	No	No
Hours Met					9	13	16	16	6	8	9	13	12	8

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	14.7	40.4
Number of Lanes on Minor Street Approach	1	3
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:05	5:06
Delay Condition Met	No	Yes
Volume on Minor Street Approach During Same Hour	21	455
High Minor Volume Condition Met	No	Yes
Total Entering Volume on All Approaches During Same Hour	1805	1805
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	Yes
Warrant Met for Intersection	**Yes**	

Signal Warrants Report For Intersection 20: Haun Rd (NS)/Driveway 1 (EW)

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	Yes
#2	Four Hour Vehicular Volume	Yes
#3	Peak Hour	Yes

Intersection Warrants Parameters

Major Approaches	S, N
Minor Approaches	E
Speed > 40mph	Yes
Population < 10,000	No
Warrant Factor	70%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	E
1	958	946	127
2	920	908	122
3	901	889	119
4	766	757	102
5	728	719	97
6	651	643	86
7	604	596	80
8	575	568	76
9	460	454	61
10	431	426	57
11	431	426	57
12	412	407	55
13	374	369	50
14	345	341	46
15	345	341	46
16	335	331	44
17	192	189	25
18	105	104	14
19	96	95	13
20	38	38	5
21	29	28	4
22	29	28	4
23	19	19	3
24	19	19	3

Signal Warrants Report For Intersection 21: Haun Rd (NS)/Driveway 2 (EW)

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	Yes
#2	Four Hour Vehicular Volume	Yes
#3	Peak Hour	Yes

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E
Speed > 40mph	Yes
Population < 10,000	No
Warrant Factor	70%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	N	S	E
1	946	780	350
2	908	749	336
3	889	733	329
4	757	624	280
5	719	593	266
6	643	530	238
7	596	491	221
8	568	468	210
9	454	374	168
10	426	351	158
11	426	351	158
12	407	335	151
13	369	304	137
14	341	281	126
15	341	281	126
16	331	273	122
17	189	156	70
18	104	86	39
19	95	78	35
20	38	31	14
21	28	23	11
22	28	23	11
23	19	16	7
24	19	16	7

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	5	1726	2	350	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	5	1657	2	336	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	5	1622	2	329	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4	5	1381	2	280	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
5	5	1312	2	266	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
6	5	1173	2	238	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
7	5	1087	2	221	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
8	5	1036	2	210	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
9	5	828	2	168	No	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	No
10	5	777	2	158	No	No	Yes	Yes	No	Yes	Yes	Yes	Yes	No
11	5	777	2	158	No	No	Yes	Yes	No	Yes	Yes	Yes	Yes	No
12	5	742	2	151	No	No	Yes	Yes	No	Yes	Yes	Yes	Yes	No
13	5	673	2	137	No	No	No	Yes	No	No	Yes	Yes	No	No
14	5	622	2	126	No	No	No	Yes	No	No	No	Yes	No	No
15	5	622	2	126	No	No	No	Yes	No	No	No	Yes	No	No
16	5	604	2	122	No	No	No	Yes	No	No	No	Yes	No	No
17	5	345	2	70	No	No	No	No	No	No	No	No	No	No
18	5	190	2	39	No	No	No	No	No	No	No	No	No	No
19	5	173	2	35	No	No	No	No	No	No	No	No	No	No
20	5	69	2	14	No	No	No	No	No	No	No	No	No	No
21	5	51	2	11	No	No	No	No	No	No	No	No	No	No
22	5	51	2	11	No	No	No	No	No	No	No	No	No	No
23	5	35	2	7	No	No	No	No	No	No	No	No	No	No
24	5	35	2	7	No	No	No	No	No	No	No	No	No	No
Hours Met					8	9	12	16	8	12	13	16	12	8

Warrant 3 Condition A

Orientation	E
Total Stopped Delay Per Vehicle on Minor Approach (s)	71.4
Number of Lanes on Minor Street Approach	2
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	6:56
Delay Condition Met	Yes
Volume on Minor Street Approach During Same Hour	350
High Minor Volume Condition Met	Yes
Total Entering Volume on All Approaches During Same Hour	2076
Number of Approaches on Intersection	3
Total Volume Condition Met	Yes
Warrant Met for Approach	Yes
Warrant Met for Intersection	**Yes**

EXISTING PLUS AMBIENT GROWTH PLUS CUMULATIVE PROJECTS WITHOUT OVERPASS CONDITIONS SIGNAL WARRANT WORKSHEETS

Signal Warrants Report For Intersection 11: Town Center Dr-Sherman Rd (NS)/Holland Rd (EW)

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	Yes
#2	Four Hour Vehicular Volume	Yes
#3	Peak Hour	Yes

Intersection Warrants Parameters

Major Approaches	E, W
Minor Approaches	N, S
Speed > 40mph	Yes
Population < 10,000	No
Warrant Factor	70%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	E	W	N	S
1	727	761	87	33
2	698	731	84	32
3	683	715	82	31
4	582	609	70	26
5	553	578	66	25
6	494	517	59	22
7	458	479	55	21
8	436	457	52	20
9	349	365	42	16
10	327	342	39	15
11	327	342	39	15
12	313	327	37	14
13	284	297	34	13
14	262	274	31	12
15	262	274	31	12
16	254	266	30	12
17	145	152	17	7
18	80	84	10	4
19	73	76	9	3
20	29	30	3	1
21	22	23	3	1
22	22	23	3	1
23	15	15	2	1
24	15	15	2	1

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	4	1488	2	120	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	4	1429	2	116	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	4	1398	2	113	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
4	4	1191	2	96	No	No	No	No	No	Yes	Yes	Yes	Yes	No
5	4	1131	2	91	No	No	No	No	No	Yes	Yes	Yes	Yes	No
6	4	1011	2	81	No	No	No	No	No	No	Yes	Yes	No	No
7	4	937	2	76	No	No	No	No	No	No	Yes	Yes	No	No
8	4	893	2	72	No	No	No	No	No	No	Yes	Yes	No	No
9	4	714	2	58	No	No	No	No	No	No	No	Yes	No	No
10	4	669	2	54	No	No	No	No	No	No	No	No	No	No
11	4	669	2	54	No	No	No	No	No	No	No	No	No	No
12	4	640	2	51	No	No	No	No	No	No	No	No	No	No
13	4	581	2	47	No	No	No	No	No	No	No	No	No	No
14	4	536	2	43	No	No	No	No	No	No	No	No	No	No
15	4	536	2	43	No	No	No	No	No	No	No	No	No	No
16	4	520	2	42	No	No	No	No	No	No	No	No	No	No
17	4	297	2	24	No	No	No	No	No	No	No	No	No	No
18	4	164	2	14	No	No	No	No	No	No	No	No	No	No
19	4	149	2	12	No	No	No	No	No	No	No	No	No	No
20	4	59	2	4	No	No	No	No	No	No	No	No	No	No
21	4	45	2	4	No	No	No	No	No	No	No	No	No	No
22	4	45	2	4	No	No	No	No	No	No	No	No	No	No
23	4	30	2	3	No	No	No	No	No	No	No	No	No	No
24	4	30	2	3	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	2	3	5	8	9	5	3

Warrant 3 Condition A

Orientation	N	S
Total Stopped Delay Per Vehicle on Minor Approach (s)	305.3	39.3
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	7:22	0:21
Delay Condition Met	Yes	No
Volume on Minor Street Approach During Same Hour	87	33
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	1608	1608
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 15: Haun Road (NS) / Holland Road (EW)

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	Yes
#2	Four Hour Vehicular Volume	Yes
#3	Peak Hour	Yes

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	Yes
Population < 10,000	No
Warrant Factor	70%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	698	682	19	647
2	670	655	18	621
3	656	641	18	608
4	558	546	15	518
5	530	518	14	492
6	475	464	13	440
7	440	430	12	408
8	419	409	11	388
9	335	327	9	311
10	314	307	9	291
11	314	307	9	291
12	300	293	8	278
13	272	266	7	252
14	251	246	7	233
15	251	246	7	233
16	244	239	7	226
17	140	136	4	129
18	77	75	2	71
19	70	68	2	65
20	28	27	1	26
21	21	20	1	19
22	21	20	1	19
23	14	14	0	13
24	14	14	0	13

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	5	1380	4	666	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	5	1325	4	639	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	5	1297	4	626	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4	5	1104	4	533	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
5	5	1048	4	506	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
6	5	939	4	453	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
7	5	870	4	420	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
8	5	828	4	399	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
9	5	662	4	320	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes
10	5	621	4	300	Yes	Yes	Yes	Yes	No	No	No	Yes	Yes	No
11	5	621	4	300	Yes	Yes	Yes	Yes	No	No	No	Yes	Yes	No
12	5	593	4	286	No	Yes	Yes	Yes	No	No	No	Yes	Yes	No
13	5	538	4	259	No	Yes	Yes	Yes	No	No	No	Yes	Yes	No
14	5	497	4	240	No	Yes	Yes	Yes	No	No	No	No	Yes	No
15	5	497	4	240	No	Yes	Yes	Yes	No	No	No	No	Yes	No
16	5	483	4	233	No	Yes	Yes	Yes	No	No	No	No	No	No
17	5	276	4	133	No	No	No	No	No	No	No	No	No	No
18	5	152	4	73	No	No	No	No	No	No	No	No	No	No
19	5	138	4	67	No	No	No	No	No	No	No	No	No	No
20	5	55	4	27	No	No	No	No	No	No	No	No	No	No
21	5	41	4	20	No	No	No	No	No	No	No	No	No	No
22	5	41	4	20	No	No	No	No	No	No	No	No	No	No
23	5	28	4	13	No	No	No	No	No	No	No	No	No	No
24	5	28	4	13	No	No	No	No	No	No	No	No	No	No
Hours Met					11	16	16	16	6	8	9	13	15	9

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	16.3	84
Number of Lanes on Minor Street Approach	1	3
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:05	15:06
Delay Condition Met	No	Yes
Volume on Minor Street Approach During Same Hour	19	647
High Minor Volume Condition Met	No	Yes
Total Entering Volume on All Approaches During Same Hour	2046	2046
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	Yes
Warrant Met for Intersection	**Yes**	

Signal Warrants Report For Intersection 11: Town Center Dr-Sherman Rd (NS)/Holland Rd (EW)

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	Yes
#2	Four Hour Vehicular Volume	Yes
#3	Peak Hour	Yes

Intersection Warrants Parameters

Major Approaches	E, W
Minor Approaches	N, S
Speed > 40mph	Yes
Population < 10,000	No
Warrant Factor	70%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	E	W	N	S
1	744	552	128	16
2	714	530	123	15
3	699	519	120	15
4	595	442	102	13
5	565	420	97	12
6	506	375	87	11
7	469	348	81	10
8	446	331	77	10
9	357	265	61	8
10	335	248	58	7
11	335	248	58	7
12	320	237	55	7
13	290	215	50	6
14	268	199	46	6
15	268	199	46	6
16	260	193	45	6
17	149	110	26	3
18	82	61	14	2
19	74	55	13	2
20	30	22	5	1
21	22	17	4	0
22	22	17	4	0
23	15	11	3	0
24	15	11	3	0

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	4	1296	2	144	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	4	1244	2	138	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	4	1218	2	135	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4	4	1037	2	115	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No
5	4	985	2	109	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No
6	4	881	2	98	No	No	No	Yes	No	Yes	Yes	Yes	Yes	No
7	4	817	2	91	No	No	No	No	No	Yes	Yes	Yes	Yes	No
8	4	777	2	87	No	No	No	No	No	Yes	Yes	Yes	No	No
9	4	622	2	69	No	No	No	No	No	No	No	Yes	No	No
10	4	583	2	65	No	No	No	No	No	No	No	Yes	No	No
11	4	583	2	65	No	No	No	No	No	No	No	Yes	No	No
12	4	557	2	62	No	No	No	No	No	No	No	Yes	No	No
13	4	505	2	56	No	No	No	No	No	No	No	Yes	No	No
14	4	467	2	52	No	No	No	No	No	No	No	No	No	No
15	4	467	2	52	No	No	No	No	No	No	No	No	No	No
16	4	453	2	51	No	No	No	No	No	No	No	No	No	No
17	4	259	2	29	No	No	No	No	No	No	No	No	No	No
18	4	143	2	16	No	No	No	No	No	No	No	No	No	No
19	4	129	2	15	No	No	No	No	No	No	No	No	No	No
20	4	52	2	6	No	No	No	No	No	No	No	No	No	No
21	4	39	2	4	No	No	No	No	No	No	No	No	No	No
22	4	39	2	4	No	No	No	No	No	No	No	No	No	No
23	4	26	2	3	No	No	No	No	No	No	No	No	No	No
24	4	26	2	3	No	No	No	No	No	No	No	No	No	No
Hours Met					0	3	3	6	5	8	8	13	7	3

Warrant 3 Condition A

Orientation	N	S
Total Stopped Delay Per Vehicle on Minor Approach (s)	41.5	25.7
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	1:28	0:06
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	128	16
High Minor Volume Condition Met	Yes	No
Total Entering Volume on All Approaches During Same Hour	1440	1440
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 15: Haun Road (NS) / Holland Road (EW)

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	Yes
#2	Four Hour Vehicular Volume	Yes
#3	Peak Hour	Yes

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	Yes
Population < 10,000	No
Warrant Factor	70%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	799	825	25	510
2	767	792	24	490
3	751	776	24	479
4	639	660	20	408
5	607	627	19	388
6	543	561	17	347
7	503	520	16	321
8	479	495	15	306
9	384	396	12	245
10	360	371	11	230
11	360	371	11	230
12	344	355	11	219
13	312	322	10	199
14	288	297	9	184
15	288	297	9	184
16	280	289	9	179
17	160	165	5	102
18	88	91	3	56
19	80	83	3	51
20	32	33	1	20
21	24	25	1	15
22	24	25	1	15
23	16	17	1	10
24	16	17	1	10

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	5	1624	4	535	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	5	1559	4	514	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	5	1527	4	503	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4	5	1299	4	428	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
5	5	1234	4	407	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
6	5	1104	4	364	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
7	5	1023	4	337	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
8	5	974	4	321	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
9	5	780	4	257	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
10	5	731	4	241	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	No
11	5	731	4	241	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	No
12	5	699	4	230	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	No
13	5	634	4	209	No	Yes	Yes	Yes	No	No	Yes	Yes	Yes	No
14	5	585	4	193	No	Yes	Yes	Yes	No	No	No	Yes	Yes	No
15	5	585	4	193	No	Yes	Yes	Yes	No	No	No	Yes	Yes	No
16	5	569	4	188	No	Yes	Yes	Yes	No	No	No	Yes	No	No
17	5	325	4	107	No	No	No	No	No	No	No	No	No	No
18	5	179	4	59	No	No	No	No	No	No	No	No	No	No
19	5	163	4	54	No	No	No	No	No	No	No	No	No	No
20	5	65	4	21	No	No	No	No	No	No	No	No	No	No
21	5	49	4	16	No	No	No	No	No	No	No	No	No	No
22	5	49	4	16	No	No	No	No	No	No	No	No	No	No
23	5	33	4	11	No	No	No	No	No	No	No	No	No	No
24	5	33	4	11	No	No	No	No	No	No	No	No	No	No
Hours Met					12	16	16	16	8	11	13	16	15	9

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	15.5	47
Number of Lanes on Minor Street Approach	1	3
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:06	6:39
Delay Condition Met	No	Yes
Volume on Minor Street Approach During Same Hour	25	510
High Minor Volume Condition Met	No	Yes
Total Entering Volume on All Approaches During Same Hour	2159	2159
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	Yes
Warrant Met for Intersection	**Yes**	

EXISTING PLUS AMBIENT GROWTH PLUS CUMULATIVE PROJECTS PLUS PROJECT WITHOUT OVERPASS CONDITIONS SIGNAL WARRANT WORKSHEETS

Signal Warrants Report For Intersection 11: Town Center Dr-Sherman Rd (NS)/Holland Rd (EW)

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	Yes
#2	Four Hour Vehicular Volume	Yes
#3	Peak Hour	Yes

Intersection Warrants Parameters

Major Approaches	E, W
Minor Approaches	N, S
Speed > 40mph	Yes
Population < 10,000	No
Warrant Factor	70%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	E	W	N	S
1	757	822	87	33
2	727	789	84	32
3	712	773	82	31
4	606	658	70	26
5	575	625	66	25
6	515	559	59	22
7	477	518	55	21
8	454	493	52	20
9	363	395	42	16
10	341	370	39	15
11	341	370	39	15
12	326	353	37	14
13	295	321	34	13
14	273	296	31	12
15	273	296	31	12
16	265	288	30	12
17	151	164	17	7
18	83	90	10	4
19	76	82	9	3
20	30	33	3	1
21	23	25	3	1
22	23	25	3	1
23	15	16	2	1
24	15	16	2	1

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	4	1579	2	120	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	4	1516	2	116	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	4	1485	2	113	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
4	4	1264	2	96	No	No	No	No	No	Yes	Yes	Yes	Yes	No
5	4	1200	2	91	No	No	No	No	No	Yes	Yes	Yes	Yes	No
6	4	1074	2	81	No	No	No	No	No	No	Yes	Yes	No	No
7	4	995	2	76	No	No	No	No	No	No	Yes	Yes	No	No
8	4	947	2	72	No	No	No	No	No	No	Yes	Yes	No	No
9	4	758	2	58	No	No	No	No	No	No	No	Yes	No	No
10	4	711	2	54	No	No	No	No	No	No	No	No	No	No
11	4	711	2	54	No	No	No	No	No	No	No	No	No	No
12	4	679	2	51	No	No	No	No	No	No	No	No	No	No
13	4	616	2	47	No	No	No	No	No	No	No	No	No	No
14	4	569	2	43	No	No	No	No	No	No	No	No	No	No
15	4	569	2	43	No	No	No	No	No	No	No	No	No	No
16	4	553	2	42	No	No	No	No	No	No	No	No	No	No
17	4	315	2	24	No	No	No	No	No	No	No	No	No	No
18	4	173	2	14	No	No	No	No	No	No	No	No	No	No
19	4	158	2	12	No	No	No	No	No	No	No	No	No	No
20	4	63	2	4	No	No	No	No	No	No	No	No	No	No
21	4	48	2	4	No	No	No	No	No	No	No	No	No	No
22	4	48	2	4	No	No	No	No	No	No	No	No	No	No
23	4	31	2	3	No	No	No	No	No	No	No	No	No	No
24	4	31	2	3	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	2	3	5	8	9	5	3

Warrant 3 Condition A

Orientation	N	S
Total Stopped Delay Per Vehicle on Minor Approach (s)	471.4	50.8
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	11:23	0:27
Delay Condition Met	Yes	No
Volume on Minor Street Approach During Same Hour	87	33
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	1699	1699
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 21: Haun Rd (NS)/Driveway 2 (EW)

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	Yes
#2	Four Hour Vehicular Volume	Yes
#3	Peak Hour	Yes

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E
Speed > 40mph	Yes
Population < 10,000	No
Warrant Factor	70%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	N	S	E
1	1171	911	237
2	1124	875	228
3	1101	856	223
4	937	729	190
5	890	692	180
6	796	619	161
7	738	574	149
8	703	547	142
9	562	437	114
10	527	410	107
11	527	410	107
12	504	392	102
13	457	355	92
14	422	328	85
15	422	328	85
16	410	319	83
17	234	182	47
18	129	100	26
19	117	91	24
20	47	36	9
21	35	27	7
22	35	27	7
23	23	18	5
24	23	18	5

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	5	2082	2	237	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	5	1999	2	228	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	5	1957	2	223	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4	5	1666	2	190	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
5	5	1582	2	180	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
6	5	1415	2	161	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
7	5	1312	2	149	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
8	5	1250	2	142	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
9	5	999	2	114	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No
10	5	937	2	107	No	No	No	No	Yes	Yes	Yes	Yes	Yes	No
11	5	937	2	107	No	No	No	No	Yes	Yes	Yes	Yes	Yes	No
12	5	896	2	102	No	No	No	No	No	Yes	Yes	Yes	Yes	No
13	5	812	2	92	No	No	No	No	No	Yes	Yes	Yes	No	No
14	5	750	2	85	No	No	No	No	No	Yes	Yes	Yes	No	No
15	5	750	2	85	No	No	No	No	No	Yes	Yes	Yes	No	No
16	5	729	2	83	No	No	No	No	No	Yes	Yes	Yes	No	No
17	5	416	2	47	No	No	No	No	No	No	No	No	No	No
18	5	229	2	26	No	No	No	No	No	No	No	No	No	No
19	5	208	2	24	No	No	No	No	No	No	No	No	No	No
20	5	83	2	9	No	No	No	No	No	No	No	No	No	No
21	5	62	2	7	No	No	No	No	No	No	No	No	No	No
22	5	62	2	7	No	No	No	No	No	No	No	No	No	No
23	5	41	2	5	No	No	No	No	No	No	No	No	No	No
24	5	41	2	5	No	No	No	No	No	No	No	No	No	No
Hours Met					3	6	8	9	11	16	16	16	12	8

Warrant 3 Condition A

Orientation	E
Total Stopped Delay Per Vehicle on Minor Approach (s)	198.3
Number of Lanes on Minor Street Approach	2
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	13:03
Delay Condition Met	Yes
Volume on Minor Street Approach During Same Hour	237
High Minor Volume Condition Met	Yes
Total Entering Volume on All Approaches During Same Hour	2319
Number of Approaches on Intersection	3
Total Volume Condition Met	Yes
Warrant Met for Approach	Yes
Warrant Met for Intersection	**Yes**

Signal Warrants Report For Intersection 11: Town Center Dr-Sherman Rd (NS)/Holland Rd (EW)

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	Yes
#2	Four Hour Vehicular Volume	Yes
#3	Peak Hour	Yes

Intersection Warrants Parameters

Major Approaches	E, W
Minor Approaches	N, S
Speed > 40mph	Yes
Population < 10,000	No
Warrant Factor	70%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	E	W	N	S
1	808	597	128	16
2	776	573	123	15
3	760	561	120	15
4	646	478	102	13
5	614	454	97	12
6	549	406	87	11
7	509	376	81	10
8	485	358	77	10
9	388	287	61	8
10	364	269	58	7
11	364	269	58	7
12	347	257	55	7
13	315	233	50	6
14	291	215	46	6
15	291	215	46	6
16	283	209	45	6
17	162	119	26	3
18	89	66	14	2
19	81	60	13	2
20	32	24	5	1
21	24	18	4	0
22	24	18	4	0
23	16	12	3	0
24	16	12	3	0

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	4	1405	2	144	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	4	1349	2	138	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	4	1321	2	135	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4	4	1124	2	115	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
5	4	1068	2	109	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No
6	4	955	2	98	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No
7	4	885	2	91	No	No	No	No	No	Yes	Yes	Yes	Yes	No
8	4	843	2	87	No	No	No	No	No	Yes	Yes	Yes	Yes	No
9	4	675	2	69	No	No	No	No	No	No	Yes	Yes	No	No
10	4	633	2	65	No	No	No	No	No	No	Yes	Yes	No	No
11	4	633	2	65	No	No	No	No	No	No	Yes	Yes	No	No
12	4	604	2	62	No	No	No	No	No	No	No	Yes	No	No
13	4	548	2	56	No	No	No	No	No	No	No	Yes	No	No
14	4	506	2	52	No	No	No	No	No	No	No	Yes	No	No
15	4	506	2	52	No	No	No	No	No	No	No	Yes	No	No
16	4	492	2	51	No	No	No	No	No	No	No	No	No	No
17	4	281	2	29	No	No	No	No	No	No	No	No	No	No
18	4	155	2	16	No	No	No	No	No	No	No	No	No	No
19	4	141	2	15	No	No	No	No	No	No	No	No	No	No
20	4	56	2	6	No	No	No	No	No	No	No	No	No	No
21	4	42	2	4	No	No	No	No	No	No	No	No	No	No
22	4	42	2	4	No	No	No	No	No	No	No	No	No	No
23	4	28	2	3	No	No	No	No	No	No	No	No	No	No
24	4	28	2	3	No	No	No	No	No	No	No	No	No	No
Hours Met					0	3	3	6	6	8	11	15	8	4

Warrant 3 Condition A

Orientation	N	S
Total Stopped Delay Per Vehicle on Minor Approach (s)	57.6	30.5
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	2:02	0:08
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	128	16
High Minor Volume Condition Met	Yes	No
Total Entering Volume on All Approaches During Same Hour	1549	1549
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 15: Haun Road (NS) / Holland Road (EW)

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	Yes
#2	Four Hour Vehicular Volume	Yes
#3	Peak Hour	Yes

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	Yes
Population < 10,000	No
Warrant Factor	70%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	939	879	25	555
2	901	844	24	533
3	883	826	24	522
4	751	703	20	444
5	714	668	19	422
6	639	598	17	377
7	592	554	16	350
8	563	527	15	333
9	451	422	12	266
10	423	396	11	250
11	423	396	11	250
12	404	378	11	239
13	366	343	10	216
14	338	316	9	200
15	338	316	9	200
16	329	308	9	194
17	188	176	5	111
18	103	97	3	61
19	94	88	3	56
20	38	35	1	22
21	28	26	1	17
22	28	26	1	17
23	19	18	1	11
24	19	18	1	11

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	5	1818	4	580	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	5	1745	4	557	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	5	1709	4	546	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4	5	1454	4	464	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
5	5	1382	4	441	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
6	5	1237	4	394	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
7	5	1146	4	366	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
8	5	1090	4	348	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
9	5	873	4	278	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
10	5	819	4	261	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
11	5	819	4	261	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
12	5	782	4	250	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
13	5	709	4	226	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	No
14	5	654	4	209	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	No
15	5	654	4	209	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	No
16	5	637	4	203	No	Yes	Yes	Yes	No	No	Yes	Yes	Yes	No
17	5	364	4	116	No	No	No	No	No	No	No	No	No	No
18	5	200	4	64	No	No	No	No	No	No	No	No	No	No
19	5	182	4	59	No	No	No	No	No	No	No	No	No	No
20	5	73	4	23	No	No	No	No	No	No	No	No	No	No
21	5	54	4	18	No	No	No	No	No	No	No	No	No	No
22	5	54	4	18	No	No	No	No	No	No	No	No	No	No
23	5	37	4	12	No	No	No	No	No	No	No	No	No	No
24	5	37	4	12	No	No	No	No	No	No	No	No	No	No
Hours Met					15	16	16	16	8	12	16	16	16	12

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	15.8	71.8
Number of Lanes on Minor Street Approach	1	3
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:06	11:04
Delay Condition Met	No	Yes
Volume on Minor Street Approach During Same Hour	25	555
High Minor Volume Condition Met	No	Yes
Total Entering Volume on All Approaches During Same Hour	2398	2398
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	Yes
Warrant Met for Intersection	**Yes**	

Signal Warrants Report For Intersection 21: Haun Rd (NS)/Driveway 2 (EW)

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	Yes
#2	Four Hour Vehicular Volume	Yes
#3	Peak Hour	Yes

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E
Speed > 40mph	Yes
Population < 10,000	No
Warrant Factor	70%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	N	S	E
1	1148	1083	490
2	1102	1040	470
3	1079	1018	461
4	918	866	392
5	872	823	372
6	781	736	333
7	723	682	309
8	689	650	294
9	551	520	235
10	517	487	221
11	517	487	221
12	494	466	211
13	448	422	191
14	413	390	176
15	413	390	176
16	402	379	172
17	230	217	98
18	126	119	54
19	115	108	49
20	46	43	20
21	34	32	15
22	34	32	15
23	23	22	10
24	23	22	10

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	5	2231	2	490	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	5	2142	2	470	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	5	2097	2	461	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4	5	1784	2	392	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
5	5	1695	2	372	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
6	5	1517	2	333	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
7	5	1405	2	309	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
8	5	1339	2	294	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
9	5	1071	2	235	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
10	5	1004	2	221	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
11	5	1004	2	221	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
12	5	960	2	211	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
13	5	870	2	191	No	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
14	5	803	2	176	No	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	No
15	5	803	2	176	No	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	No
16	5	781	2	172	No	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	No
17	5	447	2	98	No	No	No	No	No	No	No	No	No	No
18	5	245	2	54	No	No	No	No	No	No	No	No	No	No
19	5	223	2	49	No	No	No	No	No	No	No	No	No	No
20	5	89	2	20	No	No	No	No	No	No	No	No	No	No
21	5	66	2	15	No	No	No	No	No	No	No	No	No	No
22	5	66	2	15	No	No	No	No	No	No	No	No	No	No
23	5	45	2	10	No	No	No	No	No	No	No	No	No	No
24	5	45	2	10	No	No	No	No	No	No	No	No	No	No
Hours Met					12	16	16	16	12	16	16	16	16	13

Warrant 3 Condition A

Orientation	E
Total Stopped Delay Per Vehicle on Minor Approach (s)	1000
Number of Lanes on Minor Street Approach	2
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	136:06
Delay Condition Met	Yes
Volume on Minor Street Approach During Same Hour	490
High Minor Volume Condition Met	Yes
Total Entering Volume on All Approaches During Same Hour	2721
Number of Approaches on Intersection	3
Total Volume Condition Met	Yes
Warrant Met for Approach	Yes
Warrant Met for Intersection	**Yes**

EXISTING PLUS AMBIENT GROWTH PLUS CUMULATIVE PROJECTS WITH OVERPASS CONDITIONS SIGNAL WARRANT WORKSHEETS

Signal Warrants Report For Intersection 11: Sherman Rd (NS)/Holland Rd (EW)

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	Yes
#2	Four Hour Vehicular Volume	Yes
#3	Peak Hour	Yes

Intersection Warrants Parameters

Major Approaches	E, W
Minor Approaches	N, S
Speed > 40mph	Yes
Population < 10,000	No
Warrant Factor	70%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	E	W	N	S
1	966	928	181	33
2	927	891	174	32
3	908	872	170	31
4	773	742	145	26
5	734	705	138	25
6	657	631	123	22
7	609	585	114	21
8	580	557	109	20
9	464	445	87	16
10	435	418	81	15
11	435	418	81	15
12	415	399	78	14
13	377	362	71	13
14	348	334	65	12
15	348	334	65	12
16	338	325	63	12
17	193	186	36	7
18	106	102	20	4
19	97	93	18	3
20	39	37	7	1
21	29	28	5	1
22	29	28	5	1
23	19	19	4	1
24	19	19	4	1

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	4	1894	2	214	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	4	1818	2	206	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	4	1780	2	201	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4	4	1515	2	171	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
5	4	1439	2	163	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
6	4	1288	2	145	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
7	4	1194	2	135	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
8	4	1137	2	129	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
9	4	909	2	103	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No
10	4	853	2	96	No	No	No	No	No	Yes	Yes	Yes	Yes	No
11	4	853	2	96	No	No	No	No	No	Yes	Yes	Yes	Yes	No
12	4	814	2	92	No	No	No	No	No	Yes	Yes	Yes	Yes	No
13	4	739	2	84	No	No	No	No	No	Yes	Yes	Yes	No	No
14	4	682	2	77	No	No	No	No	No	No	Yes	Yes	No	No
15	4	682	2	77	No	No	No	No	No	No	Yes	Yes	No	No
16	4	663	2	75	No	No	No	No	No	No	Yes	Yes	No	No
17	4	379	2	43	No	No	No	No	No	No	No	No	No	No
18	4	208	2	24	No	No	No	No	No	No	No	No	No	No
19	4	190	2	21	No	No	No	No	No	No	No	No	No	No
20	4	76	2	8	No	No	No	No	No	No	No	No	No	No
21	4	57	2	6	No	No	No	No	No	No	No	No	No	No
22	4	57	2	6	No	No	No	No	No	No	No	No	No	No
23	4	38	2	5	No	No	No	No	No	No	No	No	No	No
24	4	38	2	5	No	No	No	No	No	No	No	No	No	No
Hours Met					3	6	8	9	9	13	16	16	12	8

Warrant 3 Condition A

Orientation	N	S
Total Stopped Delay Per Vehicle on Minor Approach (s)	6013.4	173.3
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	302:20	1:35
Delay Condition Met	Yes	No
Volume on Minor Street Approach During Same Hour	181	33
High Minor Volume Condition Met	Yes	No
Total Entering Volume on All Approaches During Same Hour	2108	2108
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	Yes	No
Warrant Met for Intersection	**Yes**	

Signal Warrants Report For Intersection 23: Antelope Rd (NS)/Albion Ln (EW)

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	Yes
#2	Four Hour Vehicular Volume	Yes
#3	Peak Hour	Yes

Intersection Warrants Parameters

Major Approaches	S, N
Minor Approaches	E
Speed > 40mph	Yes
Population < 10,000	No
Warrant Factor	70%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	E
1	803	521	154
2	771	500	148
3	755	490	145
4	642	417	123
5	610	396	117
6	546	354	105
7	506	328	97
8	482	313	92
9	385	250	74
10	361	234	69
11	361	234	69
12	345	224	66
13	313	203	60
14	289	188	55
15	289	188	55
16	281	182	54
17	161	104	31
18	88	57	17
19	80	52	15
20	32	21	6
21	24	16	5
22	24	16	5
23	16	10	3
24	16	10	3

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	4	1324	2	154	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	4	1271	2	148	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	4	1245	2	145	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4	4	1059	2	123	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No
5	4	1006	2	117	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No
6	4	900	2	105	No	No	No	No	Yes	Yes	Yes	Yes	Yes	No
7	4	834	2	97	No	No	No	No	No	Yes	Yes	Yes	No	No
8	4	795	2	92	No	No	No	No	No	Yes	Yes	Yes	No	No
9	4	635	2	74	No	No	No	No	No	No	Yes	Yes	No	No
10	4	595	2	69	No	No	No	No	No	No	No	Yes	No	No
11	4	595	2	69	No	No	No	No	No	No	No	Yes	No	No
12	4	569	2	66	No	No	No	No	No	No	No	Yes	No	No
13	4	516	2	60	No	No	No	No	No	No	No	Yes	No	No
14	4	477	2	55	No	No	No	No	No	No	No	No	No	No
15	4	477	2	55	No	No	No	No	No	No	No	No	No	No
16	4	463	2	54	No	No	No	No	No	No	No	No	No	No
17	4	265	2	31	No	No	No	No	No	No	No	No	No	No
18	4	145	2	17	No	No	No	No	No	No	No	No	No	No
19	4	132	2	15	No	No	No	No	No	No	No	No	No	No
20	4	53	2	6	No	No	No	No	No	No	No	No	No	No
21	4	40	2	5	No	No	No	No	No	No	No	No	No	No
22	4	40	2	5	No	No	No	No	No	No	No	No	No	No
23	4	26	2	3	No	No	No	No	No	No	No	No	No	No
24	4	26	2	3	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	3	5	6	8	9	13	6	3

Warrant 3 Condition A

Orientation	E
Total Stopped Delay Per Vehicle on Minor Approach (s)	35
Number of Lanes on Minor Street Approach	2
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	1:29
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	154
High Minor Volume Condition Met	Yes
Total Entering Volume on All Approaches During Same Hour	1478
Number of Approaches on Intersection	3
Total Volume Condition Met	Yes
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 25: Palomar Rd (NS)/Holland Rd (EW)

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	Yes
#2	Four Hour Vehicular Volume	Yes
#3	Peak Hour	Yes

Intersection Warrants Parameters

Major Approaches	E, W
Minor Approaches	N, S
Speed > 40mph	Yes
Population < 10,000	No
Warrant Factor	70%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	E	W	N	S
1	578	487	40	124
2	555	468	38	119
3	543	458	38	117
4	462	390	32	99
5	439	370	30	94
6	393	331	27	84
7	364	307	25	78
8	347	292	24	74
9	277	234	19	60
10	260	219	18	56
11	260	219	18	56
12	249	209	17	53
13	225	190	16	48
14	208	175	14	45
15	208	175	14	45
16	202	170	14	43
17	116	97	8	25
18	64	54	4	14
19	58	49	4	12
20	23	19	2	5
21	17	15	1	4
22	17	15	1	4
23	12	10	1	2
24	12	10	1	2

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	1065	2	164	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	3	1023	2	157	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	3	1001	2	155	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4	3	852	2	131	No	No	No	Yes	No	Yes	Yes	Yes	Yes	No
5	3	809	2	124	No	No	No	Yes	No	Yes	Yes	Yes	Yes	No
6	3	724	2	111	No	No	No	Yes	No	Yes	Yes	Yes	No	No
7	3	671	2	103	No	No	No	No	No	No	Yes	Yes	No	No
8	3	639	2	98	No	No	No	No	No	No	Yes	Yes	No	No
9	3	511	2	79	No	No	No	No	No	No	No	Yes	No	No
10	3	479	2	74	No	No	No	No	No	No	No	No	No	No
11	3	479	2	74	No	No	No	No	No	No	No	No	No	No
12	3	458	2	70	No	No	No	No	No	No	No	No	No	No
13	3	415	2	64	No	No	No	No	No	No	No	No	No	No
14	3	383	2	59	No	No	No	No	No	No	No	No	No	No
15	3	383	2	59	No	No	No	No	No	No	No	No	No	No
16	3	372	2	57	No	No	No	No	No	No	No	No	No	No
17	3	213	2	33	No	No	No	No	No	No	No	No	No	No
18	3	118	2	18	No	No	No	No	No	No	No	No	No	No
19	3	107	2	16	No	No	No	No	No	No	No	No	No	No
20	3	42	2	7	No	No	No	No	No	No	No	No	No	No
21	3	32	2	5	No	No	No	No	No	No	No	No	No	No
22	3	32	2	5	No	No	No	No	No	No	No	No	No	No
23	3	22	2	3	No	No	No	No	No	No	No	No	No	No
24	3	22	2	3	No	No	No	No	No	No	No	No	No	No
Hours Met					0	1	3	6	3	6	8	9	5	3

Warrant 3 Condition A

Orientation	N	S
Total Stopped Delay Per Vehicle on Minor Approach (s)	14.8	114.5
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:09	3:56
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	40	124
High Minor Volume Condition Met	No	Yes
Total Entering Volume on All Approaches During Same Hour	1229	1229
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 26: Menifee Rd (NS)/Holland Rd (EW)

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	Yes
#2	Four Hour Vehicular Volume	Yes
#3	Peak Hour	Yes

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	Yes
Population < 10,000	No
Warrant Factor	70%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	690	566	539	477
2	662	543	517	458
3	649	532	507	448
4	552	453	431	382
5	524	430	410	363
6	469	385	367	324
7	435	357	340	301
8	414	340	323	286
9	331	272	259	229
10	311	255	243	215
11	311	255	243	215
12	297	243	232	205
13	269	221	210	186
14	248	204	194	172
15	248	204	194	172
16	241	198	189	167
17	138	113	108	95
18	76	62	59	52
19	69	57	54	48
20	28	23	22	19
21	21	17	16	14
22	21	17	16	14
23	14	11	11	10
24	14	11	11	10

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	6	1256	6	1016	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	6	1205	6	975	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	6	1181	6	955	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4	6	1005	6	813	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
5	6	954	6	773	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
6	6	854	6	691	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
7	6	792	6	641	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
8	6	754	6	609	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
9	6	603	6	488	Yes	Yes	Yes	Yes	No	No	No	Yes	Yes	No
10	6	566	6	458	No	Yes	Yes	Yes	No	No	No	Yes	Yes	No
11	6	566	6	458	No	Yes	Yes	Yes	No	No	No	Yes	Yes	No
12	6	540	6	437	No	Yes	Yes	Yes	No	No	No	Yes	Yes	No
13	6	490	6	396	No	Yes	Yes	Yes	No	No	No	No	No	No
14	6	452	6	366	No	No	Yes	Yes	No	No	No	No	No	No
15	6	452	6	366	No	No	Yes	Yes	No	No	No	No	No	No
16	6	439	6	356	No	No	Yes	Yes	No	No	No	No	No	No
17	6	251	6	203	No	No	No	No	No	No	No	No	No	No
18	6	138	6	111	No	No	No	No	No	No	No	No	No	No
19	6	126	6	102	No	No	No	No	No	No	No	No	No	No
20	6	51	6	41	No	No	No	No	No	No	No	No	No	No
21	6	38	6	30	No	No	No	No	No	No	No	No	No	No
22	6	38	6	30	No	No	No	No	No	No	No	No	No	No
23	6	25	6	21	No	No	No	No	No	No	No	No	No	No
24	6	25	6	21	No	No	No	No	No	No	No	No	No	No
Hours Met					9	13	16	16	5	8	8	12	12	8

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	13	13.4
Number of Lanes on Minor Street Approach	3	3
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	1:56	1:46
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	539	477
High Minor Volume Condition Met	Yes	Yes
Total Entering Volume on All Approaches During Same Hour	2272	2272
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 11: Sherman Rd (NS)/Holland Rd (EW)

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	Yes
#2	Four Hour Vehicular Volume	Yes
#3	Peak Hour	Yes

Intersection Warrants Parameters

Major Approaches	E, W
Minor Approaches	N, S
Speed > 40mph	Yes
Population < 10,000	No
Warrant Factor	70%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	E	W	N	S
1	1072	755	241	16
2	1029	725	231	15
3	1008	710	227	15
4	858	604	193	13
5	815	574	183	12
6	729	513	164	11
7	675	476	152	10
8	643	453	145	10
9	515	362	116	8
10	482	340	108	7
11	482	340	108	7
12	461	325	104	7
13	418	294	94	6
14	386	272	87	6
15	386	272	87	6
16	375	264	84	6
17	214	151	48	3
18	118	83	27	2
19	107	76	24	2
20	43	30	10	1
21	32	23	7	0
22	32	23	7	0
23	21	15	5	0
24	21	15	5	0

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	4	1827	2	257	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	4	1754	2	246	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	4	1718	2	242	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4	4	1462	2	206	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
5	4	1389	2	195	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
6	4	1242	2	175	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
7	4	1151	2	162	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
8	4	1096	2	155	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
9	4	877	2	124	No	No	Yes	Yes	No	Yes	Yes	Yes	Yes	No
10	4	822	2	115	No	No	Yes	Yes	No	Yes	Yes	Yes	Yes	No
11	4	822	2	115	No	No	Yes	Yes	No	Yes	Yes	Yes	Yes	No
12	4	786	2	111	No	No	No	Yes	No	Yes	Yes	Yes	Yes	No
13	4	712	2	100	No	No	No	Yes	No	No	Yes	Yes	No	No
14	4	658	2	93	No	No	No	Yes	No	No	Yes	Yes	No	No
15	4	658	2	93	No	No	No	Yes	No	No	Yes	Yes	No	No
16	4	639	2	90	No	No	No	Yes	No	No	Yes	Yes	No	No
17	4	365	2	51	No	No	No	No	No	No	No	No	No	No
18	4	201	2	29	No	No	No	No	No	No	No	No	No	No
19	4	183	2	26	No	No	No	No	No	No	No	No	No	No
20	4	73	2	11	No	No	No	No	No	No	No	No	No	No
21	4	55	2	7	No	No	No	No	No	No	No	No	No	No
22	4	55	2	7	No	No	No	No	No	No	No	No	No	No
23	4	36	2	5	No	No	No	No	No	No	No	No	No	No
24	4	36	2	5	No	No	No	No	No	No	No	No	No	No
Hours Met					7	8	11	16	8	12	16	16	12	8

Warrant 3 Condition A

Orientation	N	S
Total Stopped Delay Per Vehicle on Minor Approach (s)	1408.1	62.2
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	94:15	0:16
Delay Condition Met	Yes	No
Volume on Minor Street Approach During Same Hour	241	16
High Minor Volume Condition Met	Yes	No
Total Entering Volume on All Approaches During Same Hour	2084	2084
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	Yes	No
Warrant Met for Intersection	**Yes**	

Signal Warrants Report For Intersection 22: Antelope Rd (NS)/Albion Ln (EW)

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	Yes
#2	Four Hour Vehicular Volume	Yes
#3	Peak Hour	Yes

Intersection Warrants Parameters

Major Approaches	S, N
Minor Approaches	E
Speed > 40mph	Yes
Population < 10,000	No
Warrant Factor	70%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	E
1	660	876	154
2	634	841	148
3	620	823	145
4	528	701	123
5	502	666	117
6	449	596	105
7	416	552	97
8	396	526	92
9	317	420	74
10	297	394	69
11	297	394	69
12	284	377	66
13	257	342	60
14	238	315	55
15	238	315	55
16	231	307	54
17	132	175	31
18	73	96	17
19	66	88	15
20	26	35	6
21	20	26	5
22	20	26	5
23	13	18	3
24	13	18	3

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	4	1536	2	154	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	4	1475	2	148	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	4	1443	2	145	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4	4	1229	2	123	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
5	4	1168	2	117	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
6	4	1045	2	105	No	No	No	No	Yes	Yes	Yes	Yes	Yes	No
7	4	968	2	97	No	No	No	No	No	Yes	Yes	Yes	Yes	No
8	4	922	2	92	No	No	No	No	No	Yes	Yes	Yes	Yes	No
9	4	737	2	74	No	No	No	No	No	No	Yes	Yes	No	No
10	4	691	2	69	No	No	No	No	No	No	No	Yes	No	No
11	4	691	2	69	No	No	No	No	No	No	No	Yes	No	No
12	4	661	2	66	No	No	No	No	No	No	No	Yes	No	No
13	4	599	2	60	No	No	No	No	No	No	No	Yes	No	No
14	4	553	2	55	No	No	No	No	No	No	No	No	No	No
15	4	553	2	55	No	No	No	No	No	No	No	No	No	No
16	4	538	2	54	No	No	No	No	No	No	No	No	No	No
17	4	307	2	31	No	No	No	No	No	No	No	No	No	No
18	4	169	2	17	No	No	No	No	No	No	No	No	No	No
19	4	154	2	15	No	No	No	No	No	No	No	No	No	No
20	4	61	2	6	No	No	No	No	No	No	No	No	No	No
21	4	46	2	5	No	No	No	No	No	No	No	No	No	No
22	4	46	2	5	No	No	No	No	No	No	No	No	No	No
23	4	31	2	3	No	No	No	No	No	No	No	No	No	No
24	4	31	2	3	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	3	5	6	8	9	13	8	5

Warrant 3 Condition A

Orientation	E
Total Stopped Delay Per Vehicle on Minor Approach (s)	125.2
Number of Lanes on Minor Street Approach	2
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	5:21
Delay Condition Met	Yes
Volume on Minor Street Approach During Same Hour	154
High Minor Volume Condition Met	Yes
Total Entering Volume on All Approaches During Same Hour	1690
Number of Approaches on Intersection	3
Total Volume Condition Met	Yes
Warrant Met for Approach	Yes
Warrant Met for Intersection	**Yes**

Signal Warrants Report For Intersection 24: Palomar Rd (NS)/Holland Rd (EW)

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	Yes
#2	Four Hour Vehicular Volume	Yes
#3	Peak Hour	Yes

Intersection Warrants Parameters

Major Approaches	E, W
Minor Approaches	N, S
Speed > 40mph	Yes
Population < 10,000	No
Warrant Factor	56%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	E	W	N	S
1	522	486	160	51
2	501	467	154	49
3	491	457	150	48
4	418	389	128	41
5	397	369	122	39
6	355	330	109	35
7	329	306	101	32
8	313	292	96	31
9	251	233	77	24
10	235	219	72	23
11	235	219	72	23
12	224	209	69	22
13	204	190	62	20
14	188	175	58	18
15	188	175	58	18
16	183	170	56	18
17	104	97	32	10
18	57	53	18	6
19	52	49	16	5
20	21	19	6	2
21	16	15	5	2
22	16	15	5	2
23	10	10	3	1
24	10	10	3	1

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	1008	2	211	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	3	968	2	203	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	3	948	2	198	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4	3	807	2	169	No	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	No
5	3	766	2	161	No	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	No
6	3	685	2	144	No	No	Yes	Yes	No	No	Yes	Yes	Yes	No
7	3	635	2	133	No	No	No	Yes	No	No	Yes	Yes	No	No
8	3	605	2	127	No	No	No	Yes	No	No	No	Yes	No	No
9	3	484	2	101	No	No	No	No	No	No	No	No	No	No
10	3	454	2	95	No	No	No	No	No	No	No	No	No	No
11	3	454	2	95	No	No	No	No	No	No	No	No	No	No
12	3	433	2	91	No	No	No	No	No	No	No	No	No	No
13	3	394	2	82	No	No	No	No	No	No	No	No	No	No
14	3	363	2	76	No	No	No	No	No	No	No	No	No	No
15	3	363	2	76	No	No	No	No	No	No	No	No	No	No
16	3	353	2	74	No	No	No	No	No	No	No	No	No	No
17	3	201	2	42	No	No	No	No	No	No	No	No	No	No
18	3	110	2	24	No	No	No	No	No	No	No	No	No	No
19	3	101	2	21	No	No	No	No	No	No	No	No	No	No
20	3	40	2	8	No	No	No	No	No	No	No	No	No	No
21	3	31	2	7	No	No	No	No	No	No	No	No	No	No
22	3	31	2	7	No	No	No	No	No	No	No	No	No	No
23	3	20	2	4	No	No	No	No	No	No	No	No	No	No
24	3	20	2	4	No	No	No	No	No	No	No	No	No	No
Hours Met					3	5	6	8	3	5	7	8	6	3

Warrant 3 Condition A

Orientation	N	S
Total Stopped Delay Per Vehicle on Minor Approach (s)	379.1	372.9
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	16:51	5:16
Delay Condition Met	Yes	Yes
Volume on Minor Street Approach During Same Hour	160	51
High Minor Volume Condition Met	Yes	No
Total Entering Volume on All Approaches During Same Hour	1219	1219
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	Yes	No
Warrant Met for Intersection	**Yes**	

Signal Warrants Report For Intersection 25: Menifee Rd (NS)/Holland Rd (EW)

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	Yes
#2	Four Hour Vehicular Volume	Yes
#3	Peak Hour	Yes

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	Yes
Population < 10,000	No
Warrant Factor	70%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	522	493	422	415
2	501	473	405	398
3	491	463	397	390
4	418	394	338	332
5	397	375	321	315
6	355	335	287	282
7	329	311	266	261
8	313	296	253	249
9	251	237	203	199
10	235	222	190	187
11	235	222	190	187
12	224	212	181	178
13	204	192	165	162
14	188	177	152	149
15	188	177	152	149
16	183	173	148	145
17	104	99	84	83
18	57	54	46	46
19	52	49	42	42
20	21	20	17	17
21	16	15	13	12
22	16	15	13	12
23	10	10	8	8
24	10	10	8	8

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	6	1015	6	837	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	6	974	6	803	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	6	954	6	787	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4	6	812	6	670	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
5	6	772	6	636	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
6	6	690	6	569	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes
7	6	640	6	527	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	No
8	6	609	6	502	Yes	Yes	Yes	Yes	No	No	No	Yes	Yes	No
9	6	488	6	402	No	Yes	Yes	Yes	No	No	No	No	No	No
10	6	457	6	377	No	No	Yes	Yes	No	No	No	No	No	No
11	6	457	6	377	No	No	Yes	Yes	No	No	No	No	No	No
12	6	436	6	359	No	No	Yes	Yes	No	No	No	No	No	No
13	6	396	6	327	No	No	No	Yes	No	No	No	No	No	No
14	6	365	6	301	No	No	No	Yes	No	No	No	No	No	No
15	6	365	6	301	No	No	No	Yes	No	No	No	No	No	No
16	6	356	6	293	No	No	No	Yes	No	No	No	No	No	No
17	6	203	6	167	No	No	No	No	No	No	No	No	No	No
18	6	111	6	92	No	No	No	No	No	No	No	No	No	No
19	6	101	6	84	No	No	No	No	No	No	No	No	No	No
20	6	41	6	34	No	No	No	No	No	No	No	No	No	No
21	6	31	6	25	No	No	No	No	No	No	No	No	No	No
22	6	31	6	25	No	No	No	No	No	No	No	No	No	No
23	6	20	6	16	No	No	No	No	No	No	No	No	No	No
24	6	20	6	16	No	No	No	No	No	No	No	No	No	No
Hours Met					8	9	12	16	3	5	7	8	8	6

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	12	12.3
Number of Lanes on Minor Street Approach	3	3
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	1:24	1:25
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	422	415
High Minor Volume Condition Met	Yes	Yes
Total Entering Volume on All Approaches During Same Hour	1852	1852
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

EXISTING PLUS AMBIENT GROWTH PLUS CUMULATIVE PROJECTS PLUS PROJECT WITH OVERPASS CONDITIONS SIGNAL WARRANT WORKSHEETS

Signal Warrants Report For Intersection 11: Sherman Rd (NS)/Holland Rd (EW)

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	Yes
#2	Four Hour Vehicular Volume	Yes
#3	Peak Hour	Yes

Intersection Warrants Parameters

Major Approaches	E, W
Minor Approaches	N, S
Speed > 40mph	Yes
Population < 10,000	No
Warrant Factor	70%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	E	W	N	S
1	996	989	181	33
2	956	949	174	32
3	936	930	170	31
4	797	791	145	26
5	757	752	138	25
6	677	673	123	22
7	627	623	114	21
8	598	593	109	20
9	478	475	87	16
10	448	445	81	15
11	448	445	81	15
12	428	425	78	14
13	388	386	71	13
14	359	356	65	12
15	359	356	65	12
16	349	346	63	12
17	199	198	36	7
18	110	109	20	4
19	100	99	18	3
20	40	40	7	1
21	30	30	5	1
22	30	30	5	1
23	20	20	4	1
24	20	20	4	1

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	4	1985	2	214	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	4	1905	2	206	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	4	1866	2	201	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4	4	1588	2	171	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
5	4	1509	2	163	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
6	4	1350	2	145	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
7	4	1250	2	135	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
8	4	1191	2	129	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
9	4	953	2	103	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No
10	4	893	2	96	No	No	No	No	No	Yes	Yes	Yes	Yes	No
11	4	893	2	96	No	No	No	No	No	Yes	Yes	Yes	Yes	No
12	4	853	2	92	No	No	No	No	No	Yes	Yes	Yes	Yes	No
13	4	774	2	84	No	No	No	No	No	Yes	Yes	Yes	No	No
14	4	715	2	77	No	No	No	No	No	No	Yes	Yes	No	No
15	4	715	2	77	No	No	No	No	No	No	Yes	Yes	No	No
16	4	695	2	75	No	No	No	No	No	No	Yes	Yes	No	No
17	4	397	2	43	No	No	No	No	No	No	No	No	No	No
18	4	219	2	24	No	No	No	No	No	No	No	No	No	No
19	4	199	2	21	No	No	No	No	No	No	No	No	No	No
20	4	80	2	8	No	No	No	No	No	No	No	No	No	No
21	4	60	2	6	No	No	No	No	No	No	No	No	No	No
22	4	60	2	6	No	No	No	No	No	No	No	No	No	No
23	4	40	2	5	No	No	No	No	No	No	No	No	No	No
24	4	40	2	5	No	No	No	No	No	No	No	No	No	No
Hours Met					3	6	8	9	9	13	16	16	12	8

Warrant 3 Condition A

Orientation	N	S
Total Stopped Delay Per Vehicle on Minor Approach (s)	9313	325.3
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	468:14	2:58
Delay Condition Met	Yes	No
Volume on Minor Street Approach During Same Hour	181	33
High Minor Volume Condition Met	Yes	No
Total Entering Volume on All Approaches During Same Hour	2199	2199
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	Yes	No
Warrant Met for Intersection	**Yes**	

Signal Warrants Report For Intersection 21: Haun Rd (NS)/Driveway 2 (EW)

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	Yes
#2	Four Hour Vehicular Volume	Yes
#3	Peak Hour	Yes

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E
Speed > 40mph	Yes
Population < 10,000	No
Warrant Factor	70%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	N	S	E
1	1207	916	267
2	1159	879	256
3	1135	861	251
4	966	733	214
5	917	696	203
6	821	623	182
7	760	577	168
8	724	550	160
9	579	440	128
10	543	412	120
11	543	412	120
12	519	394	115
13	471	357	104
14	435	330	96
15	435	330	96
16	422	321	93
17	241	183	53
18	133	101	29
19	121	92	27
20	48	37	11
21	36	27	8
22	36	27	8
23	24	18	5
24	24	18	5

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	5	2123	2	267	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	5	2038	2	256	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	5	1996	2	251	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4	5	1699	2	214	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
5	5	1613	2	203	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
6	5	1444	2	182	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
7	5	1337	2	168	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
8	5	1274	2	160	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
9	5	1019	2	128	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No
10	5	955	2	120	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No
11	5	955	2	120	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No
12	5	913	2	115	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No
13	5	828	2	104	No	No	No	No	No	Yes	Yes	Yes	Yes	No
14	5	765	2	96	No	No	No	No	No	Yes	Yes	Yes	No	No
15	5	765	2	96	No	No	No	No	No	Yes	Yes	Yes	No	No
16	5	743	2	93	No	No	No	No	No	Yes	Yes	Yes	No	No
17	5	424	2	53	No	No	No	No	No	No	No	No	No	No
18	5	234	2	29	No	No	No	No	No	No	No	No	No	No
19	5	213	2	27	No	No	No	No	No	No	No	No	No	No
20	5	85	2	11	No	No	No	No	No	No	No	No	No	No
21	5	63	2	8	No	No	No	No	No	No	No	No	No	No
22	5	63	2	8	No	No	No	No	No	No	No	No	No	No
23	5	42	2	5	No	No	No	No	No	No	No	No	No	No
24	5	42	2	5	No	No	No	No	No	No	No	No	No	No
Hours Met					5	8	8	12	12	16	16	16	13	8

Warrant 3 Condition A

Orientation	E
Total Stopped Delay Per Vehicle on Minor Approach (s)	325.7
Number of Lanes on Minor Street Approach	2
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	24:09
Delay Condition Met	Yes
Volume on Minor Street Approach During Same Hour	267
High Minor Volume Condition Met	Yes
Total Entering Volume on All Approaches During Same Hour	2390
Number of Approaches on Intersection	3
Total Volume Condition Met	Yes
Warrant Met for Approach	Yes
Warrant Met for Intersection	**Yes**

Signal Warrants Report For Intersection 22: Antelope Rd (NS)/Albion Ln (EW)

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	Yes
#2	Four Hour Vehicular Volume	Yes
#3	Peak Hour	Yes

Intersection Warrants Parameters

Major Approaches	S, N
Minor Approaches	E
Speed > 40mph	Yes
Population < 10,000	No
Warrant Factor	70%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	E
1	803	551	169
2	771	529	162
3	755	518	159
4	642	441	135
5	610	419	128
6	546	375	115
7	506	347	106
8	482	331	101
9	385	264	81
10	361	248	76
11	361	248	76
12	345	237	73
13	313	215	66
14	289	198	61
15	289	198	61
16	281	193	59
17	161	110	34
18	88	61	19
19	80	55	17
20	32	22	7
21	24	17	5
22	24	17	5
23	16	11	3
24	16	11	3

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	4	1354	2	169	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	4	1300	2	162	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	4	1273	2	159	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4	4	1083	2	135	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
5	4	1029	2	128	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No
6	4	921	2	115	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No
7	4	853	2	106	No	No	No	No	No	Yes	Yes	Yes	Yes	No
8	4	813	2	101	No	No	No	No	No	Yes	Yes	Yes	No	No
9	4	649	2	81	No	No	No	No	No	No	Yes	Yes	No	No
10	4	609	2	76	No	No	No	No	No	No	No	Yes	No	No
11	4	609	2	76	No	No	No	No	No	No	No	Yes	No	No
12	4	582	2	73	No	No	No	No	No	No	No	Yes	No	No
13	4	528	2	66	No	No	No	No	No	No	No	Yes	No	No
14	4	487	2	61	No	No	No	No	No	No	No	No	No	No
15	4	487	2	61	No	No	No	No	No	No	No	No	No	No
16	4	474	2	59	No	No	No	No	No	No	No	No	No	No
17	4	271	2	34	No	No	No	No	No	No	No	No	No	No
18	4	149	2	19	No	No	No	No	No	No	No	No	No	No
19	4	135	2	17	No	No	No	No	No	No	No	No	No	No
20	4	54	2	7	No	No	No	No	No	No	No	No	No	No
21	4	41	2	5	No	No	No	No	No	No	No	No	No	No
22	4	41	2	5	No	No	No	No	No	No	No	No	No	No
23	4	27	2	3	No	No	No	No	No	No	No	No	No	No
24	4	27	2	3	No	No	No	No	No	No	No	No	No	No
Hours Met					0	2	3	6	6	8	9	13	7	4

Warrant 3 Condition A

Orientation	E
Total Stopped Delay Per Vehicle on Minor Approach (s)	39.8
Number of Lanes on Minor Street Approach	2
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	1:52
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	169
High Minor Volume Condition Met	Yes
Total Entering Volume on All Approaches During Same Hour	1523
Number of Approaches on Intersection	3
Total Volume Condition Met	Yes
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 24: Palomar Rd (NS)/Holland Rd (EW)

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	Yes
#2	Four Hour Vehicular Volume	Yes
#3	Peak Hour	Yes

Intersection Warrants Parameters

Major Approaches	E, W
Minor Approaches	N, S
Speed > 40mph	Yes
Population < 10,000	No
Warrant Factor	70%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	E	W	N	S
1	608	502	40	124
2	584	482	38	119
3	572	472	38	117
4	486	402	32	99
5	462	382	30	94
6	413	341	27	84
7	383	316	25	78
8	365	301	24	74
9	292	241	19	60
10	274	226	18	56
11	274	226	18	56
12	261	216	17	53
13	237	196	16	48
14	219	181	14	45
15	219	181	14	45
16	213	176	14	43
17	122	100	8	25
18	67	55	4	14
19	61	50	4	12
20	24	20	2	5
21	18	15	1	4
22	18	15	1	4
23	12	10	1	2
24	12	10	1	2

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	1110	2	164	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	3	1066	2	157	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	3	1044	2	155	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4	3	888	2	131	No	No	No	Yes	No	Yes	Yes	Yes	Yes	No
5	3	844	2	124	No	No	No	Yes	No	Yes	Yes	Yes	Yes	No
6	3	754	2	111	No	No	No	Yes	No	Yes	Yes	Yes	No	No
7	3	699	2	103	No	No	No	No	No	No	Yes	Yes	No	No
8	3	666	2	98	No	No	No	No	No	No	Yes	Yes	No	No
9	3	533	2	79	No	No	No	No	No	No	No	Yes	No	No
10	3	500	2	74	No	No	No	No	No	No	No	No	No	No
11	3	500	2	74	No	No	No	No	No	No	No	No	No	No
12	3	477	2	70	No	No	No	No	No	No	No	No	No	No
13	3	433	2	64	No	No	No	No	No	No	No	No	No	No
14	3	400	2	59	No	No	No	No	No	No	No	No	No	No
15	3	400	2	59	No	No	No	No	No	No	No	No	No	No
16	3	389	2	57	No	No	No	No	No	No	No	No	No	No
17	3	222	2	33	No	No	No	No	No	No	No	No	No	No
18	3	122	2	18	No	No	No	No	No	No	No	No	No	No
19	3	111	2	16	No	No	No	No	No	No	No	No	No	No
20	3	44	2	7	No	No	No	No	No	No	No	No	No	No
21	3	33	2	5	No	No	No	No	No	No	No	No	No	No
22	3	33	2	5	No	No	No	No	No	No	No	No	No	No
23	3	22	2	3	No	No	No	No	No	No	No	No	No	No
24	3	22	2	3	No	No	No	No	No	No	No	No	No	No
Hours Met					0	1	3	6	3	6	8	9	5	3

Warrant 3 Condition A

Orientation	N	S
Total Stopped Delay Per Vehicle on Minor Approach (s)	15.4	144.5
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:10	4:58
Delay Condition Met	No	Yes
Volume on Minor Street Approach During Same Hour	40	124
High Minor Volume Condition Met	No	Yes
Total Entering Volume on All Approaches During Same Hour	1274	1274
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	Yes
Warrant Met for Intersection	**Yes**	

Signal Warrants Report For Intersection 25: Menifee Rd (NS)/Holland Rd (EW)

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	Yes
#2	Four Hour Vehicular Volume	Yes
#3	Peak Hour	Yes

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	Yes
Population < 10,000	No
Warrant Factor	70%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	702	578	545	492
2	674	555	523	472
3	660	543	512	462
4	562	462	436	394
5	534	439	414	374
6	477	393	371	335
7	442	364	343	310
8	421	347	327	295
9	337	277	262	236
10	316	260	245	221
11	316	260	245	221
12	302	249	234	212
13	274	225	213	192
14	253	208	196	177
15	253	208	196	177
16	246	202	191	172
17	140	116	109	98
18	77	64	60	54
19	70	58	55	49
20	28	23	22	20
21	21	17	16	15
22	21	17	16	15
23	14	12	11	10
24	14	12	11	10

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	6	1280	6	1037	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	6	1229	6	995	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	6	1203	6	974	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4	6	1024	6	830	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
5	6	973	6	788	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
6	6	870	6	706	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
7	6	806	6	653	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
8	6	768	6	622	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
9	6	614	6	498	Yes	Yes	Yes	Yes	No	No	No	Yes	Yes	No
10	6	576	6	466	No	Yes	Yes	Yes	No	No	No	Yes	Yes	No
11	6	576	6	466	No	Yes	Yes	Yes	No	No	No	Yes	Yes	No
12	6	551	6	446	No	Yes	Yes	Yes	No	No	No	Yes	Yes	No
13	6	499	6	405	No	Yes	Yes	Yes	No	No	No	No	No	No
14	6	461	6	373	No	No	Yes	Yes	No	No	No	No	No	No
15	6	461	6	373	No	No	Yes	Yes	No	No	No	No	No	No
16	6	448	6	363	No	No	Yes	Yes	No	No	No	No	No	No
17	6	256	6	207	No	No	No	No	No	No	No	No	No	No
18	6	141	6	114	No	No	No	No	No	No	No	No	No	No
19	6	128	6	104	No	No	No	No	No	No	No	No	No	No
20	6	51	6	42	No	No	No	No	No	No	No	No	No	No
21	6	38	6	31	No	No	No	No	No	No	No	No	No	No
22	6	38	6	31	No	No	No	No	No	No	No	No	No	No
23	6	26	6	21	No	No	No	No	No	No	No	No	No	No
24	6	26	6	21	No	No	No	No	No	No	No	No	No	No
Hours Met					9	13	16	16	5	8	8	12	12	8

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	12.7	13.2
Number of Lanes on Minor Street Approach	3	3
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	1:55	1:48
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	545	492
High Minor Volume Condition Met	Yes	Yes
Total Entering Volume on All Approaches During Same Hour	2317	2317
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 11: Sherman Rd (NS)/Holland Rd (EW)

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	Yes
#2	Four Hour Vehicular Volume	Yes
#3	Peak Hour	Yes

Intersection Warrants Parameters

Major Approaches	E, W
Minor Approaches	N, S
Speed > 40mph	Yes
Population < 10,000	No
Warrant Factor	70%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	E	W	N	S
1	1136	800	241	16
2	1091	768	231	15
3	1068	752	227	15
4	909	640	193	13
5	863	608	183	12
6	772	544	164	11
7	716	504	152	10
8	682	480	145	10
9	545	384	116	8
10	511	360	108	7
11	511	360	108	7
12	488	344	104	7
13	443	312	94	6
14	409	288	87	6
15	409	288	87	6
16	398	280	84	6
17	227	160	48	3
18	125	88	27	2
19	114	80	24	2
20	45	32	10	1
21	34	24	7	0
22	34	24	7	0
23	23	16	5	0
24	23	16	5	0

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	4	1936	2	257	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	4	1859	2	246	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	4	1820	2	242	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4	4	1549	2	206	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
5	4	1471	2	195	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
6	4	1316	2	175	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
7	4	1220	2	162	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
8	4	1162	2	155	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
9	4	929	2	124	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
10	4	871	2	115	No	No	Yes	Yes	No	Yes	Yes	Yes	Yes	No
11	4	871	2	115	No	No	Yes	Yes	No	Yes	Yes	Yes	Yes	No
12	4	832	2	111	No	No	No	Yes	No	Yes	Yes	Yes	Yes	No
13	4	755	2	100	No	No	No	Yes	No	Yes	Yes	Yes	Yes	No
14	4	697	2	93	No	No	No	Yes	No	No	Yes	Yes	No	No
15	4	697	2	93	No	No	No	Yes	No	No	Yes	Yes	No	No
16	4	678	2	90	No	No	No	Yes	No	No	Yes	Yes	No	No
17	4	387	2	51	No	No	No	No	No	No	No	No	No	No
18	4	213	2	29	No	No	No	No	No	No	No	No	No	No
19	4	194	2	26	No	No	No	No	No	No	No	No	No	No
20	4	77	2	11	No	No	No	No	No	No	No	No	No	No
21	4	58	2	7	No	No	No	No	No	No	No	No	No	No
22	4	58	2	7	No	No	No	No	No	No	No	No	No	No
23	4	39	2	5	No	No	No	No	No	No	No	No	No	No
24	4	39	2	5	No	No	No	No	No	No	No	No	No	No
Hours Met					7	8	11	16	9	13	16	16	13	8

Warrant 3 Condition A

Orientation	N	S
Total Stopped Delay Per Vehicle on Minor Approach (s)	1826.5	82.4
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	122:16	0:21
Delay Condition Met	Yes	No
Volume on Minor Street Approach During Same Hour	241	16
High Minor Volume Condition Met	Yes	No
Total Entering Volume on All Approaches During Same Hour	2193	2193
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	Yes	No
Warrant Met for Intersection	**Yes**	

Signal Warrants Report For Intersection 21: Haun Rd (NS)/Driveway 2 (EW)

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	Yes
#2	Four Hour Vehicular Volume	Yes
#3	Peak Hour	Yes

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E
Speed > 40mph	Yes
Population < 10,000	No
Warrant Factor	70%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	N	S	E
1	1227	1077	553
2	1178	1034	531
3	1153	1012	520
4	982	862	442
5	933	819	420
6	834	732	376
7	773	679	348
8	736	646	332
9	589	517	265
10	552	485	249
11	552	485	249
12	528	463	238
13	479	420	216
14	442	388	199
15	442	388	199
16	429	377	194
17	245	215	111
18	135	118	61
19	123	108	55
20	49	43	22
21	37	32	17
22	37	32	17
23	25	22	11
24	25	22	11

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	5	2304	2	553	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	5	2212	2	531	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	5	2165	2	520	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4	5	1844	2	442	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
5	5	1752	2	420	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
6	5	1566	2	376	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
7	5	1452	2	348	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
8	5	1382	2	332	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
9	5	1106	2	265	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
10	5	1037	2	249	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
11	5	1037	2	249	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
12	5	991	2	238	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
13	5	899	2	216	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
14	5	830	2	199	No	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	No
15	5	830	2	199	No	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	No
16	5	806	2	194	No	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	No
17	5	460	2	111	No	No	No	No	No	No	No	No	No	No
18	5	253	2	61	No	No	No	No	No	No	No	No	No	No
19	5	231	2	55	No	No	No	No	No	No	No	No	No	No
20	5	92	2	22	No	No	No	No	No	No	No	No	No	No
21	5	69	2	17	No	No	No	No	No	No	No	No	No	No
22	5	69	2	17	No	No	No	No	No	No	No	No	No	No
23	5	47	2	11	No	No	No	No	No	No	No	No	No	No
24	5	47	2	11	No	No	No	No	No	No	No	No	No	No
Hours Met					13	16	16	16	12	16	16	16	16	13

Warrant 3 Condition A

Orientation	E
Total Stopped Delay Per Vehicle on Minor Approach (s)	1015.2
Number of Lanes on Minor Street Approach	2
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	155:56
Delay Condition Met	Yes
Volume on Minor Street Approach During Same Hour	553
High Minor Volume Condition Met	Yes
Total Entering Volume on All Approaches During Same Hour	2857
Number of Approaches on Intersection	3
Total Volume Condition Met	Yes
Warrant Met for Approach	Yes
Warrant Met for Intersection	**Yes**

Signal Warrants Report For Intersection 22: Antelope Rd (NS)/Albion Ln (EW)

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	Yes
#2	Four Hour Vehicular Volume	Yes
#3	Peak Hour	Yes

Intersection Warrants Parameters

Major Approaches	S, N
Minor Approaches	E
Speed > 40mph	Yes
Population < 10,000	No
Warrant Factor	70%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	E
1	660	898	186
2	634	862	179
3	620	844	175
4	528	718	149
5	502	682	141
6	449	611	126
7	416	566	117
8	396	539	112
9	317	431	89
10	297	404	84
11	297	404	84
12	284	386	80
13	257	350	73
14	238	323	67
15	238	323	67
16	231	314	65
17	132	180	37
18	73	99	20
19	66	90	19
20	26	36	7
21	20	27	6
22	20	27	6
23	13	18	4
24	13	18	4

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	4	1558	2	186	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	4	1496	2	179	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	4	1464	2	175	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4	4	1246	2	149	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
5	4	1184	2	141	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
6	4	1060	2	126	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No
7	4	982	2	117	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No
8	4	935	2	112	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No
9	4	748	2	89	No	No	No	No	No	Yes	Yes	Yes	No	No
10	4	701	2	84	No	No	No	No	No	No	Yes	Yes	No	No
11	4	701	2	84	No	No	No	No	No	No	Yes	Yes	No	No
12	4	670	2	80	No	No	No	No	No	No	Yes	Yes	No	No
13	4	607	2	73	No	No	No	No	No	No	No	Yes	No	No
14	4	561	2	67	No	No	No	No	No	No	No	Yes	No	No
15	4	561	2	67	No	No	No	No	No	No	No	Yes	No	No
16	4	545	2	65	No	No	No	No	No	No	No	Yes	No	No
17	4	312	2	37	No	No	No	No	No	No	No	No	No	No
18	4	172	2	20	No	No	No	No	No	No	No	No	No	No
19	4	156	2	19	No	No	No	No	No	No	No	No	No	No
20	4	62	2	7	No	No	No	No	No	No	No	No	No	No
21	4	47	2	6	No	No	No	No	No	No	No	No	No	No
22	4	47	2	6	No	No	No	No	No	No	No	No	No	No
23	4	31	2	4	No	No	No	No	No	No	No	No	No	No
24	4	31	2	4	No	No	No	No	No	No	No	No	No	No
Hours Met					0	3	5	8	8	9	12	16	8	5

Warrant 3 Condition A

Orientation	E
Total Stopped Delay Per Vehicle on Minor Approach (s)	128.6
Number of Lanes on Minor Street Approach	2
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	6:38
Delay Condition Met	Yes
Volume on Minor Street Approach During Same Hour	186
High Minor Volume Condition Met	Yes
Total Entering Volume on All Approaches During Same Hour	1744
Number of Approaches on Intersection	3
Total Volume Condition Met	Yes
Warrant Met for Approach	Yes
Warrant Met for Intersection	**Yes**

Signal Warrants Report For Intersection 24: Palomar Rd (NS)/Holland Rd (EW)

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	Yes
#2	Four Hour Vehicular Volume	Yes
#3	Peak Hour	Yes

Intersection Warrants Parameters

Major Approaches	E, W
Minor Approaches	N, S
Speed > 40mph	Yes
Population < 10,000	No
Warrant Factor	70%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	E	W	N	S
1	544	518	160	51
2	522	497	154	49
3	511	487	150	48
4	435	414	128	41
5	413	394	122	39
6	370	352	109	35
7	343	326	101	32
8	326	311	96	31
9	261	249	77	24
10	245	233	72	23
11	245	233	72	23
12	234	223	69	22
13	212	202	62	20
14	196	186	58	18
15	196	186	58	18
16	190	181	56	18
17	109	104	32	10
18	60	57	18	6
19	54	52	16	5
20	22	21	6	2
21	16	16	5	2
22	16	16	5	2
23	11	10	3	1
24	11	10	3	1

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	1062	2	211	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	3	1019	2	203	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	3	998	2	198	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4	3	849	2	169	No	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	No
5	3	807	2	161	No	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	No
6	3	722	2	144	No	No	Yes	Yes	No	Yes	Yes	Yes	Yes	No
7	3	669	2	133	No	No	No	Yes	No	No	Yes	Yes	No	No
8	3	637	2	127	No	No	No	Yes	No	No	Yes	Yes	No	No
9	3	510	2	101	No	No	No	No	No	No	No	Yes	No	No
10	3	478	2	95	No	No	No	No	No	No	No	No	No	No
11	3	478	2	95	No	No	No	No	No	No	No	No	No	No
12	3	457	2	91	No	No	No	No	No	No	No	No	No	No
13	3	414	2	82	No	No	No	No	No	No	No	No	No	No
14	3	382	2	76	No	No	No	No	No	No	No	No	No	No
15	3	382	2	76	No	No	No	No	No	No	No	No	No	No
16	3	371	2	74	No	No	No	No	No	No	No	No	No	No
17	3	213	2	42	No	No	No	No	No	No	No	No	No	No
18	3	117	2	24	No	No	No	No	No	No	No	No	No	No
19	3	106	2	21	No	No	No	No	No	No	No	No	No	No
20	3	43	2	8	No	No	No	No	No	No	No	No	No	No
21	3	32	2	7	No	No	No	No	No	No	No	No	No	No
22	3	32	2	7	No	No	No	No	No	No	No	No	No	No
23	3	21	2	4	No	No	No	No	No	No	No	No	No	No
24	3	21	2	4	No	No	No	No	No	No	No	No	No	No
Hours Met					3	5	6	8	3	6	8	9	6	3

Warrant 3 Condition A

Orientation	N	S
Total Stopped Delay Per Vehicle on Minor Approach (s)	469.3	967.9
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	20:51	13:42
Delay Condition Met	Yes	Yes
Volume on Minor Street Approach During Same Hour	160	51
High Minor Volume Condition Met	Yes	No
Total Entering Volume on All Approaches During Same Hour	1273	1273
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	Yes	No
Warrant Met for Intersection	**Yes**	

Signal Warrants Report For Intersection 25: Menifee Rd (NS)/Holland Rd (EW)

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	Yes
#2	Four Hour Vehicular Volume	Yes
#3	Peak Hour	Yes

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	Yes
Population < 10,000	No
Warrant Factor	70%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	531	502	426	447
2	510	482	409	429
3	499	472	400	420
4	425	402	341	358
5	404	382	324	340
6	361	341	290	304
7	335	316	268	282
8	319	301	256	268
9	255	241	204	215
10	239	226	192	201
11	239	226	192	201
12	228	216	183	192
13	207	196	166	174
14	191	181	153	161
15	191	181	153	161
16	186	176	149	156
17	106	100	85	89
18	58	55	47	49
19	53	50	43	45
20	21	20	17	18
21	16	15	13	13
22	16	15	13	13
23	11	10	9	9
24	11	10	9	9

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	6	1033	6	873	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	6	992	6	838	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	6	971	6	820	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4	6	827	6	699	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
5	6	786	6	664	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
6	6	702	6	594	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes
7	6	651	6	550	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	No
8	6	620	6	524	Yes	Yes	Yes	Yes	No	No	No	Yes	Yes	No
9	6	496	6	419	No	Yes	Yes	Yes	No	No	No	No	No	No
10	6	465	6	393	No	No	Yes	Yes	No	No	No	No	No	No
11	6	465	6	393	No	No	Yes	Yes	No	No	No	No	No	No
12	6	444	6	375	No	No	Yes	Yes	No	No	No	No	No	No
13	6	403	6	340	No	No	No	Yes	No	No	No	No	No	No
14	6	372	6	314	No	No	No	Yes	No	No	No	No	No	No
15	6	372	6	314	No	No	No	Yes	No	No	No	No	No	No
16	6	362	6	305	No	No	No	Yes	No	No	No	No	No	No
17	6	206	6	174	No	No	No	No	No	No	No	No	No	No
18	6	113	6	96	No	No	No	No	No	No	No	No	No	No
19	6	103	6	88	No	No	No	No	No	No	No	No	No	No
20	6	41	6	35	No	No	No	No	No	No	No	No	No	No
21	6	31	6	26	No	No	No	No	No	No	No	No	No	No
22	6	31	6	26	No	No	No	No	No	No	No	No	No	No
23	6	21	6	18	No	No	No	No	No	No	No	No	No	No
24	6	21	6	18	No	No	No	No	No	No	No	No	No	No
Hours Met					8	9	12	16	3	5	7	8	8	6

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	11.8	12.7
Number of Lanes on Minor Street Approach	3	3
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	1:23	1:34
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	426	447
High Minor Volume Condition Met	Yes	Yes
Total Entering Volume on All Approaches During Same Hour	1906	1906
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Level of Service Worksheets
Appendix E

ALBERT A. WEBB ASSOCIATES

EXISTING CONDITIONS
LEVELS OF SERVICE WORKSHEETS

Intersection Level Of Service Report
Intersection 1: Murrieta Rd (NS)/Newport Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	37.6
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.712

Intersection Setup

Name							Newport Rd			Newport Rd		
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	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	190.00	100.00	100.00	225.00	100.00	100.00	275.00	100.00	100.00	180.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							Newport Rd			Newport Rd		
Base Volume Input [veh/h]	180	373	120	280	321	170	267	818	113	131	662	101
Base Volume Adjustment Factor	1.0000	1.0000	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]	180	373	120	280	321	170	267	818	113	131	662	101
Peak Hour Factor	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090
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]	50	103	33	77	88	47	73	225	31	36	182	28
Total Analysis Volume [veh/h]	198	410	132	308	353	187	294	900	124	144	728	111
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	1 - Coordination Group
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
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]	17	19	0	33	35	0	28	34	0	14	20	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
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]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	13	29	29	20	35	35	19	26	26	10	17	17
g / C, Green / Cycle	0.13	0.29	0.29	0.19	0.35	0.35	0.19	0.26	0.26	0.10	0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.11	0.12	0.08	0.17	0.10	0.12	0.17	0.18	0.08	0.08	0.14	0.07
s, saturation flow rate [veh/h]	1774	3547	1583	1774	3547	1583	1774	5074	1583	1774	5074	1583
c, Capacity [veh/h]	230	1015	453	347	1247	557	330	1319	412	175	876	273
d1, Uniform Delay [s]	42.68	28.85	27.84	39.23	23.37	23.86	39.74	33.33	29.75	44.26	40.02	36.87
k, delay calibration	0.11	0.50	0.50	0.14	0.50	0.50	0.12	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.09	1.20	1.63	9.85	0.57	1.63	9.11	0.63	0.41	9.16	2.13	0.97
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

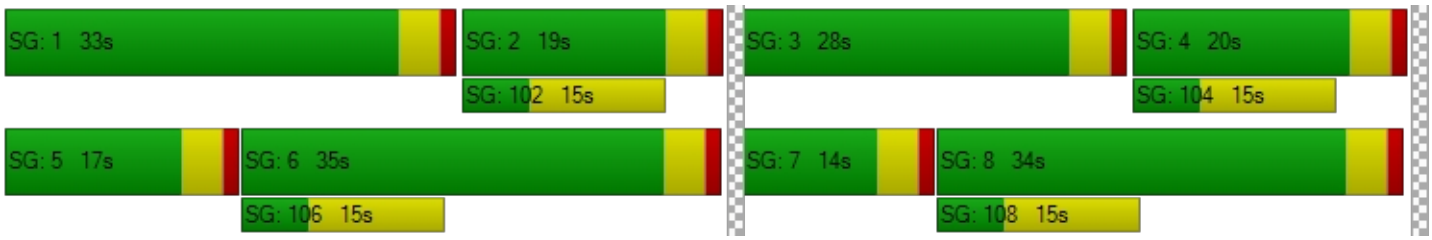
X, volume / capacity	0.86	0.40	0.29	0.89	0.28	0.34	0.89	0.68	0.30	0.82	0.83	0.41
d, Delay for Lane Group [s/veh]	51.77	30.05	29.47	49.08	23.94	25.49	48.86	33.96	30.16	53.41	42.16	37.84
Lane Group LOS	D	C	C	D	C	C	D	C	C	D	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	5.13	3.88	2.51	7.88	2.88	3.26	7.48	6.20	2.30	3.78	5.61	2.37
50th-Percentile Queue Length [ft]	128.24	97.12	62.83	196.90	72.09	81.61	186.89	154.88	57.59	94.49	140.36	59.16
95th-Percentile Queue Length [veh]	8.84	6.99	4.52	12.48	5.19	5.88	11.96	10.28	4.15	6.80	9.50	4.26
95th-Percentile Queue Length [ft]	221.09	174.81	113.09	311.96	129.77	146.91	298.99	256.93	103.66	170.07	237.51	106.49

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	51.77	30.05	29.47	49.08	23.94	25.49	48.86	33.96	30.16	53.41	42.16	37.84
Movement LOS	D	C	C	D	C	C	D	C	C	D	D	D
d_A, Approach Delay [s/veh]	35.76			33.41			36.93			43.32		
Approach LOS	D			C			D			D		
d_I, Intersection Delay [s/veh]	37.55											
Intersection LOS	D											
Intersection V/C	0.712											

Sequence

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



Intersection Level Of Service Report
Intersection 2: Bradley Rd (NS)/Newport Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	31.5
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.793

Intersection Setup

Name				Bradley Rd			Newport Rd			Newport Rd		
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	1	0	0	1	0	0	1	0	0	2	0	1
Pocket Length [ft]	100.00	100.00	100.00	125.00	100.00	100.00	165.00	100.00	100.00	155.00	100.00	150.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name				Bradley Rd			Newport Rd			Newport Rd		
Base Volume Input [veh/h]	109	200	378	166	239	58	73	1097	67	337	764	109
Base Volume Adjustment Factor	1.0000	1.0000	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	200	378	166	239	58	73	1097	67	337	764	109
Peak Hour Factor	0.8690	0.8690	0.8690	0.8690	0.8690	0.8690	0.8690	0.8690	0.8690	0.8690	0.8690	0.8690
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]	31	58	109	48	69	17	21	316	19	97	220	31
Total Analysis Volume [veh/h]	125	230	435	191	275	67	84	1262	77	388	879	125
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	1 - Coordination Group
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
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	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	2	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups			2,7									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	30	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	3.0	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	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	15	34	34	16	35	0	20	34	0	16	30	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	5	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	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	2.0	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	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	C	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]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	9	16	41	12	19	19	6	35	35	21	50	50
g / C, Green / Cycle	0.09	0.16	0.41	0.12	0.19	0.19	0.06	0.35	0.35	0.21	0.50	0.50
(v / s)_i Volume / Saturation Flow Rate	0.07	0.12	0.27	0.11	0.09	0.10	0.05	0.25	0.25	0.11	0.17	0.08
s, saturation flow rate [veh/h]	1774	1863	1583	1774	1863	1739	1774	3547	1808	3445	5074	1583
c, Capacity [veh/h]	156	290	645	214	351	328	113	1250	637	728	2536	791
d1, Uniform Delay [s]	44.81	40.70	24.26	43.40	36.40	36.45	46.05	28.00	28.00	35.10	15.15	13.60
k, delay calibration	0.11	0.11	0.39	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.15	4.84	4.39	12.15	1.10	1.21	9.07	3.43	6.57	0.61	0.38	0.43
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	0.79	0.67	0.89	0.50	0.51	0.74	0.71	0.71	0.53	0.35	0.16
d, Delay for Lane Group [s/veh]	53.97	45.54	28.65	55.55	37.50	37.66	55.12	31.42	34.56	35.71	15.53	14.03
Lane Group LOS	D	D	C	E	D	D	E	C	C	D	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	3.30	5.55	8.40	5.14	3.75	3.56	2.25	8.99	9.72	4.02	3.66	1.46
50th-Percentile Queue Length [ft]	82.44	138.86	209.91	128.60	93.70	89.03	56.16	224.75	243.09	100.60	91.58	36.57
95th-Percentile Queue Length [veh]	5.94	9.42	13.15	8.86	6.75	6.41	4.04	13.91	14.84	7.24	6.59	2.63
95th-Percentile Queue Length [ft]	148.40	235.49	328.71	221.58	168.66	160.25	101.09	347.68	370.94	181.08	164.85	65.82

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	53.97	45.54	28.65	55.55	37.56	37.66	55.12	32.36	34.56	35.71	15.53	14.03
Movement LOS	D	D	C	E	D	D	E	C	C	D	B	B
d_A, Approach Delay [s/veh]	37.57			44.02			33.82			21.02		
Approach LOS	D			D			C			C		
d_I, Intersection Delay [s/veh]	31.54											
Intersection LOS	C											
Intersection V/C	0.793											

Sequence

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

Intersection Level Of Service Report
Intersection 3: Haun Road (NS) / Newport Road (EW)

Control Type:	Signalized	Delay (sec / veh):	43.0
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.861

Intersection Setup

Name	Haun Rd			Haun Rd						Newport Rd		
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	2	0	0	2	0	0	2	0	0	2	0	0
Pocket Length [ft]	215.00	100.00	100.00	155.00	100.00	100.00	210.00	100.00	100.00	350.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Haun Rd			Haun Rd						Newport Rd		
Base Volume Input [veh/h]	135	77	569	110	38	30	121	1432	206	709	1057	322
Base Volume Adjustment Factor	1.0000	1.0000	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]	135	77	569	110	38	30	121	1432	206	709	1057	322
Peak Hour Factor	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480
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]	36	20	150	29	10	8	32	378	54	187	279	85
Total Analysis Volume [veh/h]	142	81	600	116	40	32	128	1511	217	748	1115	340
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	1 - Coordination Group
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
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	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	2	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups			2									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	30	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	3.0	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	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	12	19	19	12	19	0	16	26	0	83	93	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	5	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	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	2.0	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	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	C	L	C	R	L	C	C
C, Cycle Length [s]	140	140	140	140	140	140	140	140	140	140	140	140
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]	8	34	34	7	33	33	7	49	49	34	76	76
g / C, Green / Cycle	0.05	0.24	0.24	0.05	0.24	0.24	0.05	0.35	0.35	0.24	0.54	0.54
(v / s)_i Volume / Saturation Flow Rate	0.04	0.04	0.21	0.03	0.02	0.02	0.04	0.30	0.14	0.22	0.28	0.29
s, saturation flow rate [veh/h]	3445	1863	2803	3445	1863	1604	3445	5074	1583	3445	3547	1653
c, Capacity [veh/h]	190	452	680	173	442	381	179	1786	557	830	1920	894
d1, Uniform Delay [s]	65.16	41.98	51.10	65.36	41.52	41.61	65.35	41.85	34.06	51.50	20.38	20.62
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.73	0.87	15.42	4.48	0.37	0.48	5.30	1.18	0.44	3.91	0.21	0.48
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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	0.75	0.18	0.88	0.67	0.08	0.09	0.72	0.85	0.39	0.90	0.51	0.53
d, Delay for Lane Group [s/veh]	70.90	42.85	66.51	69.84	41.90	42.09	70.65	43.03	34.50	55.41	20.59	21.10
Lane Group LOS	E	D	E	E	D	D	E	D	C	E	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh]	2.59	2.28	11.25	2.10	1.02	0.98	2.33	15.55	5.45	12.74	9.60	9.39
50th-Percentile Queue Length [ft]	64.80	57.04	281.23	52.44	25.53	24.41	58.27	388.66	136.28	318.38	239.94	234.68
95th-Percentile Queue Length [veh]	4.67	4.11	16.75	3.78	1.84	1.76	4.20	22.01	9.28	18.59	14.68	14.41
95th-Percentile Queue Length [ft]	116.64	102.67	418.75	94.39	45.96	43.93	104.88	550.32	232.00	464.69	366.96	360.30

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	70.90	42.85	66.51	69.84	41.91	42.09	70.65	43.03	34.50	55.41	20.65	21.10
Movement LOS	E	D	E	E	D	D	E	D	C	E	C	C
d_A, Approach Delay [s/veh]	64.94			59.17			43.94			32.52		
Approach LOS	E			E			D			C		
d_I, Intersection Delay [s/veh]	42.95											
Intersection LOS	D											
Intersection V/C	0.861											

Sequence

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

Intersection Level Of Service Report
Intersection 4: I-215 SB Ramps (NS) / Newport Road (EW)

Control Type:	Signalized	Delay (sec / veh):	12.9
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.195

Intersection Setup

Name	I-215 SB Ramps			I-215 SB Ramps			Newport Rd			Newport Rd		
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	1	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	800.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name	I-215 SB Ramps			I-215 SB Ramps			Newport Rd			Newport Rd		
Base Volume Input [veh/h]	0	0	0	333	0	439	0	1489	630	0	1666	1057
Base Volume Adjustment Factor	1.0000	1.0000	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	333	0	439	0	1489	630	0	1666	1057
Peak Hour Factor	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	89	0	118	0	399	169	0	446	283
Total Analysis Volume [veh/h]	0	0	0	357	0	470	0	1594	675	0	1784	1132
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 - Coordination Group
Cycle Length [s]	140
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	Overlap	Protecte	Permiss	Overlap
Signal group	0	0	0	1	0	0	0	8	8	7	4	4
Auxiliary Signal Groups									1,4,8			1,4,8
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	7	0	0	0	7	7	0	7	7
Maximum Green [s]	0	0	0	30	0	0	0	30	30	0	30	30
Amber [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0
All red [s]	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0	1.0
Split [s]	0	0	0	48	0	0	0	92	92	0	92	92
Vehicle Extension [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0
Walk [s]	0	0	0	5	0	0	0	5	5	0	5	5
Pedestrian Clearance [s]	0	0	0	10	0	0	0	10	10	0	10	10
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	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0
Minimum Recall				No				No	No		No	No
Maximum Recall				No				No	No		No	No
Pedestrian Recall				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	C	R	C	R
C, Cycle Length [s]		140	140	140	140	140	140	140
L, Total Lost Time per Cycle [s]		4.00	4.00	4.00	4.00	0.00	4.00	0.00
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]		2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]		34	34	34	98	136	98	136
g / C, Green / Cycle		0.24	0.24	0.24	0.70	0.97	0.70	0.97
(v / s)_i Volume / Saturation Flow Rate		0.16	0.17	0.17	0.24	0.43	0.35	0.71
s, saturation flow rate [veh/h]		1774	1629	1583	6765	1583	5074	1583
c, Capacity [veh/h]		431	395	384	4736	1538	3552	1538
d1, Uniform Delay [s]		47.75	48.12	48.25	8.22	0.10	9.69	0.20
k, delay calibration		0.11	0.11	0.12	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		1.76	2.29	2.56	0.19	0.91	0.51	3.18
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		0.66	0.69	0.70	0.34	0.44	0.50	0.74
d, Delay for Lane Group [s/veh]		49.51	50.41	50.81	8.42	1.01	10.20	3.38
Lane Group LOS		D	D	D	A	A	B	A
Critical Lane Group		No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]		8.93	8.65	8.56	4.17	0.39	7.39	1.36
50th-Percentile Queue Length [ft]		223.14	216.14	213.98	104.22	9.74	184.75	33.94
95th-Percentile Queue Length [veh]		13.83	13.47	13.36	7.50	0.70	11.85	2.44
95th-Percentile Queue Length [ft]		345.63	336.69	333.93	187.60	17.54	296.21	61.10

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	49.71	0.00	50.65	0.00	8.42	1.01	0.00	10.20	3.38
Movement LOS				D		D		A	A		B	A
d_A, Approach Delay [s/veh]	0.00			50.23			6.21			7.55		
Approach LOS	A			D			A			A		
d_I, Intersection Delay [s/veh]	12.92											
Intersection LOS	B											
Intersection V/C	0.195											

Sequence

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

Intersection Level Of Service Report
Intersection 5: I-215 NB Ramps (NS) / Newport Road (EW)

Control Type:	Signalized	Delay (sec / veh):	16.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.613

Intersection Setup

Name	I-215 NB Ramps			I-215 NB Ramps			Newport Rd			Newport Rd		
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	1	0	1	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	375.00	100.00	375.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name	I-215 NB Ramps			I-215 NB Ramps			Newport Rd			Newport Rd		
Base Volume Input [veh/h]	402	0	541	0	0	0	0	1456	345	0	2313	491
Base Volume Adjustment Factor	1.0000	1.0000	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]	402	0	541	0	0	0	0	1456	345	0	2313	491
Peak Hour Factor	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	107	0	145	0	0	0	0	389	92	0	618	131
Total Analysis Volume [veh/h]	430	0	579	0	0	0	0	1557	369	0	2474	525
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 - Coordination Group
Cycle Length [s]	140
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	Split	Permiss	Split	Permiss	Permiss	Permiss	Protecte	Permiss	Overlap	Permiss	Permiss	Overlap
Signal group	5	0	0	0	0	0	3	8	5	0	4	4
Auxiliary Signal Groups									4,5,8			4,5,8
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	0	0	0	0	0	0	7	7	0	7	7
Maximum Green [s]	30	0	0	0	0	0	0	30	30	0	30	30
Amber [s]	3.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0
All red [s]	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0	1.0
Split [s]	118	0	0	0	0	0	0	22	118	0	22	22
Vehicle Extension [s]	3.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0
Walk [s]	5	0	0	0	0	0	0	5	5	0	5	5
Pedestrian Clearance [s]	10	0	0	0	0	0	0	10	10	0	10	10
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	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0
Minimum Recall	No							No	No		No	No
Maximum Recall	No							No	No		No	No
Pedestrian Recall	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		C	R	C	R
C, Cycle Length [s]	140	140	140		140	140	140	140
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00		4.00	0.00	4.00	0.00
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]	2.00	2.00	2.00		2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	36	36	36		96	136	96	136
g / C, Green / Cycle	0.26	0.26	0.26		0.68	0.97	0.68	0.97
(v / s)_i Volume / Saturation Flow Rate	0.19	0.21	0.21		0.31	0.23	0.37	0.33
s, saturation flow rate [veh/h]	1774	1632	1583		5074	1583	6765	1583
c, Capacity [veh/h]	460	423	411		3468	1538	4624	1538
d1, Uniform Delay [s]	47.33	48.31	48.70		10.11	0.07	11.05	0.09
k, delay calibration	0.11	0.11	0.11		0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.25	3.42	4.08		0.42	0.37	0.45	0.61
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	0.73	0.79	0.82		0.45	0.24	0.54	0.34
d, Delay for Lane Group [s/veh]	49.58	51.74	52.78		10.53	0.44	11.50	0.69
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]	10.66	10.99	11.13		6.52	0.16	8.46	0.26
50th-Percentile Queue Length [ft]	266.39	274.63	278.34		162.97	3.94	211.39	6.46
95th-Percentile Queue Length [veh]	16.01	16.42	16.61		10.71	0.28	13.22	0.47
95th-Percentile Queue Length [ft]	400.23	410.52	415.14		267.64	7.09	330.62	11.64

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	50.05	0.00	52.34	0.00	0.00	0.00	0.00	10.53	0.44	0.00	11.50	0.69
Movement LOS	D		D					B	A		B	A
d_A, Approach Delay [s/veh]	51.37			0.00			8.60			9.60		
Approach LOS	D			A			A			A		
d_I, Intersection Delay [s/veh]	16.38											
Intersection LOS	B											
Intersection V/C	0.613											

Sequence

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

Intersection Level Of Service Report
Intersection 6: Antelope Rd (NS)/Newport Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	34.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.801

Intersection Setup

Name												
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	2	0	0	2	0	0	2	0	0	2	0	0
Pocket Length [ft]	330.00	100.00	100.00	100.00	100.00	100.00	325.00	100.00	100.00	200.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							Newport Rd			Newport Rd		
Base Volume Input [veh/h]	580	31	97	77	64	175	75	1252	658	137	2049	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]	580	31	97	77	64	175	75	1252	658	137	2049	41
Peak Hour Factor	0.9570	0.9570	0.9570	0.9570	0.9570	0.9570	0.9570	0.9570	0.9570	0.9570	0.9570	0.9570
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]	152	8	25	20	17	46	20	327	172	36	535	11
Total Analysis Volume [veh/h]	606	32	101	80	67	183	78	1308	688	143	2141	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	1 - Coordination Group
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
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]	75	21	0	73	19	0	12	35	0	11	34	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
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	C	R	L	C	C	L	C	C
C, Cycle Length [s]	140	140	140	140	140	140	140	140	140	140	140	140	140
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	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	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	2.00
g_i, Effective Green Time [s]	28	32	32	7	11	11	11	7	78	78	8	79	79
g / C, Green / Cycle	0.20	0.23	0.23	0.05	0.08	0.08	0.08	0.05	0.55	0.55	0.06	0.56	0.56
(v / s)_i Volume / Saturation Flow Rate	0.18	0.02	0.06	0.02	0.04	0.06	0.06	0.02	0.37	0.43	0.04	0.40	0.37
s, saturation flow rate [veh/h]	3445	1863	1583	3445	1863	1583	1583	3445	3547	1583	3445	3547	2000
c, Capacity [veh/h]	683	420	357	167	141	120	120	166	1964	877	200	1999	1127
d1, Uniform Delay [s]	54.59	42.72	44.85	64.88	62.04	63.48	63.48	64.87	22.08	24.65	64.79	22.39	21.31
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
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
d2, Incremental Delay [s]	4.14	0.08	0.43	2.13	2.48	9.65	9.65	2.05	1.81	6.98	4.71	2.25	3.10
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	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	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	1.00

Lane Group Results

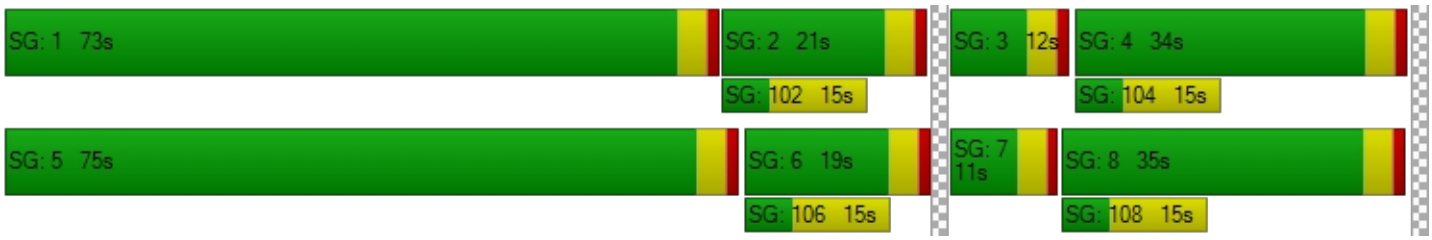
X, volume / capacity	0.89	0.08	0.28	0.48	0.48	0.76	0.76	0.47	0.67	0.78	0.72	0.72	0.66
d, Delay for Lane Group [s/veh]	58.73	42.80	45.28	67.01	64.52	73.13	73.13	66.92	23.89	31.62	69.50	24.64	24.41
Lane Group LOS	E	D	D	E	E	E	E	E	C	C	E	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	10.46	0.87	2.88	1.41	2.33	3.44	3.44	1.37	14.53	18.18	2.58	16.49	16.72
50th-Percentile Queue Length [ft]	261.51	21.65	72.05	35.25	58.30	86.10	86.10	34.33	363.20	454.52	64.52	412.20	418.10
95th-Percentile Queue Length [veh]	15.76	1.56	5.19	2.54	4.20	6.20	6.20	2.47	20.78	25.17	4.65	23.15	23.43
95th-Percentile Queue Length [ft]	394.12	38.96	129.68	63.44	104.9	154.9	154.9	61.80	519.47	629.34	116.14	578.68	585.77

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	58.73	42.80	45.28	67.01	64.52	73.13	66.92	23.89	31.62	69.50	24.57	24.41
Movement LOS	E	D	D	E	E	E	E	C	C	E	C	C
d_A, Approach Delay [s/veh]	56.21			69.90			28.07			27.32		
Approach LOS	E			E			C			C		
d_I, Intersection Delay [s/veh]	34.08											
Intersection LOS	C											
Intersection V/C	0.801											

Sequence

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



Intersection Level Of Service Report
Intersection 7: Menifee Rd (NS)/NewportRd (EW)

Control Type:	Signalized	Delay (sec / veh):	40.4
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.935

Intersection Setup

Name							Newport Rd			Newport Rd		
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	1	0	1	1	0	0	1	0	0	2	0	0
Pocket Length [ft]	250.00	100.00	200.00	100.00	100.00	100.00	400.00	100.00	100.00	295.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							Newport Rd			Newport Rd		
Base Volume Input [veh/h]	214	255	128	79	240	408	236	1002	169	191	1415	50
Base Volume Adjustment Factor	1.0000	1.0000	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]	214	255	128	79	240	408	236	1002	169	191	1415	50
Peak Hour Factor	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	57	68	34	21	64	110	63	269	45	51	380	13
Total Analysis Volume [veh/h]	230	274	137	85	258	438	253	1076	182	205	1520	54
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	1 - Coordination Group
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
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]	11	19	0	26	34	0	19	44	0	11	36	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
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	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]	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	30	30	6	29	29	16	40	40	8	32	32
g / C, Green / Cycle	0.07	0.30	0.30	0.06	0.29	0.29	0.16	0.40	0.40	0.08	0.32	0.32
(v / s)_i Volume / Saturation Flow Rate	0.07	0.08	0.09	0.05	0.07	0.28	0.14	0.24	0.24	0.06	0.30	0.03
s, saturation flow rate [veh/h]	3445	3547	1583	1774	3547	1583	1774	3547	1728	3445	5074	1583
c, Capacity [veh/h]	242	1057	472	113	1033	461	284	1418	691	271	1616	504
d1, Uniform Delay [s]	46.34	26.71	26.98	46.06	27.08	34.71	41.14	23.65	23.65	45.13	33.17	24.05
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.39	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	17.65	0.13	0.34	9.73	0.13	26.59	9.35	1.86	3.77	4.28	12.16	0.43
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	0.95	0.26	0.29	0.75	0.25	0.95	0.89	0.60	0.60	0.76	0.94	0.11
d, Delay for Lane Group [s/veh]	63.99	26.84	27.32	55.79	27.21	61.31	50.49	25.51	27.43	49.42	45.33	24.48
Lane Group LOS	E	C	C	E	C	E	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]	3.31	2.35	2.40	2.29	2.23	13.01	6.51	7.53	7.70	2.54	12.78	0.91
50th-Percentile Queue Length [ft]	82.71	58.68	59.90	57.22	55.63	325.36	162.76	188.21	192.62	63.46	319.38	22.67
95th-Percentile Queue Length [veh]	5.95	4.23	4.31	4.12	4.01	18.93	10.70	12.03	12.26	4.57	18.64	1.63
95th-Percentile Queue Length [ft]	148.87	105.63	107.83	103.00	100.13	473.27	267.38	300.70	306.42	114.22	465.92	40.80

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	63.99	26.84	27.32	55.79	27.21	61.31	50.49	25.92	27.43	49.42	45.33	24.48
Movement LOS	E	C	C	E	C	E	D	C	C	D	D	C
d_A, Approach Delay [s/veh]	40.27			49.44			30.22			45.17		
Approach LOS	D			D			C			D		
d_I, Intersection Delay [s/veh]	40.42											
Intersection LOS	D											
Intersection V/C	0.935											

Sequence

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

Intersection Level Of Service Report
Intersection 8: Bradley Rd (N/S) / La Piedra Rd (E/W)

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):	0.585

Intersection Setup

Name												
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	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	150.00	100.00	100.00	155.00	100.00	100.00	100.00	100.00	100.00	150.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	20	594	54	137	550	9	35	20	18	69	65	189
Base Volume Adjustment Factor	1.0000	1.0000	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]	20	594	54	137	550	9	35	20	18	69	65	189
Peak Hour Factor	0.7990	0.7990	0.7990	0.7990	0.7990	0.7990	0.7990	0.7990	0.7990	0.7990	0.7990	0.7990
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	186	17	43	172	3	11	6	6	22	20	59
Total Analysis Volume [veh/h]	25	743	68	171	688	11	44	25	23	86	81	237
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 Coordinated
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]	11	19	0	33	41	0	11	19	0	29	37	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
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	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	4	50	50	12	58	58	5	16	16	6	17	17
g / C, Green / Cycle	0.04	0.50	0.50	0.12	0.58	0.58	0.05	0.16	0.16	0.06	0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.01	0.22	0.22	0.10	0.19	0.19	0.02	0.01	0.01	0.05	0.04	0.15
s, saturation flow rate [veh/h]	1774	1863	1808	1774	1863	1852	1774	1863	1590	1774	1863	1583
c, Capacity [veh/h]	64	929	902	208	1080	1074	90	297	254	115	323	275
d1, Uniform Delay [s]	47.17	16.14	16.15	43.18	10.89	10.89	46.29	35.83	35.90	46.04	35.75	40.21
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.79	1.53	1.58	7.85	0.80	0.80	4.11	0.12	0.16	9.43	0.40	7.85
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

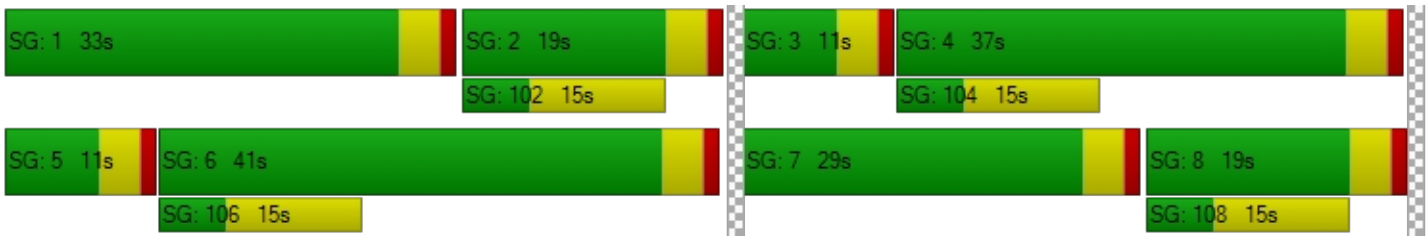
X, volume / capacity	0.39	0.44	0.44	0.82	0.32	0.32	0.49	0.08	0.09	0.75	0.25	0.86
d, Delay for Lane Group [s/veh]	50.96	17.67	17.72	51.03	11.69	11.69	50.40	35.95	36.06	55.47	36.15	48.06
Lane Group LOS	D	B	B	D	B	B	D	D	D	E	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.65	5.73	5.58	4.38	3.63	3.61	1.12	0.49	0.48	2.31	1.66	5.95
50th-Percentile Queue Length [ft]	16.28	143.25	139.47	109.55	90.69	90.23	28.07	12.33	12.02	57.72	41.52	148.69
95th-Percentile Queue Length [veh]	1.17	9.66	9.45	7.81	6.53	6.50	2.02	0.89	0.87	4.16	2.99	9.95
95th-Percentile Queue Length [ft]	29.31	241.40	236.31	195.37	163.24	162.41	50.52	22.19	21.64	103.89	74.74	248.68

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	50.96	17.70	17.72	51.03	11.69	11.69	50.40	35.95	36.06	55.47	36.15	48.06
Movement LOS	D	B	B	D	B	B	D	D	D	E	D	D
d_A, Approach Delay [s/veh]	18.69			19.42			42.89			47.25		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	25.23											
Intersection LOS	C											
Intersection V/C	0.585											

Sequence

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



Intersection Level Of Service Report
Intersection 9: Bradley Rd (NS)/Holland Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	43.4
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.864

Intersection Setup

Name												
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	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	130.00	100.00	100.00	150.00	100.00	100.00	145.00	100.00	100.00	140.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	48	318	164	66	426	204	106	228	182	174	174	110
Base Volume Adjustment Factor	1.0000	1.0000	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]	48	318	164	66	426	204	106	228	182	174	174	110
Peak Hour Factor	0.8630	0.8630	0.8630	0.8630	0.8630	0.8630	0.8630	0.8630	0.8630	0.8630	0.8630	0.8630
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	92	48	19	123	59	31	66	53	50	50	32
Total Analysis Volume [veh/h]	56	368	190	76	494	236	123	264	211	202	202	127
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	1 - Coordination Group
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]	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]	11	21	0	11	21	0	66	59	0	29	22	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	R	L	C	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	46	7	47	47	10	35	16	41	41
g / C, Green / Cycle	0.05	0.39	0.05	0.39	0.39	0.09	0.29	0.13	0.34	0.34
(v / s)_i Volume / Saturation Flow Rate	0.03	0.32	0.04	0.27	0.15	0.07	0.27	0.11	0.11	0.08
s, saturation flow rate [veh/h]	1774	1757	1774	1863	1583	1774	1727	1774	1863	1583
c, Capacity [veh/h]	89	678	98	728	619	153	509	233	632	538
d1, Uniform Delay [s]	55.93	33.15	56.01	30.30	26.16	53.88	41.21	51.15	29.37	28.47
k, delay calibration	0.11	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.13	10.82	12.45	5.03	1.78	9.52	8.39	9.54	0.29	0.22
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

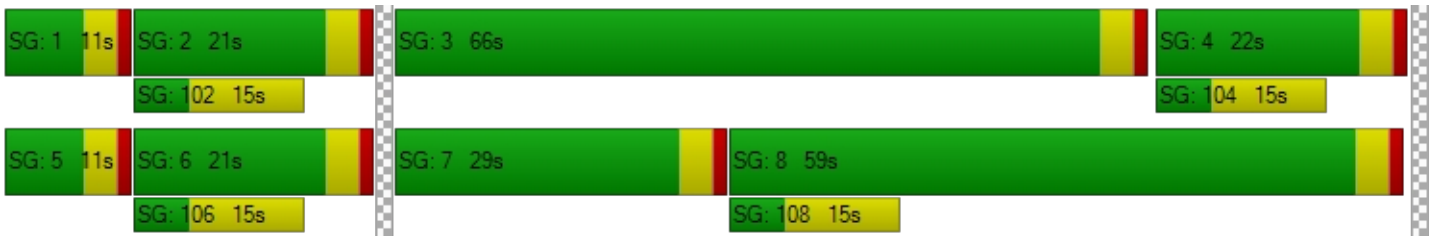
X, volume / capacity	0.63	0.82	0.78	0.68	0.38	0.81	0.93	0.87	0.32	0.24
d, Delay for Lane Group [s/veh]	63.06	43.97	68.46	35.33	27.94	63.40	49.60	60.69	29.66	28.69
Lane Group LOS	E	D	E	D	C	E	D	E	C	C
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	1.79	15.66	2.54	12.11	4.88	3.93	14.11	6.36	4.18	2.55
50th-Percentile Queue Length [ft]	44.72	391.47	63.48	302.65	122.00	98.28	352.82	158.93	104.51	63.76
95th-Percentile Queue Length [veh]	3.22	22.15	4.57	17.81	8.50	7.08	20.27	10.49	7.53	4.59
95th-Percentile Queue Length [ft]	80.50	553.71	114.26	445.30	212.57	176.90	506.84	262.31	188.13	114.76

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	63.06	43.97	43.97	68.46	35.33	27.94	63.40	49.60	49.60	60.69	29.66	28.69
Movement LOS	E	D	D	E	D	C	E	D	D	E	C	C
d_A, Approach Delay [s/veh]	45.71			36.29			52.44			41.23		
Approach LOS	D			D			D			D		
d_I, Intersection Delay [s/veh]	43.38											
Intersection LOS	D											
Intersection V/C	0.864											

Sequence

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



Intersection Level Of Service Report
Intersection 10: Town Center Dr-Sherman Rd (NS) / La Piedra Rd (EW)

Control Type:	All-way stop	Delay (sec / veh):	10.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.344

Intersection Setup

Name											
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	1	0	1	1	0	0	0	0	0	1	0	0
Pocket Length [ft]	210.00	100.00	500.00	150.00	100.00	100.00	100.00	100.00	100.00	800.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	1	188	1	1	0	0	0	0	125	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	1	188	1	1	0	0	0	0	125	0	2
Peak Hour Factor	0.6790	0.6790	0.6790	0.6790	0.6790	0.6790	0.6790	0.6790	0.6790	0.6790	0.6790	0.6790
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	69	0	0	0	0	0	0	46	0	1
Total Analysis Volume [veh/h]	0	1	277	1	1	0	0	0	0	184	0	3
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	696	696	805	581	632	629	629	625	685	790
Degree of Utilization, x	0.00	0.00	0.34	0.00	0.00	0.00	0.00	0.29	0.00	0.00

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.00	0.00	1.54	0.01	0.00	0.00	0.00	1.22	0.00	0.01
95th-Percentile Queue Length [ft]	0.00	0.11	38.47	0.13	0.12	0.00	0.00	30.61	0.00	0.29
Approach Delay [s/veh]	9.50			8.66		0.00		10.79		
Approach LOS	A			A		A		B		
Intersection Delay [s/veh]	10.01									
Intersection LOS	B									

Intersection Level Of Service Report
Intersection 11: Town Center Dr-Sherman Rd (NS)/Holland Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	57.6
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.070

Intersection Setup

Name												
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	1	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	500.00	100.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	4	1	26	2	0	26	122	500	5	6	464	110
Base Volume Adjustment Factor	1.0000	1.0000	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]	4	1	26	2	0	26	122	500	5	6	464	110
Peak Hour Factor	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	8	1	0	8	37	151	2	2	140	33
Total Analysis Volume [veh/h]	5	1	31	2	0	31	147	603	6	7	560	133
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.07	0.01	0.06	0.03	0.00	0.06	0.16	0.01	0.00	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	57.64	53.08	14.58	53.05	44.10	12.68	9.77	0.00	0.00	8.74	0.00	0.00
Movement LOS	F	F	B	F	E	B	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.50	0.50	0.50	0.28	0.28	0.28	9.77	9.77	0.00	3.92	3.92	0.00
95th-Percentile Queue Length [ft]	12.46	12.46	12.46	6.92	6.92	6.92	244.17	244.17	0.00	98.00	98.00	0.00
d_A, Approach Delay [s/veh]	21.44			15.13			1.90			0.09		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	1.83											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 12: Haun Rd (NS)/Village-Market Dr (EW)

Control Type:	Signalized	Delay (sec / veh):	13.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.390

Intersection Setup

Name	Haun Rd			Haun Rd								
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	1	0	0	2	0	0	0	0	0	0	0	1
Pocket Length [ft]	100.00	100.00	100.00	175.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	65.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Haun Rd			Haun Rd								
Base Volume Input [veh/h]	9	715	29	116	771	46	19	5	6	9	5	68
Base Volume Adjustment Factor	1.0000	1.0000	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]	9	715	29	116	771	46	19	5	6	9	5	68
Peak Hour Factor	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	208	8	34	224	13	6	1	2	3	1	20
Total Analysis Volume [veh/h]	10	830	34	135	895	53	22	6	7	10	6	79
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	1 - Coordination Group
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
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	Permiss	Permiss	Overlap
Signal group	5	2	0	1	6	0	3	8	0	0	4	4
Auxiliary Signal Groups												4
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	0	7	7
Maximum Green [s]	30	30	0	30	30	0	7	30	0	0	30	30
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	3.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	1.0
Split [s]	11	31	0	13	33	0	11	36	0	0	25	25
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	3.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	5
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	10
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	0.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0
Minimum Recall	No	No		No	No		Yes	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	C	L	C	C	L	C	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	0.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	1	44	44	7	49	49	17	17	6	6
g / C, Green / Cycle	0.02	0.55	0.55	0.08	0.62	0.62	0.21	0.21	0.08	0.08
(v / s)_i Volume / Saturation Flow Rate	0.01	0.23	0.23	0.04	0.26	0.26	0.01	0.01	0.01	0.03
s, saturation flow rate [veh/h]	1774	1863	1837	3445	1863	1826	1597	1684	1665	2803
c, Capacity [veh/h]	34	1025	1011	290	1147	1125	471	469	203	219
d1, Uniform Delay [s]	38.78	10.56	10.56	34.97	7.96	7.96	24.86	24.96	34.34	35.03
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.81	1.29	1.30	1.16	1.12	1.14	0.03	0.04	0.16	1.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

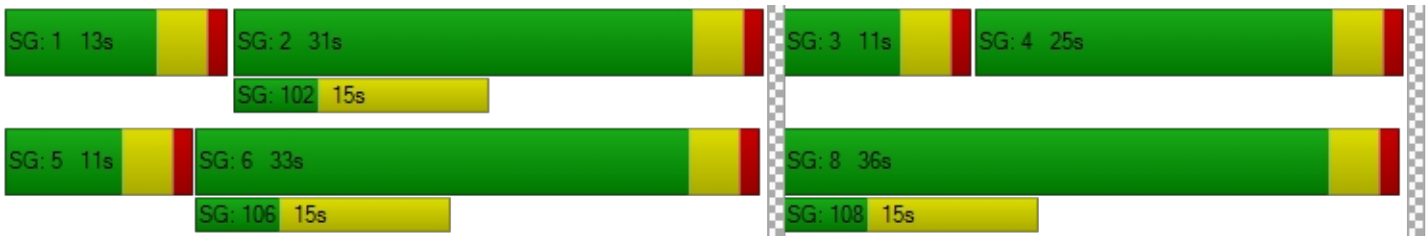
X, volume / capacity	0.30	0.42	0.42	0.46	0.42	0.42	0.03	0.04	0.08	0.36
d, Delay for Lane Group [s/veh]	43.59	11.85	11.87	36.12	9.08	9.10	24.88	25.00	34.50	36.03
Lane Group LOS	D	B	B	D	A	A	C	C	C	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	0.23	3.88	3.83	1.21	3.40	3.34	0.20	0.30	0.28	0.71
50th-Percentile Queue Length [ft]	5.66	96.88	95.69	30.30	85.02	83.56	4.89	7.40	6.98	17.75
95th-Percentile Queue Length [veh]	0.41	6.98	6.89	2.18	6.12	6.02	0.35	0.53	0.50	1.28
95th-Percentile Queue Length [ft]	10.19	174.39	172.24	54.53	153.03	150.41	8.80	13.33	12.56	31.95

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	43.59	11.86	11.87	36.12	9.09	9.10	24.92	25.00	25.00	34.50	34.50	36.03
Movement LOS	D	B	B	D	A	A	C	C	C	C	C	D
d_A, Approach Delay [s/veh]	12.22			12.46			24.95			35.77		
Approach LOS	B			B			C			D		
d_I, Intersection Delay [s/veh]	13.63											
Intersection LOS	B											
Intersection V/C	0.390											

Sequence

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



Intersection Level Of Service Report
Intersection 13: Haun Rd (NS)/Countryside Market Place (EW)

Control Type:	Signalized	Delay (sec / veh):	8.8
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.394

Intersection Setup

Name	Haun Rd			Haun Rd								
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	1	0	0	2	0	0	0	0	1	1	0	0
Pocket Length [ft]	200.00	100.00	100.00	235.00	100.00	100.00	100.00	100.00	40.00	100.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Haun Rd			Haun Rd								
Base Volume Input [veh/h]	10	728	26	105	665	0	3	0	11	5	1	71
Base Volume Adjustment Factor	1.0000	1.0000	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]	10	728	26	105	665	0	3	0	11	5	1	71
Peak Hour Factor	0.7950	0.7950	0.7950	0.7950	0.7950	0.7950	0.7950	0.7950	0.7950	0.7950	0.7950	0.7950
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	229	8	33	209	0	1	0	3	2	0	22
Total Analysis Volume [veh/h]	13	916	33	132	836	0	4	0	14	6	1	89
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	1 - Coordination Group
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
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	Overlap
Signal group	5	2	0	1	6	0	0	8	0	0	4	4
Auxiliary Signal Groups												4
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	7
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	30
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0
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	1.0
Split [s]	11	36	0	11	36	0	0	23	0	0	23	23
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	5
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	10
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	2.0
I2, Clearance 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	2.0
Minimum Recall	No	No		No	No			No			No	No
Maximum Recall	No	No		No	No			No			No	No
Pedestrian Recall	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	C	L	C	C	L	C	C	R
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	46	46	7	50	50	6	6	6	6
g / C, Green / Cycle	0.02	0.65	0.65	0.09	0.72	0.72	0.09	0.09	0.09	0.09
(v / s)_i Volume / Saturation Flow Rate	0.01	0.26	0.26	0.04	0.22	0.22	0.00	0.01	0.01	0.03
s, saturation flow rate [veh/h]	1774	1863	1840	3445	1863	1863	1410	1583	1014	2803
c, Capacity [veh/h]	43	1209	1194	323	1339	1339	158	136	183	241
d1, Uniform Delay [s]	33.64	5.80	5.80	29.95	3.58	3.58	32.46	29.55	29.42	30.25
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.92	0.97	0.98	0.83	0.61	0.61	0.06	0.33	0.08	0.94
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.30	0.39	0.39	0.41	0.31	0.31	0.03	0.10	0.04	0.37
d, Delay for Lane Group [s/veh]	37.55	6.77	6.78	30.78	4.19	4.19	32.52	29.87	29.51	31.19
Lane Group LOS	D	A	A	C	A	A	C	C	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.25	2.26	2.23	0.99	1.12	1.12	0.06	0.21	0.10	0.68
50th-Percentile Queue Length [ft]	6.15	56.46	55.87	24.71	27.94	27.94	1.57	5.26	2.57	16.88
95th-Percentile Queue Length [veh]	0.44	4.07	4.02	1.78	2.01	2.01	0.11	0.38	0.18	1.22
95th-Percentile Queue Length [ft]	11.06	101.63	100.56	44.48	50.30	50.30	2.82	9.46	4.62	30.39

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	37.55	6.78	6.78	30.78	4.19	4.19	32.52	29.87	29.87	29.51	29.51	31.19
Movement LOS	D	A	A	C	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	7.19			7.81			30.46			31.06		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	8.81											
Intersection LOS	A											
Intersection V/C	0.394											

Sequence

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

Intersection Level Of Service Report
Intersection 14: Haun Rd (N/S)/La Piedra Rd (E/W)

Control Type:	Signalized	Delay (sec / veh):	19.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.674

Intersection Setup

Name				Haun Rd								
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	1	0	1	1	0	1	0	0	0	0	0	0
Pocket Length [ft]	165.00	100.00	75.00	150.00	100.00	150.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			Yes		

Volumes

Name				Haun Rd								
Base Volume Input [veh/h]	24	412	46	28	324	334	209	37	134	23	14	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
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	24	412	46	28	324	334	209	37	134	23	14	10
Peak Hour Factor	0.7640	0.7640	0.7640	0.7640	0.7640	0.7640	0.7640	0.7640	0.7640	0.7640	0.7640	0.7640
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	135	15	9	106	109	68	12	44	8	5	3
Total Analysis Volume [veh/h]	31	539	60	37	424	437	274	48	175	30	18	13
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	1 - Coordination Group
Cycle Length [s]	65
Coordination Type	Time of Day Pattern Coordinated
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	Split	Split	Split	Split	Split	Split
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]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	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]	11	19	0	11	19	0	0	16	0	0	19	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
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]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	R	C	R	C
C, Cycle Length [s]	65	65	65	65	65	65	65	65	65
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
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
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	27	27	4	27	27	14	14	5
g / C, Green / Cycle	0.05	0.41	0.41	0.05	0.42	0.42	0.22	0.22	0.07
(v / s)_i Volume / Saturation Flow Rate	0.02	0.16	0.16	0.02	0.12	0.28	0.18	0.11	0.03
s, saturation flow rate [veh/h]	1774	1863	1798	1774	3547	1583	1787	1583	1754
c, Capacity [veh/h]	86	759	733	97	1467	655	390	346	130
d1, Uniform Delay [s]	30.07	13.70	13.71	29.77	12.74	15.49	24.32	22.42	28.98
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.52	1.58	1.65	2.43	0.50	5.32	4.45	1.15	2.61
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

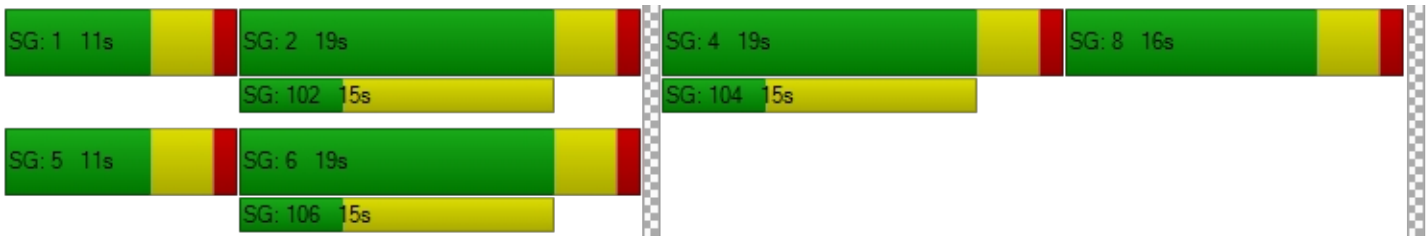
X, volume / capacity	0.36	0.40	0.40	0.38	0.29	0.67	0.83	0.51	0.47
d, Delay for Lane Group [s/veh]	32.59	15.27	15.35	32.20	13.24	20.81	28.77	23.56	31.59
Lane Group LOS	C	B	B	C	B	C	C	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	Yes
50th-Percentile Queue Length [veh]	0.48	2.84	2.76	0.57	1.73	5.06	4.55	2.15	0.91
50th-Percentile Queue Length [ft]	12.11	70.90	69.10	14.23	43.31	126.40	113.81	53.71	22.86
95th-Percentile Queue Length [veh]	0.87	5.11	4.98	1.02	3.12	8.74	8.05	3.87	1.65
95th-Percentile Queue Length [ft]	21.80	127.63	124.39	25.62	77.96	218.59	201.28	96.69	41.15

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	32.59	15.31	15.35	32.20	13.24	20.81	28.77	28.77	23.56	31.59	31.59	31.59
Movement LOS	C	B	B	C	B	C	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	16.16			17.71			26.94			31.59		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	19.85											
Intersection LOS	B											
Intersection V/C	0.674											

Sequence

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



Intersection Level Of Service Report
Intersection 15: Haun Road (NS) / Holland Road (EW)

Control Type:	All-way stop	Delay (sec / veh):	29.1
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.806

Intersection Setup

Name												
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	1	0	0	1	0	0	1	0	1	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	150.00	100.00	100.00	150.00	100.00	150.00	100.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	263	187	2	9	179	313	292	2	228	0	6	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]	263	187	2	9	179	313	292	2	228	0	6	7
Peak Hour Factor	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380
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]	78	56	1	3	53	93	87	1	68	0	2	2
Total Analysis Volume [veh/h]	314	223	2	11	214	374	348	2	272	0	7	8
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	399	423	401	425	464	438	466	512	366
Degree of Utilization, x	0.79	0.53	0.03	0.50	0.81	0.80	0.00	0.53	0.04

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	6.78	3.04	0.08	2.76	7.49	7.14	0.01	3.09	0.13
95th-Percentile Queue Length [ft]	169.59	75.89	2.11	68.94	187.13	178.48	0.32	77.13	3.19
Approach Delay [s/veh]	30.69		29.34			27.89			13.24
Approach LOS	D		D			D			B
Intersection Delay [s/veh]	29.11								
Intersection LOS	D								

Intersection Level Of Service Report
Intersection 16: Haun Rd-Zeiders Rd (NS)/Scott Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	36.3
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.850

Intersection Setup

Name												
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	1	0	0	1	0	0	1	0	0	1	0	1
Pocket Length [ft]	345.00	100.00	100.00	200.00	100.00	100.00	135.00	100.00	100.00	185.00	100.00	200.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	23	112	24	528	45	39	66	423	9	53	341	485
Base Volume Adjustment Factor	1.0000	1.0000	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]	23	112	24	528	45	39	66	423	9	53	341	485
Peak Hour Factor	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090
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	35	7	163	14	12	20	131	3	16	105	150
Total Analysis Volume [veh/h]	28	138	30	653	56	48	82	523	11	66	422	600
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	1 - Coordination Group
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	19	0	0	51	0	11	19	0	11	19	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	9	9	9	25	25	6	44	6	44	44
g / C, Green / Cycle	0.09	0.09	0.09	0.25	0.25	0.06	0.44	0.06	0.44	0.44
(v / s)_i Volume / Saturation Flow Rate	0.02	0.07	0.02	0.21	0.21	0.05	0.29	0.04	0.23	0.38
s, saturation flow rate [veh/h]	1774	1863	1583	1774	1760	1774	1856	1774	1863	1583
c, Capacity [veh/h]	168	177	150	436	432	113	816	106	812	690
d1, Uniform Delay [s]	41.67	44.30	41.81	36.26	36.29	46.01	22.05	45.97	20.60	25.65
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.46	7.28	0.64	5.53	5.66	8.45	4.06	5.82	2.37	14.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

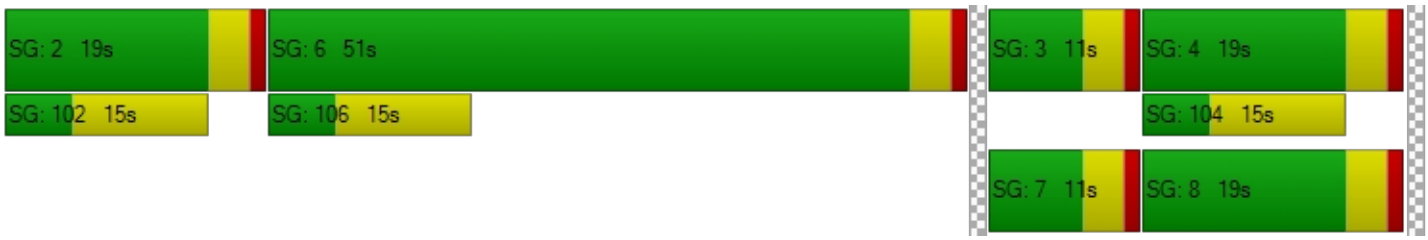
X, volume / capacity	0.17	0.78	0.20	0.87	0.87	0.72	0.65	0.62	0.52	0.87
d, Delay for Lane Group [s/veh]	42.13	51.57	42.45	41.79	41.95	54.46	26.11	51.78	22.97	39.65
Lane Group LOS	D	D	D	D	D	D	C	D	C	D
Critical Lane Group	No	Yes	No	No	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.63	3.54	0.68	8.97	8.94	2.18	9.72	1.70	7.00	14.13
50th-Percentile Queue Length [ft]	15.74	88.59	17.02	224.27	223.48	54.45	243.09	42.60	175.04	353.37
95th-Percentile Queue Length [veh]	1.13	6.38	1.23	13.88	13.84	3.92	14.84	3.07	11.34	20.30
95th-Percentile Queue Length [ft]	28.34	159.46	30.63	347.07	346.06	98.02	370.94	76.68	283.52	507.52

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	42.13	51.57	42.45	41.85	41.95	41.95	54.46	26.11	26.11	51.78	22.97	39.65
Movement LOS	D	D	D	D	D	D	D	C	C	D	C	D
d_A, Approach Delay [s/veh]	48.83			41.87			29.89			33.92		
Approach LOS	D			D			C			C		
d_I, Intersection Delay [s/veh]	36.35											
Intersection LOS	D											
Intersection V/C	0.850											

Sequence

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



Intersection Level Of Service Report
Intersection 17: I-215 SB Ramps (NS) / Scott Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	30.6
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.810

Intersection Setup

Name												
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	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	245.00	100.00	100.00
Speed [mph]		50.00			50.00			50.00			50.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		No			Yes			No			No	

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	322	0	134	0	501	379	385	592	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
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	322	0	134	0	501	379	385	592	0
Peak Hour Factor	1.0000	1.0000	1.0000	0.9250	0.9250	0.9250	1.0000	0.9250	0.9250	0.9250	0.9250	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	87	0	36	0	135	102	104	160	0
Total Analysis Volume [veh/h]	0	0	0	348	0	145	0	542	410	416	640	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 - Coordination Group
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Split	Split	Split	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	0	0	0	6	0	0	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	0	0	0	7	0	0	7	0	7	7	0
Maximum Green [s]	0	0	0	0	30	0	0	30	0	30	30	0
Amber [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	19	0	0	30	0	61	91	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	10	0	0	10	0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall					No			No		No	No	
Maximum Recall					No			No		No	No	
Pedestrian Recall					No			No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group		C	R	C	R	L	C
C, Cycle Length [s]		110	110	110	110	110	110
L, Total Lost Time per Cycle [s]		4.00	4.00	4.00	4.00	4.00	4.00
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]		2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]		35	35	35	35	28	67
g / C, Green / Cycle		0.32	0.32	0.32	0.32	0.25	0.61
(v / s)_i Volume / Saturation Flow Rate		0.20	0.09	0.29	0.26	0.23	0.34
s, saturation flow rate [veh/h]		1774	1583	1863	1583	1774	1863
c, Capacity [veh/h]		571	510	588	500	449	1127
d1, Uniform Delay [s]		31.43	27.82	30.54	29.07	35.46	8.26
k, delay calibration		0.50	0.50	0.15	0.11	0.11	0.50
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		4.78	1.40	8.86	3.40	8.69	2.08
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.33	1.33	1.33	1.20
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.61	0.28	0.92	0.82	0.93	0.57
d, Delay for Lane Group [s/veh]		36.21	29.21	39.41	32.47	44.15	10.33
Lane Group LOS		D	C	D	C	D	B
Critical Lane Group		Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh]		8.08	2.90	12.63	8.38	10.27	5.40
50th-Percentile Queue Length [ft]		202.10	72.47	315.79	209.51	256.84	135.08
95th-Percentile Queue Length [veh]		12.75	5.22	18.46	13.13	15.53	9.22
95th-Percentile Queue Length [ft]		318.68	130.45	461.51	328.20	388.25	230.39

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	36.21	36.21	29.21	0.00	39.41	32.47	44.15	10.33	0.00
Movement LOS				D	D	C		D	C	D	B	
d_A, Approach Delay [s/veh]	0.00			34.15			36.42			23.65		
Approach LOS	A			C			D			C		
d_I, Intersection Delay [s/veh]	30.58											
Intersection LOS	C											
Intersection V/C	0.810											

Sequence

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

Intersection Level Of Service Report
Intersection 18: I-215 NB Ramps (NS) / Scott Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	27.6
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.791

Intersection Setup

Name												
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	1	0	0	0	1	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	425.00	100.00	100.00	100.00	250.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		50.00			50.00			50.00			50.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		No			Yes			No			No	

Volumes

Name												
Base Volume Input [veh/h]	235	0	372	0	0	0	83	722	0	0	794	465
Base Volume Adjustment Factor	1.0000	1.0000	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	1.08	1.08	1.08	1.00	1.00	1.08	1.08	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]	235	0	372	0	0	0	83	722	0	0	794	465
Peak Hour Factor	0.9380	0.9380	0.9380	1.0000	1.0000	1.0000	0.9380	0.9380	1.0000	1.0000	0.9380	0.9380
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]	63	0	99	0	0	0	22	192	0	0	212	124
Total Analysis Volume [veh/h]	251	0	397	0	0	0	88	770	0	0	846	496
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 - Coordination Group
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	0	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	0	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	0	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	24	0	0	0	0	0	86	0	0	86	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	10	0	0	10	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	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]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	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	C	R		L	C	C	R
C, Cycle Length [s]	110	110		110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00		4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00		2.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00		2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	50	50		52	52	52	52
g / C, Green / Cycle	0.45	0.45		0.48	0.48	0.48	0.48
(v / s)_i Volume / Saturation Flow Rate	0.14	0.25		0.14	0.41	0.45	0.31
s, saturation flow rate [veh/h]	1774	1583		648	1863	1863	1583
c, Capacity [veh/h]	801	715		85	886	886	753
d1, Uniform Delay [s]	19.26	22.07		45.89	17.32	19.02	14.51
k, delay calibration	0.50	0.50		0.11	0.50	0.18	0.11
I, Upstream Filtering Factor	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.02	3.09		55.33	11.32	10.37	0.99
d3, Initial Queue Delay [s]	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00		1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.31	0.56		1.04	0.87	0.95	0.66
d, Delay for Lane Group [s/veh]	20.28	25.16		101.21	28.64	29.39	15.50
Lane Group LOS	C	C		F	C	C	B
Critical Lane Group	No	Yes		No	No	Yes	No
50th-Percentile Queue Length [veh]	4.02	7.49		3.47	13.24	15.62	5.61
50th-Percentile Queue Length [ft]	100.54	187.28		86.68	331.00	390.58	140.14
95th-Percentile Queue Length [veh]	7.24	11.98		6.24	19.21	22.11	9.49
95th-Percentile Queue Length [ft]	180.98	299.50		156.03	480.18	552.64	237.21

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	20.28	20.28	25.16	0.00	0.00	0.00	101.21	28.64	0.00	0.00	29.39	15.50
Movement LOS	C	C	C				F	C			C	B
d_A, Approach Delay [s/veh]	23.27			0.00			36.08			24.26		
Approach LOS	C			A			D			C		
d_I, Intersection Delay [s/veh]	27.59											
Intersection LOS	C											
Intersection V/C	0.791											

Sequence

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

Intersection Level Of Service Report
Intersection 19: Antelope Rd (NS)/Scott Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	37.5
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.838

Intersection Setup

Name												
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	2	0	0	1	0	1	1	0	1	1	0	0
Pocket Length [ft]	215.00	100.00	100.00	200.00	100.00	200.00	375.00	100.00	250.00	200.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	310	152	88	40	180	369	249	624	277	24	640	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]	310	152	88	40	180	369	249	624	277	24	640	46
Peak Hour Factor	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	84	41	24	11	49	100	67	169	75	7	173	12
Total Analysis Volume [veh/h]	336	165	95	43	195	400	270	676	300	26	693	50
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	1 - Coordination Group
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
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]	15	34	0	16	35	0	20	34	0	16	30	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
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	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	11	33	33	5	27	27	17	42	42	4	29	29
g / C, Green / Cycle	0.11	0.33	0.33	0.05	0.27	0.27	0.17	0.42	0.42	0.04	0.29	0.29
(v / s)_i Volume / Saturation Flow Rate	0.10	0.09	0.06	0.02	0.10	0.25	0.15	0.28	0.28	0.01	0.20	0.20
s, saturation flow rate [veh/h]	3445	1863	1583	1774	1863	1583	1774	1863	1672	1774	1863	1819
c, Capacity [veh/h]	381	621	528	89	508	432	304	782	702	66	532	520
d1, Uniform Delay [s]	43.89	24.43	23.69	46.32	29.60	35.45	40.55	23.23	23.30	46.51	27.43	27.44
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.32	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.76	0.23	0.16	4.07	0.48	20.75	8.66	4.25	4.83	3.81	7.67	7.87
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.88	0.27	0.18	0.49	0.38	0.93	0.89	0.65	0.66	0.40	0.71	0.71
d, Delay for Lane Group [s/veh]	50.65	24.66	23.85	50.38	30.07	56.21	49.22	27.48	28.13	50.32	35.10	35.31
Lane Group LOS	D	C	C	D	C	E	D	C	C	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	4.26	2.70	1.51	1.10	3.64	11.27	6.86	9.64	8.85	0.67	7.47	7.33
50th-Percentile Queue Length [ft]	106.39	67.59	37.78	27.44	91.04	281.78	171.56	240.91	221.24	16.71	186.84	183.37
95th-Percentile Queue Length [veh]	7.64	4.87	2.72	1.98	6.55	16.78	11.16	14.73	13.73	1.20	11.96	11.78
95th-Percentile Queue Length [ft]	190.97	121.67	68.01	49.38	163.87	419.43	278.97	368.18	343.21	30.08	298.92	294.41

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	50.65	24.66	23.85	50.38	30.07	56.21	49.22	27.64	28.13	50.32	35.20	35.31
Movement LOS	D	C	C	D	C	E	D	C	C	D	D	D
d_A, Approach Delay [s/veh]	39.18			47.83			32.43			35.72		
Approach LOS	D			D			C			D		
d_I, Intersection Delay [s/veh]	37.47											
Intersection LOS	D											
Intersection V/C	0.838											

Sequence

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

Intersection Level Of Service Report
Intersection 1: Murrieta Rd (NS)/Newport Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	38.3
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.775

Intersection Setup

Name							Newport Rd			Newport Rd		
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	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	190.00	100.00	100.00	225.00	100.00	100.00	275.00	100.00	100.00	180.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							Newport Rd			Newport Rd		
Base Volume Input [veh/h]	154	261	93	310	273	204	334	955	73	175	886	217
Base Volume Adjustment Factor	1.0000	1.0000	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]	154	261	93	310	273	204	334	955	73	175	886	217
Peak Hour Factor	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	41	69	25	83	73	54	89	254	19	47	236	58
Total Analysis Volume [veh/h]	164	278	99	330	291	217	356	1017	78	186	944	231
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	1 - Coordination Group
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
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]	26	19	0	26	19	0	36	36	0	19	19	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
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]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	11	20	20	20	29	29	22	32	32	12	22	22
g / C, Green / Cycle	0.11	0.20	0.20	0.20	0.29	0.29	0.22	0.32	0.32	0.12	0.22	0.22
(v / s)_i Volume / Saturation Flow Rate	0.09	0.08	0.06	0.19	0.08	0.14	0.20	0.20	0.05	0.10	0.19	0.15
s, saturation flow rate [veh/h]	1774	3547	1583	1774	3547	1583	1774	5074	1583	1774	5074	1583
c, Capacity [veh/h]	200	694	310	363	1020	455	395	1604	500	220	1103	344
d1, Uniform Delay [s]	43.44	35.14	34.55	38.93	27.68	29.44	37.85	29.30	24.64	42.93	37.68	35.91
k, delay calibration	0.11	0.50	0.50	0.17	0.50	0.50	0.18	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.11	1.72	2.70	13.03	0.70	3.54	11.78	0.42	0.14	8.62	2.03	2.27
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

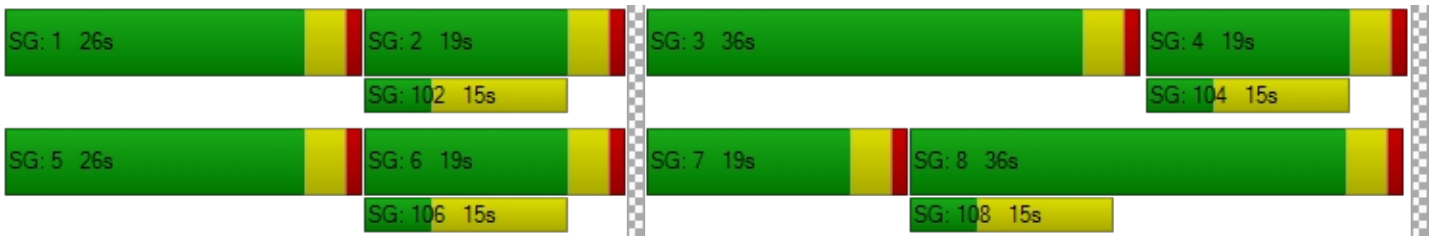
X, volume / capacity	0.82	0.40	0.32	0.91	0.29	0.48	0.90	0.63	0.16	0.85	0.86	0.67
d, Delay for Lane Group [s/veh]	51.55	36.86	37.25	51.96	28.38	32.99	49.63	29.72	24.78	51.55	39.72	38.19
Lane Group LOS	D	D	D	D	C	C	D	C	C	D	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	4.22	2.96	2.19	8.75	2.63	4.47	9.23	6.51	1.27	4.80	7.15	5.07
50th-Percentile Queue Length [ft]	105.61	74.09	54.79	218.63	65.86	111.75	230.82	162.81	31.70	120.03	178.75	126.86
95th-Percentile Queue Length [veh]	7.60	5.33	3.94	13.59	4.74	7.94	14.22	10.70	2.28	8.39	11.54	8.77
95th-Percentile Queue Length [ft]	189.88	133.36	98.62	339.87	118.56	198.44	355.40	267.45	57.06	209.87	288.39	219.21

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	51.55	36.86	37.25	51.96	28.38	32.99	49.63	29.72	24.78	51.55	39.72	38.19
Movement LOS	D	D	D	D	C	C	D	C	C	D	D	D
d_A, Approach Delay [s/veh]	41.39			38.86			34.34			41.08		
Approach LOS	D			D			C			D		
d_I, Intersection Delay [s/veh]	38.34											
Intersection LOS	D											
Intersection V/C	0.775											

Sequence

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



Intersection Level Of Service Report
Intersection 2: Bradley Rd (NS)/Newport Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	32.4
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.739

Intersection Setup

Name				Bradley Rd			Newport Rd			Newport Rd		
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	1	0	0	1	0	0	1	0	0	2	0	1
Pocket Length [ft]	100.00	100.00	100.00	125.00	100.00	100.00	165.00	100.00	100.00	155.00	100.00	150.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name				Bradley Rd			Newport Rd			Newport Rd		
Base Volume Input [veh/h]	147	258	323	206	188	103	149	1056	74	285	1129	262
Base Volume Adjustment Factor	1.0000	1.0000	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]	147	258	323	206	188	103	149	1056	74	285	1129	262
Peak Hour Factor	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410
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]	39	69	86	55	50	27	40	281	20	76	300	70
Total Analysis Volume [veh/h]	156	274	343	219	200	109	158	1122	79	303	1200	278
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	1 - Coordination Group
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
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	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	2	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups			2,7									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	30	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	3.0	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	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	19	28	28	21	30	0	24	37	0	14	27	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	5	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	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	2.0	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	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	C	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]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	11	18	40	14	21	21	11	34	34	19	41	41
g / C, Green / Cycle	0.11	0.18	0.40	0.14	0.21	0.21	0.11	0.34	0.34	0.19	0.41	0.41
(v / s)_i Volume / Saturation Flow Rate	0.09	0.15	0.22	0.12	0.09	0.09	0.09	0.22	0.22	0.09	0.24	0.18
s, saturation flow rate [veh/h]	1774	1863	1583	1774	1863	1647	1774	3547	1801	3445	5074	1583
c, Capacity [veh/h]	188	326	636	252	393	348	193	1193	606	642	2100	655
d1, Uniform Delay [s]	43.81	39.91	22.88	41.99	34.10	34.18	43.60	28.40	28.40	36.31	22.50	20.84
k, delay calibration	0.11	0.11	0.25	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.91	5.80	1.63	8.86	0.69	0.82	8.23	2.97	5.75	0.54	1.14	2.01
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	0.84	0.54	0.87	0.41	0.42	0.82	0.67	0.67	0.47	0.57	0.42
d, Delay for Lane Group [s/veh]	52.72	45.70	24.50	50.85	34.80	35.00	51.83	31.37	34.15	36.85	23.63	22.84
Lane Group LOS	D	D	C	D	C	D	D	C	C	D	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	4.07	6.67	5.90	5.63	3.29	3.00	4.08	8.02	8.61	3.17	6.76	4.57
50th-Percentile Queue Length [ft]	101.64	166.76	147.56	140.71	82.36	75.07	101.96	200.43	215.25	79.27	169.00	114.36
95th-Percentile Queue Length [veh]	7.32	10.91	9.89	9.52	5.93	5.40	7.34	12.66	13.42	5.71	11.02	8.08
95th-Percentile Queue Length [ft]	182.94	272.65	247.17	237.97	148.26	135.12	183.52	316.52	335.55	142.68	275.60	202.05

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	52.72	45.70	24.50	50.85	34.83	35.00	51.83	32.17	34.15	36.85	23.63	22.84
Movement LOS	D	D	C	D	C	D	D	C	C	D	C	C
d_A, Approach Delay [s/veh]	37.71			41.51			34.57			25.76		
Approach LOS	D			D			C			C		
d_I, Intersection Delay [s/veh]	32.41											
Intersection LOS	C											
Intersection V/C	0.739											

Sequence

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

Intersection Level Of Service Report
Intersection 3: Haun Road (NS) / Newport Road (EW)

Control Type:	Signalized	Delay (sec / veh):	39.2
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.840

Intersection Setup

Name	Haun Rd			Haun Rd						Newport Rd		
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	2	0	1	2	0	0	2	0	0	2	0	0
Pocket Length [ft]	215.00	100.00	285.00	155.00	100.00	100.00	210.00	100.00	100.00	350.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Haun Rd			Haun Rd						Newport Rd		
Base Volume Input [veh/h]	344	91	813	337	126	109	132	1152	260	889	1249	218
Base Volume Adjustment Factor	1.0000	1.0000	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]	344	91	813	337	126	109	132	1152	260	889	1249	218
Peak Hour Factor	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770
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]	88	23	208	86	32	28	34	295	67	227	320	56
Total Analysis Volume [veh/h]	352	93	832	345	129	112	135	1179	266	910	1278	223
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	1 - Coordination Group
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
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	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	2	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups			2,7									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	30	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	3.0	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	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	24	20	20	23	19	0	12	19	0	78	85	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	5	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	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	2.0	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	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	C	L	C	R	L	C	C
C, Cycle Length [s]	140	140	140	140	140	140	140	140	140	140	140	140
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	16	17	64	16	16	16	7	48	48	43	84	84
g / C, Green / Cycle	0.12	0.12	0.46	0.12	0.12	0.12	0.05	0.34	0.34	0.31	0.60	0.60
(v / s)_i Volume / Saturation Flow Rate	0.10	0.05	0.30	0.10	0.07	0.07	0.04	0.23	0.17	0.26	0.28	0.29
s, saturation flow rate [veh/h]	3445	1863	2803	3445	1863	1584	3445	5074	1583	3445	3547	1727
c, Capacity [veh/h]	406	221	1282	398	217	184	184	1732	540	1068	2121	1033
d1, Uniform Delay [s]	60.66	57.20	29.30	60.85	58.70	58.81	65.28	39.55	36.49	45.27	15.74	15.93
k, delay calibration	0.11	0.11	0.23	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.70	1.27	1.16	5.83	2.59	3.22	5.60	2.18	3.18	2.03	0.75	1.64
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

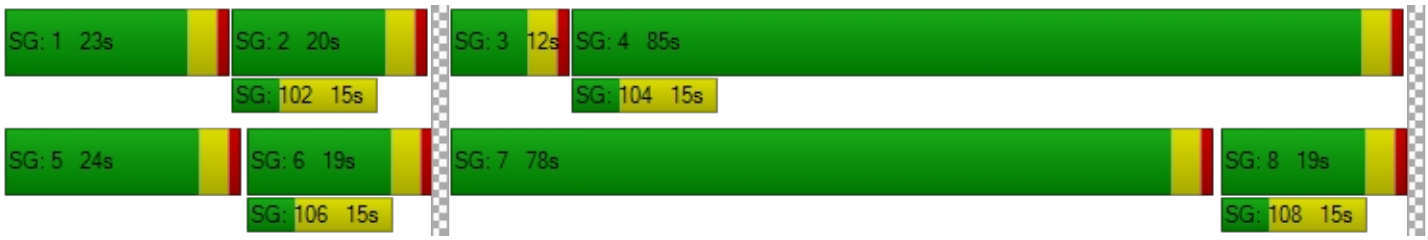
X, volume / capacity	0.87	0.42	0.65	0.87	0.59	0.61	0.73	0.68	0.49	0.85	0.47	0.49
d, Delay for Lane Group [s/veh]	66.36	58.47	30.46	66.69	61.29	62.03	70.87	41.73	39.67	47.30	16.49	17.57
Lane Group LOS	E	E	C	E	E	E	E	D	D	D	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh]	6.30	3.06	10.44	6.19	4.39	3.86	2.46	11.52	7.45	14.54	8.44	8.84
50th-Percentile Queue Length [ft]	157.59	76.52	260.97	154.75	109.66	96.39	61.57	288.01	186.34	363.43	211.04	220.90
95th-Percentile Queue Length [veh]	10.42	5.51	15.74	10.27	7.82	6.94	4.43	17.09	11.93	20.79	13.21	13.71
95th-Percentile Queue Length [ft]	260.52	137.74	393.44	256.76	195.52	173.50	110.82	427.17	298.28	519.76	330.17	342.77

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	66.36	58.47	30.46	66.69	61.29	62.03	70.87	41.73	39.67	47.30	16.72	17.57
Movement LOS	E	E	C	E	E	E	E	D	D	D	B	B
d_A, Approach Delay [s/veh]	42.39			64.61			43.88			28.34		
Approach LOS	D			E			D			C		
d_I, Intersection Delay [s/veh]	39.23											
Intersection LOS	D											
Intersection V/C	0.840											

Sequence

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



Intersection Level Of Service Report
Intersection 4: I-215 SB Ramps (NS) / Newport Road (EW)

Control Type:	Signalized	Delay (sec / veh):	17.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.591

Intersection Setup

Name	I-215 SB Ramps			I-215 SB Ramps			Newport Rd			Newport Rd		
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	1	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	800.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		50.00			50.00			50.00			50.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			No			No	

Volumes

Name	I-215 SB Ramps			I-215 SB Ramps			Newport Rd			Newport Rd		
Base Volume Input [veh/h]	0	0	0	419	0	582	0	1844	466	0	1721	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	419	0	582	0	1844	466	0	1721	464
Peak Hour Factor	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	106	0	147	0	467	118	0	436	118
Total Analysis Volume [veh/h]	0	0	0	425	0	590	0	1868	472	0	1744	470
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 - Coordination Group
Cycle Length [s]	140
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	Overlap	Protecte	Permiss	Overlap
Signal group	0	0	0	1	0	0	0	8	8	7	4	4
Auxiliary Signal Groups									8			1,4,8
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	7	0	0	0	7	7	0	7	7
Maximum Green [s]	0	0	0	30	0	0	0	30	30	0	30	30
Amber [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0
All red [s]	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0	1.0
Split [s]	0	0	0	86	0	0	0	54	54	0	54	54
Vehicle Extension [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0
Walk [s]	0	0	0	5	0	0	0	5	5	0	5	5
Pedestrian Clearance [s]	0	0	0	10	0	0	0	10	10	0	10	10
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	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0
Minimum Recall				No				No	No		No	No
Maximum Recall				No				No	No		No	No
Pedestrian Recall				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	C	R	C	R
C, Cycle Length [s]		140	140	140	140	140	140	140
L, Total Lost Time per Cycle [s]		4.00	4.00	4.00	4.00	4.00	4.00	0.00
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]		2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]		35	35	35	97	97	97	136
g / C, Green / Cycle		0.25	0.25	0.25	0.69	0.69	0.69	0.97
(v / s)_i Volume / Saturation Flow Rate		0.19	0.21	0.21	0.28	0.30	0.34	0.30
s, saturation flow rate [veh/h]		1774	1628	1583	6765	1583	5074	1583
c, Capacity [veh/h]		443	407	395	4689	1097	3517	1538
d1, Uniform Delay [s]		48.64	49.69	50.06	9.10	9.39	10.04	0.08
k, delay calibration		0.11	0.11	0.11	0.50	0.50	0.50	0.11
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		2.76	4.47	5.38	0.25	1.23	0.50	0.11
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		0.76	0.83	0.86	0.40	0.43	0.50	0.31
d, Delay for Lane Group [s/veh]		51.40	54.16	55.44	9.36	10.62	10.54	0.19
Lane Group LOS		D	D	E	A	B	B	A
Critical Lane Group		No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh]		10.94	11.33	11.50	5.34	5.86	7.38	0.05
50th-Percentile Queue Length [ft]		273.51	283.35	287.53	133.52	146.41	184.57	1.19
95th-Percentile Queue Length [veh]		16.36	16.86	17.06	9.13	9.83	11.84	0.09
95th-Percentile Queue Length [ft]		409.12	421.39	426.57	228.27	245.63	295.98	2.14

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	51.96	0.00	54.89	0.00	9.36	10.62	0.00	10.54	0.19
Movement LOS				D		D		A	B		B	A
d_A, Approach Delay [s/veh]	0.00			53.67			9.61			8.34		
Approach LOS	A			D			A			A		
d_I, Intersection Delay [s/veh]	17.14											
Intersection LOS	B											
Intersection V/C	0.591											

Sequence

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

Intersection Level Of Service Report
Intersection 5: I-215 NB Ramps (NS) / Newport Road (EW)

Control Type:	Signalized	Delay (sec / veh):	20.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.689

Intersection Setup

Name	I-215 NB Ramps			I-215 NB Ramps			Newport Rd			Newport Rd		
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	1	0	1	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	375.00	100.00	375.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name	I-215 NB Ramps			I-215 NB Ramps			Newport Rd			Newport Rd		
Base Volume Input [veh/h]	517	0	746	0	0	0	0	1885	382	0	1690	480
Base Volume Adjustment Factor	1.0000	1.0000	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]	517	0	746	0	0	0	0	1885	382	0	1690	480
Peak Hour Factor	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810
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]	132	0	190	0	0	0	0	480	97	0	431	122
Total Analysis Volume [veh/h]	527	0	760	0	0	0	0	1922	389	0	1723	489
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 - Coordination Group
Cycle Length [s]	140
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	Split	Permiss	Split	Permiss	Permiss	Permiss	Protecte	Permiss	Overlap	Permiss	Permiss	Overlap
Signal group	5	0	0	0	0	0	3	8	5	0	4	4
Auxiliary Signal Groups									4,5,8			4,5,8
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	0	0	0	0	0	0	7	7	0	7	7
Maximum Green [s]	30	0	0	0	0	0	0	30	30	0	30	30
Amber [s]	3.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0
All red [s]	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0	1.0
Split [s]	114	0	0	0	0	0	0	26	114	0	26	26
Vehicle Extension [s]	3.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0
Walk [s]	5	0	0	0	0	0	0	5	5	0	5	5
Pedestrian Clearance [s]	10	0	0	0	0	0	0	10	10	0	10	10
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	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0
Minimum Recall	No							No	No		No	No
Maximum Recall	No							No	No		No	No
Pedestrian Recall	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		C	R	C	R
C, Cycle Length [s]	140	140	140		140	140	140	140
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00		4.00	0.00	4.00	0.00
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]	2.00	2.00	2.00		2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	45	45	45		87	136	87	136
g / C, Green / Cycle	0.32	0.32	0.32		0.62	0.97	0.62	0.97
(v / s)_i Volume / Saturation Flow Rate	0.24	0.26	0.27		0.38	0.25	0.25	0.31
s, saturation flow rate [veh/h]	1774	1623	1583		5074	1583	6765	1583
c, Capacity [veh/h]	571	523	510		3150	1538	4200	1538
d1, Uniform Delay [s]	42.39	43.69	44.09		16.19	0.08	13.49	0.08
k, delay calibration	0.11	0.11	0.11		0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.02	3.27	3.84		0.89	0.40	0.30	0.54
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	0.75	0.82	0.84		0.61	0.25	0.41	0.32
d, Delay for Lane Group [s/veh]	44.41	46.96	47.92		17.08	0.47	13.79	0.63
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]	13.08	13.62	13.81		11.56	0.17	6.42	0.23
50th-Percentile Queue Length [ft]	326.92	340.55	345.26		289.08	4.23	160.53	5.82
95th-Percentile Queue Length [veh]	19.01	19.67	19.90		17.14	0.30	10.58	0.42
95th-Percentile Queue Length [ft]	475.19	491.87	497.62		428.50	7.61	264.43	10.47

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	44.88	0.00	47.50	0.00	0.00	0.00	0.00	17.08	0.47	0.00	13.79	0.63
Movement LOS	D		D					B	A		B	A
d_A, Approach Delay [s/veh]	46.43			0.00			14.28			10.88		
Approach LOS	D			A			B			B		
d_I, Intersection Delay [s/veh]	20.11											
Intersection LOS	C											
Intersection V/C	0.689											

Sequence

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

Intersection Level Of Service Report
Intersection 6: Antelope Rd (NS)/Newport Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	41.2
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.919

Intersection Setup

Name												
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	2	0	0	2	0	0	2	0	0	2	0	0
Pocket Length [ft]	330.00	100.00	100.00	100.00	100.00	100.00	325.00	100.00	100.00	200.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							Newport Rd			Newport Rd		
Base Volume Input [veh/h]	693	108	189	28	78	147	145	1761	633	174	1352	27
Base Volume Adjustment Factor	1.0000	1.0000	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]	693	108	189	28	78	147	145	1761	633	174	1352	27
Peak Hour Factor	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660
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]	179	28	49	7	20	38	38	456	164	45	350	7
Total Analysis Volume [veh/h]	717	112	196	29	81	152	150	1823	655	180	1400	28
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	1 - Coordination Group
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
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]	35	21	0	33	19	0	11	75	0	11	75	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
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	C	R	L	C	C	L	C	C
C, Cycle Length [s]	140	140	140	140	140	140	140	140	140	140	140	140	140
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	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	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	2.00
g_i, Effective Green Time [s]	31	35	35	5	9	9	9	8	75	75	9	76	76
g / C, Green / Cycle	0.22	0.25	0.25	0.03	0.06	0.06	0.06	0.06	0.54	0.54	0.07	0.54	0.54
(v / s)_i Volume / Saturation Flow Rate	0.21	0.06	0.12	0.01	0.04	0.05	0.05	0.04	0.47	0.51	0.05	0.26	0.26
s, saturation flow rate [veh/h]	3445	1863	1583	3445	1863	1583	1583	3445	3547	1634	3445	3547	1844
c, Capacity [veh/h]	757	464	394	121	120	102	102	200	1897	874	229	1927	1002
d1, Uniform Delay [s]	53.79	41.99	45.04	65.70	64.04	64.35	64.35	64.91	28.34	30.62	64.34	19.86	19.86
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
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
d2, Incremental Delay [s]	7.04	0.27	0.97	1.00	6.45	10.24	10.24	5.52	5.81	19.72	5.84	0.89	1.70
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	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	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	1.00

Lane Group Results

X, volume / capacity	0.95	0.24	0.50	0.24	0.68	0.75	0.75	0.75	0.87	0.95	0.79	0.49	0.49
d, Delay for Lane Group [s/veh]	60.83	42.26	46.01	66.70	70.49	74.59	74.59	70.43	34.15	50.34	70.18	20.74	21.56
Lane Group LOS	E	D	D	E	E	E	E	E	C	D	E	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	12.76	3.06	5.79	0.51	2.98	2.89	2.89	2.73	23.61	28.65	3.27	9.15	9.74
50th-Percentile Queue Length [ft]	318.91	76.51	144.67	12.76	74.40	72.32	72.32	68.20	590.32	716.28	81.80	228.76	243.57
95th-Percentile Queue Length [veh]	18.61	5.51	9.73	0.92	5.36	5.21	5.21	4.91	31.58	37.43	5.89	14.11	14.86
95th-Percentile Queue Length [ft]	465.35	137.73	243.31	22.97	133.9	130.1	130.1	122.77	789.56	935.74	147.25	352.78	371.54

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	60.83	42.26	46.01	66.70	70.49	74.59	70.43	35.67	50.34	70.18	21.01	21.56
Movement LOS	E	D	D	E	E	E	E	D	D	E	C	C
d_A, Approach Delay [s/veh]	55.97			72.45			41.31			26.52		
Approach LOS	E			E			D			C		
d_I, Intersection Delay [s/veh]	41.20											
Intersection LOS	D											
Intersection V/C	0.919											

Sequence

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

Intersection Level Of Service Report
Intersection 7: Menifee Rd (NS)/NewportRd (EW)

Control Type:	Signalized	Delay (sec / veh):	29.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.722

Intersection Setup

Name							Newport Rd			Newport Rd		
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	1	0	1	1	0	0	2	0	0	2	0	0
Pocket Length [ft]	250.00	100.00	200.00	100.00	100.00	100.00	400.00	100.00	100.00	295.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							Newport Rd			Newport Rd		
Base Volume Input [veh/h]	145	241	95	74	210	233	342	1264	176	147	1077	36
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	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]	145	241	95	74	210	233	342	1264	176	147	1077	36
Peak Hour Factor	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810
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	61	24	19	54	59	87	322	45	37	274	9
Total Analysis Volume [veh/h]	148	246	97	75	214	238	349	1288	179	150	1098	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	1 - Coordination Group
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
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]	11	19	0	15	23	0	47	54	0	12	19	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
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	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]	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	18	18	6	17	17	22	53	53	7	38	38
g / C, Green / Cycle	0.07	0.18	0.18	0.06	0.17	0.17	0.22	0.53	0.53	0.07	0.38	0.38
(v / s)_i Volume / Saturation Flow Rate	0.04	0.07	0.06	0.04	0.06	0.15	0.20	0.28	0.28	0.04	0.22	0.02
s, saturation flow rate [veh/h]	3445	3547	1583	1774	3547	1583	1774	3547	1749	3445	5074	1583
c, Capacity [veh/h]	239	626	280	110	600	268	389	1890	932	238	1939	605
d1, Uniform Delay [s]	45.29	36.46	36.14	45.99	36.77	40.66	37.94	15.10	15.12	45.35	24.37	19.55
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.62	0.40	0.74	7.30	0.36	9.74	7.43	1.02	2.08	2.76	1.20	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	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	0.62	0.39	0.35	0.68	0.36	0.89	0.90	0.52	0.52	0.63	0.57	0.06
d, Delay for Lane Group [s/veh]	47.91	36.86	36.88	53.29	37.12	50.40	45.37	16.12	17.20	48.11	25.57	19.75
Lane Group LOS	D	D	D	D	D	D	D	B	B	D	C	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	1.79	2.56	2.03	1.97	2.23	6.13	8.58	6.51	6.73	1.82	6.47	0.54
50th-Percentile Queue Length [ft]	44.84	63.89	50.70	49.19	55.64	153.13	214.51	162.75	168.14	45.56	161.64	13.49
95th-Percentile Queue Length [veh]	3.23	4.60	3.65	3.54	4.01	10.18	13.38	10.69	10.98	3.28	10.64	0.97
95th-Percentile Queue Length [ft]	80.72	115.00	91.26	88.54	100.15	254.60	334.61	267.35	274.47	82.00	265.89	24.28

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	47.91	36.86	36.88	53.29	37.12	50.40	45.37	16.38	17.20	48.11	25.57	19.75
Movement LOS	D	D	D	D	D	D	D	B	B	D	C	B
d_A, Approach Delay [s/veh]	40.19			45.42			22.03			28.04		
Approach LOS	D			D			C			C		
d_I, Intersection Delay [s/veh]	29.06											
Intersection LOS	C											
Intersection V/C	0.722											

Sequence

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

Intersection Level Of Service Report
Intersection 8: Bradley Rd (NS) / La Piedra Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	12.9
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.416

Intersection Setup

Name												
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	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	150.00	100.00	100.00	155.00	100.00	100.00	100.00	100.00	100.00	150.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	19	449	21	77	644	12	9	11	19	44	19	93
Base Volume Adjustment Factor	1.0000	1.0000	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]	19	449	21	77	644	12	9	11	19	44	19	93
Peak Hour Factor	0.8240	0.8240	0.8240	0.8240	0.8240	0.8240	0.8240	0.8240	0.8240	0.8240	0.8240	0.8240
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	136	6	23	195	4	3	3	6	13	6	28
Total Analysis Volume [veh/h]	23	545	25	93	782	15	11	13	23	53	23	113
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]	60
Coordination Type	Time of Day Pattern Coordinated
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]	11	19	0	11	19	0	11	19	0	11	19	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
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	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	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]	2	31	31	6	34	34	1	3	3	4	6	6
g / C, Green / Cycle	0.04	0.51	0.51	0.09	0.57	0.57	0.02	0.06	0.06	0.07	0.11	0.11
(v / s)_i Volume / Saturation Flow Rate	0.01	0.15	0.15	0.05	0.21	0.21	0.01	0.01	0.01	0.03	0.01	0.07
s, saturation flow rate [veh/h]	1774	1863	1834	1774	1863	1850	1774	1863	1583	1774	1863	1583
c, Capacity [veh/h]	71	954	939	167	1055	1048	39	107	91	126	198	169
d1, Uniform Delay [s]	28.16	8.49	8.49	26.10	7.22	7.22	29.02	26.98	27.19	26.81	24.37	25.92
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.64	0.81	0.83	2.88	1.04	1.04	3.90	0.50	1.45	2.21	0.26	4.54
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	0.33	0.30	0.30	0.56	0.38	0.38	0.28	0.12	0.25	0.42	0.12	0.67
d, Delay for Lane Group [s/veh]	30.80	9.30	9.32	28.98	8.25	8.26	32.92	27.49	28.64	29.02	24.63	30.46
Lane Group LOS	C	A	A	C	A	A	C	C	C	C	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.34	1.68	1.66	1.25	2.04	2.03	0.18	0.17	0.32	0.72	0.27	1.57
50th-Percentile Queue Length [ft]	8.44	41.98	41.54	31.21	50.97	50.68	4.53	4.29	7.90	17.98	6.85	39.24
95th-Percentile Queue Length [veh]	0.61	3.02	2.99	2.25	3.67	3.65	0.33	0.31	0.57	1.29	0.49	2.83
95th-Percentile Queue Length [ft]	15.20	75.57	74.77	56.18	91.74	91.23	8.15	7.73	14.22	32.37	12.32	70.63

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	30.80	9.31	9.32	28.98	8.26	8.26	32.92	27.49	28.64	29.02	24.63	30.46
Movement LOS	C	A	A	C	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	10.14			10.42			29.32			29.35		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	12.92											
Intersection LOS	B											
Intersection V/C	0.416											

Sequence

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

Intersection Level Of Service Report
Intersection 9: Bradley Rd (NS)/Holland Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	31.0
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.749

Intersection Setup

Name												
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	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	130.00	100.00	100.00	150.00	100.00	100.00	145.00	100.00	100.00	140.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	56	290	127	113	206	140	176	228	56	111	241	159
Base Volume Adjustment Factor	1.0000	1.0000	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]	56	290	127	113	206	140	176	228	56	111	241	159
Peak Hour Factor	0.8810	0.8810	0.8810	0.8810	0.8810	0.8810	0.8810	0.8810	0.8810	0.8810	0.8810	0.8810
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	82	36	32	58	40	50	65	16	31	68	45
Total Analysis Volume [veh/h]	64	329	144	128	234	159	200	259	64	126	274	180
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	1 - Coordination Group
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
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]	11	26	0	11	26	0	17	19	0	24	26	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	R	L	C	L	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	5	32	7	34	34	11	18	7	14	14
g / C, Green / Cycle	0.07	0.40	0.09	0.42	0.42	0.14	0.22	0.09	0.18	0.18
(v / s)_i Volume / Saturation Flow Rate	0.04	0.27	0.07	0.13	0.10	0.11	0.18	0.07	0.15	0.11
s, saturation flow rate [veh/h]	1774	1768	1774	1863	1583	1774	1800	1774	1863	1583
c, Capacity [veh/h]	121	702	157	778	661	242	400	164	333	283
d1, Uniform Delay [s]	36.15	19.90	35.92	15.56	15.12	33.73	29.56	35.55	31.72	30.52
k, delay calibration	0.11	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.59	5.11	9.85	0.99	0.86	7.07	3.89	7.30	5.10	2.37
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.53	0.67	0.82	0.30	0.24	0.83	0.81	0.77	0.82	0.64
d, Delay for Lane Group [s/veh]	39.74	25.01	45.78	16.55	15.98	40.80	33.44	42.85	36.82	32.89
Lane Group LOS	D	C	D	B	B	D	C	D	D	C
Critical Lane Group	No	Yes	Yes	No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh]	1.25	7.19	2.71	2.66	1.77	3.96	5.76	2.56	5.13	3.13
50th-Percentile Queue Length [ft]	31.16	179.73	67.64	66.42	44.28	98.91	143.88	63.99	128.21	78.24
95th-Percentile Queue Length [veh]	2.24	11.59	4.87	4.78	3.19	7.12	9.69	4.61	8.84	5.63
95th-Percentile Queue Length [ft]	56.09	289.66	121.76	119.56	79.70	178.04	242.24	115.19	221.06	140.84

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	39.74	25.01	25.01	45.78	16.55	15.98	40.80	33.44	33.44	42.85	36.82	32.89
Movement LOS	D	C	C	D	B	B	D	C	C	D	D	C
d_A, Approach Delay [s/veh]	26.77			23.56			36.25			36.91		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	31.01											
Intersection LOS	C											
Intersection V/C	0.749											

Sequence

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

Intersection Level Of Service Report
Intersection 10: Town Center Dr-Sherman Rd (NS) / La Piedra Rd (EW)

Control Type:	All-way stop	Delay (sec / veh):	8.3
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.168

Intersection Setup

Name												
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	1	0	1	1	0	0	0	0	0	1	0	0
Pocket Length [ft]	210.00	100.00	500.00	150.00	100.00	100.00	100.00	100.00	100.00	800.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	96	7	0	0	0	0	0	109	0	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]	0	0	96	7	0	0	0	0	0	109	0	3
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]	0	0	25	2	0	0	0	0	0	28	0	1
Total Analysis Volume [veh/h]	0	0	100	7	0	0	0	0	0	114	0	3
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	733	733	855	646	709	710	710	679	750	877
Degree of Utilization, x	0.00	0.00	0.12	0.01	0.00	0.00	0.00	0.17	0.00	0.00

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.00	0.00	0.40	0.03	0.00	0.00	0.00	0.60	0.00	0.01
95th-Percentile Queue Length [ft]	0.00	0.00	9.89	0.82	0.00	0.00	0.00	15.02	0.00	0.26
Approach Delay [s/veh]	7.47			8.34		0.00		9.02		
Approach LOS	A			A		A		A		
Intersection Delay [s/veh]	8.30									
Intersection LOS	A									

Intersection Level Of Service Report

Intersection 11: Town Center Dr-Sherman Rd (NS)/Holland Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	32.4
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.037

Intersection Setup

Name												
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	1	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	500.00	100.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	5	0	10	10	1	56	49	406	4	25	541	31
Base Volume Adjustment Factor	1.0000	1.0000	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]	5	0	10	10	1	56	49	406	4	25	541	31
Peak Hour Factor	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	3	3	0	15	13	108	1	7	144	8
Total Analysis Volume [veh/h]	5	0	11	11	1	60	52	432	4	27	576	33
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.00	0.02	0.07	0.01	0.12	0.05	0.00	0.00	0.02	0.01	0.00
d_M, Delay for Movement [s/veh]	32.42	27.38	11.49	30.89	28.14	14.28	8.92	0.00	0.00	8.28	0.00	0.00
Movement LOS	D	D	B	D	D	B	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.17	0.17	0.17	0.71	0.71	0.71	2.86	2.86	0.00	3.31	3.31	0.00
95th-Percentile Queue Length [ft]	4.32	4.32	4.32	17.70	17.70	17.70	71.40	71.40	0.00	82.65	82.65	0.00
d_A, Approach Delay [s/veh]	18.03			17.01			0.95			0.35		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	1.82											
Intersection LOS	D											

Intersection Level Of Service Report
Intersection 12: Haun Rd (NS)/Village-Market Dr (EW)

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):	0.679

Intersection Setup

Name	Haun Rd			Haun Rd								
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	1	0	0	2	0	0	0	0	0	0	0	1
Pocket Length [ft]	100.00	100.00	100.00	175.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	65.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Haun Rd			Haun Rd								
Base Volume Input [veh/h]	47	681	21	462	530	224	203	27	29	27	29	363
Base Volume Adjustment Factor	1.0000	1.0000	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]	47	681	21	462	530	224	203	27	29	27	29	363
Peak Hour Factor	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530
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	179	6	121	139	59	53	7	8	7	8	95
Total Analysis Volume [veh/h]	49	715	22	485	556	235	213	28	30	28	30	381
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	1 - Coordination Group
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
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	Permiss	Permiss	Overlap
Signal group	5	2	0	1	6	0	3	8	0	0	4	4
Auxiliary Signal Groups												1,4
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	0	7	7
Maximum Green [s]	30	30	0	30	30	0	7	30	0	0	30	30
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	3.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	1.0
Split [s]	11	19	0	29	37	0	11	22	0	0	11	11
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	3.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	5
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	10
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	0.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0
Minimum Recall	No	No		No	No		Yes	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	C	L	C	C	L	C	C	R
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	0.00	0.00	2.00	0.00
g_i, Effective Green Time [s]	4	27	27	14	36	36	18	18	7	25
g / C, Green / Cycle	0.06	0.38	0.38	0.19	0.51	0.51	0.26	0.26	0.10	0.35
(v / s)_i Volume / Saturation Flow Rate	0.03	0.20	0.20	0.14	0.22	0.22	0.07	0.10	0.03	0.14
s, saturation flow rate [veh/h]	1774	1863	1843	3445	1863	1678	1573	1585	1717	2803
c, Capacity [veh/h]	112	703	696	667	946	852	524	530	250	986
d1, Uniform Delay [s]	31.66	16.97	16.97	26.55	10.93	10.96	20.67	21.25	29.26	17.06
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.16	0.33	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.65	2.81	2.84	1.53	1.47	1.66	0.29	0.94	0.47	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	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

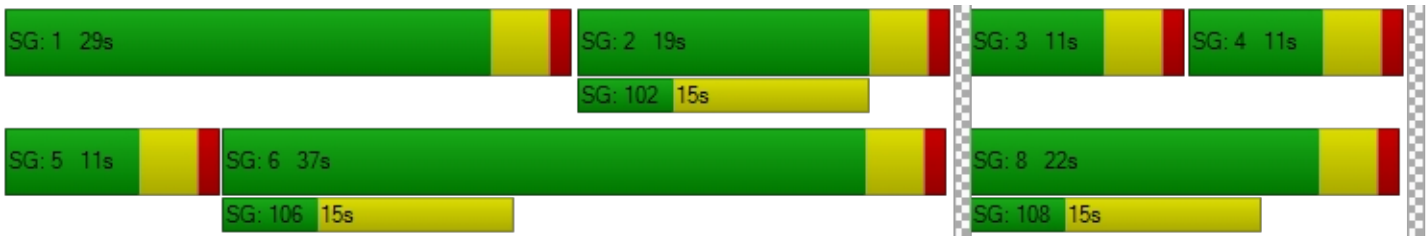
X, volume / capacity	0.44	0.53	0.53	0.73	0.44	0.44	0.22	0.30	0.23	0.39
d, Delay for Lane Group [s/veh]	34.31	19.78	19.82	28.08	12.40	12.62	20.96	22.18	29.74	17.31
Lane Group LOS	C	B	B	C	B	B	C	C	C	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	0.81	4.39	4.35	3.51	3.46	3.20	1.33	1.99	0.85	1.99
50th-Percentile Queue Length [ft]	20.29	109.77	108.82	87.63	86.49	79.90	33.28	49.70	21.35	49.63
95th-Percentile Queue Length [veh]	1.46	7.83	7.77	6.31	6.23	5.75	2.40	3.58	1.54	3.57
95th-Percentile Queue Length [ft]	36.51	195.69	194.36	157.74	155.68	143.82	59.91	89.46	38.43	89.33

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	34.31	19.80	19.82	28.08	12.46	12.62	21.50	22.18	22.18	29.74	29.74	17.31
Movement LOS	C	B	B	C	B	B	C	C	C	C	C	B
d_A, Approach Delay [s/veh]	20.70			18.42			21.67			18.95		
Approach LOS	C			B			C			B		
d_I, Intersection Delay [s/veh]	19.47											
Intersection LOS	B											
Intersection V/C	0.679											

Sequence

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



Intersection Level Of Service Report
Intersection 13: Haun Rd (NS)/Countryside Market Place (EW)

Control Type:	Signalized	Delay (sec / veh):	25.5
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.360

Intersection Setup

Name	Haun Rd			Haun Rd								
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	1	0	0	2	0	0	0	0	1	1	0	0
Pocket Length [ft]	200.00	100.00	100.00	235.00	100.00	100.00	100.00	100.00	40.00	100.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Haun Rd			Haun Rd								
Base Volume Input [veh/h]	51	478	69	279	360	0	27	7	63	39	7	258
Base Volume Adjustment Factor	1.0000	1.0000	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]	51	478	69	279	360	0	27	7	63	39	7	258
Peak Hour Factor	0.9640	0.9640	0.9640	0.9640	0.9640	0.9640	0.9640	0.9640	0.9640	0.9640	0.9640	0.9640
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	124	18	72	93	0	7	2	16	10	2	67
Total Analysis Volume [veh/h]	53	496	72	289	373	0	28	7	65	40	7	268
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	1 - Coordination Group
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]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap
Signal group	5	2	0	1	6	0	0	8	0	0	4	4
Auxiliary Signal Groups												1,4
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	7
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	30
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0
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	1.0
Split [s]	14	33	0	68	87	0	0	19	0	0	19	19
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	5
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	10
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	2.0
I2, Clearance 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	2.0
Minimum Recall	No	No		No	No			No			No	No
Maximum Recall	No	No		No	No			No			No	No
Pedestrian Recall	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	C	L	C	C	L	C	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	6	80	80	13	87	87	15	15	15	32
g / C, Green / Cycle	0.05	0.66	0.66	0.11	0.73	0.73	0.12	0.12	0.12	0.27
(v / s)_i Volume / Saturation Flow Rate	0.03	0.16	0.16	0.08	0.10	0.10	0.02	0.04	0.06	0.10
s, saturation flow rate [veh/h]	1774	1863	1781	3445	1863	1863	1403	1607	779	2802
c, Capacity [veh/h]	86	1239	1185	381	1354	1354	92	199	152	751
d1, Uniform Delay [s]	55.95	7.96	7.97	51.79	4.96	4.96	58.41	48.17	52.95	35.53
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.86	0.44	0.47	3.12	0.21	0.21	1.82	1.10	1.14	0.29
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
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

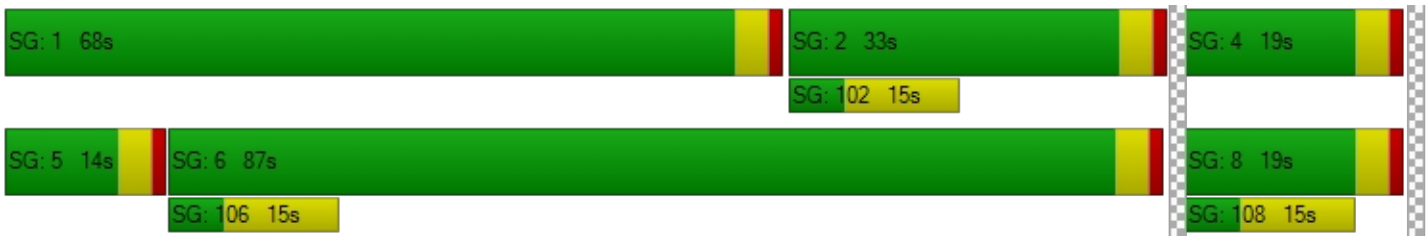
X, volume / capacity	0.61	0.23	0.23	0.76	0.14	0.14	0.30	0.36	0.31	0.36
d, Delay for Lane Group [s/veh]	62.81	8.40	8.43	54.91	5.18	5.18	60.23	49.27	54.09	35.82
Lane Group LOS	E	A	A	D	A	A	E	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	1.69	2.68	2.59	4.24	1.18	1.18	0.87	1.97	1.37	3.08
50th-Percentile Queue Length [ft]	42.25	67.03	64.72	106.06	29.51	29.51	21.70	49.35	34.27	77.01
95th-Percentile Queue Length [veh]	3.04	4.83	4.66	7.62	2.12	2.12	1.56	3.55	2.47	5.54
95th-Percentile Queue Length [ft]	76.05	120.66	116.49	190.50	53.11	53.11	39.07	88.84	61.69	138.61

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	62.81	8.41	8.43	54.91	5.18	5.18	60.23	49.27	49.27	54.09	54.09	35.82
Movement LOS	E	A	A	D	A	A	E	D	D	D	D	D
d_A, Approach Delay [s/veh]	13.06			26.89			52.34			38.55		
Approach LOS	B			C			D			D		
d_I, Intersection Delay [s/veh]	25.49											
Intersection LOS	C											
Intersection V/C	0.360											

Sequence

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



Intersection Level Of Service Report
Intersection 14: Haun Rd (NS)/La Piedra Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	18.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.553

Intersection Setup

Name				Haun Rd								
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	1	0	1	1	0	1	0	0	0	0	0	0
Pocket Length [ft]	165.00	100.00	75.00	150.00	100.00	150.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			Yes		

Volumes

Name				Haun Rd								
Base Volume Input [veh/h]	10	447	97	21	360	107	135	29	69	128	28	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]	10	447	97	21	360	107	135	29	69	128	28	47
Peak Hour Factor	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170
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	122	26	6	98	29	37	8	19	35	8	13
Total Analysis Volume [veh/h]	11	487	106	23	393	117	147	32	75	140	31	51
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	1 - Coordination Group
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
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	Split	Split	Split	Split	Split	Split
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]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	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]	11	19	0	11	19	0	0	11	0	0	19	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
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]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	R	C	R	C
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	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
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	1	24	24	2	25	25	8	8	9
g / C, Green / Cycle	0.02	0.41	0.41	0.04	0.42	0.42	0.13	0.13	0.16
(v / s)_i Volume / Saturation Flow Rate	0.01	0.16	0.16	0.01	0.11	0.07	0.10	0.05	0.13
s, saturation flow rate [veh/h]	1774	1863	1749	1774	3547	1583	1789	1583	1738
c, Capacity [veh/h]	37	753	707	68	1497	668	237	210	275
d1, Uniform Delay [s]	29.02	12.76	12.78	28.17	11.30	10.84	25.14	23.75	24.41
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.43	1.61	1.74	2.86	0.43	0.57	4.83	1.03	5.51
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

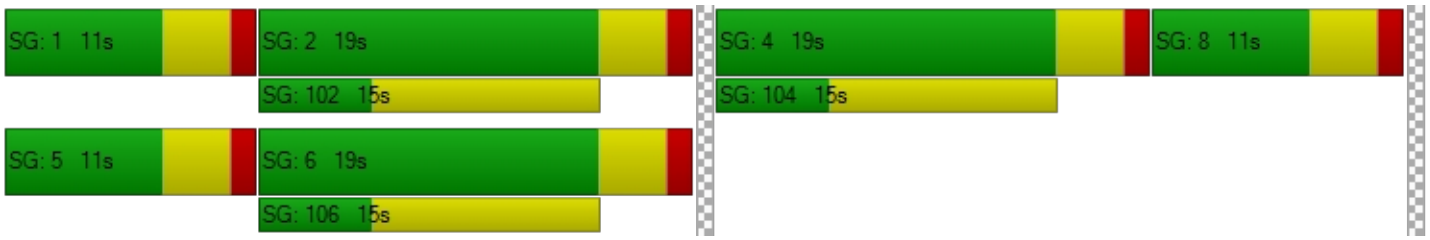
X, volume / capacity	0.30	0.40	0.41	0.34	0.26	0.18	0.75	0.36	0.81
d, Delay for Lane Group [s/veh]	33.44	14.37	14.52	31.02	11.72	11.42	29.98	24.78	29.93
Lane Group LOS	C	B	B	C	B	B	C	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	0.18	2.57	2.46	0.34	1.38	0.84	2.44	0.90	3.03
50th-Percentile Queue Length [ft]	4.61	64.18	61.46	8.50	34.43	21.06	61.09	22.53	75.84
95th-Percentile Queue Length [veh]	0.33	4.62	4.43	0.61	2.48	1.52	4.40	1.62	5.46
95th-Percentile Queue Length [ft]	8.29	115.52	110.63	15.30	61.98	37.91	109.96	40.55	136.52

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	33.44	14.42	14.52	31.02	11.72	11.42	29.98	29.98	24.78	29.93	29.93	29.93
Movement LOS	C	B	B	C	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	14.79			12.49			28.44			29.93		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	18.26											
Intersection LOS	B											
Intersection V/C	0.553											

Sequence

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



Intersection Level Of Service Report
Intersection 15: Haun Road (NS) / Holland Road (EW)

Control Type:	All-way stop	Delay (sec / veh):	25.5
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.775

Intersection Setup

Name												
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	1	0	0	1	0	0	1	0	1	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	150.00	100.00	100.00	150.00	100.00	150.00	100.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	257	277	4	6	239	352	277	4	129	2	5	14
Base Volume Adjustment Factor	1.0000	1.0000	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]	257	277	4	6	239	352	277	4	129	2	5	14
Peak Hour Factor	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	70	75	1	2	65	95	75	1	35	1	1	4
Total Analysis Volume [veh/h]	278	300	4	7	259	381	300	4	140	2	5	15
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	419	446	422	449	492	434	462	508	383
Degree of Utilization, x	0.66	0.68	0.02	0.58	0.77	0.69	0.01	0.28	0.06

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	4.69	5.02	0.05	3.57	6.89	5.14	0.03	1.12	0.18
95th-Percentile Queue Length [ft]	117.15	125.50	1.27	89.19	172.25	128.46	0.65	27.88	4.55
Approach Delay [s/veh]	26.58		26.79			22.66			12.97
Approach LOS	D		D			C			B
Intersection Delay [s/veh]	25.45								
Intersection LOS	D								

Intersection Level Of Service Report
Intersection 16: Haun Rd-Zeiders Rd (NS)/Scott Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	23.9
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.553

Intersection Setup

Name												
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	1	0	0	1	0	0	1	0	0	1	0	1
Pocket Length [ft]	345.00	100.00	100.00	200.00	100.00	100.00	135.00	100.00	100.00	185.00	100.00	200.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	33	51	32	319	19	43	39	435	20	55	441	467
Base Volume Adjustment Factor	1.0000	1.0000	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]	33	51	32	319	19	43	39	435	20	55	441	467
Peak Hour Factor	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	13	8	82	5	11	10	112	5	14	113	120
Total Analysis Volume [veh/h]	34	52	33	327	19	44	40	446	21	56	452	479
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	1 - Coordination Group
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	19	0	0	51	0	11	19	0	11	19	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	7	7	7	14	14	5	58	6	59	59
g / C, Green / Cycle	0.07	0.07	0.07	0.14	0.14	0.05	0.58	0.06	0.59	0.59
(v / s)_i Volume / Saturation Flow Rate	0.02	0.03	0.02	0.11	0.11	0.02	0.25	0.03	0.24	0.30
s, saturation flow rate [veh/h]	1774	1863	1583	1774	1735	1774	1848	1774	1863	1583
c, Capacity [veh/h]	121	127	108	244	239	85	1068	100	1092	928
d1, Uniform Delay [s]	44.31	44.71	44.39	41.88	41.89	46.41	11.94	46.04	11.33	12.30
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.25	2.09	1.57	6.21	6.36	3.95	1.30	4.85	1.16	2.05
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

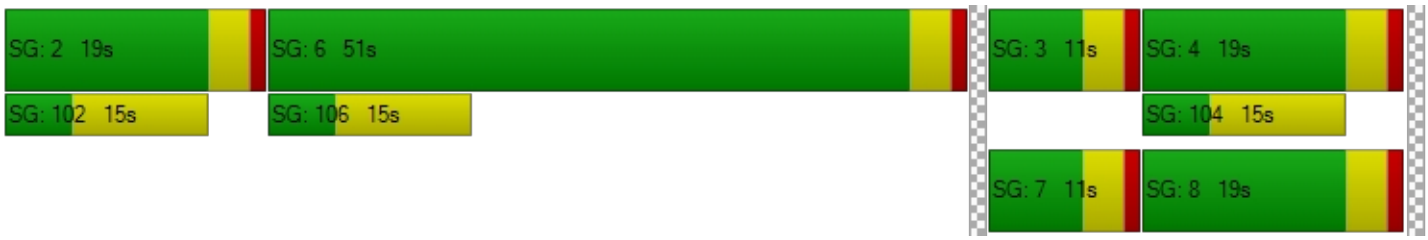
X, volume / capacity	0.28	0.41	0.31	0.81	0.81	0.47	0.44	0.56	0.41	0.52
d, Delay for Lane Group [s/veh]	45.56	46.81	45.96	48.09	48.25	50.36	13.24	50.89	12.49	14.35
Lane Group LOS	D	D	D	D	D	D	B	D	B	B
Critical Lane Group	No	Yes	No	No	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.81	1.26	0.79	4.90	4.80	1.02	5.33	1.43	4.93	5.80
50th-Percentile Queue Length [ft]	20.22	31.43	19.81	122.44	120.08	25.55	133.18	35.82	123.35	145.03
95th-Percentile Queue Length [veh]	1.46	2.26	1.43	8.53	8.40	1.84	9.11	2.58	8.58	9.75
95th-Percentile Queue Length [ft]	36.39	56.57	35.67	213.18	209.94	45.99	227.82	64.48	214.42	243.78

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	45.56	46.81	45.96	48.15	48.25	48.25	50.36	13.24	13.24	50.89	12.49	14.35
Movement LOS	D	D	D	D	D	D	D	B	B	D	B	B
d_A, Approach Delay [s/veh]	46.21			48.17			16.17			15.57		
Approach LOS	D			D			B			B		
d_I, Intersection Delay [s/veh]	23.89											
Intersection LOS	C											
Intersection V/C	0.553											

Sequence

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



Intersection Level Of Service Report
Intersection 17: I-215 SB Ramps (NS) / Scott Rd (EW)

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):	0.854

Intersection Setup

Name												
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	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	245.00	100.00	100.00
Speed [mph]		50.00			50.00			50.00			50.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		No			Yes			No			No	

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	392	0	155	0	497	238	413	680	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
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	392	0	155	0	497	238	413	680	0
Peak Hour Factor	0.9470	0.9470	0.9470	0.9470	0.9470	0.9470	0.9470	0.9470	0.9470	0.9470	0.9470	0.9470
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	103	0	41	0	131	63	109	180	0
Total Analysis Volume [veh/h]	0	0	0	414	0	164	0	525	251	436	718	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 - Coordination Group
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Split	Split	Split	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	0	0	0	6	0	0	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	0	0	0	7	0	0	7	0	7	7	0
Maximum Green [s]	0	0	0	0	30	0	0	30	0	30	30	0
Amber [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	54	0	0	11	0	45	56	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	10	0	0	10	0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall					No			No		No	No	
Maximum Recall					No			No		No	No	
Pedestrian Recall					No			No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group		C	R	C	R	L	C
C, Cycle Length [s]		110	110	110	110	110	110
L, Total Lost Time per Cycle [s]		4.00	4.00	4.00	4.00	4.00	4.00
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]		2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]		28	28	41	41	29	74
g / C, Green / Cycle		0.26	0.26	0.37	0.37	0.26	0.67
(v / s)_i Volume / Saturation Flow Rate		0.23	0.10	0.28	0.16	0.25	0.39
s, saturation flow rate [veh/h]		1774	1583	1863	1583	1774	1863
c, Capacity [veh/h]		456	407	689	585	469	1249
d1, Uniform Delay [s]		39.61	33.87	23.96	20.41	34.63	2.42
k, delay calibration		0.11	0.11	0.50	0.50	0.11	0.50
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		7.21	0.64	7.81	2.29	8.64	1.93
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.33	1.33	1.33	1.33
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

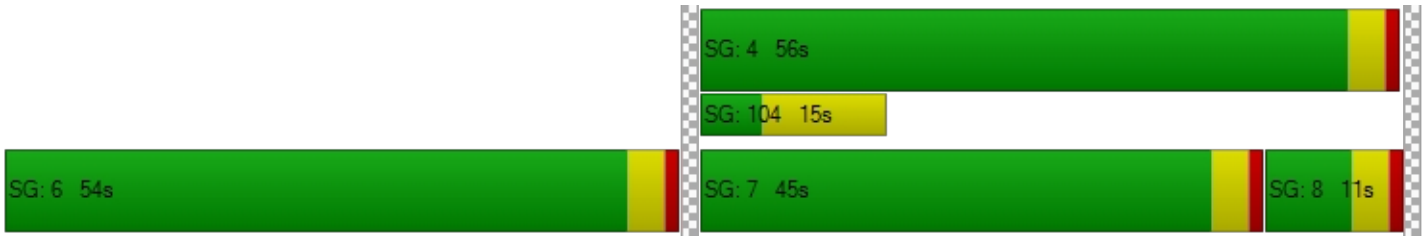
X, volume / capacity		0.91	0.40	0.76	0.43	0.93	0.57
d, Delay for Lane Group [s/veh]		46.81	34.52	31.77	22.70	43.27	4.35
Lane Group LOS		D	C	C	C	D	A
Critical Lane Group		Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh]		11.12	3.53	10.28	3.95	10.68	2.33
50th-Percentile Queue Length [ft]		278.06	88.30	256.89	98.81	266.88	58.24
95th-Percentile Queue Length [veh]		16.59	6.36	15.53	7.11	16.03	4.19
95th-Percentile Queue Length [ft]		414.80	158.93	388.32	177.87	400.84	104.84

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	46.81	46.81	34.52	0.00	31.77	22.70	43.27	4.35	0.00
Movement LOS				D	D	C		C	C	D	A	
d_A, Approach Delay [s/veh]	0.00			43.32			28.84			19.05		
Approach LOS	A			D			C			B		
d_I, Intersection Delay [s/veh]	27.67											
Intersection LOS	C											
Intersection V/C	0.854											

Sequence

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



Intersection Level Of Service Report
Intersection 18: I-215 NB Ramps (NS) / Scott Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	40.0
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.879

Intersection Setup

Name												
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	1	0	0	0	1	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	425.00	100.00	100.00	100.00	250.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		50.00			50.00			50.00			50.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		No			Yes			No			No	

Volumes

Name												
Base Volume Input [veh/h]	345	1	490	0	0	0	70	831	0	0	759	395
Base Volume Adjustment Factor	1.0000	1.0000	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	1.08	1.08	1.08	1.00	1.00	1.08	1.08	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]	345	1	490	0	0	0	70	831	0	0	759	395
Peak Hour Factor	0.9650	0.9650	0.9650	1.0000	1.0000	1.0000	0.9650	0.9650	1.0000	1.0000	0.9650	0.9650
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]	89	0	127	0	0	0	18	215	0	0	197	102
Total Analysis Volume [veh/h]	358	1	508	0	0	0	73	861	0	0	787	409
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 - Coordination Group
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	0	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	0	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	0	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	46	0	0	0	0	0	64	0	0	64	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	10	0	0	10	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	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]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	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	C	R		L	C	C	R
C, Cycle Length [s]	110	110		110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00		4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00		2.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00		2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	53	53		49	49	49	49
g / C, Green / Cycle	0.48	0.48		0.44	0.44	0.44	0.44
(v / s)_i Volume / Saturation Flow Rate	0.20	0.32		0.11	0.46	0.42	0.26
s, saturation flow rate [veh/h]	1774	1583		685	1863	1863	1583
c, Capacity [veh/h]	860	767		75	825	825	701
d1, Uniform Delay [s]	18.29	21.49		46.71	22.51	21.47	16.18
k, delay calibration	0.50	0.50		0.11	0.50	0.30	0.11
I, Upstream Filtering Factor	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.49	4.47		41.67	43.49	15.70	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		1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

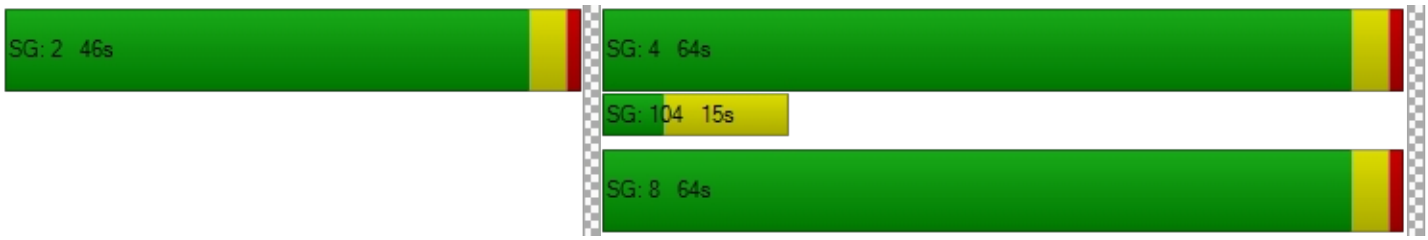
X, volume / capacity	0.42	0.66		0.97	1.04	0.95	0.58
d, Delay for Lane Group [s/veh]	19.79	25.95		88.39	66.00	37.16	16.95
Lane Group LOS	B	C		F	F	D	B
Critical Lane Group	No	Yes		No	Yes	No	No
50th-Percentile Queue Length [veh]	5.73	9.88		2.73	24.98	17.05	5.07
50th-Percentile Queue Length [ft]	143.21	247.00		68.23	624.61	426.31	126.65
95th-Percentile Queue Length [veh]	9.65	15.03		4.91	34.27	23.82	8.76
95th-Percentile Queue Length [ft]	241.34	375.87		122.81	856.84	595.62	218.93

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	19.79	19.79	25.95	0.00	0.00	0.00	88.39	66.00	0.00	0.00	37.16	16.95
Movement LOS	B	B	C				F	F			D	B
d_A, Approach Delay [s/veh]	23.40			0.00			67.75			30.25		
Approach LOS	C			A			E			C		
d_I, Intersection Delay [s/veh]	39.95											
Intersection LOS	D											
Intersection V/C	0.879											

Sequence

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



Intersection Level Of Service Report
Intersection 19: Antelope Rd (NS)/Scott Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	34.7
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.761

Intersection Setup

Name												
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	2	0	0	1	0	1	1	0	1	1	0	0
Pocket Length [ft]	215.00	100.00	100.00	200.00	100.00	200.00	375.00	100.00	250.00	200.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	392	287	189	59	167	279	271	777	283	60	508	54
Base Volume Adjustment Factor	1.0000	1.0000	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]	392	287	189	59	167	279	271	777	283	60	508	54
Peak Hour Factor	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760
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]	100	74	48	15	43	71	69	199	72	15	130	14
Total Analysis Volume [veh/h]	402	294	194	60	171	286	278	796	290	61	520	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	1 - Coordination Group
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
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]	18	28	0	18	28	0	25	41	0	13	29	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
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	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	14	28	28	6	20	20	18	45	45	6	33	33
g / C, Green / Cycle	0.14	0.28	0.28	0.06	0.20	0.20	0.18	0.45	0.45	0.06	0.33	0.33
(v / s)_i Volume / Saturation Flow Rate	0.12	0.16	0.12	0.03	0.09	0.18	0.16	0.30	0.31	0.03	0.16	0.16
s, saturation flow rate [veh/h]	3445	1863	1583	1774	1863	1583	1774	1863	1696	1774	1863	1801
c, Capacity [veh/h]	468	522	444	103	376	320	315	828	754	103	605	585
d1, Uniform Delay [s]	42.32	30.81	29.57	46.00	35.11	38.91	40.18	22.19	22.33	45.06	22.35	22.36
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.16	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.68	0.96	0.68	5.19	0.86	12.08	8.11	4.52	5.18	5.35	2.74	2.85
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	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

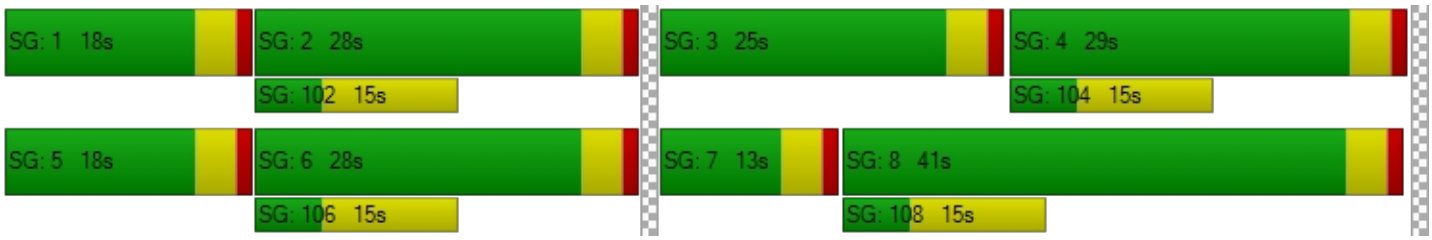
X, volume / capacity	0.86	0.56	0.44	0.58	0.45	0.89	0.88	0.68	0.69	0.59	0.48	0.48
d, Delay for Lane Group [s/veh]	47.00	31.77	30.25	51.19	35.96	50.99	48.29	26.71	27.50	50.41	25.08	25.21
Lane Group LOS	D	C	C	D	D	D	D	C	C	D	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	4.91	5.80	3.67	1.54	3.55	7.49	7.00	10.46	9.84	1.54	4.68	4.56
50th-Percentile Queue Length [ft]	122.73	145.00	91.73	38.49	88.81	187.31	174.97	261.55	246.12	38.46	116.93	113.98
95th-Percentile Queue Length [veh]	8.54	9.75	6.60	2.77	6.39	11.98	11.34	15.77	14.99	2.77	8.22	8.06
95th-Percentile Queue Length [ft]	213.58	243.74	165.11	69.28	159.86	299.53	283.44	394.16	374.77	69.23	205.60	201.53

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	47.00	31.77	30.25	51.19	35.96	50.99	48.29	26.94	27.50	50.41	25.14	25.21
Movement LOS	D	C	C	D	D	D	D	C	C	D	C	C
d_A, Approach Delay [s/veh]	38.32			46.04			31.41			27.57		
Approach LOS	D			D			C			C		
d_I, Intersection Delay [s/veh]	34.72											
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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



EXISTING PLUS PROJECT CONDITIONS
LEVELS OF SERVICE WORKSHEETS

Intersection Level Of Service Report
Intersection 1: Murrieta Rd (NS)/Newport Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	38.2
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.738

Intersection Setup

Name							Newport Rd			Newport Rd		
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	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	190.00	100.00	100.00	225.00	100.00	100.00	275.00	100.00	100.00	180.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							Newport Rd			Newport Rd		
Base Volume Input [veh/h]	180	373	120	310	321	170	267	848	113	131	677	116
Base Volume Adjustment Factor	1.0000	1.0000	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]	180	373	120	310	321	170	267	848	113	131	677	116
Peak Hour Factor	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090
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]	50	103	33	85	88	47	73	233	31	36	186	32
Total Analysis Volume [veh/h]	198	410	132	341	353	187	294	933	124	144	745	128
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	1 - Coordination Group
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
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]	36	19	0	36	19	0	26	31	0	14	19	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
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]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	13	27	27	21	35	35	19	26	26	10	17	17
g / C, Green / Cycle	0.13	0.27	0.27	0.21	0.35	0.35	0.19	0.26	0.26	0.10	0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.11	0.12	0.08	0.19	0.10	0.12	0.17	0.18	0.08	0.08	0.15	0.08
s, saturation flow rate [veh/h]	1774	3547	1583	1774	3547	1583	1774	5074	1583	1774	5074	1583
c, Capacity [veh/h]	236	962	430	380	1250	558	329	1297	405	175	858	268
d1, Uniform Delay [s]	42.34	30.06	29.00	38.26	23.31	23.80	39.82	33.99	30.10	44.26	40.52	37.61
k, delay calibration	0.11	0.50	0.50	0.16	0.50	0.50	0.12	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.69	1.38	1.85	10.70	0.57	1.62	9.42	0.76	0.42	9.16	2.86	1.32
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

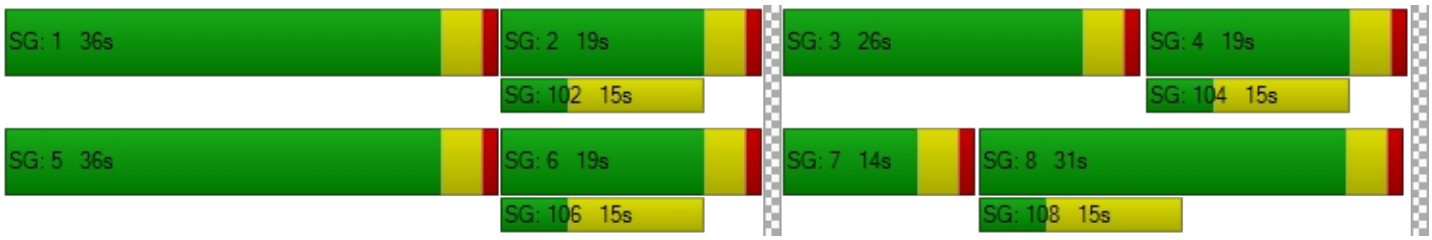
X, volume / capacity	0.84	0.43	0.31	0.90	0.28	0.34	0.89	0.72	0.31	0.82	0.87	0.48
d, Delay for Lane Group [s/veh]	50.04	31.44	30.85	48.96	23.88	25.42	49.24	34.75	30.52	53.41	43.38	38.94
Lane Group LOS	D	C	C	D	C	C	D	C	C	D	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	5.03	4.00	2.59	8.75	2.88	3.26	7.51	6.52	2.32	3.78	5.84	2.78
50th-Percentile Queue Length [ft]	125.81	99.97	64.75	218.83	72.04	81.55	187.68	163.11	57.97	94.49	146.03	69.62
95th-Percentile Queue Length [veh]	8.71	7.20	4.66	13.61	5.19	5.87	12.00	10.71	4.17	6.80	9.80	5.01
95th-Percentile Queue Length [ft]	217.78	179.95	116.55	340.13	129.68	146.78	300.02	267.83	104.34	170.07	245.12	125.31

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	50.04	31.44	30.85	48.96	23.88	25.42	49.24	34.75	30.52	53.41	43.38	38.94
Movement LOS	D	C	C	D	C	C	D	C	C	D	D	D
d_A, Approach Delay [s/veh]	36.31			33.91			37.51			44.24		
Approach LOS	D			C			D			D		
d_I, Intersection Delay [s/veh]	38.21											
Intersection LOS	D											
Intersection V/C	0.738											

Sequence

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



Intersection Level Of Service Report
Intersection 2: Bradley Rd (NS)/Newport Rd (EW)

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):	0.831

Intersection Setup

Name				Bradley Rd			Newport Rd			Newport Rd		
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	1	0	0	1	0	0	1	0	0	2	0	1
Pocket Length [ft]	100.00	100.00	100.00	125.00	100.00	100.00	165.00	100.00	100.00	155.00	100.00	150.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name				Bradley Rd			Newport Rd			Newport Rd		
Base Volume Input [veh/h]	109	200	378	196	239	58	73	1158	67	337	794	124
Base Volume Adjustment Factor	1.0000	1.0000	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	200	378	196	239	58	73	1158	67	337	794	124
Peak Hour Factor	0.8690	0.8690	0.8690	0.8690	0.8690	0.8690	0.8690	0.8690	0.8690	0.8690	0.8690	0.8690
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]	31	58	109	56	69	17	21	333	19	97	228	36
Total Analysis Volume [veh/h]	125	230	435	226	275	67	84	1333	77	388	914	143
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	1 - Coordination Group
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
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	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	2	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups			2,7									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	30	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	3.0	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	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	15	31	31	18	34	0	20	35	0	16	31	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	5	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	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	2.0	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	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	C	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]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	9	15	40	14	21	21	6	34	34	21	48	48
g / C, Green / Cycle	0.09	0.15	0.40	0.14	0.21	0.21	0.06	0.34	0.34	0.21	0.48	0.48
(v / s)_i Volume / Saturation Flow Rate	0.07	0.12	0.27	0.13	0.09	0.10	0.05	0.26	0.26	0.11	0.18	0.09
s, saturation flow rate [veh/h]	1774	1863	1583	1774	1863	1739	1774	3547	1811	3445	5074	1583
c, Capacity [veh/h]	156	289	633	249	387	361	113	1207	616	704	2439	761
d1, Uniform Delay [s]	44.81	40.77	24.89	42.40	34.71	34.75	46.05	29.58	29.58	35.71	16.47	14.84
k, delay calibration	0.11	0.11	0.39	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.15	4.98	4.73	11.88	0.84	0.91	9.07	4.86	9.16	0.67	0.44	0.55
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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	0.80	0.69	0.91	0.45	0.46	0.74	0.77	0.77	0.55	0.37	0.19
d, Delay for Lane Group [s/veh]	53.97	45.75	29.62	54.27	35.54	35.67	55.12	34.45	38.74	36.39	16.91	15.39
Lane Group LOS	D	D	C	D	D	D	E	C	D	D	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	3.30	5.57	8.56	6.03	3.63	3.44	2.25	10.04	10.99	4.07	4.05	1.79
50th-Percentile Queue Length [ft]	82.44	139.23	213.95	150.74	90.78	86.00	56.16	250.91	274.63	101.66	101.16	44.63
95th-Percentile Queue Length [veh]	5.94	9.44	13.36	10.06	6.54	6.19	4.04	15.23	16.42	7.32	7.28	3.21
95th-Percentile Queue Length [ft]	148.40	235.98	333.89	251.42	163.40	154.81	101.09	380.80	410.52	182.99	182.09	80.33

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	53.97	45.75	29.62	54.27	35.59	35.67	55.12	35.73	38.74	36.39	16.91	15.39
Movement LOS	D	D	C	D	D	D	E	D	D	D	B	B
d_A, Approach Delay [s/veh]	38.17			43.03			36.98			21.99		
Approach LOS	D			D			D			C		
d_I, Intersection Delay [s/veh]	32.96											
Intersection LOS	C											
Intersection V/C	0.831											

Sequence

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

Intersection Level Of Service Report
Intersection 3: Haun Road (NS) / Newport Road (EW)

Control Type:	Signalized	Delay (sec / veh):	53.7
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.939

Intersection Setup

Name	Haun Rd			Haun Rd						Newport Rd		
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	2	0	0	2	0	0	2	0	0	2	0	0
Pocket Length [ft]	215.00	100.00	100.00	155.00	100.00	100.00	210.00	100.00	100.00	350.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Haun Rd			Haun Rd						Newport Rd		
Base Volume Input [veh/h]	180	80	723	110	44	30	121	1432	297	1025	1057	322
Base Volume Adjustment Factor	1.0000	1.0000	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]	180	80	723	110	44	30	121	1432	297	1025	1057	322
Peak Hour Factor	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	47	21	191	29	12	8	32	378	78	270	279	85
Total Analysis Volume [veh/h]	190	84	763	116	46	32	128	1511	313	1081	1115	340
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	1 - Coordination Group
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
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	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	2	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups			2,7									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	30	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	3.0	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	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	32	40	40	11	19	0	11	43	0	46	78	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	5	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	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	2.0	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	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	C	L	C	R	L	C	C
C, Cycle Length [s]	140	140	140	140	140	140	140	140	140	140	140	140
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	10	36	82	7	33	33	7	39	39	42	74	74
g / C, Green / Cycle	0.07	0.26	0.59	0.05	0.24	0.24	0.05	0.28	0.28	0.30	0.53	0.53
(v / s)_i Volume / Saturation Flow Rate	0.06	0.05	0.27	0.03	0.02	0.02	0.04	0.30	0.20	0.31	0.27	0.29
s, saturation flow rate [veh/h]	3445	1863	2802	3445	1863	1622	3445	5074	1583	3445	3547	1657
c, Capacity [veh/h]	247	478	1640	171	437	380	173	1419	443	1033	1877	877
d1, Uniform Delay [s]	63.85	40.51	16.56	65.43	41.91	41.99	65.59	50.43	45.28	49.01	21.36	21.89
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.24	0.11	0.11	0.14
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.02	0.80	0.95	4.66	0.41	0.52	6.11	33.23	4.64	27.32	0.22	0.69
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

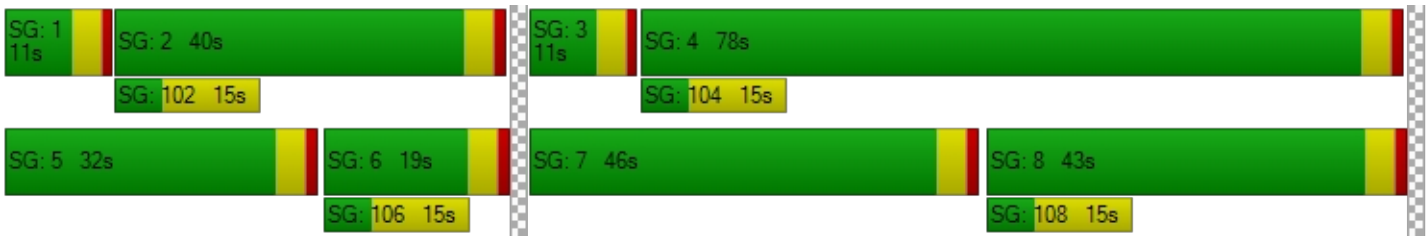
X, volume / capacity	0.77	0.18	0.47	0.68	0.09	0.10	0.74	1.07	0.71	1.05	0.52	0.55
d, Delay for Lane Group [s/veh]	68.87	41.31	17.51	70.08	42.32	42.52	71.70	83.65	49.92	76.33	21.58	22.58
Lane Group LOS	E	D	B	E	D	D	E	F	D	F	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh]	3.42	2.31	6.68	2.10	1.11	1.07	2.35	20.28	10.03	21.21	9.78	10.07
50th-Percentile Queue Length [ft]	85.52	57.85	166.91	52.53	27.79	26.63	58.75	506.92	250.68	530.24	244.49	251.79
95th-Percentile Queue Length [veh]	6.16	4.17	10.91	3.78	2.00	1.92	4.23	28.76	15.22	29.61	14.91	15.28
95th-Percentile Queue Length [ft]	153.94	104.14	272.85	94.56	50.03	47.93	105.75	718.97	380.51	740.35	372.70	381.90

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	68.87	41.31	17.51	70.08	42.35	42.52	71.70	83.65	49.92	76.33	21.71	22.58
Movement LOS	E	D	B	E	D	D	E	F	D	F	C	C
d_A, Approach Delay [s/veh]	28.85			58.96			77.46			45.11		
Approach LOS	C			E			E			D		
d_I, Intersection Delay [s/veh]	53.67											
Intersection LOS	D											
Intersection V/C	0.939											

Sequence

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



Intersection Level Of Service Report
Intersection 4: I-215 SB Ramps (NS) / Newport Road (EW)

Control Type:	Signalized	Delay (sec / veh):	14.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.216

Intersection Setup

Name	I-215 SB Ramps			I-215 SB Ramps			Newport Rd			Newport Rd		
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	1	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	800.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name	I-215 SB Ramps			I-215 SB Ramps			Newport Rd			Newport Rd		
Base Volume Input [veh/h]	0	0	0	333	0	548	0	1608	666	0	1872	1057
Base Volume Adjustment Factor	1.0000	1.0000	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	333	0	548	0	1608	666	0	1872	1057
Peak Hour Factor	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	89	0	147	0	430	178	0	501	283
Total Analysis Volume [veh/h]	0	0	0	357	0	587	0	1722	713	0	2004	1132
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 - Coordination Group
Cycle Length [s]	140
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	Overlap	Protecte	Permiss	Overlap
Signal group	0	0	0	1	0	0	0	8	8	7	4	4
Auxiliary Signal Groups									1,4,8			1,4,8
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	7	0	0	0	7	7	0	7	7
Maximum Green [s]	0	0	0	30	0	0	0	30	30	0	30	30
Amber [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0
All red [s]	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0	1.0
Split [s]	0	0	0	50	0	0	0	90	90	0	90	90
Vehicle Extension [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0
Walk [s]	0	0	0	5	0	0	0	5	5	0	5	5
Pedestrian Clearance [s]	0	0	0	10	0	0	0	10	10	0	10	10
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	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0
Minimum Recall				No				No	No		No	No
Maximum Recall				No				No	No		No	No
Pedestrian Recall				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	C	R	C	R
C, Cycle Length [s]		140	140	140	140	140	140	140
L, Total Lost Time per Cycle [s]		4.00	4.00	4.00	4.00	0.00	4.00	0.00
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]		2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]		38	38	38	94	136	94	136
g / C, Green / Cycle		0.27	0.27	0.27	0.67	0.97	0.67	0.97
(v / s)_i Volume / Saturation Flow Rate		0.18	0.20	0.20	0.25	0.45	0.39	0.71
s, saturation flow rate [veh/h]		1774	1605	1583	6765	1583	5074	1583
c, Capacity [veh/h]		479	433	427	4554	1538	3415	1538
d1, Uniform Delay [s]		45.42	46.35	46.48	10.03	0.10	12.35	0.20
k, delay calibration		0.12	0.16	0.17	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		1.83	3.45	3.76	0.24	1.01	0.75	3.18
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		0.66	0.72	0.73	0.38	0.46	0.59	0.74
d, Delay for Lane Group [s/veh]		47.25	49.79	50.24	10.27	1.11	13.10	3.38
Lane Group LOS		D	D	D	B	A	B	A
Critical Lane Group		No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]		9.75	9.99	10.03	5.23	0.43	10.09	1.36
50th-Percentile Queue Length [ft]		243.75	249.82	250.85	130.73	10.76	252.20	33.94
95th-Percentile Queue Length [veh]		14.87	15.18	15.23	8.98	0.77	15.30	2.44
95th-Percentile Queue Length [ft]		371.77	379.42	380.73	224.49	19.36	382.42	61.09

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	47.55	0.00	50.03	0.00	10.27	1.11	0.00	13.10	3.38
Movement LOS				D		D		B	A		B	A
d_A, Approach Delay [s/veh]	0.00			49.08			7.59			9.59		
Approach LOS	A			D			A			A		
d_I, Intersection Delay [s/veh]	14.56											
Intersection LOS	B											
Intersection V/C	0.216											

Sequence

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

Intersection Level Of Service Report
Intersection 5: I-215 NB Ramps (NS) / Newport Road (EW)

Control Type:	Signalized	Delay (sec / veh):	17.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.653

Intersection Setup

Name	I-215 NB Ramps			I-215 NB Ramps			Newport Rd			Newport Rd		
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	1	0	1	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	375.00	100.00	375.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name	I-215 NB Ramps			I-215 NB Ramps			Newport Rd			Newport Rd		
Base Volume Input [veh/h]	475	0	541	0	0	0	0	1521	398	0	2447	491
Base Volume Adjustment Factor	1.0000	1.0000	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]	475	0	541	0	0	0	0	1521	398	0	2447	491
Peak Hour Factor	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	127	0	145	0	0	0	0	407	106	0	654	131
Total Analysis Volume [veh/h]	508	0	579	0	0	0	0	1627	426	0	2617	525
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 - Coordination Group
Cycle Length [s]	140
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	Split	Permiss	Split	Permiss	Permiss	Permiss	Protecte	Permiss	Overlap	Permiss	Permiss	Overlap
Signal group	5	0	0	0	0	0	3	8	5	0	4	4
Auxiliary Signal Groups									4,5,8			4,5,8
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	0	0	0	0	0	0	7	7	0	7	7
Maximum Green [s]	30	0	0	0	0	0	0	30	30	0	30	30
Amber [s]	3.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0
All red [s]	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0	1.0
Split [s]	118	0	0	0	0	0	0	22	118	0	22	22
Vehicle Extension [s]	3.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0
Walk [s]	5	0	0	0	0	0	0	5	5	0	5	5
Pedestrian Clearance [s]	10	0	0	0	0	0	0	10	10	0	10	10
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	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0
Minimum Recall	No							No	No		No	No
Maximum Recall	No							No	No		No	No
Pedestrian Recall	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		C	R	C	R
C, Cycle Length [s]	140	140	140		140	140	140	140
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00		4.00	0.00	4.00	0.00
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]	2.00	2.00	2.00		2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	39	39	39		93	136	93	136
g / C, Green / Cycle	0.28	0.28	0.28		0.66	0.97	0.66	0.97
(v / s)_i Volume / Saturation Flow Rate	0.20	0.22	0.23		0.32	0.27	0.39	0.33
s, saturation flow rate [veh/h]	1774	1655	1583		5074	1583	6765	1583
c, Capacity [veh/h]	495	461	441		3369	1538	4493	1538
d1, Uniform Delay [s]	45.71	46.57	47.17		11.62	0.08	12.87	0.09
k, delay calibration	0.11	0.11	0.11		0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.12	2.99	3.85		0.50	0.45	0.56	0.61
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	0.73	0.79	0.82		0.48	0.28	0.58	0.34
d, Delay for Lane Group [s/veh]	47.83	49.57	51.02		12.12	0.53	13.43	0.69
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]	11.32	11.62	11.86		7.56	0.19	10.07	0.26
50th-Percentile Queue Length [ft]	283.06	290.57	296.40		189.05	4.78	251.84	6.46
95th-Percentile Queue Length [veh]	16.84	17.21	17.50		12.07	0.34	15.28	0.47
95th-Percentile Queue Length [ft]	421.03	430.35	437.58		301.80	8.61	381.97	11.64

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	48.33	0.00	50.48	0.00	0.00	0.00	0.00	12.12	0.53	0.00	13.43	0.69
Movement LOS	D		D					B	A		B	A
d_A, Approach Delay [s/veh]	49.47			0.00			9.71			11.30		
Approach LOS	D			A			A			B		
d_I, Intersection Delay [s/veh]	17.39											
Intersection LOS	B											
Intersection V/C	0.653											

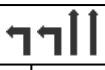
Sequence

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

Intersection Level Of Service Report
Intersection 6: Antelope Rd (NS)/Newport Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	36.4
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.829

Intersection Setup

Name							Newport Rd			Newport Rd		
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	2	0	0	2	0	0	2	0	0	2	0	0
Pocket Length [ft]	330.00	100.00	100.00	100.00	100.00	100.00	325.00	100.00	100.00	200.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							Newport Rd			Newport Rd		
Base Volume Input [veh/h]	610	31	97	77	64	193	84	1294	673	137	2134	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]	610	31	97	77	64	193	84	1294	673	137	2134	41
Peak Hour Factor	0.9570	0.9570	0.9570	0.9570	0.9570	0.9570	0.9570	0.9570	0.9570	0.9570	0.9570	0.9570
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]	159	8	25	20	17	50	22	338	176	36	557	11
Total Analysis Volume [veh/h]	637	32	101	80	67	202	88	1352	703	143	2230	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	1 - Coordination Group
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
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]	75	20	0	74	19	0	12	35	0	11	34	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
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	C	R	L	C	C	L	C	C
C, Cycle Length [s]	140	140	140	140	140	140	140	140	140	140	140	140	140
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	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	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	2.00
g_i, Effective Green Time [s]	29	34	34	7	11	11	11	7	75	75	8	77	77
g / C, Green / Cycle	0.21	0.24	0.24	0.05	0.08	0.08	0.08	0.05	0.54	0.54	0.06	0.55	0.55
(v / s)_i Volume / Saturation Flow Rate	0.18	0.02	0.06	0.02	0.04	0.06	0.06	0.03	0.38	0.44	0.04	0.42	0.39
s, saturation flow rate [veh/h]	3445	1863	1583	3445	1863	1583	1583	3445	3547	1583	3445	3547	2000
c, Capacity [veh/h]	715	449	382	167	152	130	130	169	1909	852	200	1941	1095
d1, Uniform Delay [s]	53.91	41.03	43.07	64.88	61.21	63.03	63.03	64.96	24.12	26.84	64.79	24.78	23.52
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
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
d2, Incremental Delay [s]	4.09	0.07	0.37	2.13	1.99	9.68	9.68	2.48	2.25	8.94	4.71	3.01	3.96
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	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	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	1.00

Lane Group Results

X, volume / capacity	0.89	0.07	0.26	0.48	0.44	0.78	0.78	0.52	0.71	0.82	0.72	0.77	0.71
d, Delay for Lane Group [s/veh]	58.00	41.09	43.43	67.01	63.20	72.71	72.71	67.44	26.37	35.78	69.50	27.78	27.47
Lane Group LOS	E	D	D	E	E	E	E	E	C	D	E	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	10.96	0.85	2.81	1.41	2.30	3.79	3.79	1.56	16.06	20.01	2.58	18.60	18.84
50th-Percentile Queue Length [ft]	274.08	21.14	70.32	35.25	57.56	94.79	94.79	38.93	401.41	500.22	64.52	464.98	470.99
95th-Percentile Queue Length [veh]	16.39	1.52	5.06	2.54	4.14	6.83	6.83	2.80	22.63	27.34	4.65	25.67	25.96
95th-Percentile Queue Length [ft]	409.83	38.05	126.57	63.44	103.6	170.6	170.6	70.07	565.70	683.62	116.14	641.80	648.95

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	58.00	41.09	43.43	67.01	63.20	72.71	67.44	26.37	35.78	69.50	27.68	27.47
Movement LOS	E	D	D	E	E	E	E	C	D	E	C	C
d_A, Approach Delay [s/veh]	55.39			69.58			31.14			30.15		
Approach LOS	E			E			C			C		
d_I, Intersection Delay [s/veh]	36.37											
Intersection LOS	D											
Intersection V/C	0.829											

Sequence

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

Intersection Level Of Service Report
Intersection 7: Menifee Rd (NS)/NewportRd (EW)

Control Type:	Signalized	Delay (sec / veh):	45.6
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.982

Intersection Setup

Name							Newport Rd			Newport Rd		
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	1	0	1	1	0	0	1	0	0	2	0	0
Pocket Length [ft]	250.00	100.00	200.00	100.00	100.00	100.00	400.00	100.00	100.00	295.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							Newport Rd			Newport Rd		
Base Volume Input [veh/h]	244	255	128	79	240	432	248	1017	184	191	1445	50
Base Volume Adjustment Factor	1.0000	1.0000	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]	244	255	128	79	240	432	248	1017	184	191	1445	50
Peak Hour Factor	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	66	68	34	21	64	116	67	273	49	51	388	13
Total Analysis Volume [veh/h]	262	274	137	85	258	464	266	1092	198	205	1552	54
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	1 - Coordination Group
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
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	28	0	18	34	0	19	43	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	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
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	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]	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]	8	32	32	6	30	30	15	39	39	7	31	31
g / C, Green / Cycle	0.08	0.32	0.32	0.06	0.30	0.30	0.15	0.39	0.39	0.07	0.31	0.31
(v / s)_i Volume / Saturation Flow Rate	0.08	0.08	0.09	0.05	0.07	0.29	0.15	0.24	0.24	0.06	0.31	0.03
s, saturation flow rate [veh/h]	3445	3547	1583	1774	3547	1583	1774	3547	1720	3445	5074	1583
c, Capacity [veh/h]	276	1122	501	112	1063	475	269	1379	669	247	1565	488
d1, Uniform Delay [s]	45.80	25.33	25.59	46.07	26.44	34.68	42.32	24.74	24.74	45.83	34.44	24.75
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.43	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	15.84	0.11	0.29	9.82	0.12	33.39	22.75	2.19	4.47	7.12	20.81	0.46
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

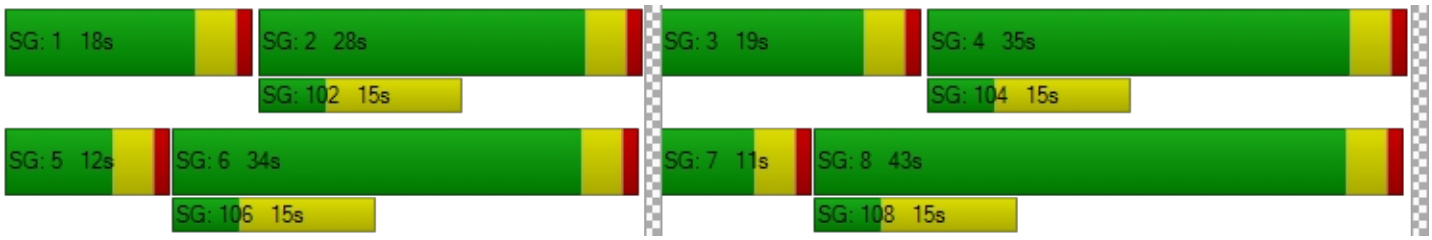
X, volume / capacity	0.95	0.24	0.27	0.76	0.24	0.98	0.99	0.63	0.63	0.83	0.99	0.11
d, Delay for Lane Group [s/veh]	61.64	25.44	25.88	55.88	26.56	68.07	65.07	26.94	29.21	52.95	55.26	25.21
Lane Group LOS	E	C	C	E	C	E	E	C	C	D	E	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	3.69	2.27	2.32	2.29	2.20	14.68	7.89	8.00	8.18	2.64	14.49	0.92
50th-Percentile Queue Length [ft]	92.30	56.84	57.99	57.27	54.88	366.91	197.36	199.92	204.56	66.08	362.33	23.07
95th-Percentile Queue Length [veh]	6.65	4.09	4.18	4.12	3.95	20.96	12.50	12.63	12.87	4.76	20.74	1.66
95th-Percentile Queue Length [ft]	166.14	102.30	104.38	103.09	98.79	523.98	312.56	315.86	321.84	118.94	518.42	41.53

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	61.64	25.44	25.88	55.88	26.56	68.07	65.07	27.40	29.21	52.95	55.26	25.21
Movement LOS	E	C	C	E	C	E	E	C	C	D	E	C
d_A, Approach Delay [s/veh]	39.62			53.52			34.07			54.10		
Approach LOS	D			D			C			D		
d_I, Intersection Delay [s/veh]	45.56											
Intersection LOS	D											
Intersection V/C	0.982											

Sequence

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



Intersection Level Of Service Report
Intersection 8: Bradley Rd (N/S) / La Piedra Rd (E/W)

Control Type:	Signalized	Delay (sec / veh):	25.8
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.590

Intersection Setup

Name												
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	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	150.00	100.00	100.00	155.00	100.00	100.00	100.00	100.00	100.00	150.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	26	594	63	137	550	9	35	20	30	87	65	189
Base Volume Adjustment Factor	1.0000	1.0000	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]	26	594	63	137	550	9	35	20	30	87	65	189
Peak Hour Factor	0.7990	0.7990	0.7990	0.7990	0.7990	0.7990	0.7990	0.7990	0.7990	0.7990	0.7990	0.7990
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	186	20	43	172	3	11	6	9	27	20	59
Total Analysis Volume [veh/h]	33	743	79	171	688	11	44	25	38	109	81	237
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 Coordinated
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]	11	34	0	17	40	0	11	19	0	30	38	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	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	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	4	50	50	11	57	57	5	14	14	8	17	17
g / C, Green / Cycle	0.04	0.50	0.50	0.11	0.57	0.57	0.05	0.14	0.14	0.08	0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.02	0.22	0.22	0.10	0.19	0.19	0.02	0.01	0.02	0.06	0.04	0.15
s, saturation flow rate [veh/h]	1774	1863	1801	1774	1863	1852	1774	1863	1583	1774	1863	1583
c, Capacity [veh/h]	77	933	902	204	1067	1061	90	270	230	140	324	275
d1, Uniform Delay [s]	46.71	16.08	16.08	43.40	11.26	11.26	46.29	37.09	37.49	45.24	35.74	40.20
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.78	1.55	1.61	8.81	0.82	0.83	4.11	0.15	0.34	8.83	0.40	7.82
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	0.43	0.45	0.45	0.84	0.33	0.33	0.49	0.09	0.17	0.78	0.25	0.86
d, Delay for Lane Group [s/veh]	50.49	17.63	17.69	52.21	12.08	12.09	50.40	37.24	37.83	54.07	36.14	48.02
Lane Group LOS	D	B	B	D	B	B	D	D	D	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.85	5.81	5.64	4.44	3.72	3.70	1.12	0.52	0.80	2.88	1.66	5.95
50th-Percentile Queue Length [ft]	21.20	145.34	140.92	110.98	92.91	92.44	28.07	12.93	19.99	71.96	41.52	148.63
95th-Percentile Queue Length [veh]	1.53	9.77	9.53	7.89	6.69	6.66	2.02	0.93	1.44	5.18	2.99	9.94
95th-Percentile Queue Length [ft]	38.15	244.19	238.26	197.37	167.24	166.39	50.52	23.28	35.97	129.52	74.73	248.59

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	50.49	17.65	17.69	52.21	12.08	12.09	50.40	37.24	37.83	54.07	36.14	48.02
Movement LOS	D	B	B	D	B	B	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	18.92			19.97			42.86			47.31		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	25.83											
Intersection LOS	C											
Intersection V/C	0.590											

Sequence

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

Intersection Level Of Service Report
Intersection 9: Bradley Rd (NS)/Holland Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	48.3
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.909

Intersection Setup

Name												
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	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	130.00	100.00	100.00	150.00	100.00	100.00	145.00	100.00	100.00	140.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	48	318	164	96	426	204	106	258	182	174	189	125
Base Volume Adjustment Factor	1.0000	1.0000	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]	48	318	164	96	426	204	106	258	182	174	189	125
Peak Hour Factor	0.8630	0.8630	0.8630	0.8630	0.8630	0.8630	0.8630	0.8630	0.8630	0.8630	0.8630	0.8630
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	92	48	28	123	59	31	75	53	50	55	36
Total Analysis Volume [veh/h]	56	368	190	111	494	236	123	299	211	202	219	145
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	1 - Coordination Group
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]	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]	11	40	0	12	41	0	44	49	0	19	24	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	R	L	C	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	44	8	46	46	10	37	15	42	42
g / C, Green / Cycle	0.05	0.36	0.07	0.38	0.38	0.09	0.31	0.13	0.35	0.35
(v / s)_i Volume / Saturation Flow Rate	0.03	0.32	0.06	0.27	0.15	0.07	0.29	0.11	0.12	0.09
s, saturation flow rate [veh/h]	1774	1757	1774	1863	1583	1774	1736	1774	1863	1583
c, Capacity [veh/h]	90	637	121	708	601	153	539	223	651	554
d1, Uniform Delay [s]	55.86	35.74	55.65	31.44	27.15	53.86	40.47	51.79	28.79	27.97
k, delay calibration	0.11	0.50	0.11	0.50	0.50	0.11	0.31	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.75	15.54	22.68	5.65	1.92	9.30	20.00	12.76	0.30	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	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

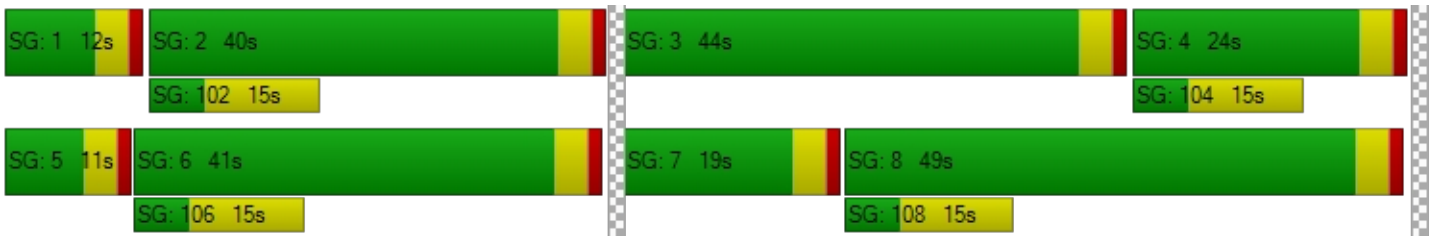
X, volume / capacity	0.62	0.88	0.92	0.70	0.39	0.80	0.95	0.90	0.34	0.26
d, Delay for Lane Group [s/veh]	62.61	51.28	78.34	37.09	29.07	63.16	60.47	64.55	29.10	28.22
Lane Group LOS	E	D	E	D	C	E	E	E	C	C
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	1.78	17.02	3.99	12.46	5.00	3.92	16.85	6.58	4.49	2.89
50th-Percentile Queue Length [ft]	44.55	425.55	99.86	311.45	125.04	98.10	421.18	164.39	112.23	72.26
95th-Percentile Queue Length [veh]	3.21	23.79	7.19	18.25	8.67	7.06	23.58	10.78	7.96	5.20
95th-Percentile Queue Length [ft]	80.19	594.70	179.75	456.16	216.74	176.57	589.46	269.52	199.10	130.07

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	62.61	51.28	51.28	78.34	37.09	29.07	63.16	60.47	60.47	64.55	29.10	28.22
Movement LOS	E	D	D	E	D	C	E	E	E	E	C	C
d_A, Approach Delay [s/veh]	52.32			40.28			60.99			41.52		
Approach LOS	D			D			E			D		
d_I, Intersection Delay [s/veh]	48.27											
Intersection LOS	D											
Intersection V/C	0.909											

Sequence

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



Intersection Level Of Service Report
Intersection 10: Town Center Dr-Sherman Rd (NS) / La Piedra Rd (EW)

Control Type:	All-way stop	Delay (sec / veh):	10.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.358

Intersection Setup

Name												
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	1	0	1	1	0	0	0	0	0	1	0	0
Pocket Length [ft]	210.00	100.00	500.00	150.00	100.00	100.00	100.00	100.00	100.00	800.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	1	188	1	1	0	0	30	0	125	15	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	1	188	1	1	0	0	30	0	125	15	2
Peak Hour Factor	0.6790	0.6790	0.6790	0.6790	0.6790	0.6790	0.6790	0.6790	0.6790	0.6790	0.6790	0.6790
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	69	0	0	0	0	11	0	46	6	1
Total Analysis Volume [veh/h]	0	1	277	1	1	0	0	44	0	184	22	3
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	673	673	774	563	611	618	618	610	667	766
Degree of Utilization, x	0.00	0.00	0.36	0.00	0.00	0.00	0.07	0.30	0.03	0.00

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.00	0.00	1.63	0.01	0.00	0.00	0.23	1.27	0.10	0.01
95th-Percentile Queue Length [ft]	0.00	0.11	40.70	0.13	0.12	0.00	5.73	31.64	2.56	0.29
Approach Delay [s/veh]	9.91			8.86		8.97		10.78		
Approach LOS	A			A		A		B		
Intersection Delay [s/veh]	10.17									
Intersection LOS	B									

Intersection Level Of Service Report
Intersection 11: Town Center Dr-Sherman Rd (NS)/Holland Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	70.0
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.086

Intersection Setup

Name												
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	1	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	500.00	100.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	4	1	26	2	0	26	122	561	5	6	494	110
Base Volume Adjustment Factor	1.0000	1.0000	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]	4	1	26	2	0	26	122	561	5	6	494	110
Peak Hour Factor	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	8	1	0	8	37	169	2	2	149	33
Total Analysis Volume [veh/h]	5	1	31	2	0	31	147	677	6	7	596	133
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.09	0.02	0.07	0.03	0.00	0.06	0.17	0.01	0.00	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	70.03	63.59	16.29	64.27	52.22	13.21	9.94	0.00	0.00	8.99	0.00	0.00
Movement LOS	F	F	C	F	F	B	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.60	0.60	0.60	0.31	0.31	0.31	14.69	14.69	0.00	5.19	5.19	0.00
95th-Percentile Queue Length [ft]	14.91	14.91	14.91	7.71	7.71	7.71	367.23	367.23	0.00	129.76	129.76	0.00
d_A, Approach Delay [s/veh]	24.83			16.30			1.76			0.09		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	1.82											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 12: Haun Rd (NS)/Village-Market Dr (EW)

Control Type:	Signalized	Delay (sec / veh):	15.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.539

Intersection Setup

Name	Haun Rd			Haun Rd								
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	1	0	0	2	0	0	0	0	0	0	0	1
Pocket Length [ft]	100.00	100.00	100.00	175.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	65.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Haun Rd			Haun Rd								
Base Volume Input [veh/h]	9	917	29	116	1184	46	19	5	6	9	5	68
Base Volume Adjustment Factor	1.0000	1.0000	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]	9	917	29	116	1184	46	19	5	6	9	5	68
Peak Hour Factor	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	266	8	34	344	13	6	1	2	3	1	20
Total Analysis Volume [veh/h]	10	1065	34	135	1375	53	22	6	7	10	6	79
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	1 - Coordination Group
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
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	Permiss	Permiss	Overlap
Signal group	5	2	0	1	6	0	3	8	0	0	4	4
Auxiliary Signal Groups												4
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	0	7	7
Maximum Green [s]	30	30	0	30	30	0	7	30	0	0	30	30
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	3.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	1.0
Split [s]	11	33	0	11	33	0	11	36	0	0	25	25
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	3.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	5
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	10
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	0.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0
Minimum Recall	No	No		No	No		Yes	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	C	L	C	C	L	C	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	0.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	1	44	44	7	49	49	17	17	6	6
g / C, Green / Cycle	0.02	0.55	0.55	0.08	0.62	0.62	0.21	0.21	0.08	0.08
(v / s)_i Volume / Saturation Flow Rate	0.01	0.30	0.30	0.04	0.38	0.39	0.01	0.01	0.01	0.03
s, saturation flow rate [veh/h]	1774	1863	1843	3445	1863	1839	1597	1684	1665	2803
c, Capacity [veh/h]	34	1025	1014	290	1147	1132	471	469	203	219
d1, Uniform Delay [s]	38.78	11.51	11.51	34.97	9.61	9.64	24.86	24.96	34.34	35.03
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.81	2.03	2.05	1.16	2.58	2.64	0.03	0.04	0.16	1.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.30	0.54	0.54	0.46	0.63	0.63	0.03	0.04	0.08	0.36
d, Delay for Lane Group [s/veh]	43.59	13.54	13.56	36.12	12.19	12.29	24.88	25.00	34.50	36.03
Lane Group LOS	D	B	B	D	B	B	C	C	C	D
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	0.23	5.43	5.38	1.21	6.33	6.31	0.20	0.30	0.28	0.71
50th-Percentile Queue Length [ft]	5.66	135.86	134.58	30.30	158.24	157.77	4.89	7.40	6.98	17.75
95th-Percentile Queue Length [veh]	0.41	9.26	9.19	2.18	10.46	10.43	0.35	0.53	0.50	1.28
95th-Percentile Queue Length [ft]	10.19	231.43	229.71	54.53	261.39	260.77	8.80	13.33	12.56	31.95

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	43.59	13.55	13.56	36.12	12.24	12.29	24.92	25.00	25.00	34.50	34.50	36.03
Movement LOS	D	B	B	D	B	B	C	C	C	C	C	D
d_A, Approach Delay [s/veh]	13.82			14.30			24.95			35.77		
Approach LOS	B			B			C			D		
d_I, Intersection Delay [s/veh]	14.97											
Intersection LOS	B											
Intersection V/C	0.539											

Sequence

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

Intersection Level Of Service Report
Intersection 13: Haun Rd (NS)/Countryside Market Place (EW)

Control Type:	Signalized	Delay (sec / veh):	9.4
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.492

Intersection Setup

Name	Haun Rd			Haun Rd								
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	1	0	0	2	0	0	0	0	1	1	0	0
Pocket Length [ft]	200.00	100.00	100.00	235.00	100.00	100.00	100.00	100.00	40.00	100.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Haun Rd			Haun Rd								
Base Volume Input [veh/h]	10	936	35	105	1090	0	3	0	11	23	1	71
Base Volume Adjustment Factor	1.0000	1.0000	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]	10	936	35	105	1090	0	3	0	11	23	1	71
Peak Hour Factor	0.7950	0.7950	0.7950	0.7950	0.7950	0.7950	0.7950	0.7950	0.7950	0.7950	0.7950	0.7950
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	294	11	33	343	0	1	0	3	7	0	22
Total Analysis Volume [veh/h]	13	1177	44	132	1371	0	4	0	14	29	1	89
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	1 - Coordination Group
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
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	Overlap
Signal group	5	2	0	1	6	0	0	8	0	0	4	4
Auxiliary Signal Groups												4
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	7
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	30
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0
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	1.0
Split [s]	11	32	0	11	32	0	0	27	0	0	27	27
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	5
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	10
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	2.0
I2, Clearance 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	2.0
Minimum Recall	No	No		No	No			No			No	No
Maximum Recall	No	No		No	No			No			No	No
Pedestrian Recall	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	C	L	C	C	L	C	C	R
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	45	45	7	50	50	6	6	6	6
g / C, Green / Cycle	0.02	0.64	0.64	0.09	0.71	0.71	0.09	0.09	0.09	0.09
(v / s)_i Volume / Saturation Flow Rate	0.01	0.33	0.33	0.04	0.37	0.37	0.00	0.01	0.03	0.03
s, saturation flow rate [veh/h]	1774	1863	1839	3445	1863	1863	1410	1583	935	2803
c, Capacity [veh/h]	43	1199	1184	323	1329	1329	139	145	187	257
d1, Uniform Delay [s]	33.64	6.64	6.65	29.95	4.56	4.56	33.35	29.20	31.46	29.89
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.92	1.57	1.59	0.83	1.43	1.43	0.08	0.29	0.40	0.80
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

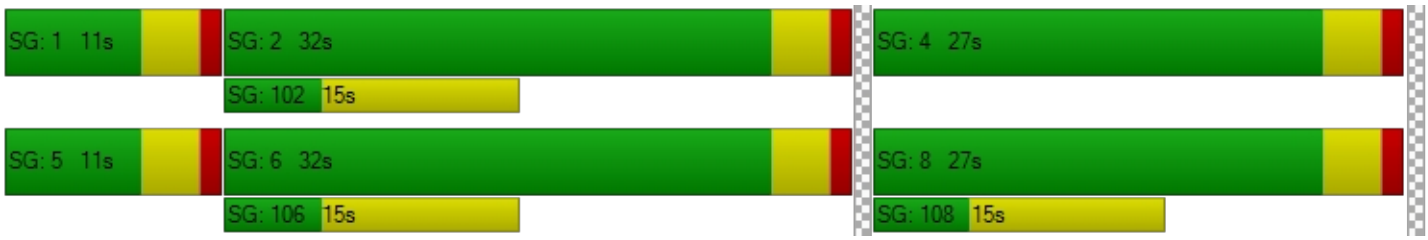
X, volume / capacity	0.30	0.51	0.51	0.41	0.52	0.52	0.03	0.10	0.16	0.35
d, Delay for Lane Group [s/veh]	37.55	8.21	8.23	30.78	6.00	6.00	33.44	29.48	31.86	30.69
Lane Group LOS	D	A	A	C	A	A	C	C	C	C
Critical Lane Group	Yes	No	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.25	3.38	3.35	0.99	2.44	2.44	0.06	0.21	0.47	0.67
50th-Percentile Queue Length [ft]	6.15	84.47	83.68	24.71	60.99	60.99	1.60	5.20	11.63	16.69
95th-Percentile Queue Length [veh]	0.44	6.08	6.03	1.78	4.39	4.39	0.12	0.37	0.84	1.20
95th-Percentile Queue Length [ft]	11.06	152.04	150.63	44.48	109.78	109.78	2.88	9.36	20.93	30.04

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	37.55	8.22	8.23	30.78	6.00	6.00	33.44	29.48	29.48	31.86	31.86	30.69
Movement LOS	D	A	A	C	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	8.53			8.17			30.36			30.99		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	9.41											
Intersection LOS	A											
Intersection V/C	0.492											

Sequence

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



Intersection Level Of Service Report
Intersection 14: Haun Rd (N/S)/La Piedra Rd (E/W)

Control Type:	Signalized	Delay (sec / veh):	21.8
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.698

Intersection Setup

Name				Haun Rd								
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	1	0	1	1	0	1	0	0	0	0	0	0
Pocket Length [ft]	165.00	100.00	75.00	150.00	100.00	150.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			Yes		

Volumes

Name				Haun Rd								
Base Volume Input [veh/h]	39	629	46	28	767	334	209	37	164	23	14	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
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	39	629	46	28	767	334	209	37	164	23	14	10
Peak Hour Factor	0.7640	0.7640	0.7640	0.7640	0.7640	0.7640	0.7640	0.7640	0.7640	0.7640	0.7640	0.7640
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	206	15	9	251	109	68	12	54	8	5	3
Total Analysis Volume [veh/h]	51	823	60	37	1004	437	274	48	215	30	18	13
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	1 - Coordination Group
Cycle Length [s]	65
Coordination Type	Time of Day Pattern Coordinated
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	Split	Split	Split	Split	Split	Split
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]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	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]	11	19	0	11	19	0	0	16	0	0	19	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
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]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	R	C	R	C
C, Cycle Length [s]	65	65	65	65	65	65	65	65	65
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
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
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	4	27	27	4	26	26	14	14	5
g / C, Green / Cycle	0.07	0.41	0.41	0.05	0.40	0.40	0.22	0.22	0.07
(v / s)_i Volume / Saturation Flow Rate	0.03	0.24	0.24	0.02	0.28	0.28	0.18	0.14	0.03
s, saturation flow rate [veh/h]	1774	1863	1819	1774	3547	1583	1787	1583	1754
c, Capacity [veh/h]	119	757	739	97	1397	624	392	348	130
d1, Uniform Delay [s]	29.24	15.14	15.14	29.77	16.72	16.56	24.25	23.00	28.98
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.42	3.37	3.45	2.43	3.21	6.44	4.31	1.80	2.61
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

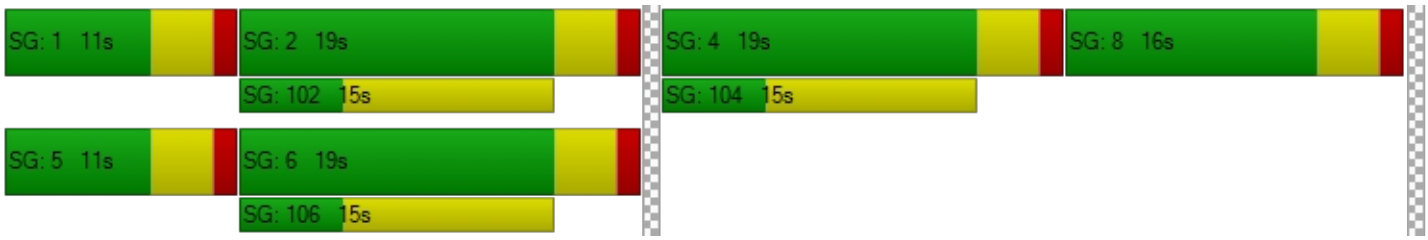
X, volume / capacity	0.43	0.59	0.59	0.38	0.72	0.70	0.82	0.62	0.47
d, Delay for Lane Group [s/veh]	31.66	18.50	18.58	32.20	19.93	23.00	28.56	24.80	31.59
Lane Group LOS	C	B	B	C	B	C	C	C	C
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	0.77	4.77	4.67	0.57	5.62	5.42	4.53	2.75	0.91
50th-Percentile Queue Length [ft]	19.21	119.22	116.81	14.23	140.41	135.53	113.28	68.64	22.86
95th-Percentile Queue Length [veh]	1.38	8.35	8.22	1.02	9.50	9.24	8.02	4.94	1.65
95th-Percentile Queue Length [ft]	34.57	208.75	205.44	25.62	237.58	230.99	200.56	123.56	41.15

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	31.66	18.54	18.58	32.20	19.93	23.00	28.56	28.56	24.80	31.59	31.59	31.59
Movement LOS	C	B	B	C	B	C	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	19.26			21.14			27.06			31.59		
Approach LOS	B			C			C			C		
d_I, Intersection Delay [s/veh]	21.82											
Intersection LOS	C											
Intersection V/C	0.698											

Sequence

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



Intersection Level Of Service Report
Intersection 15: Haun Road (NS) / Holland Road (EW)

Control Type:	All-way stop	Delay (sec / veh):	45.8
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.021

Intersection Setup

Name												
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	1	0	0	1	0	0	1	0	1	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	150.00	100.00	100.00	150.00	100.00	150.00	100.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	263	260	2	9	215	343	353	2	228	0	6	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]	263	260	2	9	215	343	353	2	228	0	6	7
Peak Hour Factor	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380
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]	78	78	1	3	64	102	105	1	68	0	2	2
Total Analysis Volume [veh/h]	314	310	2	11	257	409	421	2	272	0	7	8
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	388	410	386	407	441	421	438	479	342
Degree of Utilization, x	0.81	0.76	0.03	0.63	0.93	1.02	0.00	0.57	0.04

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	7.18	6.32	0.09	4.20	10.54	13.12	0.01	3.47	0.14
95th-Percentile Queue Length [ft]	179.39	157.94	2.20	105.10	263.39	327.95	0.34	86.86	3.43
Approach Delay [s/veh]	37.99		43.16			55.97			14.01
Approach LOS	E		E			F			B
Intersection Delay [s/veh]	45.76								
Intersection LOS	E								

Intersection Level Of Service Report
Intersection 16: Haun Rd-Zeiders Rd (NS)/Scott Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	46.0
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.930

Intersection Setup

Name												
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	1	0	0	1	0	0	1	0	0	1	0	1
Pocket Length [ft]	345.00	100.00	100.00	200.00	100.00	100.00	135.00	100.00	100.00	185.00	100.00	200.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	23	112	24	555	45	48	84	423	9	53	341	540
Base Volume Adjustment Factor	1.0000	1.0000	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]	23	112	24	555	45	48	84	423	9	53	341	540
Peak Hour Factor	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090
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	35	7	172	14	15	26	131	3	16	105	167
Total Analysis Volume [veh/h]	28	138	30	686	56	59	104	523	11	66	422	667
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	1 - Coordination Group
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	19	0	0	22	0	11	39	0	20	48	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	9	9	9	23	23	7	45	6	44	44
g / C, Green / Cycle	0.09	0.09	0.09	0.23	0.23	0.07	0.45	0.06	0.44	0.44
(v / s)_i Volume / Saturation Flow Rate	0.02	0.07	0.02	0.23	0.23	0.06	0.29	0.04	0.23	0.42
s, saturation flow rate [veh/h]	1774	1863	1583	1774	1755	1774	1856	1774	1863	1583
c, Capacity [veh/h]	167	175	149	415	410	130	841	105	817	694
d1, Uniform Delay [s]	41.70	44.32	41.83	37.94	37.99	45.60	21.01	46.00	20.39	27.25
k, delay calibration	0.11	0.11	0.11	0.27	0.27	0.11	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.47	7.59	0.66	25.64	26.81	10.52	3.65	6.13	2.33	25.81
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
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.17	0.79	0.20	0.97	0.97	0.80	0.64	0.63	0.52	0.96
d, Delay for Lane Group [s/veh]	42.16	51.92	42.49	63.58	64.80	56.12	24.65	52.13	22.72	53.06
Lane Group LOS	D	D	D	E	E	E	C	D	C	D
Critical Lane Group	No	Yes	No	No	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.63	3.56	0.68	12.03	12.08	2.81	9.42	1.71	6.97	18.59
50th-Percentile Queue Length [ft]	15.75	88.89	17.02	300.67	302.00	70.20	235.44	42.76	174.31	464.69
95th-Percentile Queue Length [veh]	1.13	6.40	1.23	17.71	17.78	5.05	14.45	3.08	11.30	25.66
95th-Percentile Queue Length [ft]	28.34	160.00	30.64	442.86	444.50	126.37	361.26	76.97	282.57	641.46

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	42.16	51.92	42.49	64.09	64.80	64.80	56.12	24.65	24.65	52.13	22.72	53.06
Movement LOS	D	D	D	E	E	E	E	C	C	D	C	D
d_A, Approach Delay [s/veh]	49.08			64.19			29.78			41.92		
Approach LOS	D			E			C			D		
d_I, Intersection Delay [s/veh]	46.04											
Intersection LOS	D											
Intersection V/C	0.930											

Sequence

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

Intersection Level Of Service Report
Intersection 17: I-215 SB Ramps (NS) / Scott Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	30.6
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.818

Intersection Setup

Name												
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	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	245.00	100.00	100.00
Speed [mph]		50.00			50.00			50.00			50.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		No			Yes			No			No	

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	322	0	134	0	513	394	385	647	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
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	322	0	134	0	513	394	385	647	0
Peak Hour Factor	1.0000	1.0000	1.0000	0.9250	0.9250	0.9250	1.0000	0.9250	0.9250	0.9250	0.9250	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	87	0	36	0	139	106	104	175	0
Total Analysis Volume [veh/h]	0	0	0	348	0	145	0	555	426	416	699	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 - Coordination Group
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Split	Split	Split	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	0	0	0	6	0	0	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	0	0	0	7	0	0	7	0	7	7	0
Maximum Green [s]	0	0	0	0	30	0	0	30	0	30	30	0
Amber [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	23	0	0	27	0	60	87	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	10	0	0	10	0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall					No			No		No	No	
Maximum Recall					No			No		No	No	
Pedestrian Recall					No			No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group		C	R	C	R	L	C
C, Cycle Length [s]		110	110	110	110	110	110
L, Total Lost Time per Cycle [s]		4.00	4.00	4.00	4.00	4.00	4.00
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]		2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]		35	35	35	35	28	67
g / C, Green / Cycle		0.32	0.32	0.32	0.32	0.25	0.61
(v / s)_i Volume / Saturation Flow Rate		0.20	0.09	0.30	0.27	0.23	0.38
s, saturation flow rate [veh/h]		1774	1583	1863	1583	1774	1863
c, Capacity [veh/h]		560	499	601	511	449	1140
d1, Uniform Delay [s]		32.06	28.37	30.07	28.73	35.46	6.82
k, delay calibration		0.50	0.50	0.20	0.15	0.11	0.50
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		5.14	1.47	10.96	5.05	8.69	2.47
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.33	1.33	1.33	1.27
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.62	0.29	0.92	0.83	0.93	0.61
d, Delay for Lane Group [s/veh]		37.20	29.84	41.02	33.78	44.15	9.29
Lane Group LOS		D	C	D	C	D	A
Critical Lane Group		Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh]		8.21	2.94	13.21	8.92	10.27	4.97
50th-Percentile Queue Length [ft]		205.32	73.43	330.13	223.11	256.84	124.34
95th-Percentile Queue Length [veh]		12.91	5.29	19.16	13.82	15.53	8.63
95th-Percentile Queue Length [ft]		322.82	132.18	479.11	345.59	388.26	215.77

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	37.20	37.20	29.84	0.00	41.02	33.78	44.15	9.29	0.00
Movement LOS				D	D	C		D	C	D	A	
d_A, Approach Delay [s/veh]	0.00			35.03			37.88			22.30		
Approach LOS	A			D			D			C		
d_I, Intersection Delay [s/veh]	30.63											
Intersection LOS	C											
Intersection V/C	0.818											

Sequence

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

Intersection Level Of Service Report
Intersection 18: I-215 NB Ramps (NS) / Scott Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	27.9
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.807

Intersection Setup

Name												
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	1	0	0	0	1	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	425.00	100.00	100.00	100.00	250.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		50.00			50.00			50.00			50.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		No			Yes			No			No	

Volumes

Name												
Base Volume Input [veh/h]	265	0	372	0	0	0	83	734	0	0	818	465
Base Volume Adjustment Factor	1.0000	1.0000	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	1.08	1.08	1.08	1.00	1.00	1.08	1.08	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]	265	0	372	0	0	0	83	734	0	0	818	465
Peak Hour Factor	0.9380	0.9380	0.9380	1.0000	1.0000	1.0000	0.9380	0.9380	1.0000	1.0000	0.9380	0.9380
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]	71	0	99	0	0	0	22	196	0	0	218	124
Total Analysis Volume [veh/h]	283	0	397	0	0	0	88	783	0	0	872	496
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 - Coordination Group
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	0	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	0	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	0	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	22	0	0	0	0	0	88	0	0	88	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	10	0	0	10	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	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]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	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	C	R		L	C	C	R
C, Cycle Length [s]	110	110		110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00		4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00		2.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00		2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	48	48		54	54	54	54
g / C, Green / Cycle	0.44	0.44		0.49	0.49	0.49	0.49
(v / s)_i Volume / Saturation Flow Rate	0.16	0.25		0.14	0.42	0.47	0.31
s, saturation flow rate [veh/h]	1774	1583		633	1863	1863	1583
c, Capacity [veh/h]	772	689		87	916	916	779
d1, Uniform Delay [s]	20.86	23.40		47.79	18.00	19.98	14.97
k, delay calibration	0.50	0.50		0.11	0.50	0.19	0.11
I, Upstream Filtering Factor	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.34	3.48		49.25	10.01	9.87	0.87
d3, Initial Queue Delay [s]	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00		1.25	1.25	1.25	1.25
PF, progression factor	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.37	0.58		1.02	0.85	0.95	0.64
d, Delay for Lane Group [s/veh]	22.20	26.88		97.04	28.01	29.85	15.84
Lane Group LOS	C	C		F	C	C	B
Critical Lane Group	No	Yes		No	No	Yes	No
50th-Percentile Queue Length [veh]	4.82	7.80		3.42	14.16	17.30	5.98
50th-Percentile Queue Length [ft]	120.45	194.88		85.46	353.99	432.57	149.51
95th-Percentile Queue Length [veh]	8.42	12.37		6.15	20.33	24.12	9.99
95th-Percentile Queue Length [ft]	210.44	309.35		153.83	508.26	603.12	249.78

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	22.20	22.20	26.88	0.00	0.00	0.00	97.04	28.01	0.00	0.00	29.85	15.84
Movement LOS	C	C	C				F	C			C	B
d_A, Approach Delay [s/veh]	24.93			0.00			34.98			24.77		
Approach LOS	C			A			C			C		
d_I, Intersection Delay [s/veh]	27.86											
Intersection LOS	C											
Intersection V/C	0.807											

Sequence

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

Intersection Level Of Service Report
Intersection 19: Antelope Rd (NS)/Scott Rd (EW)

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):	0.847

Intersection Setup

Name												
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	2	0	0	1	0	1	1	0	1	1	0	0
Pocket Length [ft]	215.00	100.00	100.00	200.00	100.00	200.00	375.00	100.00	250.00	200.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	310	152	88	40	180	369	249	636	277	24	664	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]	310	152	88	40	180	369	249	636	277	24	664	46
Peak Hour Factor	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	84	41	24	11	49	100	67	172	75	7	180	12
Total Analysis Volume [veh/h]	336	165	95	43	195	400	270	689	300	26	719	50
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	1 - Coordination Group
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
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]	15	31	0	18	34	0	20	35	0	16	31	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
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	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	11	33	33	5	27	27	17	42	42	4	29	29
g / C, Green / Cycle	0.11	0.33	0.33	0.05	0.27	0.27	0.17	0.42	0.42	0.04	0.29	0.29
(v / s)_i Volume / Saturation Flow Rate	0.10	0.09	0.06	0.02	0.10	0.25	0.15	0.28	0.28	0.01	0.21	0.21
s, saturation flow rate [veh/h]	3445	1863	1583	1774	1863	1583	1774	1863	1674	1774	1863	1820
c, Capacity [veh/h]	380	620	527	88	506	430	303	785	706	65	535	523
d1, Uniform Delay [s]	43.89	24.45	23.70	46.34	29.64	35.50	40.59	23.21	23.29	46.53	27.50	27.51
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.34	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.90	0.23	0.16	4.20	0.48	21.89	8.94	4.34	4.94	3.95	8.36	8.56
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.88	0.27	0.18	0.49	0.39	0.93	0.89	0.66	0.67	0.40	0.73	0.73
d, Delay for Lane Group [s/veh]	50.79	24.67	23.87	50.54	30.12	57.40	49.53	27.55	28.22	50.49	35.86	36.07
Lane Group LOS	D	C	C	D	C	E	D	C	C	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	4.26	2.71	1.51	1.10	3.65	11.41	6.89	9.78	9.00	0.67	7.82	7.68
50th-Percentile Queue Length [ft]	106.53	67.67	37.82	27.49	91.16	285.28	172.13	244.42	225.04	16.75	195.46	191.92
95th-Percentile Queue Length [veh]	7.65	4.87	2.72	1.98	6.56	16.95	11.19	14.90	13.92	1.21	12.40	12.22
95th-Percentile Queue Length [ft]	191.17	121.81	68.08	49.48	164.09	423.78	279.72	372.62	348.05	30.15	310.10	305.52

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	50.79	24.67	23.87	50.54	30.12	57.40	49.53	27.72	28.22	50.49	35.95	36.07
Movement LOS	D	C	C	D	C	E	D	C	C	D	D	D
d_A, Approach Delay [s/veh]	39.27			48.60			32.52			36.44		
Approach LOS	D			D			C			D		
d_I, Intersection Delay [s/veh]	37.81											
Intersection LOS	D											
Intersection V/C	0.847											

Sequence

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

Intersection Level Of Service Report
Intersection 20: Haun Rd (NS)/Driveway 1 (EW)

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):	0.103

Intersection Setup

Name						
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]	50.00		50.00		50.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	658	30	0	974	0	59
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]	658	30	0	974	0	59
Peak Hour Factor	0.9200	0.9200	1.0000	0.9200	1.0000	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	179	8	0	265	0	16
Total Analysis Volume [veh/h]	715	33	0	1059	0	64
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	0.01	0.00	0.00	0.01	0.00	0.10
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	11.43
Movement LOS	A	A		A		B
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.00	0.34
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	0.00	8.54
d_A, Approach Delay [s/veh]	0.00		0.00		11.43	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.39					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 21: Haun Rd (NS)/Driveway 2 (EW)

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):	0.493

Intersection Setup

Name						
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	2	0	0	0
Pocket Length [ft]	100.00	100.00	300.00	100.00	100.00	100.00
Speed [mph]	50.00		50.00		50.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	516	103	473	501	65	172
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]	516	103	473	501	65	172
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	140	28	129	136	18	47
Total Analysis Volume [veh/h]	561	112	514	545	71	187
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]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Split	Overlap
Signal group	2	0	1	6	7	4
Auxiliary Signal Groups						1,4
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	7	0	7	7	7	7
Maximum Green [s]	30	0	30	30	30	30
Amber [s]	3.0	0.0	3.0	3.0	3.0	3.0
All red [s]	1.0	0.0	1.0	1.0	1.0	1.0
Split [s]	40	0	81	121	19	19
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	3.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	2.0
Minimum Recall	No		No	No	No	No
Maximum Recall	No		No	No	No	No
Pedestrian Recall	No		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]	140	140	140	140	140	140
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	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	0.00
g_i, Effective Green Time [s]	89	89	24	117	15	43
g / C, Green / Cycle	0.63	0.63	0.17	0.84	0.11	0.31
(v / s)_i Volume / Saturation Flow Rate	0.18	0.19	0.15	0.15	0.04	0.12
s, saturation flow rate [veh/h]	1863	1759	3445	3547	1774	1583
c, Capacity [veh/h]	1181	1116	597	2965	189	489
d1, Uniform Delay [s]	11.43	11.58	56.18	2.22	58.16	37.91
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.61	0.70	3.78	0.14	1.23	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

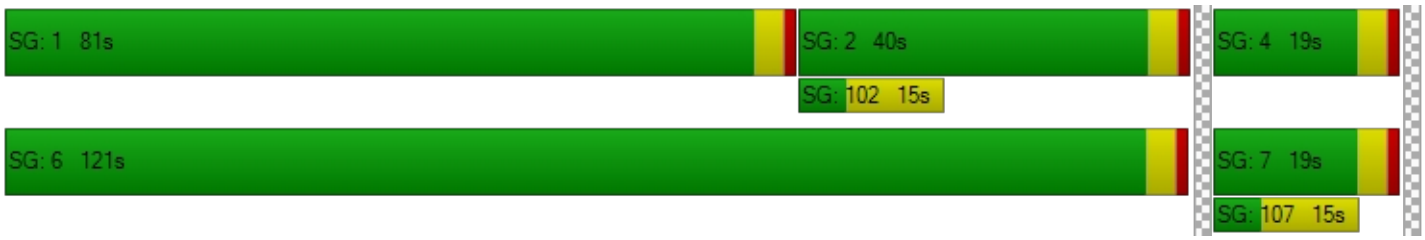
X, volume / capacity	0.28	0.30	0.86	0.18	0.38	0.38
d, Delay for Lane Group [s/veh]	12.04	12.28	59.97	2.36	59.39	38.41
Lane Group LOS	B	B	E	A	E	D
Critical Lane Group	No	Yes	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	4.49	4.56	8.87	0.89	2.35	4.96
50th-Percentile Queue Length [ft/ln]	112.14	113.97	221.84	22.16	58.82	124.00
95th-Percentile Queue Length [veh/ln]	7.96	8.06	13.76	1.60	4.23	8.61
95th-Percentile Queue Length [ft/ln]	198.98	201.50	343.97	39.90	105.87	215.32

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	12.13	12.28	59.97	2.36	59.39	38.41
Movement LOS	B	B	E	A	E	D
d_A, Approach Delay [s/veh]	12.16		30.32		44.18	
Approach LOS	B		C		D	
d_I, Intersection Delay [s/veh]	25.97					
Intersection LOS	C					
Intersection V/C	0.493					

Sequence

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



Intersection Level Of Service Report
Intersection 1: Murrieta Rd (NS)/Newport Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	39.3
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.799

Intersection Setup

Name							Newport Rd			Newport Rd		
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	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	190.00	100.00	100.00	225.00	100.00	100.00	275.00	100.00	100.00	180.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							Newport Rd			Newport Rd		
Base Volume Input [veh/h]	154	261	93	332	273	204	334	977	73	175	918	249
Base Volume Adjustment Factor	1.0000	1.0000	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]	154	261	93	332	273	204	334	977	73	175	918	249
Peak Hour Factor	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	41	69	25	88	73	54	89	260	19	47	244	66
Total Analysis Volume [veh/h]	164	278	99	354	291	217	356	1040	78	186	978	265
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	1 - Coordination Group
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
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]	28	19	0	28	19	0	34	35	0	18	19	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
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]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	11	18	18	22	29	29	22	32	32	12	22	22
g / C, Green / Cycle	0.11	0.18	0.18	0.22	0.29	0.29	0.22	0.32	0.32	0.12	0.22	0.22
(v / s)_i Volume / Saturation Flow Rate	0.09	0.08	0.06	0.20	0.08	0.14	0.20	0.20	0.05	0.10	0.19	0.17
s, saturation flow rate [veh/h]	1774	3547	1583	1774	3547	1583	1774	5074	1583	1774	5074	1583
c, Capacity [veh/h]	200	652	291	387	1027	458	394	1594	498	219	1095	342
d1, Uniform Delay [s]	43.43	36.18	35.57	38.22	27.53	29.29	37.90	29.62	24.77	42.96	38.15	36.99
k, delay calibration	0.11	0.50	0.50	0.21	0.50	0.50	0.21	0.11	0.11	0.11	0.11	0.13
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.03	2.03	3.15	14.69	0.69	3.48	13.55	0.46	0.15	8.76	2.81	4.43
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.82	0.43	0.34	0.91	0.28	0.47	0.90	0.65	0.16	0.85	0.89	0.78
d, Delay for Lane Group [s/veh]	51.46	38.21	38.72	52.90	28.23	32.77	51.45	30.07	24.91	51.71	40.97	41.41
Lane Group LOS	D	D	D	D	C	C	D	C	C	D	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	4.22	3.03	2.25	9.52	2.63	4.46	9.43	6.72	1.27	4.81	7.55	6.14
50th-Percentile Queue Length [ft]	105.49	75.84	56.25	237.93	65.70	111.39	235.73	167.89	31.77	120.24	188.71	153.61
95th-Percentile Queue Length [veh]	7.59	5.46	4.05	14.58	4.73	7.92	14.47	10.97	2.29	8.41	12.05	10.21
95th-Percentile Queue Length [ft]	189.72	136.51	101.24	364.41	118.26	197.93	361.63	274.14	57.19	210.16	301.36	255.24

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	51.46	38.21	38.72	52.90	28.23	32.77	51.45	30.07	24.91	51.71	40.97	41.41
Movement LOS	D	D	D	D	C	C	D	C	C	D	D	D
d_A, Approach Delay [s/veh]	42.32			39.50			34.96			42.45		
Approach LOS	D			D			C			D		
d_I, Intersection Delay [s/veh]	39.28											
Intersection LOS	D											
Intersection V/C	0.799											

Sequence

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

Intersection Level Of Service Report
Intersection 2: Bradley Rd (NS)/Newport Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	33.5
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.771

Intersection Setup

Name				Bradley Rd			Newport Rd			Newport Rd		
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	1	0	0	1	0	0	1	0	0	2	0	1
Pocket Length [ft]	100.00	100.00	100.00	125.00	100.00	100.00	165.00	100.00	100.00	155.00	100.00	150.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name				Bradley Rd			Newport Rd			Newport Rd		
Base Volume Input [veh/h]	147	258	323	228	188	103	149	1101	74	285	1193	294
Base Volume Adjustment Factor	1.0000	1.0000	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]	147	258	323	228	188	103	149	1101	74	285	1193	294
Peak Hour Factor	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410
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]	39	69	86	61	50	27	40	293	20	76	317	78
Total Analysis Volume [veh/h]	156	274	343	242	200	109	158	1170	79	303	1268	312
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	1 - Coordination Group
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
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	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	2	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups			2,7									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	30	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	3.0	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	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	18	32	32	21	35	0	24	36	0	11	23	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	5	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	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	2.0	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	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	C	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]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	11	18	40	15	22	22	11	32	32	19	40	40
g / C, Green / Cycle	0.11	0.18	0.40	0.15	0.22	0.22	0.11	0.32	0.32	0.19	0.40	0.40
(v / s)_i Volume / Saturation Flow Rate	0.09	0.15	0.22	0.14	0.09	0.09	0.09	0.23	0.23	0.09	0.25	0.20
s, saturation flow rate [veh/h]	1774	1863	1583	1774	1863	1647	1774	3547	1803	3445	5074	1583
c, Capacity [veh/h]	188	328	635	274	418	370	193	1151	585	637	2032	634
d1, Uniform Delay [s]	43.83	39.82	22.91	41.39	32.94	33.01	43.59	29.77	29.77	36.43	23.97	22.39
k, delay calibration	0.11	0.11	0.25	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.01	5.61	1.63	9.08	0.59	0.69	8.17	3.89	7.45	0.55	1.46	2.72
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	0.84	0.54	0.88	0.39	0.40	0.82	0.72	0.72	0.48	0.62	0.49
d, Delay for Lane Group [s/veh]	52.84	45.43	24.55	50.47	33.53	33.70	51.76	33.67	37.23	36.98	25.43	25.11
Lane Group LOS	D	D	C	D	C	C	D	C	D	D	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	4.07	6.65	5.91	6.21	3.22	2.93	4.08	8.72	9.44	3.18	7.52	5.47
50th-Percentile Queue Length [ft]	101.76	166.19	147.64	155.29	80.62	73.24	101.88	217.99	236.12	79.41	187.97	136.86
95th-Percentile Queue Length [veh]	7.33	10.88	9.89	10.30	5.80	5.27	7.34	13.56	14.49	5.72	12.02	9.31
95th-Percentile Queue Length [ft]	183.18	271.90	247.27	257.47	145.11	131.83	183.38	339.06	362.13	142.94	300.39	232.79

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	52.84	45.43	24.55	50.47	33.56	33.70	51.76	34.71	37.23	36.98	25.43	25.11
Movement LOS	D	D	C	D	C	C	D	C	D	D	C	C
d_A, Approach Delay [s/veh]	37.66			41.02			36.76			27.24		
Approach LOS	D			D			D			C		
d_I, Intersection Delay [s/veh]	33.53											
Intersection LOS	C											
Intersection V/C	0.771											

Sequence

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

Intersection Level Of Service Report
Intersection 3: Haun Road (NS) / Newport Road (EW)

Control Type:	Signalized	Delay (sec / veh):	43.5
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.945

Intersection Setup

Name	Haun Rd			Haun Rd						Newport Rd		
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	2	0	1	2	0	0	2	0	0	2	0	0
Pocket Length [ft]	215.00	100.00	285.00	155.00	100.00	100.00	210.00	100.00	100.00	350.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Haun Rd			Haun Rd						Newport Rd		
Base Volume Input [veh/h]	439	97	1143	337	130	109	132	1152	327	1122	1249	218
Base Volume Adjustment Factor	1.0000	1.0000	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]	439	97	1143	337	130	109	132	1152	327	1122	1249	218
Peak Hour Factor	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770
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]	112	25	292	86	33	28	34	295	84	287	320	56
Total Analysis Volume [veh/h]	449	99	1170	345	133	112	135	1179	335	1148	1278	223
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	1 - Coordination Group
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
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	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	2	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups			2,7									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	30	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	3.0	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	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	25	23	23	21	19	0	11	38	0	58	85	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	5	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	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	2.0	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	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	C	L	C	R	L	C	C
C, Cycle Length [s]	140	140	140	140	140	140	140	140	140	140	140	140
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	20	20	76	16	16	16	7	36	36	52	81	81
g / C, Green / Cycle	0.14	0.14	0.54	0.11	0.11	0.11	0.05	0.26	0.26	0.37	0.58	0.58
(v / s)_i Volume / Saturation Flow Rate	0.13	0.05	0.42	0.10	0.07	0.07	0.04	0.23	0.21	0.33	0.28	0.29
s, saturation flow rate [veh/h]	3445	1863	2802	3445	1863	1588	3445	5074	1583	3445	3547	1729
c, Capacity [veh/h]	496	265	1512	393	209	179	179	1323	413	1270	2048	998
d1, Uniform Delay [s]	59.00	54.38	25.47	61.07	59.31	59.41	65.46	49.83	48.52	41.84	17.37	17.71
k, delay calibration	0.11	0.11	0.43	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.55	0.87	3.40	6.43	3.04	3.77	6.23	9.35	15.81	2.71	0.82	1.86
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

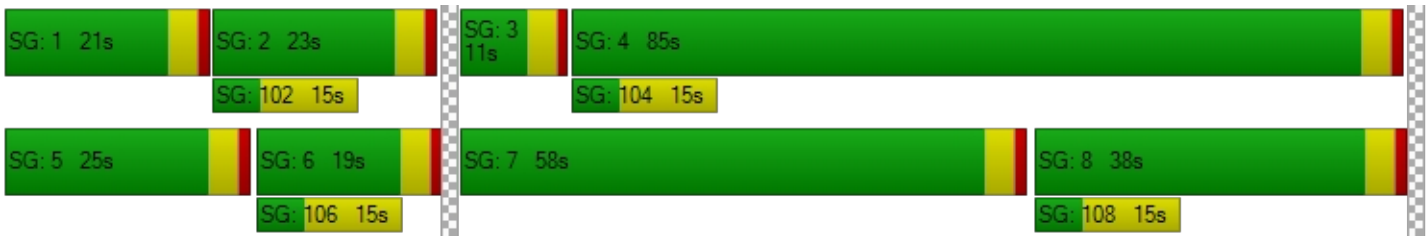
X, volume / capacity	0.91	0.37	0.77	0.88	0.62	0.64	0.75	0.89	0.81	0.90	0.48	0.51
d, Delay for Lane Group [s/veh]	65.54	55.25	28.88	67.50	62.34	63.19	71.69	59.18	64.33	44.55	18.19	19.57
Lane Group LOS	E	E	C	E	E	E	E	E	E	D	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh]	8.07	3.15	14.88	6.23	4.50	3.96	2.48	13.93	12.42	18.35	8.94	9.61
50th-Percentile Queue Length [ft]	201.66	78.83	371.90	155.72	112.46	99.09	62.01	348.14	310.51	458.82	223.62	240.23
95th-Percentile Queue Length [veh]	12.72	5.68	21.20	10.32	7.98	7.13	4.46	20.05	18.20	25.38	13.85	14.69
95th-Percentile Queue Length [ft]	318.11	141.89	530.03	258.05	199.41	178.37	111.61	501.14	455.01	634.47	346.24	367.33

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	65.54	55.25	28.88	67.50	62.36	63.19	71.69	59.18	64.33	44.55	18.50	19.57
Movement LOS	E	E	C	E	E	E	E	E	E	D	B	B
d_A, Approach Delay [s/veh]	39.98			65.52			61.25			29.88		
Approach LOS	D			E			E			C		
d_I, Intersection Delay [s/veh]	43.52											
Intersection LOS	D											
Intersection V/C	0.945											

Sequence

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



Intersection Level Of Service Report
Intersection 4: I-215 SB Ramps (NS) / Newport Road (EW)

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):	0.642

Intersection Setup

Name	I-215 SB Ramps			I-215 SB Ramps			Newport Rd			Newport Rd		
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	1	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	800.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		50.00			50.00			50.00			50.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			No			No	

Volumes

Name	I-215 SB Ramps			I-215 SB Ramps			Newport Rd			Newport Rd		
Base Volume Input [veh/h]	0	0	0	419	0	663	0	2098	542	0	1873	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	419	0	663	0	2098	542	0	1873	464
Peak Hour Factor	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	106	0	168	0	531	137	0	474	118
Total Analysis Volume [veh/h]	0	0	0	425	0	672	0	2126	549	0	1898	470
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 - Coordination Group
Cycle Length [s]	140
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	Overlap	Protecte	Permiss	Overlap
Signal group	0	0	0	1	0	0	0	8	8	7	4	4
Auxiliary Signal Groups									8			1,4,8
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	7	0	0	0	7	7	0	7	7
Maximum Green [s]	0	0	0	30	0	0	0	30	30	0	30	30
Amber [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0
All red [s]	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0	1.0
Split [s]	0	0	0	103	0	0	0	37	37	0	37	37
Vehicle Extension [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0
Walk [s]	0	0	0	5	0	0	0	5	5	0	5	5
Pedestrian Clearance [s]	0	0	0	10	0	0	0	10	10	0	10	10
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	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0
Minimum Recall				No				No	No		No	No
Maximum Recall				No				No	No		No	No
Pedestrian Recall				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	C	R	C	R
C, Cycle Length [s]		140	140	140	140	140	140	140
L, Total Lost Time per Cycle [s]		4.00	4.00	4.00	4.00	4.00	4.00	0.00
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]		2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]		38	38	38	94	94	94	136
g / C, Green / Cycle		0.27	0.27	0.27	0.67	0.67	0.67	0.97
(v / s)_i Volume / Saturation Flow Rate		0.21	0.23	0.23	0.31	0.35	0.37	0.30
s, saturation flow rate [veh/h]		1774	1611	1583	6765	1583	5074	1583
c, Capacity [veh/h]		476	432	425	4564	1068	3423	1538
d1, Uniform Delay [s]		47.17	48.44	48.69	10.80	11.34	11.83	0.08
k, delay calibration		0.11	0.11	0.11	0.50	0.50	0.50	0.11
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		2.64	4.63	5.23	0.34	1.77	0.65	0.11
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

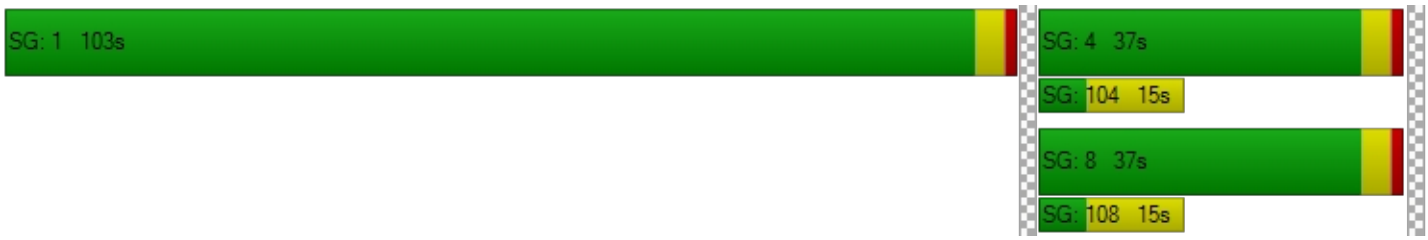
X, volume / capacity		0.77	0.85	0.86	0.47	0.51	0.55	0.31
d, Delay for Lane Group [s/veh]		49.81	53.07	53.92	11.14	13.11	12.49	0.19
Lane Group LOS		D	D	D	B	B	B	A
Critical Lane Group		No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh]		11.70	12.21	12.33	6.98	7.98	9.17	0.05
50th-Percentile Queue Length [ft]		292.43	305.23	308.28	174.58	199.46	229.29	1.19
95th-Percentile Queue Length [veh]		17.31	17.94	18.09	11.32	12.61	14.14	0.09
95th-Percentile Queue Length [ft]		432.66	448.49	452.26	282.93	315.27	353.46	2.14

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	50.27	0.00	53.53	0.00	11.14	13.11	0.00	12.49	0.19
Movement LOS				D		D		B	B		B	A
d_A, Approach Delay [s/veh]	0.00			52.27			11.55			10.05		
Approach LOS	A			D			B			B		
d_I, Intersection Delay [s/veh]	18.24											
Intersection LOS	B											
Intersection V/C	0.642											

Sequence

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



Intersection Level Of Service Report
Intersection 5: I-215 NB Ramps (NS) / Newport Road (EW)

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):	0.731

Intersection Setup

Name	I-215 NB Ramps			I-215 NB Ramps			Newport Rd			Newport Rd		
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	1	0	1	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	375.00	100.00	375.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name	I-215 NB Ramps			I-215 NB Ramps			Newport Rd			Newport Rd		
Base Volume Input [veh/h]	571	0	746	0	0	0	0	2025	496	0	1789	480
Base Volume Adjustment Factor	1.0000	1.0000	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]	571	0	746	0	0	0	0	2025	496	0	1789	480
Peak Hour Factor	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810
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]	146	0	190	0	0	0	0	516	126	0	456	122
Total Analysis Volume [veh/h]	582	0	760	0	0	0	0	2064	506	0	1824	489
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 - Coordination Group
Cycle Length [s]	140
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	Split	Permiss	Split	Permiss	Permiss	Permiss	Protecte	Permiss	Overlap	Permiss	Permiss	Overlap
Signal group	5	0	0	0	0	0	3	8	5	0	4	4
Auxiliary Signal Groups									4,5,8			4,5,8
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	0	0	0	0	0	0	7	7	0	7	7
Maximum Green [s]	30	0	0	0	0	0	0	30	30	0	30	30
Amber [s]	3.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0
All red [s]	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0	1.0
Split [s]	121	0	0	0	0	0	0	19	121	0	19	19
Vehicle Extension [s]	3.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0
Walk [s]	5	0	0	0	0	0	0	5	5	0	5	5
Pedestrian Clearance [s]	10	0	0	0	0	0	0	10	10	0	10	10
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	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0
Minimum Recall	No							No	No		No	No
Maximum Recall	No							No	No		No	No
Pedestrian Recall	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		C	R	C	R
C, Cycle Length [s]	140	140	140		140	140	140	140
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00		4.00	0.00	4.00	0.00
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]	2.00	2.00	2.00		2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	47	47	47		84	136	84	136
g / C, Green / Cycle	0.34	0.34	0.34		0.60	0.97	0.60	0.97
(v / s)_i Volume / Saturation Flow Rate	0.25	0.27	0.28		0.41	0.32	0.27	0.31
s, saturation flow rate [veh/h]	1774	1636	1583		5074	1583	6765	1583
c, Capacity [veh/h]	601	554	536		3065	1538	4086	1538
d1, Uniform Delay [s]	40.88	42.07	42.61		18.49	0.08	15.02	0.08
k, delay calibration	0.11	0.11	0.11		0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.85	2.84	3.48		1.20	0.57	0.35	0.54
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	0.74	0.81	0.83		0.67	0.33	0.45	0.32
d, Delay for Lane Group [s/veh]	42.73	44.91	46.08		19.69	0.66	15.37	0.63
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]	13.40	13.92	14.17		13.81	0.24	7.35	0.23
50th-Percentile Queue Length [ft]	335.12	347.88	354.20		345.23	6.12	183.77	5.82
95th-Percentile Queue Length [veh]	19.41	20.03	20.34		19.90	0.44	11.80	0.42
95th-Percentile Queue Length [ft]	485.23	500.82	508.52		497.59	11.01	294.93	10.47

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	43.23	0.00	45.60	0.00	0.00	0.00	0.00	19.69	0.66	0.00	15.37	0.63
Movement LOS	D		D					B	A		B	A
d_A, Approach Delay [s/veh]	44.57			0.00			15.94			12.25		
Approach LOS	D			A			B			B		
d_I, Intersection Delay [s/veh]	20.74											
Intersection LOS	C											
Intersection V/C	0.731											

Sequence

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

Intersection Level Of Service Report
Intersection 6: Antelope Rd (NS)/Newport Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	45.6
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.968

Intersection Setup

Name												
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	2	0	0	2	0	0	2	0	0	2	0	0
Pocket Length [ft]	330.00	100.00	100.00	100.00	100.00	100.00	325.00	100.00	100.00	200.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							Newport Rd			Newport Rd		
Base Volume Input [veh/h]	715	108	189	28	78	160	164	1850	665	174	1415	27
Base Volume Adjustment Factor	1.0000	1.0000	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]	715	108	189	28	78	160	164	1850	665	174	1415	27
Peak Hour Factor	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660
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]	185	28	49	7	20	41	42	479	172	45	366	7
Total Analysis Volume [veh/h]	740	112	196	29	81	166	170	1915	688	180	1465	28
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	1 - Coordination Group
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
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]	34	21	0	32	19	0	16	76	0	11	71	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
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	C	R	L	C	C	L	C	C
C, Cycle Length [s]	140	140	140	140	140	140	140	140	140	140	140	140	140
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	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	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	2.00
g_i, Effective Green Time [s]	30	35	35	5	10	10	10	9	75	75	9	75	75
g / C, Green / Cycle	0.21	0.25	0.25	0.03	0.07	0.07	0.07	0.06	0.54	0.54	0.07	0.54	0.54
(v / s)_i Volume / Saturation Flow Rate	0.21	0.06	0.12	0.01	0.04	0.05	0.05	0.05	0.49	0.54	0.05	0.28	0.28
s, saturation flow rate [veh/h]	3445	1863	1583	3445	1863	1583	1583	3445	3547	1637	3445	3547	1845
c, Capacity [veh/h]	738	462	392	121	128	109	109	223	1903	878	228	1907	992
d1, Uniform Delay [s]	54.98	42.13	45.19	65.70	63.46	64.06	64.06	64.38	29.21	32.43	64.40	20.67	20.68
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
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
d2, Incremental Delay [s]	15.90	0.27	0.99	1.00	5.09	10.50	10.50	5.28	7.63	31.12	6.05	1.00	1.91
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	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	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	1.00

Lane Group Results

X, volume / capacity	1.00	0.24	0.50	0.24	0.63	0.76	0.76	0.76	0.90	1.00	0.79	0.51	0.51
d, Delay for Lane Group [s/veh]	70.88	42.40	46.18	66.70	68.55	74.56	74.56	69.65	36.84	63.56	70.46	21.67	22.58
Lane Group LOS	F	D	D	E	E	E	E	E	D	F	E	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	14.21	3.07	5.80	0.51	2.93	3.16	3.16	3.08	25.81	34.55	3.28	9.88	10.53
50th-Percentile Queue Length [ft]	355.13	76.67	144.98	12.76	73.19	78.96	78.96	76.91	645.20	863.79	81.97	246.92	263.24
95th-Percentile Queue Length [veh]	20.41	5.52	9.75	0.92	5.27	5.68	5.68	5.54	34.14	44.31	5.90	15.03	15.85
95th-Percentile Queue Length [ft]	510.28	138.01	243.72	22.97	131.7	142.1	142.1	138.44	853.48	1107.76	147.54	375.77	396.29

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	70.88	42.40	46.18	66.70	68.55	74.56	69.65	39.53	63.56	70.46	21.97	22.58
Movement LOS	F	D	D	E	E	E	E	D	E	E	C	C
d_A, Approach Delay [s/veh]	63.22			71.97			47.34			27.20		
Approach LOS	E			E			D			C		
d_I, Intersection Delay [s/veh]	45.56											
Intersection LOS	D											
Intersection V/C	0.968											

Sequence

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

Intersection Level Of Service Report
Intersection 7: Menifee Rd (NS)/NewportRd (EW)

Control Type:	Signalized	Delay (sec / veh):	30.2
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.765

Intersection Setup

Name							Newport Rd			Newport Rd		
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	1	0	1	1	0	0	2	0	0	2	0	0
Pocket Length [ft]	250.00	100.00	200.00	100.00	100.00	100.00	400.00	100.00	100.00	295.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							Newport Rd			Newport Rd		
Base Volume Input [veh/h]	167	241	95	74	210	251	367	1296	208	147	1099	36
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	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]	167	241	95	74	210	251	367	1296	208	147	1099	36
Peak Hour Factor	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810
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	61	24	19	54	64	94	330	53	37	280	9
Total Analysis Volume [veh/h]	170	246	97	75	214	256	374	1321	212	150	1120	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	1 - Coordination Group
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
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]	11	21	0	14	24	0	46	53	0	12	19	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
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	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]	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	19	19	6	18	18	23	52	52	7	36	36
g / C, Green / Cycle	0.07	0.19	0.19	0.06	0.18	0.18	0.23	0.52	0.52	0.07	0.36	0.36
(v / s)_i Volume / Saturation Flow Rate	0.05	0.07	0.06	0.04	0.06	0.16	0.21	0.29	0.29	0.04	0.22	0.02
s, saturation flow rate [veh/h]	3445	3547	1583	1774	3547	1583	1774	3547	1734	3445	5074	1583
c, Capacity [veh/h]	240	666	297	110	638	285	415	1849	904	238	1810	565
d1, Uniform Delay [s]	45.54	35.46	35.16	45.99	35.82	40.15	37.23	16.13	16.17	45.34	26.56	21.20
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.79	0.34	0.63	7.30	0.31	10.31	7.41	1.21	2.49	2.75	1.60	0.22
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

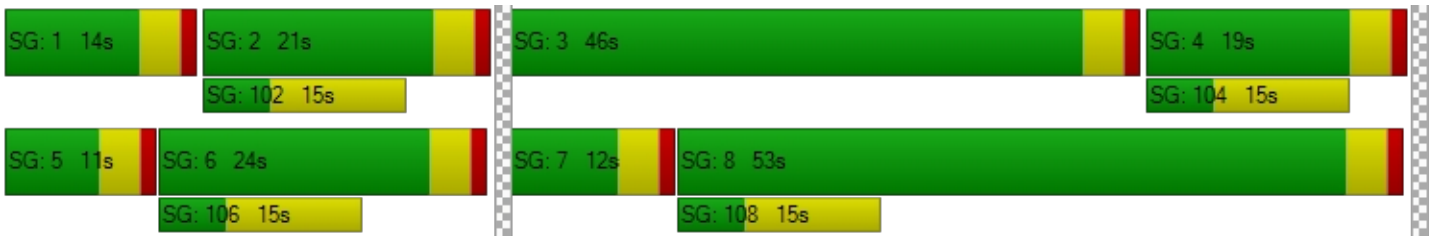
X, volume / capacity	0.71	0.37	0.33	0.68	0.34	0.90	0.90	0.56	0.56	0.63	0.62	0.07
d, Delay for Lane Group [s/veh]	49.34	35.80	35.79	53.29	36.12	50.45	44.64	17.34	18.67	48.10	28.16	21.42
Lane Group LOS	D	D	D	D	D	D	D	B	B	D	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	2.10	2.51	1.99	1.97	2.19	6.61	9.15	7.20	7.42	1.82	7.02	0.57
50th-Percentile Queue Length [ft]	52.48	62.75	49.75	49.19	54.70	165.25	228.75	179.88	185.54	45.55	175.48	14.22
95th-Percentile Queue Length [veh]	3.78	4.52	3.58	3.54	3.94	10.83	14.11	11.59	11.89	3.28	11.36	1.02
95th-Percentile Queue Length [ft]	94.46	112.95	89.54	88.54	98.46	270.66	352.77	289.85	297.24	82.00	284.10	25.60

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	49.34	35.80	35.79	53.29	36.12	50.45	44.64	17.63	18.67	48.10	28.16	21.42
Movement LOS	D	D	D	D	D	D	D	B	B	D	C	C
d_A, Approach Delay [s/veh]	40.28			45.22			23.05			30.26		
Approach LOS	D			D			C			C		
d_I, Intersection Delay [s/veh]	30.15											
Intersection LOS	C											
Intersection V/C	0.765											

Sequence

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



Intersection Level Of Service Report
Intersection 8: Bradley Rd (NS) / La Piedra Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	14.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.428

Intersection Setup

Name											
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	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	150.00	100.00	100.00	155.00	100.00	100.00	100.00	100.00	100.00	150.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	32	449	40	77	644	12	9	11	28	57	19	93
Base Volume Adjustment Factor	1.0000	1.0000	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]	32	449	40	77	644	12	9	11	28	57	19	93
Peak Hour Factor	0.8240	0.8240	0.8240	0.8240	0.8240	0.8240	0.8240	0.8240	0.8240	0.8240	0.8240	0.8240
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	136	12	23	195	4	3	3	8	17	6	28
Total Analysis Volume [veh/h]	39	545	49	93	782	15	11	13	34	69	23	113
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]	60
Coordination Type	Time of Day Pattern Coordinated
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]	11	19	0	11	19	0	11	19	0	11	19	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
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	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	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]	3	30	30	6	32	32	1	4	4	5	8	8
g / C, Green / Cycle	0.06	0.50	0.50	0.09	0.53	0.53	0.02	0.06	0.06	0.08	0.13	0.13
(v / s)_i Volume / Saturation Flow Rate	0.02	0.16	0.16	0.05	0.21	0.21	0.01	0.01	0.02	0.04	0.01	0.07
s, saturation flow rate [veh/h]	1774	1863	1809	1774	1863	1850	1774	1863	1583	1774	1863	1583
c, Capacity [veh/h]	104	917	891	167	984	977	39	123	104	146	235	200
d1, Uniform Delay [s]	27.32	9.27	9.27	26.10	8.55	8.55	29.02	26.50	26.89	26.42	23.31	24.79
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.24	0.95	0.99	2.88	1.25	1.26	3.90	0.38	1.80	2.36	0.18	2.50
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	0.38	0.33	0.33	0.56	0.41	0.41	0.28	0.11	0.33	0.47	0.10	0.57
d, Delay for Lane Group [s/veh]	29.56	10.22	10.26	28.98	9.80	9.81	32.92	26.87	28.69	28.78	23.49	27.29
Lane Group LOS	C	B	B	C	A	A	C	C	C	C	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.54	1.91	1.87	1.25	2.40	2.39	0.18	0.17	0.46	0.93	0.26	1.46
50th-Percentile Queue Length [ft]	13.53	47.73	46.74	31.21	59.99	59.65	4.53	4.19	11.58	23.14	6.60	36.41
95th-Percentile Queue Length [veh]	0.97	3.44	3.37	2.25	4.32	4.29	0.33	0.30	0.83	1.67	0.47	2.62
95th-Percentile Queue Length [ft]	24.36	85.92	84.13	56.18	107.98	107.37	8.15	7.55	20.85	41.66	11.87	65.53

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	29.56	10.24	10.26	28.98	9.80	9.81	32.92	26.87	28.69	28.78	23.49	27.29
Movement LOS	C	B	B	C	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	11.43			11.81			29.08			27.37		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	14.02											
Intersection LOS	B											
Intersection V/C	0.428											

Sequence

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

Intersection Level Of Service Report
Intersection 9: Bradley Rd (NS)/Holland Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	32.0
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.791

Intersection Setup

Name												
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	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	130.00	100.00	100.00	150.00	100.00	100.00	145.00	100.00	100.00	140.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	56	290	127	135	206	140	176	250	56	111	273	191
Base Volume Adjustment Factor	1.0000	1.0000	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]	56	290	127	135	206	140	176	250	56	111	273	191
Peak Hour Factor	0.8810	0.8810	0.8810	0.8810	0.8810	0.8810	0.8810	0.8810	0.8810	0.8810	0.8810	0.8810
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	82	36	38	58	40	50	71	16	31	77	54
Total Analysis Volume [veh/h]	64	329	144	153	234	159	200	284	64	126	310	217
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	1 - Coordination Group
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
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]	11	19	0	13	21	0	24	23	0	25	24	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	R	L	C	L	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	5	29	9	32	32	11	20	7	16	16
g / C, Green / Cycle	0.07	0.36	0.11	0.40	0.40	0.14	0.24	0.09	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.04	0.27	0.09	0.13	0.10	0.11	0.19	0.07	0.17	0.14
s, saturation flow rate [veh/h]	1774	1768	1774	1863	1583	1774	1804	1774	1863	1583
c, Capacity [veh/h]	119	630	189	737	627	244	443	163	372	316
d1, Uniform Delay [s]	36.16	22.66	34.98	16.72	16.25	33.58	28.26	35.56	30.77	29.73
k, delay calibration	0.11	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.71	8.03	7.93	1.13	0.97	6.71	3.13	7.58	4.90	2.64
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.54	0.75	0.81	0.32	0.25	0.82	0.79	0.77	0.83	0.69
d, Delay for Lane Group [s/veh]	39.87	30.69	42.91	17.85	17.23	40.29	31.39	43.14	35.68	32.37
Lane Group LOS	D	C	D	B	B	D	C	D	D	C
Critical Lane Group	No	Yes	Yes	No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh]	1.25	8.18	3.11	2.81	1.87	3.93	5.99	2.57	5.72	3.76
50th-Percentile Queue Length [ft]	31.22	204.61	77.74	70.14	46.74	98.13	149.70	64.23	142.94	93.88
95th-Percentile Queue Length [veh]	2.25	12.88	5.60	5.05	3.37	7.07	10.00	4.62	9.64	6.76
95th-Percentile Queue Length [ft]	56.20	321.90	139.94	126.26	84.13	176.63	250.03	115.61	240.97	168.99

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	39.87	30.69	30.69	42.91	17.85	17.23	40.29	31.39	31.39	43.14	35.68	32.37
Movement LOS	D	C	C	D	B	B	D	C	C	D	D	C
d_A, Approach Delay [s/veh]	31.78			24.69			34.64			36.02		
Approach LOS	C			C			C			D		
d_I, Intersection Delay [s/veh]	31.98											
Intersection LOS	C											
Intersection V/C	0.791											

Sequence

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

Intersection Level Of Service Report
Intersection 10: Town Center Dr-Sherman Rd (NS) / La Piedra Rd (EW)

Control Type:	All-way stop	Delay (sec / veh):	8.3
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.170

Intersection Setup

Name												
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	1	0	1	1	0	0	0	0	0	1	0	0
Pocket Length [ft]	210.00	100.00	500.00	150.00	100.00	100.00	100.00	100.00	100.00	800.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	96	7	0	0	0	22	0	109	32	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]	0	0	96	7	0	0	0	22	0	109	32	3
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]	0	0	25	2	0	0	0	6	0	28	8	1
Total Analysis Volume [veh/h]	0	0	100	7	0	0	0	23	0	114	33	3
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	714	714	829	630	691	701	701	671	740	864
Degree of Utilization, x	0.00	0.00	0.12	0.01	0.00	0.00	0.03	0.17	0.04	0.00

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.00	0.00	0.41	0.03	0.00	0.00	0.10	0.61	0.14	0.01
95th-Percentile Queue Length [ft]	0.00	0.00	10.24	0.84	0.00	0.00	2.54	15.22	3.50	0.26
Approach Delay [s/veh]	7.64			8.48		8.01		8.81		
Approach LOS	A			A		A		A		
Intersection Delay [s/veh]	8.32									
Intersection LOS	A									

Intersection Level Of Service Report

Intersection 11: Town Center Dr-Sherman Rd (NS)/Holland Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	38.8
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.046

Intersection Setup

Name												
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	1	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	500.00	100.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	5	0	10	10	1	56	49	451	4	25	605	31
Base Volume Adjustment Factor	1.0000	1.0000	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]	5	0	10	10	1	56	49	451	4	25	605	31
Peak Hour Factor	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	3	3	0	15	13	120	1	7	161	8
Total Analysis Volume [veh/h]	5	0	11	11	1	60	52	480	4	27	644	33
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.00	0.02	0.09	0.01	0.13	0.06	0.00	0.00	0.03	0.01	0.00
d_M, Delay for Movement [s/veh]	38.79	31.71	12.14	36.71	32.82	15.73	9.17	0.00	0.00	8.42	0.00	0.00
Movement LOS	E	D	B	E	D	C	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.20	0.20	0.20	0.83	0.83	0.83	3.86	3.86	0.00	4.53	4.53	0.00
95th-Percentile Queue Length [ft]	5.12	5.12	5.12	20.75	20.75	20.75	96.47	96.47	0.00	113.34	113.34	0.00
d_A, Approach Delay [s/veh]	20.47			19.17			0.89			0.32		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	1.82											
Intersection LOS	E											

Intersection Level Of Service Report
Intersection 12: Haun Rd (NS)/Village-Market Dr (EW)

Control Type:	Signalized	Delay (sec / veh):	23.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.840

Intersection Setup

Name	Haun Rd			Haun Rd								
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	1	0	0	2	0	0	0	0	0	0	0	1
Pocket Length [ft]	100.00	100.00	100.00	175.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	65.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Haun Rd			Haun Rd								
Base Volume Input [veh/h]	47	1113	21	462	835	224	203	27	29	27	29	363
Base Volume Adjustment Factor	1.0000	1.0000	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]	47	1113	21	462	835	224	203	27	29	27	29	363
Peak Hour Factor	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530
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	292	6	121	219	59	53	7	8	7	8	95
Total Analysis Volume [veh/h]	49	1168	22	485	876	235	213	28	30	28	30	381
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	1 - Coordination Group
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
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	Permiss	Permiss	Overlap
Signal group	5	2	0	1	6	0	3	8	0	0	4	4
Auxiliary Signal Groups												1,4
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	0	7	7
Maximum Green [s]	30	30	0	30	30	0	7	30	0	0	30	30
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	3.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	1.0
Split [s]	11	30	0	18	37	0	11	22	0	0	11	11
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	3.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	5
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	10
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	0.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0
Minimum Recall	No	No		No	No		Yes	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	C	L	C	C	L	C	C	R
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	0.00	0.00	2.00	0.00
g_i, Effective Green Time [s]	4	28	28	12	36	36	18	18	7	23
g / C, Green / Cycle	0.06	0.40	0.40	0.18	0.51	0.51	0.26	0.26	0.10	0.33
(v / s)_i Volume / Saturation Flow Rate	0.03	0.32	0.32	0.14	0.30	0.31	0.07	0.10	0.03	0.14
s, saturation flow rate [veh/h]	1774	1863	1851	3445	1863	1731	1573	1585	1717	2803
c, Capacity [veh/h]	112	735	730	608	946	879	524	530	250	938
d1, Uniform Delay [s]	31.66	18.92	18.92	27.69	12.22	12.38	20.67	21.25	29.26	17.98
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.16	0.33	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.65	9.50	9.58	2.45	2.81	3.25	0.29	0.94	0.47	0.28
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

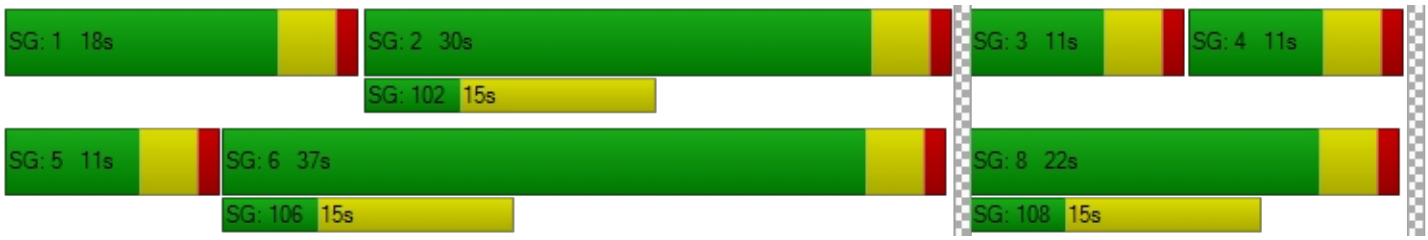
X, volume / capacity	0.44	0.81	0.81	0.80	0.60	0.62	0.22	0.30	0.23	0.41
d, Delay for Lane Group [s/veh]	34.31	28.42	28.50	30.14	15.03	15.64	20.96	22.18	29.74	18.26
Lane Group LOS	C	C	C	C	B	B	C	C	C	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	0.81	8.94	8.91	3.66	5.45	5.36	1.33	1.99	0.85	2.06
50th-Percentile Queue Length [ft]	20.29	223.62	222.68	91.61	136.22	134.03	33.28	49.70	21.35	51.54
95th-Percentile Queue Length [veh]	1.46	13.85	13.80	6.60	9.28	9.16	2.40	3.58	1.54	3.71
95th-Percentile Queue Length [ft]	36.51	346.24	345.05	164.90	231.93	228.96	59.91	89.46	38.43	92.77

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	34.31	28.46	28.50	30.14	15.25	15.64	21.50	22.18	22.18	29.74	29.74	18.26
Movement LOS	C	C	C	C	B	B	C	C	C	C	C	B
d_A, Approach Delay [s/veh]	28.69			19.83			21.67			19.78		
Approach LOS	C			B			C			B		
d_I, Intersection Delay [s/veh]	23.06											
Intersection LOS	C											
Intersection V/C	0.840											

Sequence

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



Intersection Level Of Service Report
Intersection 13: Haun Rd (NS)/Countryside Market Place (EW)

Control Type:	Signalized	Delay (sec / veh):	20.9
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.503

Intersection Setup

Name	Haun Rd			Haun Rd								
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	1	0	0	2	0	0	0	0	1	1	0	0
Pocket Length [ft]	200.00	100.00	100.00	235.00	100.00	100.00	100.00	100.00	40.00	100.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Haun Rd			Haun Rd								
Base Volume Input [veh/h]	51	923	88	279	674	0	27	7	63	52	7	258
Base Volume Adjustment Factor	1.0000	1.0000	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]	51	923	88	279	674	0	27	7	63	52	7	258
Peak Hour Factor	0.9640	0.9640	0.9640	0.9640	0.9640	0.9640	0.9640	0.9640	0.9640	0.9640	0.9640	0.9640
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	239	23	72	175	0	7	2	16	13	2	67
Total Analysis Volume [veh/h]	53	957	91	289	699	0	28	7	65	54	7	268
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	1 - Coordination Group
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]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap
Signal group	5	2	0	1	6	0	0	8	0	0	4	4
Auxiliary Signal Groups												1,4
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	7
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	30
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0
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	1.0
Split [s]	14	33	0	68	87	0	0	19	0	0	19	19
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	5
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	10
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	2.0
I2, Clearance 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	2.0
Minimum Recall	No	No		No	No			No			No	No
Maximum Recall	No	No		No	No			No			No	No
Pedestrian Recall	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	C	L	C	C	L	C	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	6	80	80	13	87	87	15	15	15	32
g / C, Green / Cycle	0.05	0.66	0.66	0.11	0.73	0.73	0.13	0.13	0.13	0.27
(v / s)_i Volume / Saturation Flow Rate	0.03	0.29	0.29	0.08	0.19	0.19	0.02	0.04	0.08	0.10
s, saturation flow rate [veh/h]	1774	1863	1807	3445	1863	1863	1403	1607	780	2803
c, Capacity [veh/h]	86	1237	1200	381	1352	1352	80	201	154	754
d1, Uniform Delay [s]	55.95	9.47	9.47	51.79	5.54	5.54	59.35	48.05	53.70	35.42
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.86	1.09	1.13	3.12	0.46	0.46	2.56	1.07	1.64	0.28
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

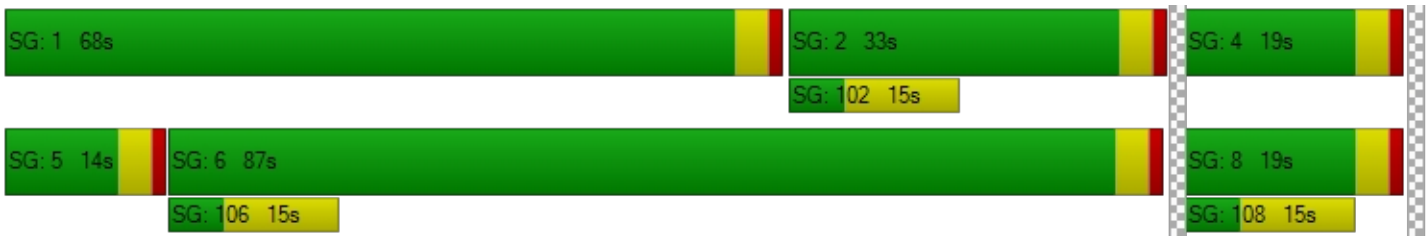
X, volume / capacity	0.61	0.43	0.43	0.76	0.26	0.26	0.35	0.36	0.40	0.36
d, Delay for Lane Group [s/veh]	62.81	10.56	10.60	54.91	6.01	6.01	61.91	49.12	55.34	35.71
Lane Group LOS	E	B	B	D	A	A	E	D	E	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	1.69	5.88	5.72	4.24	2.47	2.47	0.88	1.97	1.80	3.08
50th-Percentile Queue Length [ft]	42.25	147.05	143.00	106.06	61.66	61.66	22.11	49.30	45.11	76.93
95th-Percentile Queue Length [veh]	3.04	9.86	9.64	7.62	4.44	4.44	1.59	3.55	3.25	5.54
95th-Percentile Queue Length [ft]	76.05	246.49	241.06	190.50	110.99	110.99	39.79	88.74	81.19	138.48

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	62.81	10.58	10.60	54.91	6.01	6.01	61.91	49.12	49.12	55.34	55.34	35.71
Movement LOS	E	B	B	D	A	A	E	D	D	E	E	D
d_A, Approach Delay [s/veh]	13.10			20.31			52.70			39.35		
Approach LOS	B			C			D			D		
d_I, Intersection Delay [s/veh]	20.93											
Intersection LOS	C											
Intersection V/C	0.503											

Sequence

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



Intersection Level Of Service Report
Intersection 14: Haun Rd (NS)/La Piedra Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	21.6
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.737

Intersection Setup

Name				Haun Rd								
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	1	0	1	1	0	1	0	0	0	0	0	0
Pocket Length [ft]	165.00	100.00	75.00	150.00	100.00	150.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			Yes		

Volumes

Name				Haun Rd								
Base Volume Input [veh/h]	42	911	97	21	687	107	135	29	91	128	28	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]	42	911	97	21	687	107	135	29	91	128	28	47
Peak Hour Factor	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170
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	248	26	6	187	29	37	8	25	35	8	13
Total Analysis Volume [veh/h]	46	993	106	23	749	117	147	32	99	140	31	51
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	1 - Coordination Group
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
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	Split	Split	Split	Split	Split	Split
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]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	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]	11	19	0	11	19	0	0	11	0	0	19	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
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]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	R	C	R	C
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	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
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	4	24	24	2	23	23	8	8	9
g / C, Green / Cycle	0.06	0.40	0.40	0.04	0.38	0.38	0.13	0.13	0.16
(v / s)_i Volume / Saturation Flow Rate	0.03	0.30	0.30	0.01	0.21	0.07	0.10	0.06	0.13
s, saturation flow rate [veh/h]	1774	1863	1800	1774	3547	1583	1789	1583	1738
c, Capacity [veh/h]	113	751	726	68	1340	598	239	212	275
d1, Uniform Delay [s]	27.05	15.29	15.30	28.17	14.75	12.57	25.09	24.08	24.41
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.32	6.57	6.81	2.86	1.69	0.73	4.66	1.61	5.51
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

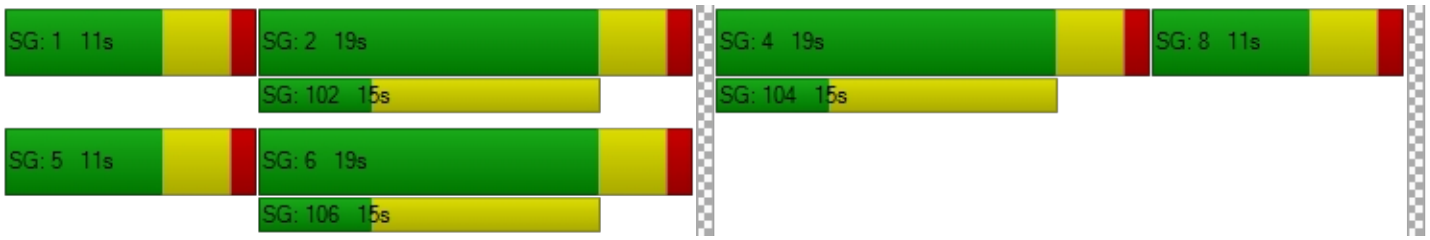
X, volume / capacity	0.41	0.74	0.74	0.34	0.56	0.20	0.75	0.47	0.81
d, Delay for Lane Group [s/veh]	29.37	21.86	22.11	31.02	16.44	13.30	29.74	25.69	29.93
Lane Group LOS	C	C	C	C	B	B	C	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	0.63	6.27	6.12	0.34	3.43	0.95	2.43	1.22	3.03
50th-Percentile Queue Length [ft]	15.80	156.81	152.95	8.50	85.79	23.77	60.78	30.52	75.84
95th-Percentile Queue Length [veh]	1.14	10.38	10.17	0.61	6.18	1.71	4.38	2.20	5.46
95th-Percentile Queue Length [ft]	28.45	259.49	254.37	15.30	154.43	42.79	109.40	54.94	136.52

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	29.37	21.97	22.11	31.02	16.44	13.30	29.74	29.74	25.69	29.93	29.93	29.93
Movement LOS	C	C	C	C	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	22.28			16.40			28.30			29.93		
Approach LOS	C			B			C			C		
d_I, Intersection Delay [s/veh]	21.55											
Intersection LOS	C											
Intersection V/C	0.737											

Sequence

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



Intersection Level Of Service Report
Intersection 15: Haun Road (NS) / Holland Road (EW)

Control Type:	All-way stop	Delay (sec / veh):	49.6
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.005

Intersection Setup

Name												
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	1	0	0	1	0	0	1	0	1	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	150.00	100.00	100.00	150.00	100.00	150.00	100.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	257	331	4	6	315	416	322	4	129	2	5	14
Base Volume Adjustment Factor	1.0000	1.0000	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]	257	331	4	6	315	416	322	4	129	2	5	14
Peak Hour Factor	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	70	90	1	2	85	113	87	1	35	1	1	4
Total Analysis Volume [veh/h]	278	359	4	7	341	451	349	4	140	2	5	15
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	376	399	389	412	451	395	418	456	330
Degree of Utilization, x	0.74	0.91	0.02	0.83	1.01	0.88	0.01	0.31	0.07

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	5.77	9.65	0.05	7.72	13.16	8.92	0.03	1.28	0.21
95th-Percentile Queue Length [ft]	144.19	241.20	1.37	193.11	328.98	223.04	0.72	32.12	5.33
Approach Delay [s/veh]	46.66		58.70			40.37			14.70
Approach LOS	E		F			E			B
Intersection Delay [s/veh]	49.64								
Intersection LOS	E								

Intersection Level Of Service Report
Intersection 16: Haun Rd-Zeiders Rd (NS)/Scott Rd (EW)

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):	0.619

Intersection Setup

Name											
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	1	0	0	1	0	0	1	0	0	1	0	1
Pocket Length [ft]	345.00	100.00	100.00	200.00	100.00	100.00	135.00	100.00	100.00	185.00	100.00	200.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	33	51	32	376	19	62	52	435	20	55	441	507
Base Volume Adjustment Factor	1.0000	1.0000	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]	33	51	32	376	19	62	52	435	20	55	441	507
Peak Hour Factor	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	13	8	96	5	16	13	112	5	14	113	130
Total Analysis Volume [veh/h]	34	52	33	386	19	64	53	446	21	56	452	520
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	1 - Coordination Group
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	19	0	0	51	0	11	19	0	11	19	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	7	7	7	16	16	5	56	6	56	56
g / C, Green / Cycle	0.07	0.07	0.07	0.16	0.16	0.05	0.56	0.06	0.56	0.56
(v / s)_i Volume / Saturation Flow Rate	0.02	0.03	0.02	0.13	0.13	0.03	0.25	0.03	0.24	0.33
s, saturation flow rate [veh/h]	1774	1863	1583	1774	1723	1774	1848	1774	1863	1583
c, Capacity [veh/h]	121	127	108	287	279	98	1024	100	1034	879
d1, Uniform Delay [s]	44.31	44.71	44.39	40.64	40.64	46.09	13.33	46.04	13.08	14.75
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.25	2.09	1.57	6.10	6.27	4.62	1.47	4.85	1.34	2.92
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

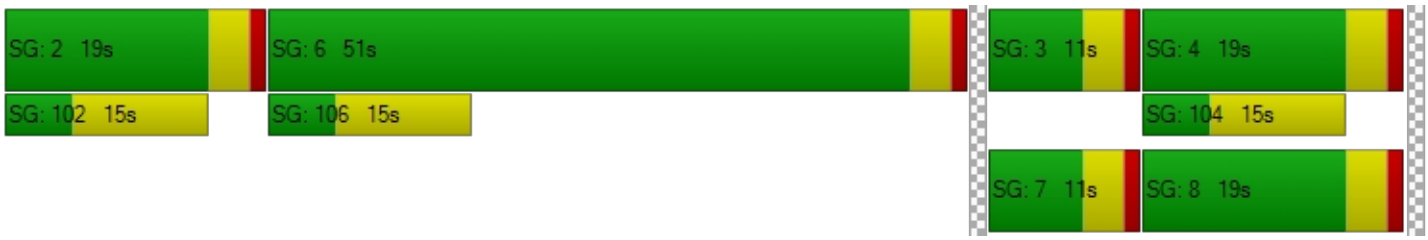
X, volume / capacity	0.28	0.41	0.31	0.83	0.83	0.54	0.46	0.56	0.44	0.59
d, Delay for Lane Group [s/veh]	45.56	46.81	45.96	46.74	46.90	50.71	14.80	50.89	14.43	17.67
Lane Group LOS	D	D	D	D	D	D	B	D	B	B
Critical Lane Group	No	Yes	No	No	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.81	1.26	0.79	5.85	5.70	1.35	5.77	1.43	5.48	7.32
50th-Percentile Queue Length [ft]	20.22	31.43	19.81	146.23	142.38	33.85	144.36	35.82	137.04	183.09
95th-Percentile Queue Length [veh]	1.46	2.26	1.43	9.82	9.61	2.44	9.72	2.58	9.32	11.76
95th-Percentile Queue Length [ft]	36.39	56.57	35.67	245.39	240.23	60.93	242.89	64.48	233.04	294.05

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	45.56	46.81	45.96	46.80	46.90	46.90	50.71	14.80	14.80	50.89	14.43	17.67
Movement LOS	D	D	D	D	D	D	D	B	B	D	B	B
d_A, Approach Delay [s/veh]	46.21			46.82			18.46			18.06		
Approach LOS	D			D			B			B		
d_I, Intersection Delay [s/veh]	26.04											
Intersection LOS	C											
Intersection V/C	0.619											

Sequence

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



Intersection Level Of Service Report
Intersection 17: I-215 SB Ramps (NS) / Scott Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	28.0
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.870

Intersection Setup

Name												
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	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	245.00	100.00	100.00
Speed [mph]		50.00			50.00			50.00			50.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		No			Yes			No			No	

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	392	0	155	0	522	270	413	720	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
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	392	0	155	0	522	270	413	720	0
Peak Hour Factor	0.9470	0.9470	0.9470	0.9470	0.9470	0.9470	0.9470	0.9470	0.9470	0.9470	0.9470	0.9470
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	103	0	41	0	138	71	109	190	0
Total Analysis Volume [veh/h]	0	0	0	414	0	164	0	551	285	436	760	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 - Coordination Group
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Split	Split	Split	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	0	0	0	6	0	0	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	0	0	0	7	0	0	7	0	7	7	0
Maximum Green [s]	0	0	0	0	30	0	0	30	0	30	30	0
Amber [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	54	0	0	11	0	45	56	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	10	0	0	10	0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall					No			No		No	No	
Maximum Recall					No			No		No	No	
Pedestrian Recall					No			No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group		C	R	C	R	L	C
C, Cycle Length [s]		110	110	110	110	110	110
L, Total Lost Time per Cycle [s]		4.00	4.00	4.00	4.00	4.00	4.00
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]		2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]		28	28	41	41	29	74
g / C, Green / Cycle		0.26	0.26	0.37	0.37	0.26	0.67
(v / s)_i Volume / Saturation Flow Rate		0.23	0.10	0.30	0.18	0.25	0.41
s, saturation flow rate [veh/h]		1774	1583	1863	1583	1774	1863
c, Capacity [veh/h]		456	407	689	585	469	1249
d1, Uniform Delay [s]		39.61	33.87	24.48	20.92	34.63	2.48
k, delay calibration		0.11	0.11	0.50	0.50	0.11	0.50
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		7.21	0.64	9.46	2.88	8.64	2.21
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.33	1.33	1.33	1.33
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

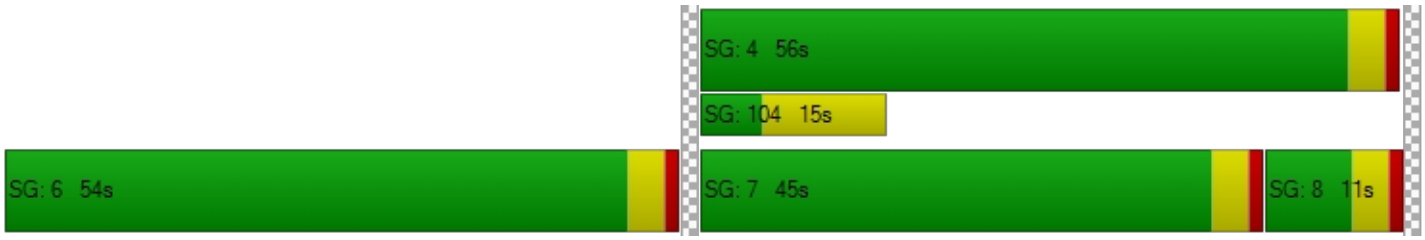
X, volume / capacity		0.91	0.40	0.80	0.49	0.93	0.61
d, Delay for Lane Group [s/veh]		46.81	34.52	33.94	23.80	43.27	4.69
Lane Group LOS		D	C	C	C	D	A
Critical Lane Group		Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh]		11.12	3.53	11.31	4.62	10.68	2.54
50th-Percentile Queue Length [ft]		278.06	88.30	282.74	115.41	266.88	63.50
95th-Percentile Queue Length [veh]		16.59	6.36	16.82	8.14	16.03	4.57
95th-Percentile Queue Length [ft]		414.80	158.93	420.62	203.50	400.84	114.29

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	46.81	46.81	34.52	0.00	33.94	23.80	43.27	4.69	0.00
Movement LOS				D	D	C		C	C	D	A	
d_A, Approach Delay [s/veh]	0.00			43.32			30.49			18.76		
Approach LOS	A			D			C			B		
d_I, Intersection Delay [s/veh]	27.95											
Intersection LOS	C											
Intersection V/C	0.870											

Sequence

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



Intersection Level Of Service Report
Intersection 18: I-215 NB Ramps (NS) / Scott Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	40.0
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.895

Intersection Setup

Name												
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	1	0	0	0	1	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	425.00	100.00	100.00	100.00	250.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		50.00			50.00			50.00			50.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		No			Yes			No			No	

Volumes

Name												
Base Volume Input [veh/h]	367	1	490	0	0	0	70	856	0	0	777	395
Base Volume Adjustment Factor	1.0000	1.0000	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	1.08	1.08	1.08	1.00	1.00	1.08	1.08	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]	367	1	490	0	0	0	70	856	0	0	777	395
Peak Hour Factor	0.9650	0.9650	0.9650	1.0000	1.0000	1.0000	0.9650	0.9650	1.0000	1.0000	0.9650	0.9650
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]	95	0	127	0	0	0	18	222	0	0	201	102
Total Analysis Volume [veh/h]	380	1	508	0	0	0	73	887	0	0	805	409
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 - Coordination Group
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	0	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	0	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	0	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	42	0	0	0	0	0	68	0	0	68	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	10	0	0	10	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	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]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	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	C	R		L	C	C	R
C, Cycle Length [s]	110	110		110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00		4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00		2.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00		2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	52	52		50	50	50	50
g / C, Green / Cycle	0.47	0.47		0.45	0.45	0.45	0.45
(v / s)_i Volume / Saturation Flow Rate	0.21	0.32		0.11	0.48	0.43	0.26
s, saturation flow rate [veh/h]	1774	1583		674	1863	1863	1583
c, Capacity [veh/h]	842	751		77	843	843	717
d1, Uniform Delay [s]	19.33	22.35		46.53	21.78	20.72	15.32
k, delay calibration	0.50	0.50		0.11	0.50	0.28	0.11
I, Upstream Filtering Factor	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.76	4.85		37.31	45.45	14.62	0.72
d3, Initial Queue Delay [s]	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00		1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

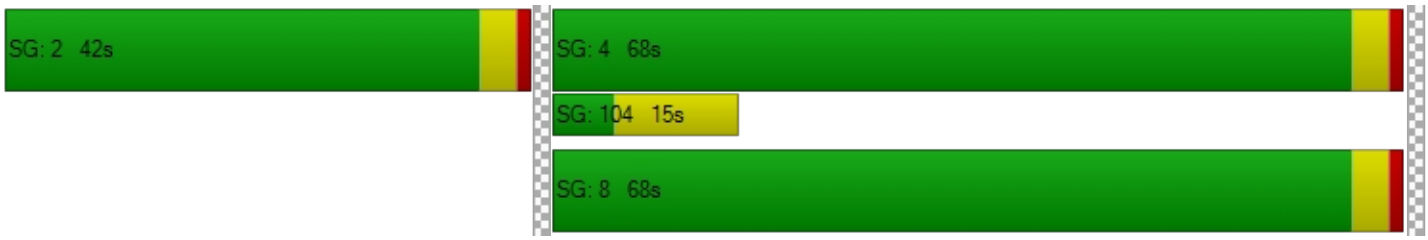
X, volume / capacity	0.45	0.68		0.95	1.05	0.95	0.57
d, Delay for Lane Group [s/veh]	21.09	27.20		83.84	67.23	35.34	16.04
Lane Group LOS	C	C		F	F	D	B
Critical Lane Group	No	Yes		No	Yes	No	No
50th-Percentile Queue Length [veh]	6.35	10.17		2.65	25.68	16.84	4.86
50th-Percentile Queue Length [ft]	158.83	254.31		66.36	642.03	421.02	121.46
95th-Percentile Queue Length [veh]	10.49	15.40		4.78	35.30	23.57	8.47
95th-Percentile Queue Length [ft]	262.17	385.07		119.44	882.56	589.27	211.83

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	21.09	21.09	27.20	0.00	0.00	0.00	83.84	67.23	0.00	0.00	35.34	16.04
Movement LOS	C	C	C				F	F			D	B
d_A, Approach Delay [s/veh]	24.58			0.00			68.49			28.84		
Approach LOS	C			A			E			C		
d_I, Intersection Delay [s/veh]	40.03											
Intersection LOS	D											
Intersection V/C	0.895											

Sequence

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



Intersection Level Of Service Report
Intersection 19: Antelope Rd (NS)/Scott Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	34.8
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.769

Intersection Setup

Name												
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	2	0	0	1	0	1	1	0	1	1	0	0
Pocket Length [ft]	215.00	100.00	100.00	200.00	100.00	200.00	375.00	100.00	250.00	200.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	392	287	189	59	167	279	271	802	283	60	526	54
Base Volume Adjustment Factor	1.0000	1.0000	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]	392	287	189	59	167	279	271	802	283	60	526	54
Peak Hour Factor	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760
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]	100	74	48	15	43	71	69	205	72	15	135	14
Total Analysis Volume [veh/h]	402	294	194	60	171	286	278	822	290	61	539	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	1 - Coordination Group
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
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]	18	32	0	21	35	0	24	36	0	11	23	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
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	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	14	28	28	6	21	21	18	44	44	6	32	32
g / C, Green / Cycle	0.14	0.28	0.28	0.06	0.21	0.21	0.18	0.44	0.44	0.06	0.32	0.32
(v / s)_i Volume / Saturation Flow Rate	0.12	0.16	0.12	0.03	0.09	0.18	0.16	0.31	0.31	0.03	0.16	0.16
s, saturation flow rate [veh/h]	3445	1863	1583	1774	1863	1583	1774	1863	1700	1774	1863	1803
c, Capacity [veh/h]	468	528	449	103	383	325	317	821	749	103	596	577
d1, Uniform Delay [s]	42.32	30.51	29.28	46.00	34.80	38.57	40.06	22.68	22.85	45.06	22.90	22.91
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.14	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.68	0.92	0.66	5.19	0.82	9.69	7.72	4.99	5.74	5.35	3.04	3.16
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	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.86	0.56	0.43	0.58	0.45	0.88	0.88	0.70	0.71	0.59	0.51	0.51
d, Delay for Lane Group [s/veh]	47.00	31.43	29.94	51.19	35.62	48.26	47.78	27.68	28.59	50.41	25.94	26.08
Lane Group LOS	D	C	C	D	D	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]	4.91	5.77	3.65	1.54	3.53	7.26	6.96	10.94	10.35	1.54	4.93	4.81
50th-Percentile Queue Length [ft]	122.73	144.13	91.19	38.49	88.32	181.60	173.97	273.39	258.74	38.46	123.36	120.31
95th-Percentile Queue Length [veh]	8.54	9.70	6.57	2.77	6.36	11.68	11.28	16.36	15.63	2.77	8.58	8.41
95th-Percentile Queue Length [ft]	213.58	242.57	164.14	69.28	158.98	292.11	282.12	408.98	390.64	69.23	214.44	210.26

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	47.00	31.43	29.94	51.19	35.62	48.26	47.78	27.95	28.59	50.41	26.00	26.08
Movement LOS	D	C	C	D	D	D	D	C	C	D	C	C
d_A, Approach Delay [s/veh]	38.14			44.42			32.05			28.28		
Approach LOS	D			D			C			C		
d_I, Intersection Delay [s/veh]	34.76											
Intersection LOS	C											
Intersection V/C	0.769											

Sequence

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

Intersection Level Of Service Report
Intersection 20: Haun Rd (NS)/Driveway 1 (EW)

Control Type:	Two-way stop	Delay (sec / veh):	14.9
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.276

Intersection Setup

Name						
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]	50.00		50.00		50.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	936	22	0	946	0	127
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	1.10	1.00	1.10	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]	936	22	0	946	0	127
Peak Hour Factor	0.9200	0.9200	1.0000	0.9200	1.0000	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	254	6	0	257	0	35
Total Analysis Volume [veh/h]	1017	24	0	1028	0	138
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	0.01	0.00	0.00	0.01	0.00	0.28
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	14.91
Movement LOS	A	A		A		B
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.00	1.11
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	0.00	27.86
d_A, Approach Delay [s/veh]	0.00		0.00		14.91	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.93					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 21: Haun Rd (NS)/Driveway 2 (EW)

Control Type:	Signalized	Delay (sec / veh):	25.9
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.555

Intersection Setup

Name						
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	2	0	0	0
Pocket Length [ft]	100.00	100.00	300.00	100.00	100.00	100.00
Speed [mph]	50.00		50.00		50.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	590	76	349	597	140	368
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]	590	76	349	597	140	368
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	160	21	95	162	38	100
Total Analysis Volume [veh/h]	641	83	379	649	152	400
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]	140
Coordination Type	Time of Day Pattern Coordinated
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	Overlap
Signal group	2	0	1	6	7	4
Auxiliary Signal Groups						1,4
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	7	0	7	7	7	7
Maximum Green [s]	30	0	30	30	30	30
Amber [s]	3.0	0.0	3.0	3.0	3.0	3.0
All red [s]	1.0	0.0	1.0	1.0	1.0	1.0
Split [s]	61	0	42	103	37	37
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	3.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	2.0
Minimum Recall	No		No	No	No	No
Maximum Recall	No		No	No	No	No
Pedestrian Recall	No		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]	140	140	140	140	140	140
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	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	0.00
g_i, Effective Green Time [s]	69	69	30	103	29	63
g / C, Green / Cycle	0.50	0.50	0.21	0.74	0.20	0.45
(v / s)_i Volume / Saturation Flow Rate	0.19	0.20	0.11	0.18	0.09	0.25
s, saturation flow rate [veh/h]	1863	1790	3445	3547	1774	1583
c, Capacity [veh/h]	924	888	736	2617	363	708
d1, Uniform Delay [s]	22.08	22.30	48.61	5.88	48.38	28.62
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.41
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.25	1.39	0.56	0.23	0.77	2.67
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	0.41	0.52	0.25	0.42	0.57
d, Delay for Lane Group [s/veh]	23.33	23.68	49.17	6.11	49.15	31.29
Lane Group LOS	C	C	D	A	D	C
Critical Lane Group	No	Yes	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	7.43	7.52	5.76	2.62	4.59	10.00
50th-Percentile Queue Length [ft/ln]	185.68	187.97	143.97	65.58	114.64	249.93
95th-Percentile Queue Length [veh/ln]	11.90	12.02	9.69	4.72	8.10	15.18
95th-Percentile Queue Length [ft/ln]	297.41	300.40	242.36	118.04	202.44	379.57

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	23.48	23.68	49.17	6.11	49.15	31.29
Movement LOS	C	C	D	A	D	C
d_A, Approach Delay [s/veh]	23.51		21.98		36.21	
Approach LOS	C		C		D	
d_I, Intersection Delay [s/veh]	25.87					
Intersection LOS	C					
Intersection V/C	0.555					

Sequence

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

EXISTING PLUS PROJECT CONDITIONS
WITH IMPROVEMENTS
LEVELS OF SERVICE WORKSHEETS

Intersection Level Of Service Report

Intersection 11: Town Center Dr-Sherman Rd (NS)/Holland Rd (EW)

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):	0.606

Intersection Setup

Name												
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	1	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	500.00	100.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	4	1	26	2	0	26	122	561	5	6	494	110
Base Volume Adjustment Factor	1.0000	1.0000	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]	4	1	26	2	0	26	122	561	5	6	494	110
Peak Hour Factor	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	8	1	0	8	37	169	2	2	149	33
Total Analysis Volume [veh/h]	5	1	31	2	0	31	147	677	6	7	596	133
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 Coordinated
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]	11	19	0	11	19	0	51	59	0	11	19	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	L	C	L	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	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
g_i, Effective Green Time [s]	1	5	0	4	10	78	1	69
g / C, Green / Cycle	0.01	0.05	0.00	0.04	0.10	0.78	0.01	0.69
(v / s)_i Volume / Saturation Flow Rate	0.00	0.02	0.00	0.02	0.08	0.37	0.00	0.40
s, saturation flow rate [veh/h]	1774	1591	1774	1583	1774	1860	1774	1805
c, Capacity [veh/h]	18	74	9	66	184	1442	24	1236
d1, Uniform Delay [s]	49.18	46.43	49.63	46.92	43.88	4.00	48.93	8.33
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.11	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.86	3.89	12.50	5.19	7.84	1.12	6.66	2.07
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

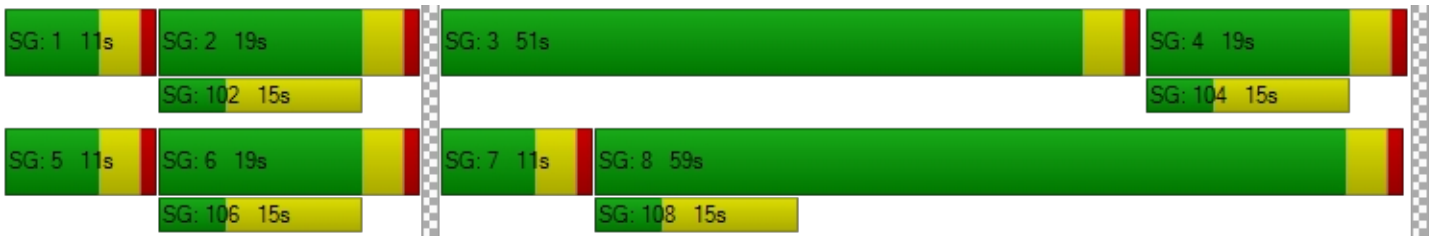
X, volume / capacity	0.27	0.43	0.23	0.47	0.80	0.47	0.29	0.59
d, Delay for Lane Group [s/veh]	57.05	50.32	62.13	52.11	51.73	5.12	55.59	10.40
Lane Group LOS	E	D	E	D	D	A	E	B
Critical Lane Group	Yes	No	No	Yes	Yes	No	No	Yes
50th-Percentile Queue Length [veh]	0.16	0.82	0.08	0.82	3.79	3.06	0.21	6.73
50th-Percentile Queue Length [ft]	3.97	20.56	1.96	20.44	94.71	76.45	5.26	168.28
95th-Percentile Queue Length [veh]	0.29	1.48	0.14	1.47	6.82	5.50	0.38	10.99
95th-Percentile Queue Length [ft]	7.15	37.00	3.53	36.79	170.48	137.61	9.46	274.66

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	57.05	50.32	50.32	62.13	52.11	52.11	51.73	5.12	5.12	55.59	10.40	10.40
Movement LOS	E	D	D	E	D	D	D	A	A	E	B	B
d_A, Approach Delay [s/veh]	51.23			52.72			13.38			10.83		
Approach LOS	D			D			B			B		
d_I, Intersection Delay [s/veh]	13.88											
Intersection LOS	B											
Intersection V/C	0.606											

Sequence

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



Intersection Level Of Service Report
Intersection 15: Haun Road (NS) / Holland Road (EW)

Control Type:	Signalized	Delay (sec / veh):	41.7
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.976

Intersection Setup

Name												
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	1	0	0	1	0	0	1	0	1	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	150.00	100.00	100.00	150.00	100.00	150.00	100.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	263	260	2	9	215	343	353	2	228	0	6	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
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	263	260	2	9	215	343	353	2	228	0	6	7
Peak Hour Factor	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380
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]	78	78	1	3	64	102	105	1	68	0	2	2
Total Analysis Volume [veh/h]	314	310	2	11	257	409	421	2	272	0	7	8
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	Yes
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
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	Split	Split	Split	Split	Split	Split
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]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	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]	27	25	0	37	35	0	0	38	0	0	38	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
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]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	R	L	C	R	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	21	52	2	33	33	34	34	34	34
g / C, Green / Cycle	0.21	0.52	0.02	0.33	0.33	0.34	0.34	0.34	0.34
(v / s)_i Volume / Saturation Flow Rate	0.20	0.19	0.01	0.15	0.29	0.34	0.00	0.19	0.01
s, saturation flow rate [veh/h]	1597	1675	1597	1676	1425	1253	1676	1425	1532
c, Capacity [veh/h]	342	872	31	547	465	464	570	484	557
d1, Uniform Delay [s]	38.45	14.12	48.40	26.81	31.84	35.44	21.82	26.94	22.01
k, delay calibration	0.20	0.50	0.11	0.50	0.50	0.45	0.11	0.13	0.11
I, 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]	16.33	1.15	6.64	2.88	20.56	22.16	0.00	1.25	0.02
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

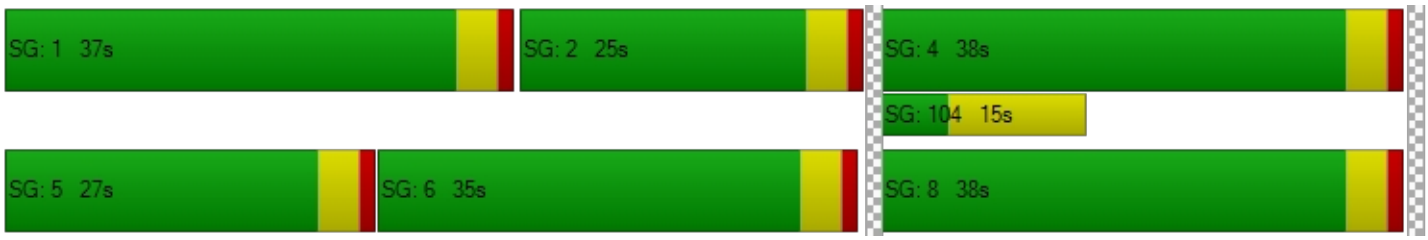
X, volume / capacity	0.92	0.36	0.35	0.47	0.88	0.91	0.00	0.56	0.03
d, Delay for Lane Group [s/veh]	54.78	15.27	55.04	29.70	52.40	57.59	21.82	28.18	22.03
Lane Group LOS	D	B	E	C	D	E	C	C	C
Critical Lane Group	Yes	No	No	No	Yes	Yes	No	No	No
50th-Percentile Queue Length [veh]	8.60	3.92	0.32	4.97	11.22	12.55	0.03	5.06	0.22
50th-Percentile Queue Length [ft]	215.06	98.10	7.93	124.21	280.41	313.78	0.74	126.42	5.58
95th-Percentile Queue Length [veh]	13.41	7.06	0.57	8.62	16.71	18.36	0.05	8.74	0.40
95th-Percentile Queue Length [ft]	335.31	176.59	14.28	215.61	417.73	459.03	1.33	218.62	10.05

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	54.78	15.27	15.27	55.04	29.70	52.40	57.59	21.82	28.18	22.03	22.03	22.03
Movement LOS	D	B	B	E	C	D	E	C	C	C	C	C
d_A, Approach Delay [s/veh]	35.09			43.82			45.98			22.03		
Approach LOS	D			D			D			C		
d_I, Intersection Delay [s/veh]	41.69											
Intersection LOS	D											
Intersection V/C	0.976											

Sequence

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



Intersection Level Of Service Report

Intersection 11: Town Center Dr-Sherman Rd (NS)/Holland Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	12.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.520

Intersection Setup

Name												
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	1	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	500.00	100.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	5	0	10	10	1	56	49	451	4	25	605	31
Base Volume Adjustment Factor	1.0000	1.0000	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]	5	0	10	10	1	56	49	451	4	25	605	31
Peak Hour Factor	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	3	3	0	15	13	120	1	7	161	8
Total Analysis Volume [veh/h]	5	0	11	11	1	60	52	480	4	27	644	33
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 Coordinated
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]	11	19	0	11	19	0	11	59	0	11	59	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	L	C	L	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	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
g_i, Effective Green Time [s]	1	5	2	6	5	74	4	72
g / C, Green / Cycle	0.01	0.05	0.02	0.06	0.05	0.74	0.04	0.72
(v / s)_i Volume / Saturation Flow Rate	0.00	0.01	0.01	0.04	0.03	0.26	0.02	0.37
s, saturation flow rate [veh/h]	1774	1583	1774	1587	1774	1860	1774	1847
c, Capacity [veh/h]	18	77	35	92	96	1366	67	1326
d1, Uniform Delay [s]	49.18	45.63	48.42	46.20	46.17	4.78	47.08	6.29
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.11	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.86	0.84	5.06	7.87	4.73	0.72	3.89	1.41
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

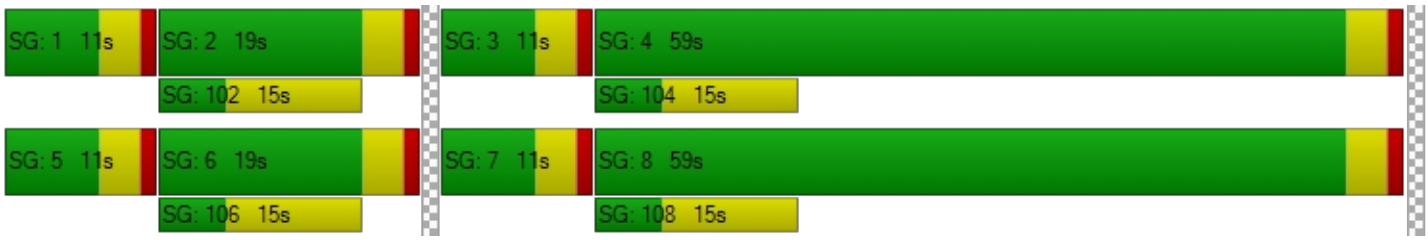
X, volume / capacity	0.27	0.14	0.32	0.66	0.54	0.35	0.40	0.51
d, Delay for Lane Group [s/veh]	57.05	46.47	53.48	54.08	50.89	5.50	50.97	7.69
Lane Group LOS	E	D	D	D	D	A	D	A
Critical Lane Group	Yes	No	No	Yes	Yes	No	No	Yes
50th-Percentile Queue Length [veh]	0.16	0.27	0.31	1.62	1.33	2.60	0.70	4.81
50th-Percentile Queue Length [ft]	3.97	6.73	7.72	40.57	33.29	65.07	17.55	120.25
95th-Percentile Queue Length [veh]	0.29	0.48	0.56	2.92	2.40	4.68	1.26	8.41
95th-Percentile Queue Length [ft]	7.15	12.11	13.90	73.02	59.92	117.12	31.58	210.18

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	57.05	46.47	46.47	53.48	54.08	54.08	50.89	5.50	5.50	50.97	7.69	7.69
Movement LOS	E	D	D	D	D	D	D	A	A	D	A	A
d_A, Approach Delay [s/veh]	49.78			53.99			9.91			9.35		
Approach LOS	D			D			A			A		
d_I, Intersection Delay [s/veh]	12.48											
Intersection LOS	B											
Intersection V/C	0.520											

Sequence

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



Intersection Level Of Service Report
Intersection 15: Haun Road (NS) / Holland Road (EW)

Control Type:	Signalized	Delay (sec / veh):	36.8
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.862

Intersection Setup

Name												
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	1	0	0	1	0	0	1	0	1	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	150.00	100.00	100.00	150.00	100.00	150.00	100.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	257	331	4	6	315	416	322	4	129	2	5	14
Base Volume Adjustment Factor	1.0000	1.0000	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]	257	331	4	6	315	416	322	4	129	2	5	14
Peak Hour Factor	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	70	90	1	2	85	113	87	1	35	1	1	4
Total Analysis Volume [veh/h]	278	359	4	7	341	451	349	4	140	2	5	15
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
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	Split	Split	Split	Split	Split	Split
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]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	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]	28	17	0	33	22	0	0	31	0	0	19	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
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]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	R	L	C	R	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
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
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	19	55	1	37	37	24	24	24	3
g / C, Green / Cycle	0.19	0.55	0.01	0.37	0.37	0.24	0.24	0.24	0.03
(v / s)_i Volume / Saturation Flow Rate	0.17	0.22	0.00	0.20	0.32	0.22	0.00	0.10	0.01
s, saturation flow rate [veh/h]	1597	1673	1597	1676	1425	1597	1676	1425	1490
c, Capacity [veh/h]	310	920	22	620	527	389	408	347	50
d1, Uniform Delay [s]	39.39	12.95	48.93	24.97	29.10	36.68	28.73	31.79	47.50
k, delay calibration	0.14	0.50	0.11	0.50	0.50	0.14	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	11.67	1.27	8.32	3.49	16.25	9.43	0.01	0.76	6.12
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	0.90	0.39	0.32	0.55	0.86	0.90	0.01	0.40	0.44
d, Delay for Lane Group [s/veh]	51.06	14.22	57.25	28.47	45.36	46.11	28.74	32.54	53.62
Lane Group LOS	D	B	E	C	D	D	C	C	D
Critical Lane Group	Yes	No	No	No	Yes	Yes	No	No	Yes
50th-Percentile Queue Length [veh]	7.27	4.35	0.22	6.46	11.41	8.72	0.07	2.75	0.60
50th-Percentile Queue Length [ft]	181.84	108.67	5.41	161.59	285.36	218.02	1.76	68.76	15.00
95th-Percentile Queue Length [veh]	11.70	7.77	0.39	10.63	16.96	13.56	0.13	4.95	1.08
95th-Percentile Queue Length [ft]	292.42	194.15	9.74	265.82	423.88	339.09	3.16	123.78	27.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	51.06	14.22	14.22	57.25	28.47	45.36	46.11	28.74	32.54	53.62	53.62	53.62
Movement LOS	D	B	B	E	C	D	D	C	C	D	D	D
d_A, Approach Delay [s/veh]	30.20			38.25			42.12			53.62		
Approach LOS	C			D			D			D		
d_I, Intersection Delay [s/veh]	36.76											
Intersection LOS	D											
Intersection V/C	0.862											

Sequence

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

EXISTING PLUS AMBIENT GROWTH PLUS CUMULATIVE GROWTH WITHOUT OVERPASS CONDITIONS PROJECT LEVELS OF SERVICE WORKSHEETS

Intersection Level Of Service Report
Intersection 1: Murrieta Rd (NS)/Newport Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	43.4
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.836

Intersection Setup

Name							Newport Rd			Newport Rd		
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	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	190.00	100.00	100.00	225.00	100.00	100.00	275.00	100.00	100.00	180.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							Newport Rd			Newport Rd		
Base Volume Input [veh/h]	212	440	150	330	379	201	315	985	133	155	821	119
Base Volume Adjustment Factor	1.0000	1.0000	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	440	150	330	379	201	315	985	133	155	821	119
Peak Hour Factor	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090
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]	58	121	41	91	104	55	87	271	37	43	226	33
Total Analysis Volume [veh/h]	233	484	165	363	417	221	347	1084	146	171	903	131
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	1 - Coordination Group
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
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]	34	20	0	34	20	0	31	40	0	16	25	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	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]	110	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	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]	17	24	24	25	32	32	23	34	34	12	22	22
g / C, Green / Cycle	0.15	0.22	0.22	0.22	0.29	0.29	0.21	0.31	0.31	0.11	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.13	0.14	0.10	0.20	0.12	0.14	0.20	0.21	0.09	0.10	0.18	0.08
s, saturation flow rate [veh/h]	1774	3547	1583	1774	3547	1583	1774	5074	1583	1774	5074	1583
c, Capacity [veh/h]	269	763	341	397	1019	455	379	1552	484	195	1026	320
d1, Uniform Delay [s]	45.67	39.31	37.90	41.75	31.72	32.53	42.34	33.76	29.25	48.28	42.67	38.24
k, delay calibration	0.11	0.50	0.50	0.27	0.50	0.50	0.24	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.27	4.00	4.87	17.83	1.22	3.68	17.17	0.58	0.35	11.55	2.66	0.84
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.87	0.63	0.48	0.91	0.41	0.49	0.91	0.70	0.30	0.87	0.88	0.41
d, Delay for Lane Group [s/veh]	53.94	43.31	42.76	59.57	32.94	36.21	59.50	34.34	29.59	59.84	45.32	39.08
Lane Group LOS	D	D	D	E	C	D	E	C	C	E	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	6.57	6.08	4.18	11.08	4.42	5.08	10.55	8.09	2.85	5.06	7.79	3.02
50th-Percentile Queue Length [ft]	164.14	152.06	104.49	276.93	110.54	127.11	263.80	202.29	71.24	126.56	194.87	75.41
95th-Percentile Queue Length [veh]	10.77	10.13	7.52	16.54	7.87	8.78	15.88	12.76	5.13	8.75	12.37	5.43
95th-Percentile Queue Length [ft]	269.19	253.18	188.08	413.39	196.76	219.56	396.98	318.91	128.23	218.82	309.34	135.74

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	53.94	43.31	42.76	59.57	32.94	36.21	59.50	34.34	29.59	59.84	45.32	39.08
Movement LOS	D	D	D	E	C	D	E	C	C	E	D	D
d_A, Approach Delay [s/veh]	46.02			43.32			39.44			46.70		
Approach LOS	D			D			D			D		
d_I, Intersection Delay [s/veh]	43.39											
Intersection LOS	D											
Intersection V/C	0.836											

Sequence

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

Intersection Level Of Service Report
Intersection 2: Bradley Rd (N/S)/Newport Rd (E/W)

Control Type:	Signalized	Delay (sec / veh):	43.4
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.001

Intersection Setup

Name				Bradley Rd			Newport Rd			Newport Rd		
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	1	0	0	1	0	0	1	0	0	2	0	1
Pocket Length [ft]	100.00	100.00	100.00	125.00	100.00	100.00	165.00	100.00	100.00	155.00	100.00	150.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name				Bradley Rd			Newport Rd			Newport Rd		
Base Volume Input [veh/h]	150	276	484	221	318	71	90	1481	82	465	1120	129
Base Volume Adjustment Factor	1.0000	1.0000	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]	150	276	484	221	318	71	90	1481	82	465	1120	129
Peak Hour Factor	0.8690	0.8690	0.8690	0.8690	0.8690	0.8690	0.8690	0.8690	0.8690	0.8690	0.8690	0.8690
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	79	139	64	91	20	26	426	24	134	322	37
Total Analysis Volume [veh/h]	173	318	557	254	366	82	104	1704	94	535	1289	148
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	1 - Coordination Group
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
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	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	2	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups			2,7									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	30	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	3.0	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	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	16	21	21	19	24	0	27	48	0	22	43	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	5	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	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	2.0	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	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	C	L	C	C	L	C	R
C, Cycle Length [s]	110	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	12	20	42	15	23	23	8	41	41	18	50	50
g / C, Green / Cycle	0.11	0.18	0.38	0.14	0.21	0.21	0.07	0.37	0.37	0.16	0.46	0.46
(v / s)_i Volume / Saturation Flow Rate	0.10	0.17	0.35	0.14	0.12	0.12	0.06	0.34	0.34	0.16	0.25	0.09
s, saturation flow rate [veh/h]	1774	1863	1583	1774	1863	1746	1774	3547	1813	3445	5074	1583
c, Capacity [veh/h]	195	344	610	243	395	370	134	1307	668	566	2320	724
d1, Uniform Delay [s]	48.34	44.15	32.12	47.54	39.06	39.09	50.02	33.04	33.08	45.57	21.76	17.91
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.35	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	12.38	32.47	20.36	38.95	6.21	6.68	9.21	2.79	14.28	8.81	0.21	0.14
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

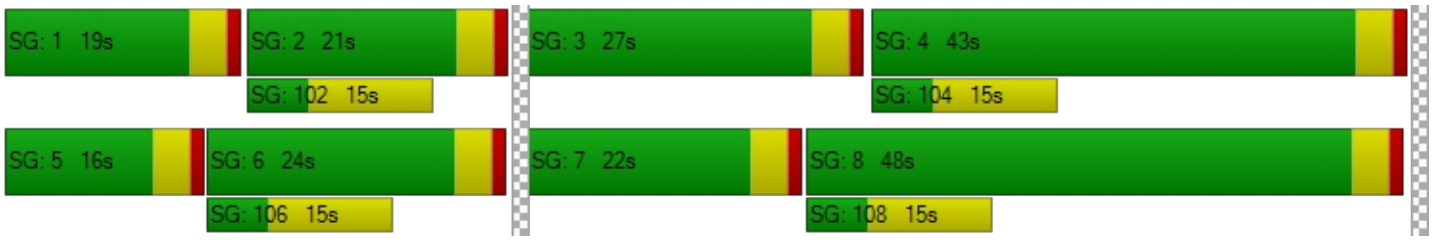
X, volume / capacity	0.89	0.92	0.91	1.04	0.58	0.59	0.78	0.91	0.91	0.95	0.56	0.20
d, Delay for Lane Group [s/veh]	60.72	76.62	52.47	86.50	45.27	45.77	59.24	35.84	47.37	54.38	21.97	18.04
Lane Group LOS	E	E	D	F	D	D	E	D	D	D	C	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	5.16	11.21	16.35	9.01	6.03	5.73	3.05	14.36	16.87	7.59	7.40	2.11
50th-Percentile Queue Length [ft]	129.12	280.32	408.86	225.24	150.71	143.21	76.25	359.03	421.78	189.73	185.02	52.82
95th-Percentile Queue Length [veh]	8.89	16.70	22.99	14.20	10.05	9.65	5.49	20.58	23.61	12.11	11.86	3.80
95th-Percentile Queue Length [ft]	222.30	417.61	574.66	354.92	251.37	241.34	137.25	514.41	590.18	302.67	296.56	95.07

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	60.72	76.62	52.47	86.50	45.46	45.77	59.24	39.32	47.37	54.38	21.97	18.04
Movement LOS	E	E	D	F	D	D	E	D	D	D	C	B
d_A, Approach Delay [s/veh]	61.16			60.34			40.81			30.47		
Approach LOS	E			E			D			C		
d_I, Intersection Delay [s/veh]	43.41											
Intersection LOS	D											
Intersection V/C	1.001											

Sequence

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



Intersection Level Of Service Report
Intersection 3: Haun Road (NS) / Newport Road (EW)

Control Type:	Signalized	Delay (sec / veh):	37.9
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.977

Intersection Setup

Name	Haun Rd			Haun Rd						Newport Rd		
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	2	0	1	2	0	0	2	0	0	2	0	1
Pocket Length [ft]	215.00	100.00	285.00	155.00	100.00	100.00	210.00	100.00	100.00	350.00	100.00	150.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Haun Rd			Haun Rd						Newport Rd		
Base Volume Input [veh/h]	236	106	757	146	58	62	149	1912	274	872	1460	380
Base Volume Adjustment Factor	1.0000	1.0000	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]	236	106	757	146	58	62	149	1912	274	872	1460	380
Peak Hour Factor	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	62	28	200	39	15	16	39	504	72	230	385	100
Total Analysis Volume [veh/h]	249	112	799	154	61	65	157	2017	289	920	1540	401
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	1 - Coordination Group
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
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	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	2	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups			2,7									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	30	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	3.0	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	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	15	22	22	12	19	0	42	62	0	44	64	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	5	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	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	2.0	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	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	C	L	C	R	L	C	C
C, Cycle Length [s]	140	140	140	140	140	140	140	140	140	140	140	140
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	11	18	61	8	15	15	9	58	58	40	89	89
g / C, Green / Cycle	0.08	0.13	0.44	0.06	0.11	0.11	0.06	0.42	0.42	0.28	0.64	0.64
(v / s)_i Volume / Saturation Flow Rate	0.07	0.06	0.29	0.04	0.03	0.04	0.05	0.40	0.18	0.27	0.36	0.39
s, saturation flow rate [veh/h]	3445	1863	2803	3445	1863	1583	3445	5074	1583	3445	3547	1684
c, Capacity [veh/h]	273	238	1229	199	198	168	214	2121	662	972	2263	1074
d1, Uniform Delay [s]	63.98	56.66	30.87	65.05	57.79	58.29	64.50	39.34	29.00	49.20	14.32	15.15
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.19
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	11.62	6.55	2.68	6.32	3.99	6.57	4.79	3.11	0.45	5.70	0.22	1.03
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

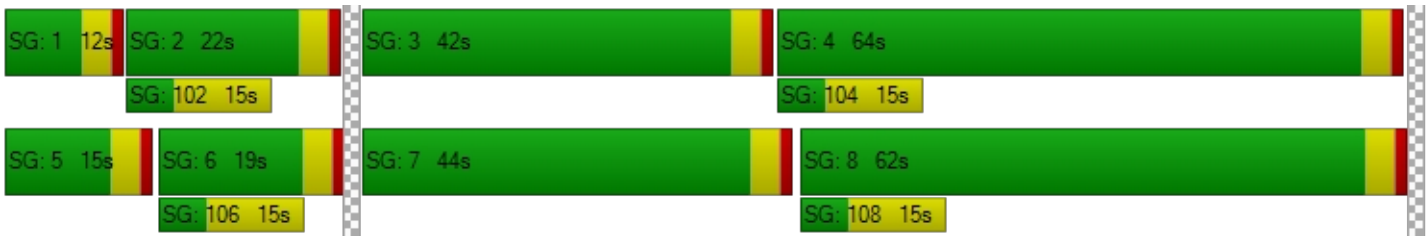
X, volume / capacity	0.91	0.47	0.65	0.77	0.31	0.39	0.73	0.95	0.44	0.95	0.56	0.62
d, Delay for Lane Group [s/veh]	75.60	63.21	33.55	71.37	61.78	64.86	69.29	42.45	29.45	54.91	14.54	16.19
Lane Group LOS	E	E	C	E	E	E	E	D	C	D	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh]	4.74	4.02	10.52	2.82	2.17	2.40	2.83	21.65	6.75	15.91	10.33	11.61
50th-Percentile Queue Length [ft]	118.45	100.49	263.05	70.58	54.26	60.09	70.77	541.32	168.74	397.64	258.16	290.31
95th-Percentile Queue Length [veh]	8.31	7.24	15.84	5.08	3.91	4.33	5.10	29.28	11.01	22.45	15.60	17.20
95th-Percentile Queue Length [ft]	207.69	180.88	396.05	127.04	97.67	108.17	127.38	732.11	275.26	561.16	389.91	430.02

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	75.60	63.21	33.55	71.37	61.78	64.86	69.29	42.45	29.45	54.91	14.83	16.19
Movement LOS	E	E	C	E	E	E	E	D	C	D	B	B
d_A, Approach Delay [s/veh]	45.44			67.77			42.64			27.90		
Approach LOS	D			E			D			C		
d_I, Intersection Delay [s/veh]	37.93											
Intersection LOS	D											
Intersection V/C	0.977											

Sequence

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



Intersection Level Of Service Report
Intersection 4: I-215 SB Ramps (NS) / Newport Road (EW)

Control Type:	Signalized	Delay (sec / veh):	20.9
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.350

Intersection Setup

Name	I-215 SB Ramps			I-215 SB Ramps			Newport Rd			Newport Rd		
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	1	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	800.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name	I-215 SB Ramps			I-215 SB Ramps			Newport Rd			Newport Rd		
Base Volume Input [veh/h]	0	0	0	563	0	672	0	1902	922	0	2058	1378
Base Volume Adjustment Factor	1.0000	1.0000	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	563	0	672	0	1902	922	0	2058	1378
Peak Hour Factor	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	151	0	180	0	509	247	0	551	369
Total Analysis Volume [veh/h]	0	0	0	603	0	719	0	2036	987	0	2203	1475
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 - Coordination Group
Cycle Length [s]	140
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	Overlap	Protecte	Permiss	Overlap
Signal group	0	0	0	1	0	0	0	8	8	7	4	4
Auxiliary Signal Groups									1,4,8			1,4,8
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	7	0	0	0	7	7	0	7	7
Maximum Green [s]	0	0	0	30	0	0	0	30	30	0	30	30
Amber [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0
All red [s]	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0	1.0
Split [s]	0	0	0	53	0	0	0	87	87	0	87	87
Vehicle Extension [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0
Walk [s]	0	0	0	5	0	0	0	5	5	0	5	5
Pedestrian Clearance [s]	0	0	0	10	0	0	0	10	10	0	10	10
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	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0
Minimum Recall				No				No	No		No	No
Maximum Recall				No				No	No		No	No
Pedestrian Recall				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	C	R	C	R
C, Cycle Length [s]		140	140	140	140	140	140	140
L, Total Lost Time per Cycle [s]		4.00	4.00	4.00	4.00	0.00	4.00	0.00
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]		2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]		48	48	48	84	136	84	136
g / C, Green / Cycle		0.34	0.34	0.34	0.60	0.97	0.60	0.97
(v / s)_i Volume / Saturation Flow Rate		0.25	0.27	0.28	0.30	0.62	0.43	0.93
s, saturation flow rate [veh/h]		1774	1649	1583	6765	1583	5074	1583
c, Capacity [veh/h]		603	560	538	4079	1538	3060	1538
d1, Uniform Delay [s]		40.52	41.56	42.20	15.75	0.15	19.46	0.84
k, delay calibration		0.25	0.29	0.31	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		3.92	6.44	8.60	0.44	2.07	1.50	15.07
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		0.73	0.79	0.82	0.50	0.64	0.72	0.96
d, Delay for Lane Group [s/veh]		44.44	48.00	50.80	16.19	2.22	20.96	15.91
Lane Group LOS		D	D	D	B	A	C	B
Critical Lane Group		No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]		13.47	14.14	14.63	8.60	0.88	15.53	6.44
50th-Percentile Queue Length [ft]		336.67	353.57	365.65	214.96	22.11	388.19	160.99
95th-Percentile Queue Length [veh]		19.49	20.31	20.90	13.41	1.59	21.99	10.60
95th-Percentile Queue Length [ft]		487.13	507.76	522.45	335.18	39.79	549.75	265.04

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	45.40	0.00	49.71	0.00	16.19	2.22	0.00	20.96	15.91
Movement LOS				D		D		B	A		C	B
d_A, Approach Delay [s/veh]	0.00			47.75			11.63			18.93		
Approach LOS	A			D			B			B		
d_I, Intersection Delay [s/veh]	20.93											
Intersection LOS	C											
Intersection V/C	0.350											

Sequence

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

Intersection Level Of Service Report
Intersection 5: I-215 NB Ramps (NS) / Newport Road (EW)

Control Type:	Signalized	Delay (sec / veh):	22.4
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.787

Intersection Setup

Name	I-215 NB Ramps			I-215 NB Ramps			Newport Rd			Newport Rd		
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	1	0	1	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	375.00	100.00	375.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name	I-215 NB Ramps			I-215 NB Ramps			Newport Rd			Newport Rd		
Base Volume Input [veh/h]	564	0	720	0	0	0	0	1810	633	0	2863	721
Base Volume Adjustment Factor	1.0000	1.0000	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]	564	0	720	0	0	0	0	1810	633	0	2863	721
Peak Hour Factor	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	151	0	193	0	0	0	0	484	169	0	766	193
Total Analysis Volume [veh/h]	603	0	770	0	0	0	0	1936	677	0	3062	771
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 - Coordination Group
Cycle Length [s]	140
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	Split	Permiss	Split	Permiss	Permiss	Permiss	Protecte	Permiss	Overlap	Permiss	Permiss	Overlap
Signal group	5	0	0	0	0	0	3	8	5	0	4	4
Auxiliary Signal Groups									4,5,8			4,5,8
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	0	0	0	0	0	0	7	7	0	7	7
Maximum Green [s]	30	0	0	0	0	0	0	30	30	0	30	30
Amber [s]	3.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0
All red [s]	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0	1.0
Split [s]	95	0	0	0	0	0	0	45	95	0	45	45
Vehicle Extension [s]	3.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0
Walk [s]	5	0	0	0	0	0	0	5	5	0	5	5
Pedestrian Clearance [s]	10	0	0	0	0	0	0	10	10	0	10	10
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	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0
Minimum Recall	No							No	No		No	No
Maximum Recall	No							No	No		No	No
Pedestrian Recall	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		C	R	C	R
C, Cycle Length [s]	140	140	140		140	140	140	140
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00		4.00	0.00	4.00	0.00
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]	2.00	2.00	2.00		2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	51	51	51		80	136	80	136
g / C, Green / Cycle	0.37	0.37	0.37		0.57	0.97	0.57	0.97
(v / s)_i Volume / Saturation Flow Rate	0.26	0.28	0.29		0.38	0.43	0.45	0.49
s, saturation flow rate [veh/h]	1774	1639	1583		5074	1583	6765	1583
c, Capacity [veh/h]	652	602	582		2919	1538	3892	1538
d1, Uniform Delay [s]	37.70	38.81	39.35		20.40	0.10	23.04	0.11
k, delay calibration	0.11	0.11	0.11		0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.39	2.00	2.40		1.20	0.92	1.68	1.17
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	0.70	0.76	0.79		0.66	0.44	0.79	0.50
d, Delay for Lane Group [s/veh]	39.09	40.81	41.75		21.60	1.02	24.72	1.28
Lane Group LOS	D	D	D		C	A	C	A
Critical Lane Group	No	No	Yes		No	No	Yes	No
50th-Percentile Queue Length [veh]	13.07	13.53	13.76		13.61	0.39	18.25	0.50
50th-Percentile Queue Length [ft]	326.70	338.21	344.11		340.15	9.79	456.28	12.50
95th-Percentile Queue Length [veh]	19.00	19.56	19.85		19.66	0.71	25.26	0.90
95th-Percentile Queue Length [ft]	474.91	489.01	496.22		491.38	17.63	631.43	22.50

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	39.50	0.00	41.37	0.00	0.00	0.00	0.00	21.60	1.02	0.00	24.72	1.28
Movement LOS	D		D					C	A		C	A
d_A, Approach Delay [s/veh]	40.55			0.00			16.27			20.01		
Approach LOS	D			A			B			C		
d_I, Intersection Delay [s/veh]	22.36											
Intersection LOS	C											
Intersection V/C	0.787											

Sequence

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

Intersection Level Of Service Report
Intersection 6: Antelope Rd (NS)/Newport Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	57.5
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.044

Intersection Setup

Name												
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	2	0	0	2	0	0	2	0	0	2	0	0
Pocket Length [ft]	330.00	100.00	100.00	100.00	100.00	100.00	325.00	100.00	100.00	200.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							Newport Rd			Newport Rd		
Base Volume Input [veh/h]	738	38	119	95	79	275	130	1540	847	169	2570	50
Base Volume Adjustment Factor	1.0000	1.0000	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]	738	38	119	95	79	275	130	1540	847	169	2570	50
Peak Hour Factor	0.9570	0.9570	0.9570	0.9570	0.9570	0.9570	0.9570	0.9570	0.9570	0.9570	0.9570	0.9570
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]	193	10	31	25	21	72	34	402	221	44	671	13
Total Analysis Volume [veh/h]	771	40	124	99	83	287	136	1609	885	177	2685	52
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	1 - Coordination Group
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
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	8	7	4	0
Auxiliary Signal Groups									5,8			
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	7	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	30	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0	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	1.0	1.0	1.0	0.0
Split [s]	33	36	0	16	19	0	11	77	77	11	77	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	5	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	10	0	10	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	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0	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	C	R	L	C	C	L	C	C
C, Cycle Length [s]	140	140	140	140	140	140	140	140	140	140	140	140	140
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	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	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	2.00
g_i, Effective Green Time [s]	29	37	37	7	15	15	15	7	73	73	7	73	73
g / C, Green / Cycle	0.21	0.27	0.27	0.05	0.11	0.11	0.11	0.05	0.52	0.52	0.05	0.52	0.52
(v / s)_i Volume / Saturation Flow Rate	0.22	0.02	0.08	0.03	0.04	0.09	0.09	0.04	0.45	0.56	0.05	0.51	0.51
s, saturation flow rate [veh/h]	3445	1863	1583	3445	1863	1583	1583	3445	3547	1583	3445	3547	1845
c, Capacity [veh/h]	714	496	422	169	202	171	171	173	1845	824	173	1845	960
d1, Uniform Delay [s]	55.50	38.50	40.87	65.18	58.26	61.21	61.21	65.76	29.50	33.59	66.49	32.62	32.95
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.50	0.11	0.11	0.50	0.11	0.11	0.46
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
d2, Incremental Delay [s]	42.40	0.32	1.77	3.21	6.10	36.12	36.12	7.76	1.40	53.33	38.60	5.26	23.99
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	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	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	1.00

Lane Group Results

X, volume / capacity	1.08	0.08	0.29	0.59	0.41	0.84	0.84	0.79	0.87	1.07	1.03	0.97	0.98
d, Delay for Lane Group [s/veh]	97.90	38.81	42.64	68.39	64.35	97.32	97.32	73.52	30.90	86.92	105.09	37.88	56.94
Lane Group LOS	F	D	D	E	E	F	F	E	C	F	F	D	E
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	16.37	1.06	3.54	1.77	3.03	6.60	6.60	2.53	22.22	37.68	3.94	28.31	35.00
50th-Percentile Queue Length [ft]	409.31	26.39	88.43	44.17	75.66	164.9	164.9	63.32	555.44	942.09	98.39	707.68	874.91
95th-Percentile Queue Length [veh]	23.98	1.90	6.37	3.18	5.45	10.81	10.81	4.56	29.95	50.59	7.08	37.03	44.70
95th-Percentile Queue Length [ft]	599.62	47.51	159.18	79.51	136.1	270.2	270.2	113.97	748.69	1264.81	177.10	925.82	1117.45

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	97.90	38.81	42.64	68.39	64.35	97.32	73.52	30.90	86.92	105.09	44.20	56.94
Movement LOS	F	D	D	E	E	F	E	C	F	F	D	E
d_A, Approach Delay [s/veh]	88.04			85.38			51.95			48.12		
Approach LOS	F			F			D			D		
d_I, Intersection Delay [s/veh]	57.46											
Intersection LOS	E											
Intersection V/C	1.044											

Sequence

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

Intersection Level Of Service Report
Intersection 7: Menifee Rd (NS)/NewportRd (EW)

Control Type:	Signalized	Delay (sec / veh):	97.2
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.204

Intersection Setup

Name							Newport Rd			Newport Rd		
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	1	0	1	1	0	0	1	0	0	2	0	0
Pocket Length [ft]	250.00	100.00	200.00	100.00	100.00	100.00	400.00	100.00	100.00	295.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							Newport Rd			Newport Rd		
Base Volume Input [veh/h]	357	301	151	93	283	518	362	1104	268	225	1709	59
Base Volume Adjustment Factor	1.0000	1.0000	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]	357	301	151	93	283	518	362	1104	268	225	1709	59
Peak Hour Factor	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	96	81	41	25	76	139	97	296	72	60	459	16
Total Analysis Volume [veh/h]	383	323	162	100	304	556	389	1186	288	242	1836	63
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	1 - Coordination Group
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]	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]	15	20	0	34	39	0	26	51	0	15	40	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
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	C	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]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	11	37	37	9	35	35	22	48	48	10	36	36
g / C, Green / Cycle	0.09	0.31	0.31	0.07	0.29	0.29	0.18	0.40	0.40	0.09	0.30	0.30
(v / s)_i Volume / Saturation Flow Rate	0.11	0.09	0.10	0.06	0.09	0.35	0.22	0.28	0.28	0.07	0.36	0.04
s, saturation flow rate [veh/h]	3445	3547	1583	1774	3547	1583	1774	3547	1683	3445	5074	1583
c, Capacity [veh/h]	316	1107	494	126	1034	462	327	1409	669	297	1517	473
d1, Uniform Delay [s]	54.50	31.23	31.62	54.88	32.94	42.51	48.93	30.32	30.41	53.89	42.06	30.71
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.36	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	102.28	0.14	0.38	10.69	0.16	111.13	104.84	3.02	6.37	5.42	101.09	0.58
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

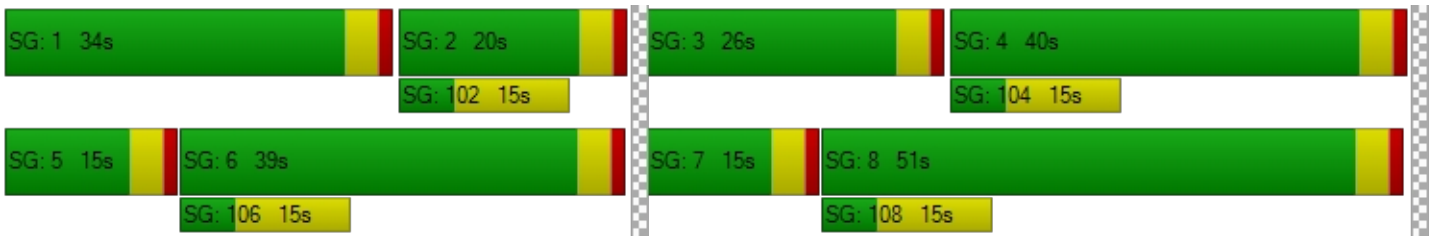
X, volume / capacity	1.21	0.29	0.33	0.79	0.29	1.20	1.19	0.71	0.71	0.82	1.21	0.13
d, Delay for Lane Group [s/veh]	156.78	31.37	32.00	65.57	33.10	153.64	153.76	33.34	36.78	59.31	143.15	31.30
Lane Group LOS	F	C	C	E	C	F	F	C	D	E	F	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	9.09	3.42	3.51	3.25	3.32	27.16	18.93	11.90	12.03	3.69	28.30	1.36
50th-Percentile Queue Length [ft]	227.28	85.54	87.63	81.35	82.94	678.98	473.35	297.41	300.63	92.36	707.62	34.00
95th-Percentile Queue Length [veh]	15.00	6.16	6.31	5.86	5.97	39.81	28.36	17.55	17.71	6.65	41.44	2.45
95th-Percentile Queue Length [ft]	375.08	153.97	157.73	146.42	149.30	995.25	709.09	438.82	442.81	166.24	1036.06	61.20

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	156.78	31.37	32.00	65.57	33.10	153.64	153.76	33.89	36.78	59.31	143.15	31.30
Movement LOS	F	C	C	E	C	F	F	C	D	E	F	C
d_A, Approach Delay [s/veh]	86.83			106.29			59.36			130.38		
Approach LOS	F			F			E			F		
d_I, Intersection Delay [s/veh]	97.25											
Intersection LOS	F											
Intersection V/C	1.204											

Sequence

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



Intersection Level Of Service Report
Intersection 8: Bradley Rd (N/S) / La Piedra Rd (E/W)

Control Type:	Signalized	Delay (sec / veh):	27.9
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.690

Intersection Setup

Name												
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	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	150.00	100.00	100.00	155.00	100.00	100.00	100.00	100.00	100.00	150.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	24	701	64	162	649	11	41	24	21	81	77	223
Base Volume Adjustment Factor	1.0000	1.0000	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]	24	701	64	162	649	11	41	24	21	81	77	223
Peak Hour Factor	0.7990	0.7990	0.7990	0.7990	0.7990	0.7990	0.7990	0.7990	0.7990	0.7990	0.7990	0.7990
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	219	20	51	203	3	13	8	7	25	24	70
Total Analysis Volume [veh/h]	30	877	80	203	812	14	51	30	26	101	96	279
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 Coordinated
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]	11	19	0	22	30	0	11	36	0	23	48	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
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	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	4	45	45	13	55	55	5	18	18	7	20	20
g / C, Green / Cycle	0.04	0.45	0.45	0.13	0.55	0.55	0.05	0.18	0.18	0.07	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.02	0.26	0.26	0.11	0.22	0.22	0.03	0.02	0.02	0.06	0.05	0.18
s, saturation flow rate [veh/h]	1774	1863	1809	1774	1863	1852	1774	1863	1597	1774	1863	1583
c, Capacity [veh/h]	71	842	817	237	1016	1010	95	338	289	130	374	318
d1, Uniform Delay [s]	46.89	20.33	20.33	42.39	13.29	13.29	46.14	34.06	34.12	45.58	33.69	38.79
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.90	2.87	2.96	8.54	1.21	1.22	4.63	0.11	0.14	9.63	0.36	7.69
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.42	0.58	0.58	0.86	0.41	0.41	0.54	0.08	0.10	0.78	0.26	0.88
d, Delay for Lane Group [s/veh]	50.79	23.20	23.29	50.93	14.50	14.51	50.77	34.16	34.27	55.22	34.05	46.48
Lane Group LOS	D	C	C	D	B	B	D	C	C	E	C	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.78	8.17	7.95	5.21	5.04	5.01	1.30	0.56	0.54	2.70	1.90	6.92
50th-Percentile Queue Length [ft]	19.39	204.28	198.82	130.32	125.96	125.27	32.61	13.96	13.56	67.50	47.54	172.95
95th-Percentile Queue Length [veh]	1.40	12.86	12.58	8.96	8.72	8.68	2.35	1.01	0.98	4.86	3.42	11.23
95th-Percentile Queue Length [ft]	34.91	321.48	314.44	223.93	218.00	217.04	58.70	25.13	24.41	121.50	85.58	280.79

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	50.79	23.24	23.29	50.93	14.51	14.51	50.77	34.17	34.27	55.22	34.05	46.48
Movement LOS	D	C	C	D	B	B	D	C	C	E	C	D
d_A, Approach Delay [s/veh]	24.08			21.69			42.10			45.83		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	27.86											
Intersection LOS	C											
Intersection V/C	0.690											

Sequence

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

Intersection Level Of Service Report
Intersection 9: Bradley Rd (NS)/Holland Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	62.6
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.015

Intersection Setup

Name												
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	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	130.00	100.00	100.00	150.00	100.00	100.00	145.00	100.00	100.00	140.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	57	390	210	81	517	251	130	298	224	214	264	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]	57	390	210	81	517	251	130	298	224	214	264	135
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	106	57	22	140	68	35	81	61	58	72	37
Total Analysis Volume [veh/h]	62	424	228	88	562	273	141	324	243	233	287	147
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	1 - Coordination Group
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]	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]	11	47	0	11	47	0	40	42	0	20	22	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	R	L	C	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	43	7	44	44	12	38	16	42	42
g / C, Green / Cycle	0.05	0.36	0.06	0.37	0.37	0.10	0.32	0.13	0.35	0.35
(v / s)_i Volume / Saturation Flow Rate	0.03	0.37	0.05	0.30	0.17	0.08	0.33	0.13	0.15	0.09
s, saturation flow rate [veh/h]	1774	1754	1774	1863	1583	1774	1732	1774	1863	1583
c, Capacity [veh/h]	90	631	104	683	581	171	546	237	657	558
d1, Uniform Delay [s]	55.99	38.43	55.98	34.44	29.06	53.25	41.07	51.88	29.72	27.72
k, delay calibration	0.11	0.50	0.11	0.50	0.50	0.11	0.49	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.81	44.82	16.97	10.75	2.72	9.67	48.14	23.80	0.46	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	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

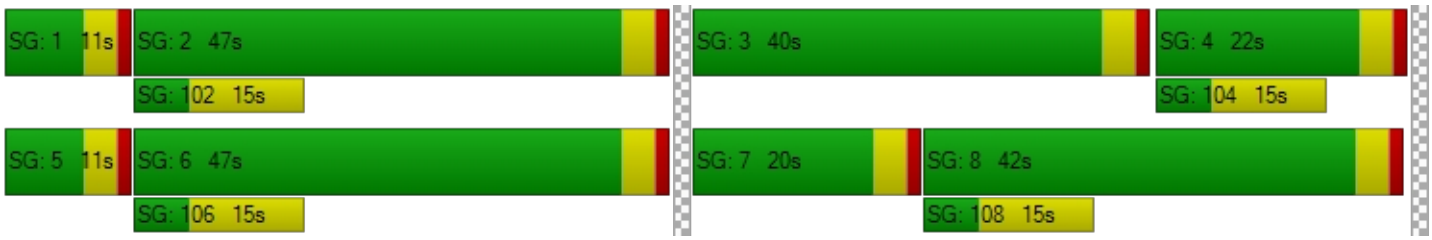
X, volume / capacity	0.69	1.03	0.85	0.82	0.47	0.83	1.04	0.98	0.44	0.26
d, Delay for Lane Group [s/veh]	64.81	83.25	72.95	45.20	31.78	62.92	89.22	75.68	30.18	27.97
Lane Group LOS	E	F	E	D	C	E	F	E	C	C
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	2.01	25.16	3.04	15.99	6.16	4.49	22.47	8.30	6.11	2.92
50th-Percentile Queue Length [ft]	50.25	628.98	76.09	399.72	153.89	112.31	561.83	207.39	152.78	72.93
95th-Percentile Queue Length [veh]	3.62	34.18	5.48	22.55	10.22	7.97	31.01	13.02	10.17	5.25
95th-Percentile Queue Length [ft]	90.46	854.42	136.95	563.66	255.61	199.21	775.15	325.48	254.13	131.28

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	64.81	83.25	83.25	72.95	45.20	31.78	62.92	89.22	89.22	75.68	30.18	27.97
Movement LOS	E	F	F	E	D	C	E	F	F	E	C	C
d_A, Approach Delay [s/veh]	81.65			43.87			83.98			45.59		
Approach LOS	F			D			F			D		
d_I, Intersection Delay [s/veh]	62.64											
Intersection LOS	E											
Intersection V/C	1.015											

Sequence

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



Intersection Level Of Service Report
Intersection 10: Town Center Dr-Sherman Rd (NS) / La Piedra Rd (EW)

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):	0.425

Intersection Setup

Name												
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	1	0	1	1	0	0	0	0	0	1	0	0
Pocket Length [ft]	210.00	100.00	500.00	150.00	100.00	100.00	100.00	100.00	100.00	800.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	61	134	222	10	98	10	62	23	12	135	7	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
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	61	134	222	10	98	10	62	23	12	135	7	7
Peak Hour Factor	0.6790	0.6790	0.6790	0.6790	0.6790	0.6790	0.6790	0.6790	0.6790	0.6790	0.6790	0.6790
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	49	82	4	36	4	23	8	4	50	3	3
Total Analysis Volume [veh/h]	90	197	327	15	144	15	91	34	18	199	10	10
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 Coordinated
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]	11	19	0	11	19	0	51	19	0	51	19	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
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	L	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	63	63	2	59	7	5	13	12	12
g / C, Green / Cycle	0.06	0.63	0.63	0.02	0.59	0.07	0.05	0.13	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.05	0.11	0.21	0.01	0.09	0.05	0.03	0.11	0.01	0.01
s, saturation flow rate [veh/h]	1774	1863	1583	1774	1832	1774	1756	1774	1863	1583
c, Capacity [veh/h]	115	1169	994	43	1076	119	95	237	225	191
d1, Uniform Delay [s]	46.10	7.75	8.74	48.02	9.32	45.90	46.14	42.29	38.89	38.93
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.95	0.31	0.89	4.65	0.29	9.72	4.85	7.70	0.08	0.11
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.78	0.17	0.33	0.35	0.15	0.76	0.55	0.84	0.04	0.05
d, Delay for Lane Group [s/veh]	57.05	8.06	9.62	52.67	9.61	55.62	50.99	49.99	38.97	39.04
Lane Group LOS	E	A	A	D	A	E	D	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	2.45	1.54	2.93	0.41	1.42	2.44	1.33	5.05	0.21	0.21
50th-Percentile Queue Length [ft]	61.37	38.49	73.37	10.22	35.47	61.12	33.34	126.35	5.32	5.34
95th-Percentile Queue Length [veh]	4.42	2.77	5.28	0.74	2.55	4.40	2.40	8.74	0.38	0.38
95th-Percentile Queue Length [ft]	110.46	69.28	132.07	18.40	63.84	110.01	60.01	218.52	9.57	9.62

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	57.05	8.06	9.62	52.67	9.61	9.61	55.62	50.99	50.99	49.99	38.97	39.04
Movement LOS	E	A	A	D	A	A	E	D	D	D	D	D
d_A, Approach Delay [s/veh]	16.07			13.33			53.93			48.99		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	26.63											
Intersection LOS	C											
Intersection V/C	0.425											

Sequence

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

Intersection Level Of Service Report
Intersection 11: Town Center Dr-Sherman Rd (NS)/Holland Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	363.7
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.184

Intersection Setup

Name												
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	1	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	500.00	100.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	4	1	28	34	0	53	164	592	5	6	577	144
Base Volume Adjustment Factor	1.0000	1.0000	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]	4	1	28	34	0	53	164	592	5	6	577	144
Peak Hour Factor	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	8	10	0	16	49	179	2	2	174	43
Total Analysis Volume [veh/h]	5	1	34	41	0	64	198	714	6	7	696	174
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.17	0.03	0.08	1.18	0.00	0.14	0.26	0.01	0.00	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	136.59	119.12	22.69	363.70	342.06	267.92	11.23	0.00	0.00	9.12	0.00	0.00
Movement LOS	F	F	C	F	F	F	B	A	A	A	A	A
95th-Percentile Queue Length [veh]	1.07	1.07	1.07	8.10	8.10	8.10	28.97	28.97	0.00	8.54	8.54	0.00
95th-Percentile Queue Length [ft]	26.65	26.65	26.65	202.61	202.61	202.61	724.20	724.20	0.00	213.55	213.55	0.00
d_A, Approach Delay [s/veh]	39.34			305.32			2.42			0.07		
Approach LOS	E			F			A			A		
d_I, Intersection Delay [s/veh]	18.52											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 12: Haun Rd (NS)/Village-Market Dr (EW)

Control Type:	Signalized	Delay (sec / veh):	15.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.511

Intersection Setup

Name	Haun Rd			Haun Rd								
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	1	0	0	2	0	0	0	0	0	0	0	1
Pocket Length [ft]	100.00	100.00	100.00	175.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	65.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Haun Rd			Haun Rd								
Base Volume Input [veh/h]	21	953	46	135	980	68	53	6	15	22	6	117
Base Volume Adjustment Factor	1.0000	1.0000	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]	21	953	46	135	980	68	53	6	15	22	6	117
Peak Hour Factor	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	277	13	39	285	20	15	2	4	6	2	34
Total Analysis Volume [veh/h]	24	1107	53	157	1138	79	62	7	17	26	7	136
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	1 - Coordination Group
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
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	Permiss	Permiss	Overlap
Signal group	5	2	0	1	6	0	3	8	0	0	4	4
Auxiliary Signal Groups												1,4
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	0	7	7
Maximum Green [s]	30	30	0	30	30	0	7	30	0	0	30	30
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	3.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	1.0
Split [s]	11	51	0	11	51	0	11	38	0	0	27	27
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	3.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	5
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	10
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	0.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0
Minimum Recall	No	No		No	No		Yes	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	C	L	C	C	L	C	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	0.00	0.00	2.00	0.00
g_i, Effective Green Time [s]	3	63	63	7	67	67	18	18	7	18
g / C, Green / Cycle	0.03	0.63	0.63	0.07	0.67	0.67	0.18	0.18	0.07	0.18
(v / s)_i Volume / Saturation Flow Rate	0.01	0.31	0.31	0.05	0.33	0.33	0.02	0.03	0.02	0.05
s, saturation flow rate [veh/h]	1774	1863	1833	3445	1863	1821	1588	1641	1547	2802
c, Capacity [veh/h]	62	1173	1155	241	1238	1210	372	386	173	505
d1, Uniform Delay [s]	47.21	9.99	9.99	45.33	8.39	8.41	34.37	34.60	44.09	35.34
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.84	1.51	1.54	2.95	1.42	1.47	0.12	0.14	0.53	0.28
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

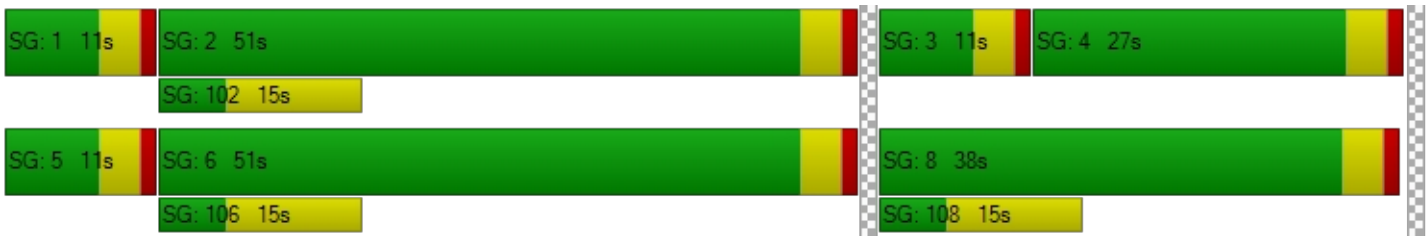
X, volume / capacity	0.38	0.50	0.50	0.65	0.50	0.50	0.10	0.12	0.19	0.27
d, Delay for Lane Group [s/veh]	51.05	11.50	11.53	48.29	9.81	9.87	34.48	34.74	44.62	35.62
Lane Group LOS	D	B	B	D	A	A	C	C	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	0.63	6.00	5.92	1.91	5.53	5.45	0.75	0.96	0.77	1.38
50th-Percentile Queue Length [ft]	15.67	150.04	148.00	47.83	138.19	136.15	18.64	23.95	19.20	34.46
95th-Percentile Queue Length [veh]	1.13	10.02	9.91	3.44	9.38	9.27	1.34	1.72	1.38	2.48
95th-Percentile Queue Length [ft]	28.21	250.48	247.76	86.10	234.59	231.83	33.55	43.11	34.55	62.03

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	51.05	11.51	11.53	48.29	9.84	9.87	34.58	34.74	34.74	44.62	44.62	35.62
Movement LOS	D	B	B	D	A	A	C	C	C	D	D	D
d_A, Approach Delay [s/veh]	12.31			14.24			34.63			37.38		
Approach LOS	B			B			C			D		
d_I, Intersection Delay [s/veh]	15.44											
Intersection LOS	B											
Intersection V/C	0.511											

Sequence

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



Intersection Level Of Service Report
Intersection 13: Haun Rd (NS)/Countryside Marketplace (EW)

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):	0.483

Intersection Setup

Name	Haun Rd			Haun Rd								
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	1	0	0	2	0	0	0	0	1	1	0	0
Pocket Length [ft]	200.00	100.00	100.00	235.00	100.00	100.00	100.00	100.00	40.00	100.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Haun Rd			Haun Rd								
Base Volume Input [veh/h]	11	971	43	118	873	8	10	0	15	7	1	91
Base Volume Adjustment Factor	1.0000	1.0000	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]	11	971	43	118	873	8	10	0	15	7	1	91
Peak Hour Factor	0.7950	0.7950	0.7950	0.7950	0.7950	0.7950	0.7950	0.7950	0.7950	0.7950	0.7950	0.7950
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	305	14	37	275	3	3	0	5	2	0	29
Total Analysis Volume [veh/h]	14	1221	54	148	1098	10	13	0	19	9	1	114
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	1 - Coordination Group
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
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	Overlap
Signal group	5	2	0	1	6	0	0	8	0	0	4	4
Auxiliary Signal Groups												1,4
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	7
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	30
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0
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	1.0
Split [s]	11	63	0	12	64	0	0	25	0	0	25	25
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	5
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	10
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	2.0
I2, Clearance 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	2.0
Minimum Recall	No	No		No	No			No			No	No
Maximum Recall	No	No		No	No			No			No	No
Pedestrian Recall	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	C	L	C	C	L	C	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	2	74	74	7	79	79	7	7	7	18
g / C, Green / Cycle	0.02	0.74	0.74	0.07	0.79	0.79	0.07	0.07	0.07	0.18
(v / s)_i Volume / Saturation Flow Rate	0.01	0.34	0.35	0.04	0.30	0.30	0.01	0.01	0.01	0.04
s, saturation flow rate [veh/h]	1774	1863	1835	3445	1863	1857	1410	1583	903	2803
c, Capacity [veh/h]	42	1381	1361	240	1467	1463	110	109	130	500
d1, Uniform Delay [s]	48.05	5.09	5.10	45.21	3.21	3.21	47.79	43.90	45.01	35.18
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.57	1.13	1.15	2.56	0.74	0.75	0.47	0.76	0.25	0.23
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.33	0.46	0.47	0.62	0.38	0.38	0.12	0.17	0.08	0.23
d, Delay for Lane Group [s/veh]	52.62	6.22	6.24	47.77	3.95	3.96	48.26	44.65	45.26	35.41
Lane Group LOS	D	A	A	D	A	A	D	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.38	3.72	3.68	1.79	1.94	1.94	0.32	0.45	0.24	1.15
50th-Percentile Queue Length [ft]	9.57	93.06	92.06	44.78	48.61	48.50	7.99	11.19	5.96	28.70
95th-Percentile Queue Length [veh]	0.69	6.70	6.63	3.22	3.50	3.49	0.58	0.81	0.43	2.07
95th-Percentile Queue Length [ft]	17.22	167.50	165.71	80.60	87.51	87.30	14.38	20.14	10.73	51.67

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	52.62	6.23	6.24	47.77	3.96	3.96	48.26	44.65	44.65	45.26	45.26	35.41
Movement LOS	D	A	A	D	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	6.74			9.12			46.12			36.21		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	9.66											
Intersection LOS	A											
Intersection V/C	0.483											

Sequence

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

Intersection Level Of Service Report
Intersection 14: Haun Rd (N/S)/La Piedra Rd (E/W)

Control Type:	Signalized	Delay (sec / veh):	34.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.708

Intersection Setup

Name				Haun Rd								
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	1	0	1	1	0	1	0	0	0	0	0	0
Pocket Length [ft]	165.00	100.00	75.00	150.00	100.00	150.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			Yes		

Volumes

Name				Haun Rd								
Base Volume Input [veh/h]	33	622	67	48	470	373	284	43	154	36	16	21
Base Volume Adjustment Factor	1.0000	1.0000	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]	33	622	67	48	470	373	284	43	154	36	16	21
Peak Hour Factor	0.7640	0.7640	0.7640	0.7640	0.7640	0.7640	0.7640	0.7640	0.7640	0.7640	0.7640	0.7640
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	204	22	16	154	122	93	14	50	12	5	7
Total Analysis Volume [veh/h]	43	814	88	63	615	488	372	56	202	47	21	27
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
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 - Coordination Group
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
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	Split	Split	Split	Split	Split	Split
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]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	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]	11	39	0	18	46	0	0	63	0	0	20	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
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]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	R	C	R	C
C, Cycle Length [s]	140	140	140	140	140	140	140	140	140
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
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
l2, Clearance Lost Time [s]	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	72	72	6	73	73	36	36	9
g / C, Green / Cycle	0.04	0.51	0.51	0.05	0.52	0.52	0.26	0.26	0.07
(v / s)_i Volume / Saturation Flow Rate	0.02	0.25	0.25	0.04	0.17	0.31	0.24	0.13	0.05
s, saturation flow rate [veh/h]	1774	1863	1800	1774	3547	1583	1785	1583	1733
c, Capacity [veh/h]	73	955	923	82	1837	820	462	410	117
d1, Uniform Delay [s]	65.93	22.04	22.04	66.00	19.68	23.52	50.56	44.06	64.38
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.27	1.73	1.79	13.72	0.49	3.17	8.39	0.92	12.46
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

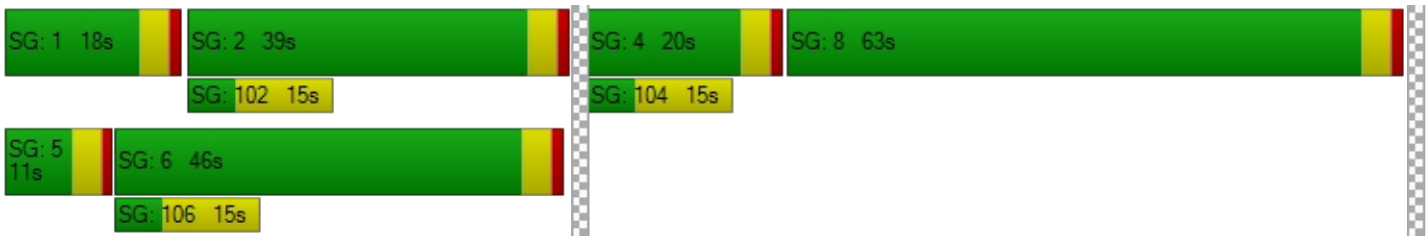
X, volume / capacity	0.59	0.48	0.48	0.77	0.33	0.60	0.93	0.49	0.81
d, Delay for Lane Group [s/veh]	73.20	23.77	23.83	79.72	20.17	26.69	58.95	44.97	76.84
Lane Group LOS	E	C	C	E	C	C	E	D	E
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	Yes
50th-Percentile Queue Length [veh]	1.62	9.67	9.36	2.49	5.68	11.26	15.16	5.90	3.67
50th-Percentile Queue Length [ft]	40.61	241.78	233.99	62.22	142.07	281.51	379.07	147.44	91.73
95th-Percentile Queue Length [veh]	2.92	14.77	14.38	4.48	9.59	16.76	21.55	9.88	6.60
95th-Percentile Queue Length [ft]	73.09	369.28	359.42	112.00	239.81	419.09	538.72	247.00	165.11

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	73.20	23.79	23.83	79.72	20.17	26.69	58.95	58.95	44.97	76.84	76.84	76.84
Movement LOS	E	C	C	E	C	C	E	E	D	E	E	E
d_A, Approach Delay [s/veh]	26.04			26.12			54.47			76.84		
Approach LOS	C			C			D			E		
d_I, Intersection Delay [s/veh]	34.09											
Intersection LOS	C											
Intersection V/C	0.708											

Sequence

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



Intersection Level Of Service Report
Intersection 15: Haun Road (NS) / Holland Road (EW)

Control Type:	All-way stop	Delay (sec / veh):	92.6
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.148

Intersection Setup

Name												
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	1	0	0	1	0	0	1	0	1	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	150.00	100.00	100.00	150.00	100.00	150.00	100.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	337	342	3	11	302	385	365	2	280	3	7	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]	337	342	3	11	302	385	365	2	280	3	7	9
Peak Hour Factor	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380
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]	101	102	1	3	90	115	109	1	84	1	2	3
Total Analysis Volume [veh/h]	402	408	4	13	360	459	436	2	334	4	8	11
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	402	412	360	379	459	436	401	434	294
Degree of Utilization, x	1.11	1.08	0.04	0.95	1.12	1.15	0.00	0.77	0.08

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	14.96	14.44	0.11	10.50	16.64	16.77	0.02	6.56	0.25
95th-Percentile Queue Length [ft]	373.92	360.91	2.80	262.58	415.95	419.32	0.38	163.97	6.31
Approach Delay [s/veh]	105.29		90.16			84.04			16.26
Approach LOS	F		F			F			C
Intersection Delay [s/veh]	92.57								
Intersection LOS	F								

Intersection Level Of Service Report
Intersection 16: Haun Rd-Zeiders Rd (N/S)/Scott Rd (E/W)

Control Type:	Signalized	Delay (sec / veh):	147.5
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.340

Intersection Setup

Name												
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	1	0	0	1	0	0	1	0	0	1	0	1
Pocket Length [ft]	345.00	100.00	100.00	200.00	100.00	100.00	135.00	100.00	100.00	185.00	100.00	200.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	62	233	108	924	148	62	108	922	39	203	675	839
Base Volume Adjustment Factor	1.0000	1.0000	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]	62	233	108	924	148	62	108	922	39	203	675	839
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	63	29	251	40	17	29	251	11	55	183	228
Total Analysis Volume [veh/h]	67	253	117	1004	161	67	117	1002	42	221	734	912
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	1 - Coordination Group
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	19	0	0	27	0	11	41	0	13	43	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	C	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
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
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
g_i, Effective Green Time [s]	15	15	15	23	23	7	31	31	15	39	39
g / C, Green / Cycle	0.15	0.15	0.15	0.23	0.23	0.07	0.31	0.31	0.15	0.39	0.39
(v / s)_i Volume / Saturation Flow Rate	0.04	0.14	0.07	0.35	0.35	0.07	0.28	0.28	0.12	0.21	0.58
s, saturation flow rate [veh/h]	1774	1863	1583	1774	1773	1774	1863	1836	1774	3547	1583
c, Capacity [veh/h]	266	279	238	407	407	128	585	577	259	1378	615
d1, Uniform Delay [s]	37.54	41.80	39.01	38.53	38.53	46.12	32.75	32.76	41.64	23.57	30.57
k, delay calibration	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.50	0.50
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
d2, Incremental Delay [s]	0.49	10.65	1.58	243.11	243.55	21.49	19.08	19.35	7.75	1.48	225.70
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
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
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

Lane Group Results

X, volume / capacity	0.25	0.91	0.49	1.51	1.51	0.92	0.90	0.90	0.85	0.53	1.48
d, Delay for Lane Group [s/veh]	38.04	52.45	40.59	281.64	282.08	67.61	51.84	52.11	49.39	25.05	256.27
Lane Group LOS	D	D	D	F	F	E	D	D	D	C	F
Critical Lane Group	No	Yes	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	1.42	6.63	2.61	36.80	36.83	3.52	14.28	14.13	5.59	6.38	51.83
50th-Percentile Queue Length [ft]	35.41	165.72	65.20	920.08	920.72	87.96	356.91	353.15	139.71	159.52	1295.79
95th-Percentile Queue Length [veh]	2.55	10.85	4.69	56.57	56.61	6.33	20.47	20.29	9.47	10.52	79.51
95th-Percentile Queue Length [ft]	63.73	271.28	117.36	1414.20	1415.37	158.32	511.82	507.25	236.63	263.09	1987.77

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	38.04	52.45	40.59	281.81	282.08	282.08	67.61	51.97	52.11	49.39	25.05	256.27
Movement LOS	D	D	D	F	F	F	E	D	D	D	C	F
d_A, Approach Delay [s/veh]	47.06			281.86			53.55			140.88		
Approach LOS	D			F			D			F		
d_I, Intersection Delay [s/veh]	147.54											
Intersection LOS	F											
Intersection V/C	1.340											

Sequence

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

Intersection Level Of Service Report
Intersection 17: I-215 SB Ramps (N/S) / Scott Rd (E/W)

Control Type:	Signalized	Delay (sec / veh):	11.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.633

Intersection Setup

Name												
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	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	245.00	100.00	100.00
Speed [mph]		50.00			50.00			50.00			50.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		No			Yes			No			No	

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	510	0	359	0	983	633	0	999	455
Base Volume Adjustment Factor	1.0000	1.0000	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	510	0	359	0	983	633	0	999	455
Peak Hour Factor	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	138	0	97	0	266	171	0	270	123
Total Analysis Volume [veh/h]	0	0	0	551	0	388	0	1063	684	0	1080	492
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 - Coordination Group
Cycle Length [s]	110
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	Split	Split	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	0	0	0	6	0	0	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	0	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	69	0	0	41	0	0	41	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	10	0	0	10	0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall					No			No			No	
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]		110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]		4.00	4.00	4.00	4.00	4.00	4.00	4.00
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]		2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]		21	21	21	81	81	81	81
g / C, Green / Cycle		0.19	0.19	0.19	0.74	0.74	0.74	0.74
(v / s)_i Volume / Saturation Flow Rate		0.16	0.16	0.14	0.30	0.43	0.30	0.31
s, saturation flow rate [veh/h]		1774	1774	2803	3547	1583	3547	1583
c, Capacity [veh/h]		334	334	527	2621	1170	2621	1170
d1, Uniform Delay [s]		42.86	42.86	42.02	0.21	0.22	0.21	0.22
k, delay calibration		0.11	0.11	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		5.18	5.18	2.02	0.47	2.14	0.48	1.11
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	1.33	1.33	1.33	1.33
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	0.83	0.74	0.41	0.58	0.41	0.42
d, Delay for Lane Group [s/veh]		48.03	48.03	44.04	0.68	2.36	0.70	1.33
Lane Group LOS		D	D	D	A	A	A	A
Critical Lane Group		Yes	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh]		7.32	7.32	4.87	0.30	0.86	0.31	0.48
50th-Percentile Queue Length [ft]		183.10	183.10	121.83	7.51	21.61	7.68	12.04
95th-Percentile Queue Length [veh]		11.76	11.76	8.49	0.54	1.56	0.55	0.87
95th-Percentile Queue Length [ft]		294.06	294.06	212.34	13.52	38.89	13.82	21.68

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	48.03	48.03	44.04	0.00	0.68	2.36	0.00	0.70	1.33
Movement LOS				D	D	D		A	A		A	A
d_A, Approach Delay [s/veh]	0.00			46.38			1.34			0.89		
Approach LOS	A			D			A			A		
d_I, Intersection Delay [s/veh]	11.11											
Intersection LOS	B											
Intersection V/C	0.633											

Sequence

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

Intersection Level Of Service Report
Intersection 18: I-215 NB Ramps (N/S) / Scott Rd (E/W)

Control Type:	Signalized	Delay (sec / veh):	20.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.794

Intersection Setup

Name												
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	1	0	0	0	1	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	425.00	100.00	100.00	100.00	250.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		50.00			50.00			50.00			50.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		No			Yes			No			No	

Volumes

Name												
Base Volume Input [veh/h]	0	0	402	0	0	472	271	1203	0	0	1213	502
Base Volume Adjustment Factor	1.0000	1.0000	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	402	0	0	472	271	1203	0	0	1213	502
Peak Hour Factor	0.9380	0.9380	0.9380	0.9380	0.9380	0.9380	0.9380	0.9380	0.9380	0.9380	0.9380	0.9380
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	107	0	0	126	72	321	0	0	323	134
Total Analysis Volume [veh/h]	0	0	429	0	0	503	289	1283	0	0	1293	535
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	1 - Coordination Group
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
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	Split	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	0	6	3	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	0	7	7	7	0	0	7	0
Maximum Green [s]	0	30	0	0	0	30	30	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	3.0	3.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	1.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	31	0	0	0	31	28	79	0	0	51	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	3.0	3.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	5	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	10	0	10	0	0	10	0
Rest In Walk		No				No		No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	2.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	0.0	2.0	2.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No				No	No	No			No	
Maximum Recall		No				No	No	No			No	
Pedestrian Recall		No				No	No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	R	R	L	C	C	R
C, Cycle Length [s]	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00
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]	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	22	22	22	20	80	56	56
g / C, Green / Cycle	0.20	0.20	0.20	0.18	0.73	0.51	0.51
(v / s)_i Volume / Saturation Flow Rate	0.14	0.14	0.18	0.16	0.36	0.36	0.34
s, saturation flow rate [veh/h]	1583	1583	2803	1774	3547	3547	1583
c, Capacity [veh/h]	317	317	561	320	2579	1810	808
d1, Uniform Delay [s]	40.68	40.68	42.86	40.83	0.50	12.59	12.06
k, delay calibration	0.11	0.11	0.11	0.15	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.52	2.52	5.38	12.62	0.69	2.44	4.25
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	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.68	0.68	0.90	0.90	0.50	0.71	0.66
d, Delay for Lane Group [s/veh]	43.20	43.20	48.24	53.46	1.18	15.03	16.31
Lane Group LOS	D	D	D	D	A	B	B
Critical Lane Group	No	No	Yes	Yes	No	Yes	No
50th-Percentile Queue Length [veh]	5.34	5.34	6.75	7.82	0.59	6.80	5.96
50th-Percentile Queue Length [ft]	133.58	133.58	168.64	195.59	14.71	169.98	148.94
95th-Percentile Queue Length [veh]	9.13	9.13	11.00	12.41	1.06	11.08	9.96
95th-Percentile Queue Length [ft]	228.35	228.35	275.12	310.27	26.49	276.89	249.02

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	43.20	43.20	0.00	0.00	48.24	53.46	1.18	0.00	0.00	15.03	16.31
Movement LOS		D	D			D	D	A			B	B
d_A, Approach Delay [s/veh]	43.20			48.24			10.79		15.40			
Approach LOS	D			D			B		B			
d_I, Intersection Delay [s/veh]	20.30											
Intersection LOS	C											
Intersection V/C	0.794											

Sequence

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

Intersection Level Of Service Report
Intersection 19: Antelope Rd (NS)/Scott Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	44.4
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.937

Intersection Setup

Name												
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	2	0	0	1	0	1	2	0	0	1	0	0
Pocket Length [ft]	215.00	100.00	100.00	200.00	100.00	200.00	375.00	100.00	100.00	200.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	335	164	166	43	194	558	438	822	405	26	815	50
Base Volume Adjustment Factor	1.0000	1.0000	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]	335	164	166	43	194	558	438	822	405	26	815	50
Peak Hour Factor	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	91	44	45	12	53	151	119	223	110	7	221	14
Total Analysis Volume [veh/h]	363	178	180	47	210	605	475	891	439	28	883	54
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	1 - Coordination Group
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
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]	16	21	0	19	24	0	27	48	0	22	43	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
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	C
C, Cycle Length [s]	110	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	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]	12	49	49	5	42	42	18	36	36	4	23	23
g / C, Green / Cycle	0.11	0.44	0.44	0.05	0.38	0.38	0.16	0.33	0.33	0.04	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.11	0.05	0.11	0.03	0.11	0.38	0.14	0.25	0.28	0.01	0.17	0.18
s, saturation flow rate [veh/h]	3445	3547	1583	1774	1863	1583	3445	3547	1583	3445	3547	1808
c, Capacity [veh/h]	378	1560	697	88	707	601	553	1162	519	130	726	370
d1, Uniform Delay [s]	48.78	18.18	19.48	51.09	23.87	34.14	45.01	33.23	34.43	50.73	38.45	38.48
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.12	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	14.09	0.15	0.90	4.99	1.07	38.23	4.04	1.09	4.20	0.82	2.98	5.74
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	1.33	1.33	1.33
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

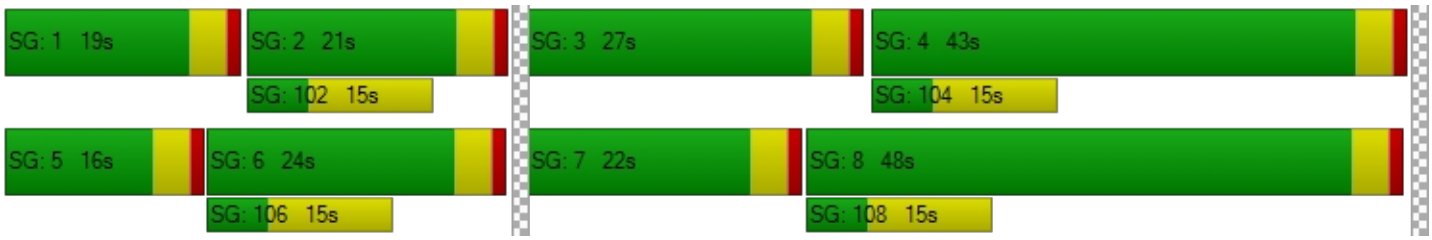
X, volume / capacity	0.96	0.11	0.26	0.54	0.30	1.01	0.86	0.77	0.85	0.22	0.85	0.86
d, Delay for Lane Group [s/veh]	62.88	18.33	20.38	56.08	24.94	72.38	49.04	34.32	38.63	51.55	41.43	44.22
Lane Group LOS	E	B	C	E	C	F	D	C	D	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	5.49	1.28	2.87	1.34	3.80	21.07	6.34	10.15	10.79	0.37	7.24	7.70
50th-Percentile Queue Length [ft]	137.34	31.96	71.87	33.55	94.88	526.72	158.44	253.69	269.63	9.30	181.01	192.47
95th-Percentile Queue Length [veh]	9.34	2.30	5.17	2.42	6.83	28.72	10.47	15.37	16.17	0.67	11.65	12.25
95th-Percentile Queue Length [ft]	233.43	57.53	129.37	60.40	170.78	718.09	261.65	384.29	404.28	16.74	291.33	306.23

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	62.88	18.33	20.38	56.08	24.94	72.38	49.04	34.32	38.63	51.55	42.26	44.22
Movement LOS	E	B	C	E	C	F	D	C	D	D	D	D
d_A, Approach Delay [s/veh]	41.27			59.93			39.24			42.64		
Approach LOS	D			E			D			D		
d_I, Intersection Delay [s/veh]	44.43											
Intersection LOS	D											
Intersection V/C	0.937											

Sequence

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



Intersection Level Of Service Report
Intersection 1: Murrieta Rd (NS)/Newport Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	45.3
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.886

Intersection Setup

Name							Newport Rd			Newport Rd		
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	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	190.00	100.00	100.00	225.00	100.00	100.00	275.00	100.00	100.00	180.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							Newport Rd			Newport Rd		
Base Volume Input [veh/h]	181	308	133	357	314	231	376	1139	86	218	1073	264
Base Volume Adjustment Factor	1.0000	1.0000	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]	181	308	133	357	314	231	376	1139	86	218	1073	264
Peak Hour Factor	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390
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	82	35	95	84	62	100	303	23	58	286	70
Total Analysis Volume [veh/h]	193	328	142	380	334	246	400	1213	92	232	1143	281
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	1 - Coordination Group
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
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]	26	19	0	29	22	0	31	41	0	21	31	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
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]	110	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	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]	14	16	16	25	27	27	27	37	37	16	27	27
g / C, Green / Cycle	0.13	0.14	0.14	0.23	0.24	0.24	0.24	0.34	0.34	0.15	0.24	0.24
(v / s)_i Volume / Saturation Flow Rate	0.11	0.09	0.09	0.21	0.09	0.16	0.23	0.24	0.06	0.13	0.23	0.18
s, saturation flow rate [veh/h]	1774	3547	1583	1774	3547	1583	1774	5074	1583	1774	5074	1583
c, Capacity [veh/h]	227	507	226	403	859	383	428	1708	533	263	1236	386
d1, Uniform Delay [s]	47.02	44.60	44.47	41.88	34.94	37.47	40.97	31.87	25.75	46.01	40.70	38.33
k, delay calibration	0.11	0.50	0.50	0.29	0.50	0.50	0.32	0.11	0.11	0.11	0.11	0.20
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.61	6.27	12.48	22.91	1.33	8.01	22.31	0.56	0.15	9.47	3.51	4.71
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

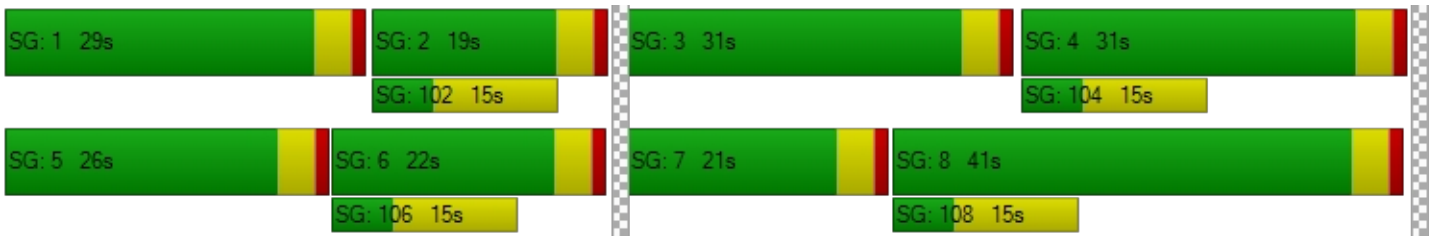
X, volume / capacity	0.85	0.65	0.63	0.94	0.39	0.64	0.94	0.71	0.17	0.88	0.92	0.73
d, Delay for Lane Group [s/veh]	55.63	50.87	56.95	64.79	36.27	45.48	63.28	32.42	25.90	55.47	44.20	43.04
Lane Group LOS	E	D	E	E	D	D	E	C	C	E	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	5.50	4.50	4.28	12.16	3.73	6.50	12.68	8.84	1.63	6.64	9.90	7.11
50th-Percentile Queue Length [ft]	137.54	112.38	107.09	304.01	93.28	162.43	317.12	220.99	40.78	165.94	247.58	177.63
95th-Percentile Queue Length [veh]	9.35	7.97	7.68	17.88	6.72	10.68	18.53	13.72	2.94	10.86	15.06	11.48
95th-Percentile Queue Length [ft]	233.71	199.31	191.95	446.98	167.90	266.94	463.15	342.89	73.41	271.57	376.60	286.92

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	55.63	50.87	56.95	64.79	36.27	45.48	63.28	32.42	25.90	55.47	44.20	43.04
Movement LOS	E	D	E	E	D	D	E	C	C	E	D	D
d_A, Approach Delay [s/veh]	53.56			49.92			39.31			45.59		
Approach LOS	D			D			D			D		
d_I, Intersection Delay [s/veh]	45.33											
Intersection LOS	D											
Intersection V/C	0.886											

Sequence

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



Intersection Level Of Service Report
Intersection 2: Bradley Rd (N/S)/Newport Rd (E/W)

Control Type:	Signalized	Delay (sec / veh):	42.3
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.964

Intersection Setup

Name				Bradley Rd			Newport Rd			Newport Rd		
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	1	0	0	1	0	0	1	0	0	2	0	1
Pocket Length [ft]	100.00	100.00	100.00	125.00	100.00	100.00	165.00	100.00	100.00	155.00	100.00	150.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name				Bradley Rd			Newport Rd			Newport Rd		
Base Volume Input [veh/h]	196	330	418	253	231	127	183	1448	98	394	1581	322
Base Volume Adjustment Factor	1.0000	1.0000	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	330	418	253	231	127	183	1448	98	394	1581	322
Peak Hour Factor	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410
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	88	111	67	61	34	49	385	26	105	420	86
Total Analysis Volume [veh/h]	208	351	444	269	245	135	194	1539	104	419	1680	342
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	1 - Coordination Group
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
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	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	2	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups			2,7									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	30	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	3.0	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	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	19	23	23	22	26	0	17	46	0	19	48	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	5	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	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	2.0	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	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	C	L	C	C	L	C	R
C, Cycle Length [s]	110	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	15	21	40	18	25	25	13	40	40	15	42	42
g / C, Green / Cycle	0.13	0.19	0.37	0.16	0.22	0.22	0.12	0.36	0.36	0.14	0.38	0.38
(v / s)_i Volume / Saturation Flow Rate	0.12	0.19	0.28	0.15	0.11	0.11	0.11	0.31	0.31	0.12	0.33	0.22
s, saturation flow rate [veh/h]	1774	1863	1583	1774	1863	1644	1774	3547	1803	3445	5074	1583
c, Capacity [veh/h]	237	364	583	291	420	371	211	1272	647	471	1912	597
d1, Uniform Delay [s]	46.78	43.93	30.52	45.36	37.03	37.08	48.01	32.66	32.69	46.70	31.96	27.27
k, delay calibration	0.11	0.50	0.50	0.13	0.50	0.50	0.11	0.11	0.32	0.11	0.11	0.12
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.82	39.13	9.07	13.62	3.86	4.47	15.16	1.76	9.37	5.92	1.44	0.99
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

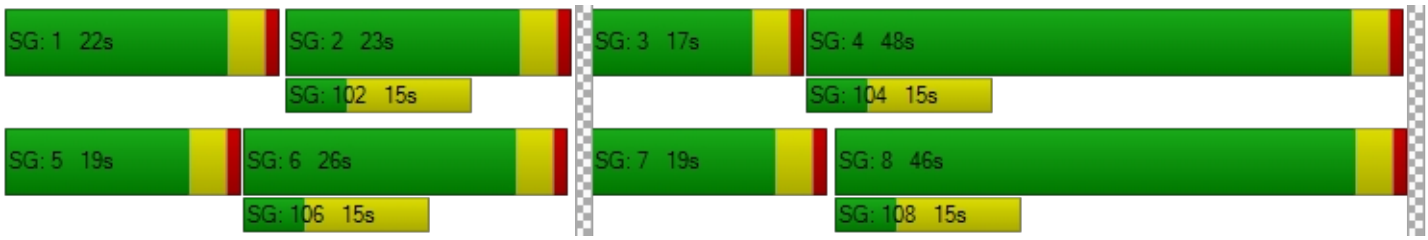
X, volume / capacity	0.88	0.96	0.76	0.93	0.48	0.48	0.92	0.86	0.86	0.89	0.88	0.57
d, Delay for Lane Group [s/veh]	56.60	83.06	39.59	58.98	40.89	41.56	63.17	34.43	42.07	52.62	33.40	28.26
Lane Group LOS	E	F	D	E	D	D	E	C	D	D	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	6.00	12.96	11.06	8.00	4.92	4.47	5.93	12.71	14.32	5.78	13.00	6.81
50th-Percentile Queue Length [ft]	149.88	324.02	276.46	200.07	123.11	111.71	148.27	317.64	358.11	144.46	325.11	170.19
95th-Percentile Queue Length [veh]	10.01	18.87	16.51	12.64	8.56	7.94	9.92	18.55	20.53	9.72	18.92	11.09
95th-Percentile Queue Length [ft]	250.27	471.63	412.80	316.06	214.09	198.38	248.12	463.78	513.29	243.01	472.96	277.16

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	56.60	83.06	39.59	58.98	41.01	41.56	63.17	36.66	42.07	52.62	33.40	28.26
Movement LOS	E	F	D	E	D	D	E	D	D	D	C	C
d_A, Approach Delay [s/veh]	58.33			48.57			39.77			35.98		
Approach LOS	E			D			D			D		
d_I, Intersection Delay [s/veh]	42.31											
Intersection LOS	D											
Intersection V/C	0.964											

Sequence

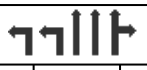
Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Haun Road (NS) / Newport Road (EW)

Control Type:	Signalized	Delay (sec / veh):	50.2
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.019

Intersection Setup

Name	Haun Rd			Haun Rd						Newport Rd		
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	2	0	1	2	0	0	2	0	0	2	0	1
Pocket Length [ft]	215.00	100.00	285.00	155.00	100.00	100.00	210.00	100.00	100.00	350.00	100.00	150.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Haun Rd			Haun Rd						Newport Rd		
Base Volume Input [veh/h]	458	116	1122	415	155	134	190	1510	396	1146	1661	307
Base Volume Adjustment Factor	1.0000	1.0000	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]	458	116	1122	415	155	134	190	1510	396	1146	1661	307
Peak Hour Factor	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770
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]	117	30	287	106	40	34	49	386	101	293	425	79
Total Analysis Volume [veh/h]	469	119	1148	425	159	137	194	1546	405	1173	1700	314
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	1 - Coordination Group
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
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	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	2	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups			2,7									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	30	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	3.0	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	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	23	19	19	23	19	0	13	46	0	52	85	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	5	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	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	2.0	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	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	C	L	C	R	L	C	C
C, Cycle Length [s]	140	140	140	140	140	140	140	140	140	140	140	140
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	19	15	67	19	15	15	9	42	42	48	81	81
g / C, Green / Cycle	0.14	0.11	0.48	0.14	0.11	0.11	0.06	0.30	0.30	0.34	0.58	0.58
(v / s)_i Volume / Saturation Flow Rate	0.14	0.06	0.41	0.12	0.09	0.09	0.06	0.30	0.26	0.34	0.37	0.40
s, saturation flow rate [veh/h]	3445	1863	2803	3445	1863	1583	3445	5074	1583	3445	3547	1725
c, Capacity [veh/h]	468	197	1337	468	197	167	222	1530	477	1181	2056	1000
d1, Uniform Delay [s]	60.49	59.79	32.43	59.64	61.20	61.28	64.92	48.89	45.89	45.86	19.70	20.68
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.35	0.11	0.11	0.25
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	19.93	12.98	7.34	7.06	28.73	34.14	10.28	13.40	12.59	10.78	0.34	1.99
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

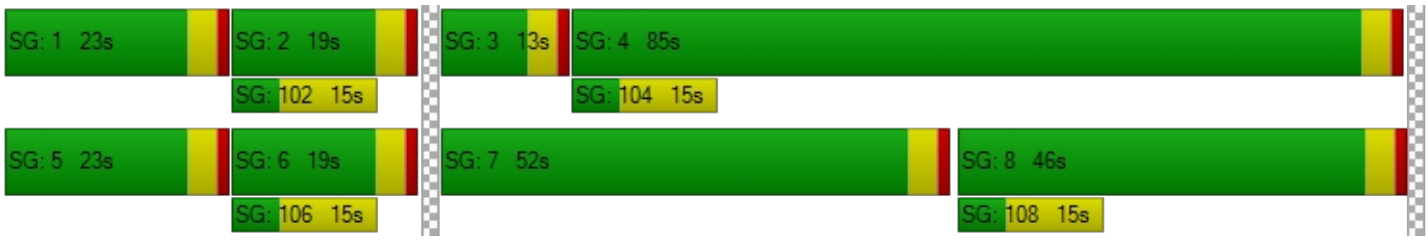
X, volume / capacity	1.00	0.60	0.86	0.91	0.81	0.82	0.87	1.01	0.85	0.99	0.64	0.69
d, Delay for Lane Group [s/veh]	80.42	72.77	39.76	66.70	89.93	95.42	75.20	62.29	58.48	56.63	20.04	22.67
Lane Group LOS	F	E	D	E	F	F	E	F	E	E	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh]	9.37	4.65	17.42	7.69	6.95	6.23	3.67	18.98	14.40	21.12	13.32	15.13
50th-Percentile Queue Length [ft]	234.14	116.15	435.56	192.16	173.86	155.78	91.68	474.44	360.04	528.07	332.96	378.30
95th-Percentile Queue Length [veh]	14.40	8.18	24.27	12.23	11.28	10.32	6.60	26.30	20.63	28.66	19.30	21.51
95th-Percentile Queue Length [ft]	360.02	204.53	606.70	305.83	281.98	258.12	165.02	657.57	515.64	716.50	482.58	537.79

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	80.42	72.77	39.76	66.70	89.93	95.42	75.20	62.29	58.48	56.63	20.62	22.67
Movement LOS	F	E	D	E	F	F	E	F	E	E	C	C
d_A, Approach Delay [s/veh]	53.01			77.28			62.74			34.08		
Approach LOS	D			E			E			C		
d_I, Intersection Delay [s/veh]	50.19											
Intersection LOS	D											
Intersection V/C	1.019											

Sequence

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



Intersection Level Of Service Report
Intersection 4: I-215 SB Ramps (NS) / Newport Road (EW)

Control Type:	Signalized	Delay (sec / veh):	23.9
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.805

Intersection Setup

Name	I-215 SB Ramps			I-215 SB Ramps			Newport Rd			Newport Rd		
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	1	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	800.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name	I-215 SB Ramps			I-215 SB Ramps			Newport Rd			Newport Rd		
Base Volume Input [veh/h]	0	0	0	640	0	890	0	2336	719	0	2167	688
Base Volume Adjustment Factor	1.0000	1.0000	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	640	0	890	0	2336	719	0	2167	688
Peak Hour Factor	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	162	0	225	0	592	182	0	549	174
Total Analysis Volume [veh/h]	0	0	0	648	0	902	0	2367	728	0	2196	697
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 - Coordination Group
Cycle Length [s]	140
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	Overlap	Protecte	Permiss	Overlap
Signal group	0	0	0	1	0	0	0	8	8	7	4	4
Auxiliary Signal Groups									1,4,8			1,4,8
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	7	0	0	0	7	7	0	7	7
Maximum Green [s]	0	0	0	30	0	0	0	30	30	0	30	30
Amber [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0
All red [s]	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0	1.0
Split [s]	0	0	0	91	0	0	0	49	49	0	49	49
Vehicle Extension [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0
Walk [s]	0	0	0	5	0	0	0	5	5	0	5	5
Pedestrian Clearance [s]	0	0	0	10	0	0	0	10	10	0	10	10
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	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0
Minimum Recall				No				No	No		No	No
Maximum Recall				No				No	No		No	No
Pedestrian Recall				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	C	R	C	R
C, Cycle Length [s]		140	140	140	140	140	140	140
L, Total Lost Time per Cycle [s]		4.00	4.00	4.00	4.00	0.00	4.00	0.00
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]		2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]		57	57	57	75	136	75	136
g / C, Green / Cycle		0.41	0.41	0.41	0.54	0.97	0.54	0.97
(v / s)_i Volume / Saturation Flow Rate		0.29	0.32	0.33	0.35	0.46	0.43	0.44
s, saturation flow rate [veh/h]		1774	1628	1583	6765	1583	5074	1583
c, Capacity [veh/h]		719	660	642	3637	1538	2727	1538
d1, Uniform Delay [s]		34.90	36.24	36.72	23.01	0.11	26.37	0.10
k, delay calibration		0.11	0.11	0.12	0.50	0.28	0.50	0.26
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		1.37	2.08	2.66	0.92	0.59	2.65	0.50
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

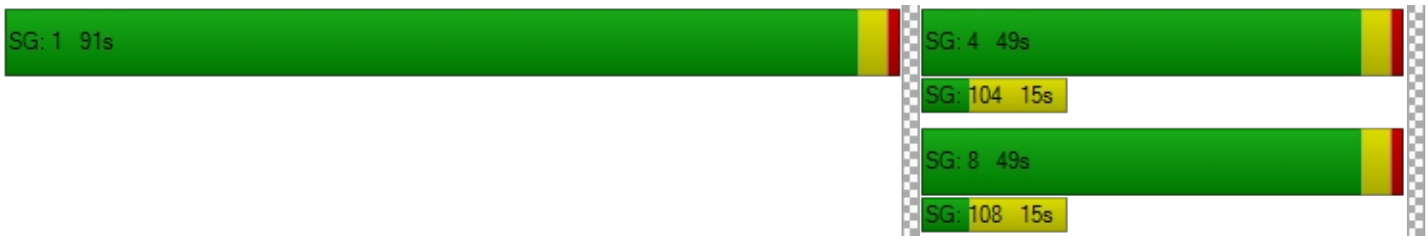
X, volume / capacity		0.72	0.78	0.81	0.65	0.47	0.81	0.45
d, Delay for Lane Group [s/veh]		36.26	38.32	39.37	23.92	0.70	29.02	0.60
Lane Group LOS		D	D	D	C	A	C	A
Critical Lane Group		No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh]		14.35	15.00	15.28	13.15	0.25	18.99	0.21
50th-Percentile Queue Length [ft]		358.78	375.00	382.12	328.76	6.33	474.64	5.34
95th-Percentile Queue Length [veh]		20.56	21.35	21.70	19.10	0.46	26.13	0.38
95th-Percentile Queue Length [ft]		514.10	533.79	542.41	477.44	11.40	653.28	9.62

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	36.68	0.00	38.92	0.00	23.92	0.70	0.00	29.02	0.60
Movement LOS				D		D		C	A		C	A
d_A, Approach Delay [s/veh]	0.00			37.99			18.46			22.17		
Approach LOS	A			D			B			C		
d_I, Intersection Delay [s/veh]	23.90											
Intersection LOS	C											
Intersection V/C	0.805											

Sequence

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



Intersection Level Of Service Report
Intersection 5: I-215 NB Ramps (NS) / Newport Road (EW)

Control Type:	Signalized	Delay (sec / veh):	29.2
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.902

Intersection Setup

Name	I-215 NB Ramps			I-215 NB Ramps			Newport Rd			Newport Rd		
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	1	0	1	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	375.00	100.00	375.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name	I-215 NB Ramps			I-215 NB Ramps			Newport Rd			Newport Rd		
Base Volume Input [veh/h]	740	0	1004	0	0	0	0	2369	511	0	2139	699
Base Volume Adjustment Factor	1.0000	1.0000	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]	740	0	1004	0	0	0	0	2369	511	0	2139	699
Peak Hour Factor	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810
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]	189	0	256	0	0	0	0	604	130	0	545	178
Total Analysis Volume [veh/h]	754	0	1023	0	0	0	0	2415	521	0	2180	713
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 - Coordination Group
Cycle Length [s]	140
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	Split	Permiss	Split	Permiss	Permiss	Permiss	Protecte	Permiss	Overlap	Permiss	Permiss	Overlap
Signal group	5	0	0	0	0	0	3	8	5	0	4	4
Auxiliary Signal Groups									4,5,8			4,5,8
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	0	0	0	0	0	0	7	7	0	7	7
Maximum Green [s]	30	0	0	0	0	0	0	30	30	0	30	30
Amber [s]	3.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0
All red [s]	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0	1.0
Split [s]	66	0	0	0	0	0	0	74	66	0	74	74
Vehicle Extension [s]	3.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0
Walk [s]	5	0	0	0	0	0	0	5	5	0	5	5
Pedestrian Clearance [s]	10	0	0	0	0	0	0	10	10	0	10	10
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	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0
Minimum Recall	No							No	No		No	No
Maximum Recall	No							No	No		No	No
Pedestrian Recall	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		C	R	C	R
C, Cycle Length [s]	140	140	140		140	140	140	140
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00		4.00	0.00	4.00	0.00
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]	2.00	2.00	2.00		2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	58	58	58		74	136	74	136
g / C, Green / Cycle	0.42	0.42	0.42		0.53	0.97	0.53	0.97
(v / s)_i Volume / Saturation Flow Rate	0.33	0.36	0.37		0.48	0.33	0.32	0.45
s, saturation flow rate [veh/h]	1774	1631	1583		5074	1583	6765	1583
c, Capacity [veh/h]	738	678	658		2674	1538	3565	1538
d1, Uniform Delay [s]	35.82	37.46	38.12		29.87	0.09	23.09	0.10
k, delay calibration	0.29	0.34	0.36		0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.39	10.44	13.46		5.57	0.60	0.79	1.01
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

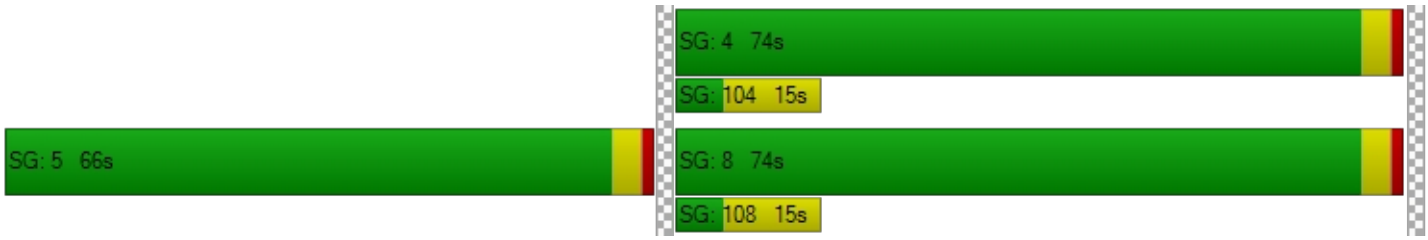
X, volume / capacity	0.80	0.87	0.90		0.90	0.34	0.61	0.46
d, Delay for Lane Group [s/veh]	41.21	47.90	51.58		35.44	0.68	23.88	1.11
Lane Group LOS	D	D	D		D	A	C	A
Critical Lane Group	No	No	Yes		Yes	No	No	No
50th-Percentile Queue Length [veh]	17.91	19.55	20.35		23.82	0.26	11.94	0.43
50th-Percentile Queue Length [ft]	447.81	488.65	508.73		595.39	6.39	298.51	10.76
95th-Percentile Queue Length [veh]	24.85	26.80	27.75		31.82	0.46	17.61	0.77
95th-Percentile Queue Length [ft]	621.34	669.91	693.69		795.47	11.50	440.18	19.36

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	42.65	0.00	50.03	0.00	0.00	0.00	0.00	35.44	0.68	0.00	23.88	1.11
Movement LOS	D		D					D	A		C	A
d_A, Approach Delay [s/veh]	46.90			0.00			29.27			18.27		
Approach LOS	D			A			C			B		
d_I, Intersection Delay [s/veh]	29.21											
Intersection LOS	C											
Intersection V/C	0.902											

Sequence

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



Intersection Level Of Service Report
Intersection 6: Antelope Rd (NS)/Newport Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	91.9
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.187

Intersection Setup

Name												
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	2	0	0	2	0	0	2	0	0	2	0	0
Pocket Length [ft]	330.00	100.00	100.00	100.00	100.00	100.00	325.00	100.00	100.00	200.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							Newport Rd			Newport Rd		
Base Volume Input [veh/h]	877	133	232	34	96	255	228	2166	779	214	1731	33
Base Volume Adjustment Factor	1.0000	1.0000	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]	877	133	232	34	96	255	228	2166	779	214	1731	33
Peak Hour Factor	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660
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]	227	34	60	9	25	66	59	561	202	55	448	9
Total Analysis Volume [veh/h]	908	138	240	35	99	264	236	2242	806	222	1792	34
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	1 - Coordination Group
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
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	8	7	4	0
Auxiliary Signal Groups									5,8			
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	7	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	30	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0	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	1.0	1.0	1.0	0.0
Split [s]	34	22	0	31	19	0	15	75	75	12	72	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	5	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	10	0	10	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	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0	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	C	R	L	C	C	L	C	C
C, Cycle Length [s]	140	140	140	140	140	140	140	140	140	140	140	140	140
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	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	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	2.00
g_i, Effective Green Time [s]	30	40	40	5	15	15	15	11	71	71	8	68	68
g / C, Green / Cycle	0.21	0.28	0.28	0.04	0.11	0.11	0.11	0.08	0.51	0.51	0.06	0.49	0.49
(v / s)_i Volume / Saturation Flow Rate	0.26	0.07	0.15	0.01	0.05	0.08	0.08	0.07	0.56	0.64	0.06	0.34	0.34
s, saturation flow rate [veh/h]	3445	1863	1583	3445	1863	1583	1583	3445	3547	1640	3445	3547	1845
c, Capacity [veh/h]	738	531	451	128	201	171	171	271	1795	830	197	1719	894
d1, Uniform Delay [s]	55.00	38.64	42.17	65.54	58.81	60.75	60.75	63.79	34.57	34.57	65.99	28.10	28.12
k, delay calibration	0.17	0.50	0.50	0.11	0.50	0.50	0.50	0.11	0.14	0.50	0.11	0.11	0.25
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
d2, Incremental Delay [s]	107.67	1.19	4.43	1.13	8.35	27.93	27.93	8.47	53.59	128.46	70.87	0.52	2.28
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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	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	1.00

Lane Group Results

X, volume / capacity	1.23	0.26	0.53	0.27	0.49	0.77	0.77	0.87	1.11	1.26	1.13	0.70	0.70
d, Delay for Lane Group [s/veh]	162.67	39.82	46.60	66.68	67.16	88.68	88.68	72.26	88.16	163.03	136.86	28.62	30.40
Lane Group LOS	F	D	D	E	E	F	F	E	F	F	F	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	23.61	3.76	7.35	0.62	3.70	5.78	5.78	4.38	41.34	55.51	5.38	14.85	15.92
50th-Percentile Queue Length [ft]	590.34	93.89	183.80	15.38	92.47	144.4	144.4	109.43	1033.48	1387.72	134.43	371.24	398.08
95th-Percentile Queue Length [veh]	35.12	6.76	11.80	1.11	6.66	9.72	9.72	7.81	56.41	80.02	9.50	21.17	22.47
95th-Percentile Queue Length [ft]	878.00	169.00	294.96	27.68	166.4	243.0	243.0	195.21	1410.18	2000.60	237.38	529.24	561.69

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	162.67	39.82	46.60	66.68	67.16	88.68	72.26	96.29	163.03	136.86	29.21	30.40
Movement LOS	F	D	D	E	E	F	E	F	F	F	C	C
d_A, Approach Delay [s/veh]	127.83			81.39			110.94			40.90		
Approach LOS	F			F			F			D		
d_I, Intersection Delay [s/veh]	91.91											
Intersection LOS	F											
Intersection V/C	1.187											

Sequence

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

Intersection Level Of Service Report
Intersection 7: Menifee Rd (NS)/NewportRd (EW)

Control Type:	Signalized	Delay (sec / veh):	43.1
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.904

Intersection Setup

Name							Newport Rd			Newport Rd		
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	1	0	1	1	0	0	1	0	0	2	0	0
Pocket Length [ft]	250.00	100.00	200.00	100.00	100.00	100.00	400.00	100.00	100.00	295.00	100.00	100.00
Speed [mph]		50.00			50.00			50.00			50.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name							Newport Rd			Newport Rd		
Base Volume Input [veh/h]	240	289	115	92	247	328	417	1489	336	170	1305	57
Base Volume Adjustment Factor	1.0000	1.0000	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]	240	289	115	92	247	328	417	1489	336	170	1305	57
Peak Hour Factor	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810
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]	61	74	29	23	63	84	106	379	86	43	333	15
Total Analysis Volume [veh/h]	245	295	117	94	252	334	425	1518	343	173	1330	58
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	1 - Coordination Group
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]	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]	14	26	0	19	31	0	37	64	0	11	38	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	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	C	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]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	10	29	29	8	27	27	31	60	60	7	37	37
g / C, Green / Cycle	0.08	0.24	0.24	0.07	0.22	0.22	0.25	0.50	0.50	0.06	0.30	0.30
(v / s)_i Volume / Saturation Flow Rate	0.07	0.08	0.07	0.05	0.07	0.21	0.24	0.35	0.36	0.05	0.26	0.04
s, saturation flow rate [veh/h]	3445	3547	1583	1774	3547	1583	1774	3547	1696	3445	5074	1583
c, Capacity [veh/h]	287	855	382	118	795	355	452	1770	846	207	1546	482
d1, Uniform Delay [s]	54.28	37.70	37.32	55.21	38.88	45.77	43.85	23.23	23.61	55.80	39.32	30.11
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.34	0.36	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.11	0.24	0.45	11.47	0.23	26.98	23.98	2.38	5.39	8.51	6.50	0.51
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

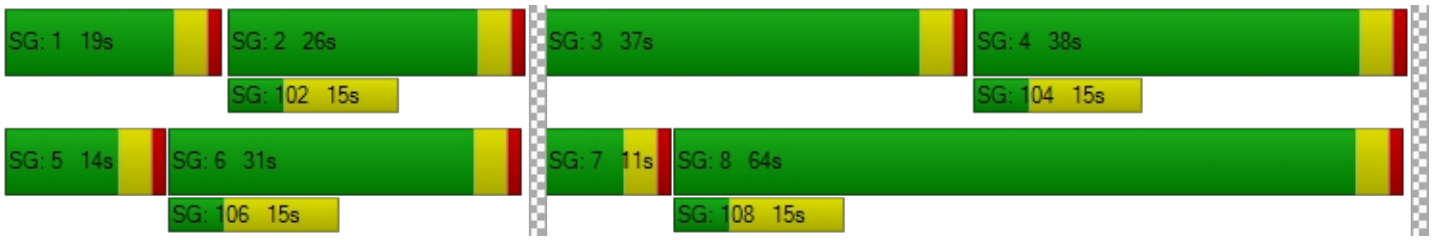
X, volume / capacity	0.85	0.35	0.31	0.80	0.32	0.94	0.94	0.70	0.73	0.83	0.86	0.12
d, Delay for Lane Group [s/veh]	61.39	37.94	37.77	66.68	39.10	72.75	67.83	25.61	29.00	64.31	45.82	30.62
Lane Group LOS	E	D	D	E	D	E	E	C	C	E	D	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	3.81	3.49	2.76	3.09	3.02	12.00	14.78	12.98	13.67	2.75	12.58	1.24
50th-Percentile Queue Length [ft]	95.32	87.21	69.11	77.21	75.45	300.02	369.40	324.62	341.81	68.86	314.47	30.89
95th-Percentile Queue Length [veh]	6.86	6.28	4.98	5.56	5.43	17.68	21.08	18.89	19.74	4.96	18.40	2.22
95th-Percentile Queue Length [ft]	171.58	156.97	124.41	138.97	135.81	442.05	527.01	472.36	493.41	123.94	459.88	55.60

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	61.39	37.94	37.77	66.68	39.10	72.75	67.83	26.22	29.00	64.31	45.82	30.62
Movement LOS	E	D	D	E	D	E	E	C	C	E	D	C
d_A, Approach Delay [s/veh]	46.65			59.44			34.37			47.31		
Approach LOS	D			E			C			D		
d_I, Intersection Delay [s/veh]	43.11											
Intersection LOS	D											
Intersection V/C	0.904											

Sequence

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



Intersection Level Of Service Report
Intersection 8: Bradley Rd (N/S) / La Piedra Rd (E/W)

Control Type:	Signalized	Delay (sec / veh):	19.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.409

Intersection Setup

Name												
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	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	150.00	100.00	100.00	155.00	100.00	100.00	100.00	100.00	100.00	150.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	26	498	25	84	701	19	15	52	23	57	75	104
Base Volume Adjustment Factor	1.0000	1.0000	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]	26	498	25	84	701	19	15	52	23	57	75	104
Peak Hour Factor	0.8240	0.8240	0.8240	0.8240	0.8240	0.8240	0.8240	0.8240	0.8240	0.8240	0.8240	0.8240
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	151	8	25	213	6	5	16	7	17	23	32
Total Analysis Volume [veh/h]	32	604	30	102	851	23	18	63	28	69	91	126
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 Coordinated
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]	11	19	0	39	47	0	11	30	0	12	31	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
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	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	4	64	64	7	67	67	3	7	7	6	10	10
g / C, Green / Cycle	0.04	0.64	0.64	0.07	0.67	0.67	0.03	0.07	0.07	0.06	0.10	0.10
(v / s)_i Volume / Saturation Flow Rate	0.02	0.17	0.17	0.06	0.24	0.24	0.01	0.02	0.03	0.04	0.05	0.08
s, saturation flow rate [veh/h]	1774	1863	1832	1774	1863	1846	1774	1863	1678	1774	1863	1583
c, Capacity [veh/h]	75	1181	1161	133	1241	1229	51	132	119	108	192	163
d1, Uniform Delay [s]	46.76	8.11	8.11	45.47	7.30	7.30	47.71	44.32	44.41	45.96	42.37	43.79
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.77	0.56	0.58	8.94	0.79	0.80	4.09	1.57	1.97	6.19	1.82	7.60
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

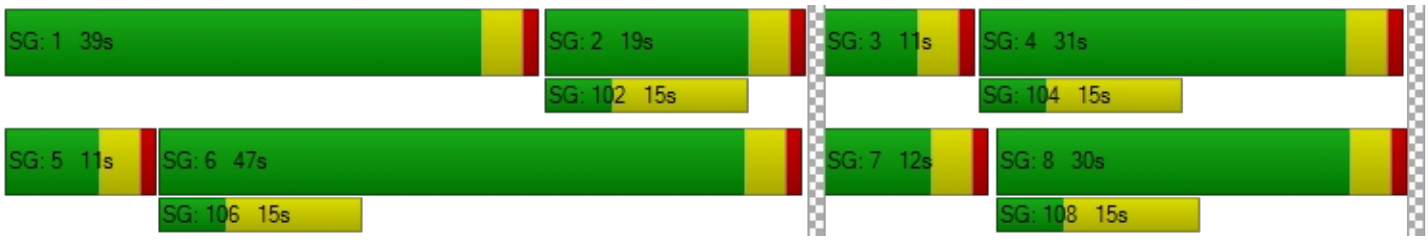
X, volume / capacity	0.43	0.27	0.27	0.77	0.35	0.35	0.35	0.35	0.38	0.64	0.48	0.77
d, Delay for Lane Group [s/veh]	50.52	8.67	8.68	54.41	8.09	8.10	51.81	45.89	46.39	52.15	44.19	51.39
Lane Group LOS	D	A	A	D	A	A	D	D	D	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.82	2.63	2.60	2.70	3.40	3.37	0.48	1.10	1.08	1.79	2.12	3.24
50th-Percentile Queue Length [ft]	20.58	65.81	64.93	67.60	85.03	84.30	12.01	27.45	27.10	44.71	53.03	81.00
95th-Percentile Queue Length [veh]	1.48	4.74	4.68	4.87	6.12	6.07	0.86	1.98	1.95	3.22	3.82	5.83
95th-Percentile Queue Length [ft]	37.04	118.46	116.88	121.68	153.05	151.74	21.61	49.41	48.79	80.48	95.45	145.80

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	50.52	8.68	8.68	54.41	8.10	8.10	51.81	46.02	46.39	52.15	44.19	51.39
Movement LOS	D	A	A	D	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	10.69			12.94			47.07			49.28		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	19.13											
Intersection LOS	B											
Intersection V/C	0.409											

Sequence

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



Intersection Level Of Service Report
Intersection 9: Bradley Rd (NS)/Holland Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	46.5
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.837

Intersection Setup

Name											
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	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	130.00	100.00	100.00	150.00	100.00	100.00	145.00	100.00	100.00	140.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	69	368	150	133	267	172	216	291	69	137	331	196
Base Volume Adjustment Factor	1.0000	1.0000	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]	69	368	150	133	267	172	216	291	69	137	331	196
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	100	41	36	73	47	59	79	19	37	90	53
Total Analysis Volume [veh/h]	75	400	163	145	290	187	235	316	75	149	360	213
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 Coordinated
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	46	0	15	49	0	22	43	0	16	37	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	R	L	C	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	50	11	54	54	18	31	12	26	26
g / C, Green / Cycle	0.05	0.41	0.09	0.45	0.45	0.15	0.26	0.10	0.21	0.21
(v / s)_i Volume / Saturation Flow Rate	0.04	0.32	0.08	0.16	0.12	0.13	0.22	0.08	0.19	0.13
s, saturation flow rate [veh/h]	1774	1772	1774	1863	1583	1774	1802	1774	1863	1583
c, Capacity [veh/h]	97	732	164	840	714	262	472	176	398	339
d1, Uniform Delay [s]	56.04	30.29	53.87	21.43	20.52	50.30	41.74	53.18	45.99	42.87
k, delay calibration	0.11	0.50	0.11	0.50	0.50	0.11	0.21	0.11	0.23	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	12.45	7.62	14.43	1.13	0.89	10.66	7.18	10.61	14.72	1.93
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

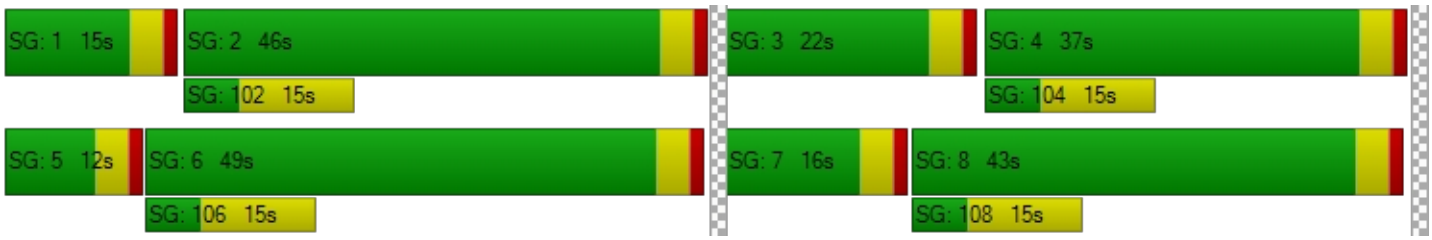
X, volume / capacity	0.78	0.77	0.89	0.35	0.26	0.90	0.83	0.85	0.90	0.63
d, Delay for Lane Group [s/veh]	68.49	37.91	68.30	22.55	21.41	60.96	48.92	63.79	60.71	44.80
Lane Group LOS	E	D	E	C	C	E	D	E	E	D
Critical Lane Group	No	Yes	Yes	No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh]	2.51	14.55	4.84	5.24	3.25	7.45	11.33	4.79	11.63	5.70
50th-Percentile Queue Length [ft]	62.67	363.69	120.95	130.99	81.24	186.23	283.36	119.71	290.86	142.49
95th-Percentile Queue Length [veh]	4.51	20.80	8.45	8.99	5.85	11.93	16.86	8.38	17.23	9.61
95th-Percentile Queue Length [ft]	112.81	520.07	211.13	224.84	146.23	298.14	421.39	209.43	430.70	240.37

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	68.49	37.91	37.91	68.30	22.55	21.41	60.96	48.92	48.92	63.79	60.71	44.80
Movement LOS	E	D	D	E	C	C	E	D	D	E	E	D
d_A, Approach Delay [s/veh]	41.50			32.87			53.44			56.65		
Approach LOS	D			C			D			E		
d_I, Intersection Delay [s/veh]	46.50											
Intersection LOS	D											
Intersection V/C	0.837											

Sequence

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



Intersection Level Of Service Report
Intersection 10: Town Center Dr-Sherman Rd (NS) / La Piedra Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	30.9
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.245

Intersection Setup

Name												
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	1	0	1	1	0	0	0	0	0	1	0	0
Pocket Length [ft]	210.00	100.00	500.00	150.00	100.00	100.00	100.00	100.00	100.00	800.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	4	55	116	32	56	7	13	37	9	143	57	34
Base Volume Adjustment Factor	1.0000	1.0000	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]	4	55	116	32	56	7	13	37	9	143	57	34
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]	1	14	30	8	15	2	3	10	2	37	15	9
Total Analysis Volume [veh/h]	4	57	121	33	58	7	14	39	9	149	59	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]	100
Coordination Type	Time of Day Pattern Coordinated
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]	11	19	0	11	19	0	17	19	0	51	53	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
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	L	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	1	64	64	4	68	2	5	10	13	13
g / C, Green / Cycle	0.01	0.64	0.64	0.04	0.68	0.02	0.05	0.10	0.13	0.13
(v / s)_i Volume / Saturation Flow Rate	0.00	0.03	0.08	0.02	0.04	0.01	0.03	0.08	0.03	0.03
s, saturation flow rate [veh/h]	1774	1863	1583	1774	1828	1774	1803	1774	1863	1641
c, Capacity [veh/h]	14	1194	1015	76	1235	41	94	185	248	218
d1, Uniform Delay [s]	49.35	6.64	6.97	46.73	5.45	48.12	46.18	43.84	38.60	38.68
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.52	0.08	0.24	3.92	0.08	4.80	4.24	8.03	0.38	0.47
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

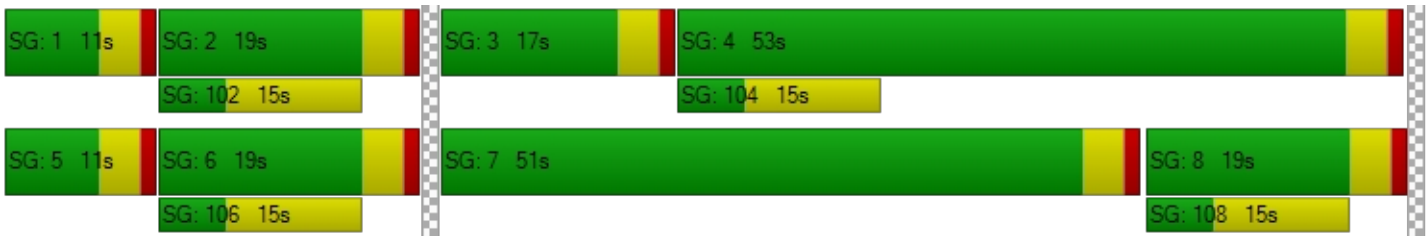
X, volume / capacity	0.28	0.05	0.12	0.44	0.05	0.34	0.51	0.81	0.20	0.21
d, Delay for Lane Group [s/veh]	59.87	6.72	7.21	50.65	5.53	52.93	50.42	51.87	38.98	39.15
Lane Group LOS	E	A	A	D	A	D	D	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	0.14	0.39	0.87	0.85	0.38	0.38	1.22	3.85	1.03	0.98
50th-Percentile Queue Length [ft]	3.42	9.68	21.85	21.24	9.44	9.61	30.57	96.14	25.85	24.55
95th-Percentile Queue Length [veh]	0.25	0.70	1.57	1.53	0.68	0.69	2.20	6.92	1.86	1.77
95th-Percentile Queue Length [ft]	6.15	17.42	39.34	38.23	17.00	17.30	55.03	173.04	46.53	44.18

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	59.87	6.72	7.21	50.65	5.53	5.53	52.93	50.42	50.42	51.87	39.01	39.15
Movement LOS	E	A	A	D	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	8.22			20.72			50.99			46.91		
Approach LOS	A			C			D			D		
d_I, Intersection Delay [s/veh]	30.92											
Intersection LOS	C											
Intersection V/C	0.245											

Sequence

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



Intersection Level Of Service Report
Intersection 11: Town Center Dr-Sherman Rd (NS)/Holland Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	62.5
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.357

Intersection Setup

Name												
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	1	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	500.00	100.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	5	0	11	33	1	94	65	483	4	27	662	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
Total Hourly Volume [veh/h]	5	0	11	33	1	94	65	483	4	27	662	55
Peak Hour Factor	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	3	9	0	25	17	129	1	7	176	15
Total Analysis Volume [veh/h]	5	0	12	35	1	100	69	514	4	29	705	59
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.07	0.00	0.02	0.36	0.01	0.23	0.08	0.01	0.00	0.03	0.01	0.00
d_M, Delay for Movement [s/veh]	55.45	40.46	13.25	62.51	56.91	34.02	9.62	0.00	0.00	8.53	0.00	0.00
Movement LOS	F	E	B	F	F	D	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.29	0.29	0.29	3.40	3.40	3.40	5.63	5.63	0.00	6.07	6.07	0.00
95th-Percentile Queue Length [ft]	7.23	7.23	7.23	85.12	85.12	85.12	140.66	140.66	0.00	151.84	151.84	0.00
d_A, Approach Delay [s/veh]	25.66			41.52			1.13			0.31		
Approach LOS	D			E			A			A		
d_I, Intersection Delay [s/veh]	4.56											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 12: Haun Rd (NS)/Village-Market Dr (EW)

Control Type:	Signalized	Delay (sec / veh):	27.0
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.767

Intersection Setup

Name	Haun Rd			Haun Rd								
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	1	0	0	2	0	0	0	0	0	0	0	1
Pocket Length [ft]	100.00	100.00	100.00	175.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	65.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Haun Rd			Haun Rd								
Base Volume Input [veh/h]	111	924	104	519	855	260	266	35	82	64	37	505
Base Volume Adjustment Factor	1.0000	1.0000	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]	111	924	104	519	855	260	266	35	82	64	37	505
Peak Hour Factor	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530
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	242	27	136	224	68	70	9	22	17	10	132
Total Analysis Volume [veh/h]	116	970	109	545	897	273	279	37	86	67	39	530
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	1 - Coordination Group
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
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	Overlap
Signal group	5	2	0	1	6	0	3	8	0	0	4	4
Auxiliary Signal Groups												1,4
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	7
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	30
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0
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	1.0
Split [s]	13	45	0	28	60	0	0	27	0	0	27	27
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	5
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	10
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	2.0
I2, Clearance 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	2.0
Minimum Recall	No	No		No	No			No			No	No
Maximum Recall	No	No		No	No			No			No	No
Pedestrian Recall	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	C	L	C	C	L	C	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	2.00	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	0.00
g_i, Effective Green Time [s]	8	46	46	19	57	57	23	23	23	46
g / C, Green / Cycle	0.08	0.46	0.46	0.19	0.57	0.57	0.23	0.23	0.23	0.46
(v / s)_i Volume / Saturation Flow Rate	0.07	0.29	0.30	0.16	0.32	0.33	0.11	0.22	0.07	0.19
s, saturation flow rate [veh/h]	1774	1863	1798	3445	1863	1719	1363	1121	1477	2803
c, Capacity [veh/h]	146	851	821	664	1057	975	283	312	399	1298
d1, Uniform Delay [s]	45.07	20.91	20.93	38.70	13.75	14.06	40.25	40.42	31.71	17.77
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.26	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.40	3.75	3.90	2.59	2.17	2.61	1.61	10.46	0.35	0.21
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

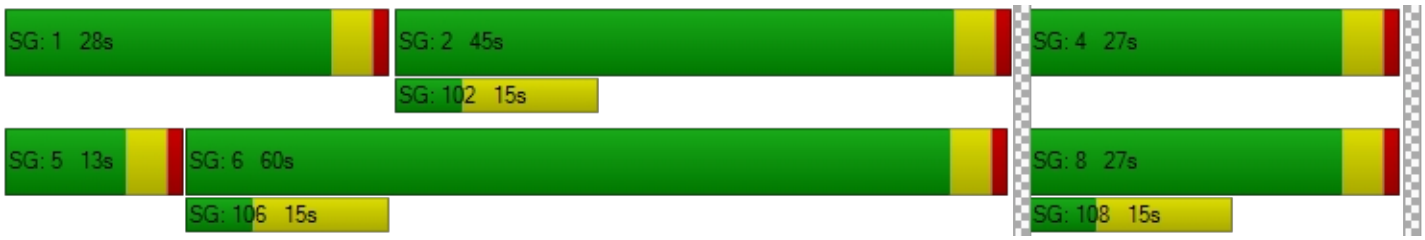
X, volume / capacity	0.80	0.64	0.65	0.82	0.56	0.59	0.54	0.80	0.27	0.41
d, Delay for Lane Group [s/veh]	54.47	24.66	24.83	41.29	15.92	16.67	41.87	50.88	32.06	17.98
Lane Group LOS	D	C	C	D	B	B	D	D	C	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh]	3.08	9.66	9.38	6.27	7.81	7.79	3.53	6.63	2.04	3.67
50th-Percentile Queue Length [ft]	76.92	241.59	234.55	156.78	195.22	194.83	88.32	165.72	51.00	91.86
95th-Percentile Queue Length [veh]	5.54	14.76	14.41	10.38	12.39	12.37	6.36	10.85	3.67	6.61
95th-Percentile Queue Length [ft]	138.45	369.04	360.13	259.46	309.79	309.29	158.98	271.28	91.80	165.36

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	54.47	24.74	24.83	41.29	16.17	16.67	45.34	50.88	50.88	32.06	32.06	17.98
Movement LOS	D	C	C	D	B	B	D	D	D	C	C	B
d_A, Approach Delay [s/veh]	27.63			24.23			47.44			20.33		
Approach LOS	C			C			D			C		
d_I, Intersection Delay [s/veh]	27.00											
Intersection LOS	C											
Intersection V/C	0.767											

Sequence

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



Intersection Level Of Service Report
Intersection 13: Haun Rd (NS)/Countryside Marketplace (EW)

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):	0.576

Intersection Setup

Name	Haun Rd			Haun Rd								
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	1	0	0	2	0	0	0	0	1	1	0	0
Pocket Length [ft]	200.00	100.00	100.00	235.00	100.00	100.00	100.00	100.00	40.00	100.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Haun Rd			Haun Rd								
Base Volume Input [veh/h]	55	777	90	356	634	68	46	9	115	71	9	330
Base Volume Adjustment Factor	1.0000	1.0000	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]	55	777	90	356	634	68	46	9	115	71	9	330
Peak Hour Factor	0.9640	0.9640	0.9640	0.9640	0.9640	0.9640	0.9640	0.9640	0.9640	0.9640	0.9640	0.9640
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	202	23	92	164	18	12	2	30	18	2	86
Total Analysis Volume [veh/h]	57	806	93	369	658	71	48	9	119	74	9	342
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	1 - Coordination Group
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
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	Overlap
Signal group	5	2	0	1	6	0	0	8	0	0	4	4
Auxiliary Signal Groups												1,4
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	7
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	30
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0
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	1.0
Split [s]	14	19	0	62	67	0	0	19	0	0	19	19
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	5
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	10
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	2.0
I2, Clearance 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	2.0
Minimum Recall	No	No		No	No			No			No	No
Maximum Recall	No	No		No	No			No			No	No
Pedestrian Recall	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	C	L	C	C	L	C	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	6	59	59	14	67	67	15	15	15	33
g / C, Green / Cycle	0.06	0.59	0.59	0.14	0.67	0.67	0.15	0.15	0.15	0.33
(v / s)_i Volume / Saturation Flow Rate	0.03	0.25	0.25	0.11	0.20	0.20	0.03	0.08	0.15	0.12
s, saturation flow rate [veh/h]	1774	1863	1796	3445	1863	1800	1400	1600	539	2803
c, Capacity [veh/h]	100	1093	1053	492	1253	1211	73	241	149	934
d1, Uniform Delay [s]	45.98	11.33	11.33	41.15	6.68	6.68	50.00	39.22	46.48	25.31
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.96	1.18	1.23	2.32	0.60	0.62	9.71	1.81	3.21	0.24
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

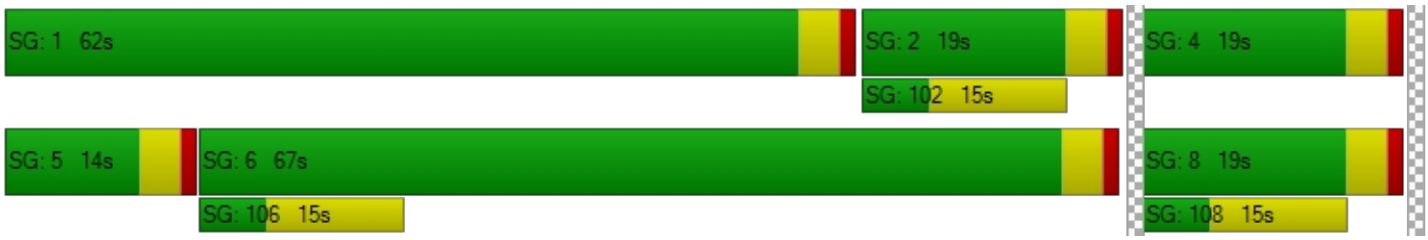
X, volume / capacity	0.57	0.42	0.42	0.75	0.30	0.30	0.66	0.53	0.56	0.37
d, Delay for Lane Group [s/veh]	50.94	12.51	12.56	43.47	7.28	7.31	59.71	41.03	49.69	25.55
Lane Group LOS	D	B	B	D	A	A	E	D	D	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	1.46	5.02	4.85	4.30	2.65	2.57	1.35	2.88	2.11	2.90
50th-Percentile Queue Length [ft]	36.48	125.48	121.30	107.39	66.25	64.24	33.69	71.94	52.67	72.53
95th-Percentile Queue Length [veh]	2.63	8.69	8.46	7.69	4.77	4.62	2.43	5.18	3.79	5.22
95th-Percentile Queue Length [ft]	65.66	217.34	211.62	192.37	119.25	115.62	60.65	129.50	94.81	130.55

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	50.94	12.53	12.56	43.47	7.29	7.31	59.71	41.03	41.03	49.69	49.69	25.55
Movement LOS	D	B	B	D	A	A	E	D	D	D	D	C
d_A, Approach Delay [s/veh]	14.82			19.45			46.12			30.26		
Approach LOS	B			B			D			C		
d_I, Intersection Delay [s/veh]	21.28											
Intersection LOS	C											
Intersection V/C	0.576											

Sequence

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



Intersection Level Of Service Report
Intersection 14: Haun Rd (N/S)/La Piedra Rd (E/W)

Control Type:	Signalized	Delay (sec / veh):	38.5
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.734

Intersection Setup

Name				Haun Rd								
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	1	0	1	1	0	1	0	0	0	0	0	0
Pocket Length [ft]	165.00	100.00	75.00	150.00	100.00	150.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			Yes		

Volumes

Name				Haun Rd								
Base Volume Input [veh/h]	22	734	187	68	577	154	181	38	102	172	48	90
Base Volume Adjustment Factor	1.0000	1.0000	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]	22	734	187	68	577	154	181	38	102	172	48	90
Peak Hour Factor	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	200	51	19	157	42	49	10	28	47	13	25
Total Analysis Volume [veh/h]	24	800	204	74	629	168	197	41	111	188	52	98
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	1 - Coordination Group
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
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	Split	Split	Split	Split	Split	Split
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]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	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]	11	44	0	11	44	0	0	22	0	0	63	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
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]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	R	C	R	C
C, Cycle Length [s]	140	140	140	140	140	140	140	140	140
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
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
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	4	66	66	7	69	69	21	21	30
g / C, Green / Cycle	0.03	0.47	0.47	0.05	0.49	0.49	0.15	0.15	0.21
(v / s)_i Volume / Saturation Flow Rate	0.01	0.28	0.28	0.04	0.18	0.11	0.13	0.07	0.20
s, saturation flow rate [veh/h]	1774	1863	1734	1774	3547	1583	1789	1583	1726
c, Capacity [veh/h]	55	881	820	90	1746	780	269	238	366
d1, Uniform Delay [s]	66.61	26.98	26.98	65.83	21.92	20.17	58.27	54.33	54.07
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.34	2.90	3.11	16.72	0.58	0.63	9.38	1.42	10.03
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

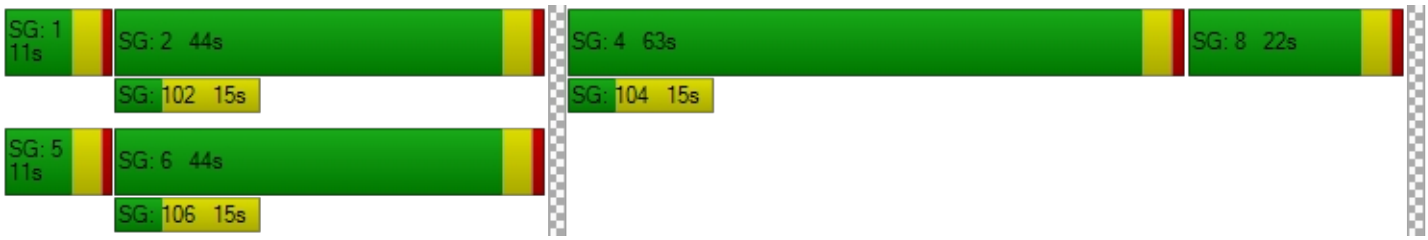
X, volume / capacity	0.44	0.59	0.59	0.82	0.36	0.22	0.88	0.47	0.92
d, Delay for Lane Group [s/veh]	71.96	29.88	30.10	82.55	22.50	20.81	67.66	55.75	64.10
Lane Group LOS	E	C	C	F	C	C	E	E	E
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	0.91	12.75	11.92	2.98	6.23	3.13	8.73	3.58	12.31
50th-Percentile Queue Length [ft]	22.66	318.79	298.02	74.40	155.79	78.29	218.25	89.62	307.65
95th-Percentile Queue Length [veh]	1.63	18.61	17.58	5.36	10.33	5.64	13.58	6.45	18.06
95th-Percentile Queue Length [ft]	40.79	465.19	439.58	133.92	258.13	140.92	339.39	161.31	451.48

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	71.96	29.96	30.10	82.55	22.50	20.81	67.66	67.66	55.75	64.10	64.10	64.10
Movement LOS	E	C	C	F	C	C	E	E	E	E	E	E
d_A, Approach Delay [s/veh]	30.97			27.27			63.87			64.10		
Approach LOS	C			C			E			E		
d_I, Intersection Delay [s/veh]	38.49											
Intersection LOS	D											
Intersection V/C	0.734											

Sequence

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



Intersection Level Of Service Report
Intersection 15: Haun Road (NS) / Holland Road (EW)

Control Type:	All-way stop	Delay (sec / veh):	99.1
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.334

Intersection Setup

Name												
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	1	0	0	1	0	0	1	0	1	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	150.00	100.00	100.00	150.00	100.00	150.00	100.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	342	479	4	6	378	415	327	5	178	2	6	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]	342	479	4	6	378	415	327	5	178	2	6	17
Peak Hour Factor	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	93	130	1	2	102	112	89	1	48	1	2	5
Total Analysis Volume [veh/h]	371	519	4	7	410	450	354	5	193	2	7	18
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	372	523	373	410	450	377	398	431	315
Degree of Utilization, x	1.00	1.33	0.02	1.04	1.06	0.94	0.01	0.45	0.09

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	11.75	24.40	0.06	13.49	14.61	10.17	0.04	2.26	0.28
95th-Percentile Queue Length [ft]	293.63	609.90	1.43	337.36	365.20	254.15	0.95	56.54	6.97
Approach Delay [s/veh]	144.94		87.69			46.95			15.48
Approach LOS	F		F			E			C
Intersection Delay [s/veh]	99.12								
Intersection LOS	F								

Intersection Level Of Service Report
Intersection 16: Haun Rd-Zeiders Rd (N/S)/Scott Rd (E/W)

Control Type:	Signalized	Delay (sec / veh):	73.1
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.042

Intersection Setup

Name												
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	1	0	0	1	0	0	1	0	0	1	0	1
Pocket Length [ft]	345.00	100.00	100.00	200.00	100.00	100.00	135.00	100.00	100.00	185.00	100.00	200.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	168	172	265	721	78	94	85	948	45	252	684	649
Base Volume Adjustment Factor	1.0000	1.0000	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]	168	172	265	721	78	94	85	948	45	252	684	649
Peak Hour Factor	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750
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	44	68	185	20	24	22	243	12	65	175	166
Total Analysis Volume [veh/h]	172	176	272	739	80	96	87	972	46	258	702	666
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	1 - Coordination Group
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]	16.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	24	0	0	34	0	11	42	0	20	51	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	C	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
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
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
g_i, Effective Green Time [s]	20	20	20	30	30	7	34	34	20	47	47
g / C, Green / Cycle	0.17	0.17	0.17	0.25	0.25	0.06	0.29	0.29	0.16	0.39	0.39
(v / s)_i Volume / Saturation Flow Rate	0.10	0.09	0.17	0.26	0.26	0.05	0.28	0.28	0.15	0.20	0.42
s, saturation flow rate [veh/h]	1774	1863	1583	1774	1744	1774	1863	1833	1774	3547	1583
c, Capacity [veh/h]	296	311	264	442	435	107	534	526	291	1384	618
d1, Uniform Delay [s]	46.14	46.01	50.00	45.06	45.06	55.69	42.11	42.11	49.09	27.81	36.59
k, delay calibration	0.11	0.11	0.22	0.48	0.49	0.11	0.50	0.50	0.11	0.50	0.50
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
d2, Incremental Delay [s]	1.81	1.62	44.85	51.75	56.51	13.32	30.15	30.50	8.94	1.33	58.95
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
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
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

Lane Group Results

X, volume / capacity	0.58	0.57	1.03	1.04	1.05	0.81	0.96	0.96	0.89	0.51	1.08
d, Delay for Lane Group [s/veh]	47.95	47.64	94.85	96.81	101.57	69.01	72.25	72.61	58.03	29.14	95.54
Lane Group LOS	D	D	F	F	F	E	E	E	E	C	F
Critical Lane Group	No	No	Yes	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	4.72	4.80	10.89	18.84	19.10	2.92	18.63	18.39	7.99	7.49	26.86
50th-Percentile Queue Length [ft]	117.93	120.05	272.18	471.09	477.59	72.95	465.67	459.72	199.81	187.14	671.59
95th-Percentile Queue Length [veh]	8.28	8.40	16.54	26.54	27.06	5.25	25.70	25.42	12.63	11.97	37.28
95th-Percentile Queue Length [ft]	206.98	209.90	413.47	663.54	676.50	131.31	642.62	635.54	315.72	299.32	932.02

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	47.95	47.64	94.85	98.62	101.57	101.57	69.01	72.42	72.61	58.03	29.14	95.54
Movement LOS	D	D	F	F	F	F	E	E	E	E	C	F
d_A, Approach Delay [s/veh]	68.44			99.18			72.16			60.92		
Approach LOS	E			F			E			E		
d_I, Intersection Delay [s/veh]	73.13											
Intersection LOS	E											
Intersection V/C	1.042											

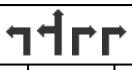
Sequence

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

Intersection Level Of Service Report
Intersection 17: I-215 SB Ramps (N/S) / Scott Rd (E/W)

Control Type:	Signalized	Delay (sec / veh):	11.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.553

Intersection Setup

Name												
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	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	245.00	100.00	100.00
Speed [mph]		50.00			50.00			50.00			50.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		No			Yes			No			No	

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	608	0	353	0	1079	498	413	1094	487
Base Volume Adjustment Factor	1.0000	1.0000	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	608	0	353	0	1079	498	413	1094	487
Peak Hour Factor	1.0000	1.0000	1.0000	0.9470	0.9470	0.9470	1.0000	0.9470	0.9470	0.9470	0.9470	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	161	0	93	0	285	131	109	289	122
Total Analysis Volume [veh/h]	0	0	0	642	0	373	0	1139	526	436	1155	487
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 - Coordination Group
Cycle Length [s]	110
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	Split	Split	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	0	0	0	6	0	0	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	0	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	73	0	0	37	0	0	37	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	10	0	0	10	0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall					No			No			No	
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]		110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]		4.00	4.00	4.00	4.00	4.00	4.00	4.00
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]		2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]		24	24	24	78	78	78	78
g / C, Green / Cycle		0.21	0.21	0.21	0.71	0.71	0.71	0.71
(v / s)_i Volume / Saturation Flow Rate		0.18	0.18	0.13	0.32	0.33	0.33	0.31
s, saturation flow rate [veh/h]		1774	1774	2803	3547	1583	3547	1583
c, Capacity [veh/h]		380	380	600	2529	1129	2529	1129
d1, Uniform Delay [s]		41.40	41.40	39.11	0.85	0.86	0.86	0.85
k, delay calibration		0.11	0.11	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		5.18	5.18	1.06	0.58	1.38	0.60	1.20
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	1.33	1.33	1.33	1.33
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.84	0.84	0.62	0.45	0.47	0.46	0.43
d, Delay for Lane Group [s/veh]		46.58	46.58	40.17	1.44	2.24	1.45	2.05
Lane Group LOS		D	D	D	A	A	A	A
Critical Lane Group		Yes	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh]		8.46	8.46	4.43	0.73	0.92	0.74	0.82
50th-Percentile Queue Length [ft]		211.45	211.45	110.77	18.16	22.93	18.49	20.58
95th-Percentile Queue Length [veh]		13.23	13.23	7.88	1.31	1.65	1.33	1.48
95th-Percentile Queue Length [ft]		330.68	330.68	197.07	32.70	41.27	33.28	37.04

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	46.58	46.58	40.17	0.00	1.44	2.24	0.00	1.45	2.05
Movement LOS				D	D	D		A	A		A	A
d_A, Approach Delay [s/veh]	0.00			44.22			1.69			1.63		
Approach LOS	A			D			A			A		
d_I, Intersection Delay [s/veh]	11.66											
Intersection LOS	B											
Intersection V/C	0.553											

Sequence

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

Intersection Level Of Service Report
Intersection 18: I-215 NB Ramps (N/S) / Scott Rd (E/W)

Control Type:	Signalized	Delay (sec / veh):	20.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.754

Intersection Setup

Name												
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	1	0	0	0	1	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	425.00	100.00	100.00	100.00	250.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		50.00			50.00			50.00			50.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		No			Yes			No			No	

Volumes

Name												
Base Volume Input [veh/h]	345	1	529	0	0	445	293	1406	0	0	1107	427
Base Volume Adjustment Factor	1.0000	1.0000	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]	345	1	529	0	0	445	293	1406	0	0	1107	427
Peak Hour Factor	0.9600	0.9600	0.9600	1.0000	1.0000	1.0000	0.9600	0.9600	1.0000	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	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	90	0	138	0	0	111	76	366	0	0	288	111
Total Analysis Volume [veh/h]	359	1	551	0	0	445	305	1465	0	0	1153	445
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	1 - Coordination Group
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
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	Split	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	0	6	3	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	0	7	7	7	0	0	7	0
Maximum Green [s]	0	30	0	0	0	30	30	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	3.0	3.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	1.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	56	0	0	0	56	35	54	0	0	19	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	3.0	3.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	5	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	10	0	10	0	0	10	0
Rest In Walk		No				No		No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	2.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	0.0	2.0	2.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No				No	No	No			No	
Maximum Recall		No				No	No	No			No	
Pedestrian Recall		No				No	No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	R	R	L	C	C	R
C, Cycle Length [s]	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00
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]	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	22	22	22	21	80	55	55
g / C, Green / Cycle	0.20	0.20	0.20	0.19	0.73	0.50	0.50
(v / s)_i Volume / Saturation Flow Rate	0.17	0.17	0.16	0.17	0.41	0.33	0.28
s, saturation flow rate [veh/h]	1584	1583	2803	1774	3547	3547	1583
c, Capacity [veh/h]	318	317	562	338	2578	1772	791
d1, Uniform Delay [s]	42.56	42.57	41.78	40.00	0.51	12.70	11.94
k, delay calibration	0.11	0.11	0.11	0.11	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.24	7.26	2.56	8.78	0.92	1.87	2.88
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	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.87	0.87	0.79	0.90	0.57	0.65	0.56
d, Delay for Lane Group [s/veh]	49.81	49.82	44.34	48.78	1.43	14.57	14.82
Lane Group LOS	D	D	D	D	A	B	B
Critical Lane Group	No	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh]	7.53	7.54	5.66	7.84	0.73	6.11	4.84
50th-Percentile Queue Length [ft]	188.37	188.40	141.42	195.96	18.15	152.70	120.88
95th-Percentile Queue Length [veh]	12.04	12.04	9.56	12.43	1.31	10.16	8.44
95th-Percentile Queue Length [ft]	300.91	300.96	238.94	310.74	32.67	254.02	211.04

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	49.81	49.81	0.00	0.00	44.34	48.78	1.43	0.00	0.00	14.57	14.82
Movement LOS		D	D			D	D	A			B	B
d_A, Approach Delay [s/veh]	49.81			44.34			9.59		14.64			
Approach LOS	D			D			A		B			
d_I, Intersection Delay [s/veh]	20.07											
Intersection LOS	C											
Intersection V/C	0.754											

Sequence

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

Intersection Level Of Service Report
Intersection 19: Antelope Rd (NS)/Scott Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	41.0
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.893

Intersection Setup

Name												
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	2	0	0	1	0	1	2	0	0	1	0	0
Pocket Length [ft]	215.00	100.00	100.00	200.00	100.00	200.00	375.00	100.00	100.00	200.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	423	310	377	64	180	445	344	1144	458	65	635	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]	423	310	377	64	180	445	344	1144	458	65	635	58
Peak Hour Factor	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760
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	79	97	16	46	114	88	293	117	17	163	15
Total Analysis Volume [veh/h]	433	318	386	66	184	456	352	1172	469	67	651	59
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
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 - Coordination Group
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
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]	19	23	0	22	26	0	17	46	0	19	48	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
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	C
C, Cycle Length [s]	110	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	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]	15	41	41	6	32	32	13	41	41	6	34	34
g / C, Green / Cycle	0.14	0.37	0.37	0.06	0.29	0.29	0.12	0.37	0.37	0.06	0.31	0.31
(v / s)_i Volume / Saturation Flow Rate	0.13	0.09	0.24	0.04	0.10	0.29	0.10	0.33	0.30	0.02	0.13	0.13
s, saturation flow rate [veh/h]	3445	3547	1583	1774	1863	1583	3445	3547	1583	3445	3547	1785
c, Capacity [veh/h]	471	1307	583	99	536	456	409	1326	592	194	1105	556
d1, Uniform Delay [s]	46.92	24.12	29.03	50.95	30.99	39.21	47.63	32.24	30.67	48.99	25.20	25.23
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.20	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.72	0.44	5.81	7.35	1.74	42.35	5.42	2.15	4.46	1.05	0.26	0.53
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	1.33	1.33	1.33
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

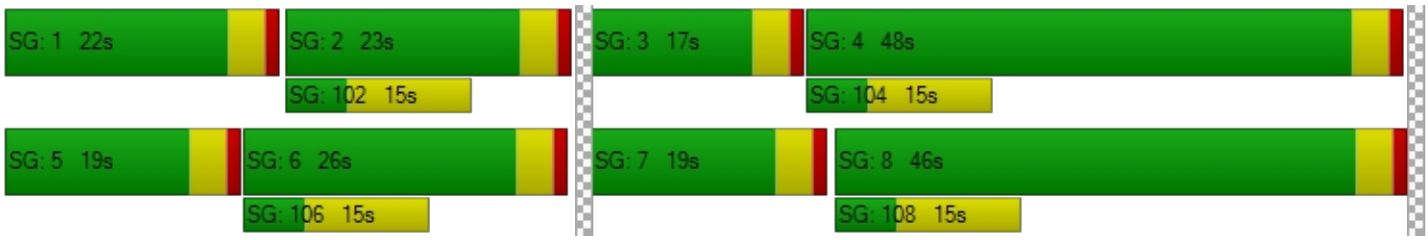
X, volume / capacity	0.92	0.24	0.66	0.66	0.34	1.00	0.86	0.88	0.79	0.35	0.43	0.43
d, Delay for Lane Group [s/veh]	54.64	24.56	34.84	58.30	32.73	81.56	53.04	34.39	35.13	50.04	25.46	25.76
Lane Group LOS	D	C	C	E	C	F	D	C	D	D	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh]	6.10	2.79	8.85	1.92	3.93	16.85	4.85	13.83	10.96	0.87	3.93	4.04
50th-Percentile Queue Length [ft]	152.55	69.64	221.21	48.05	98.19	421.33	121.18	345.70	274.02	21.69	98.24	100.93
95th-Percentile Queue Length [veh]	10.15	5.01	13.73	3.46	7.07	23.60	8.46	19.93	16.39	1.56	7.07	7.27
95th-Percentile Queue Length [ft]	253.83	125.36	343.16	86.50	176.73	589.94	211.44	498.16	409.75	39.04	176.83	181.68

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	54.64	24.56	34.84	58.30	32.73	81.56	53.04	34.39	35.13	50.04	25.54	25.76
Movement LOS	D	C	C	E	C	F	D	C	D	D	C	C
d_A, Approach Delay [s/veh]	39.51			66.66			37.86			27.67		
Approach LOS	D			E			D			C		
d_I, Intersection Delay [s/veh]	40.96											
Intersection LOS	D											
Intersection V/C	0.893											

Sequence

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



EXISTING PLUS AMBIENT GROWTH PLUS CUMULATIVE PROJECTS PLUS PROJECT WITHOUT OVERPASS CONDITIONS LEVELS OF SERVICE WORKSHEETS

Intersection Level Of Service Report
Intersection 1: Murrieta Rd (NS)/Newport Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	44.2
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.862

Intersection Setup

Name							Newport Rd			Newport Rd		
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	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	190.00	100.00	100.00	225.00	100.00	100.00	275.00	100.00	100.00	180.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							Newport Rd			Newport Rd		
Base Volume Input [veh/h]	212	440	150	360	379	201	315	1015	133	155	836	134
Base Volume Adjustment Factor	1.0000	1.0000	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	440	150	360	379	201	315	1015	133	155	836	134
Peak Hour Factor	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090
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]	58	121	41	99	104	55	87	279	37	43	230	37
Total Analysis Volume [veh/h]	233	484	165	396	417	221	347	1117	146	171	920	147
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	1 - Coordination Group
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
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]	35	20	0	35	20	0	30	39	0	16	25	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	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]	110	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	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]	17	22	22	27	32	32	23	34	34	12	22	22
g / C, Green / Cycle	0.15	0.20	0.20	0.24	0.29	0.29	0.21	0.31	0.31	0.11	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.13	0.14	0.10	0.22	0.12	0.14	0.20	0.22	0.09	0.10	0.18	0.09
s, saturation flow rate [veh/h]	1774	3547	1583	1774	3547	1583	1774	5074	1583	1774	5074	1583
c, Capacity [veh/h]	269	702	313	429	1022	456	378	1547	483	195	1023	319
d1, Uniform Delay [s]	45.66	41.05	39.57	40.77	31.64	32.45	42.39	34.14	29.33	48.28	42.89	38.71
k, delay calibration	0.11	0.50	0.50	0.30	0.50	0.50	0.24	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.24	5.48	6.21	19.36	1.21	3.65	17.47	0.65	0.35	11.55	3.16	1.03
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	0.87	0.69	0.53	0.92	0.41	0.48	0.92	0.72	0.30	0.87	0.90	0.46
d, Delay for Lane Group [s/veh]	53.90	46.53	45.78	60.13	32.85	36.10	59.86	34.79	29.68	59.84	46.05	39.74
Lane Group LOS	D	D	D	E	C	D	E	C	C	E	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	6.56	6.34	4.36	12.20	4.42	5.08	10.59	8.42	2.85	5.06	8.02	3.43
50th-Percentile Queue Length [ft]	164.07	158.59	108.96	305.06	110.42	126.94	264.65	210.58	71.32	126.56	200.42	85.76
95th-Percentile Queue Length [veh]	10.76	10.47	7.78	17.93	7.86	8.77	15.92	13.18	5.14	8.75	12.66	6.17
95th-Percentile Queue Length [ft]	269.10	261.85	194.56	448.28	196.59	219.32	398.05	329.57	128.38	218.82	316.51	154.36

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	53.90	46.53	45.78	60.13	32.85	36.10	59.86	34.79	29.68	59.84	46.05	39.74
Movement LOS	D	D	D	E	C	D	E	C	C	E	D	D
d_A, Approach Delay [s/veh]	48.34			43.99			39.73			47.21		
Approach LOS	D			D			D			D		
d_I, Intersection Delay [s/veh]	44.19											
Intersection LOS	D											
Intersection V/C	0.862											

Sequence

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

Intersection Level Of Service Report
Intersection 2: Bradley Rd (N/S)/Newport Rd (E/W)

Control Type:	Signalized	Delay (sec / veh):	47.3
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.022

Intersection Setup

Name				Bradley Rd			Newport Rd			Newport Rd		
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	1	0	0	1	0	0	1	0	0	2	0	1
Pocket Length [ft]	100.00	100.00	100.00	125.00	100.00	100.00	165.00	100.00	100.00	155.00	100.00	150.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name				Bradley Rd			Newport Rd			Newport Rd		
Base Volume Input [veh/h]	150	276	484	251	318	71	90	1542	82	465	1150	144
Base Volume Adjustment Factor	1.0000	1.0000	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]	150	276	484	251	318	71	90	1542	82	465	1150	144
Peak Hour Factor	0.8690	0.8690	0.8690	0.8690	0.8690	0.8690	0.8690	0.8690	0.8690	0.8690	0.8690	0.8690
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	79	139	72	91	20	26	444	24	134	331	41
Total Analysis Volume [veh/h]	173	318	557	289	366	82	104	1774	94	535	1323	166
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	1 - Coordination Group
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
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	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	2	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups			2,7									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	30	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	3.0	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	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	16	22	22	21	27	0	30	45	0	22	37	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	5	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	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	2.0	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	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	C	L	C	C	L	C	R
C, Cycle Length [s]	110	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	12	19	41	17	24	24	8	40	40	18	50	50
g / C, Green / Cycle	0.11	0.17	0.37	0.15	0.21	0.21	0.07	0.37	0.37	0.16	0.46	0.46
(v / s)_i Volume / Saturation Flow Rate	0.10	0.17	0.35	0.16	0.12	0.12	0.06	0.35	0.35	0.16	0.26	0.10
s, saturation flow rate [veh/h]	1774	1863	1583	1774	1863	1746	1774	3547	1815	3445	5074	1583
c, Capacity [veh/h]	194	315	585	274	400	375	132	1301	666	564	2314	722
d1, Uniform Delay [s]	48.36	45.71	33.75	46.51	38.73	38.75	50.07	33.84	33.90	45.55	22.02	18.19
k, delay calibration	0.11	0.50	0.50	0.16	0.50	0.50	0.11	0.11	0.42	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	13.03	52.72	27.10	45.20	5.96	6.39	9.84	4.62	22.08	9.08	0.22	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	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

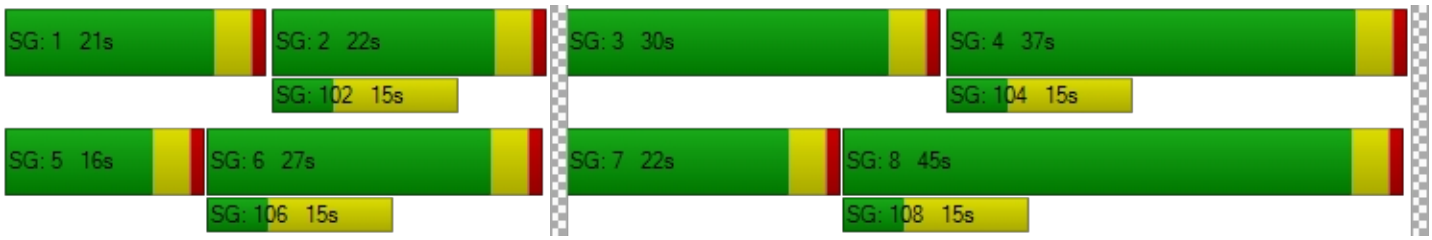
X, volume / capacity	0.89	1.01	0.95	1.05	0.58	0.58	0.79	0.95	0.95	0.95	0.57	0.23
d, Delay for Lane Group [s/veh]	61.39	98.42	60.85	91.71	44.69	45.15	59.91	38.46	55.98	54.63	22.25	18.35
Lane Group LOS	E	F	E	F	D	D	E	D	E	D	C	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	5.19	12.83	17.72	10.60	5.99	5.68	3.07	15.54	19.21	7.60	7.69	2.41
50th-Percentile Queue Length [ft]	129.84	320.66	442.99	265.08	149.73	142.05	76.70	388.60	480.36	190.11	192.22	60.19
95th-Percentile Queue Length [veh]	8.93	18.78	24.62	16.33	10.00	9.59	5.52	22.01	26.40	12.13	12.24	4.33
95th-Percentile Queue Length [ft]	223.28	469.43	615.57	408.32	250.07	239.78	138.06	550.25	660.08	303.17	305.91	108.34

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	61.39	98.42	60.85	91.71	44.86	45.15	59.91	43.79	55.98	54.63	22.25	18.35
Movement LOS	E	F	E	F	D	D	E	D	E	D	C	B
d_A, Approach Delay [s/veh]	72.34			63.26			45.22			30.49		
Approach LOS	E			E			D			C		
d_I, Intersection Delay [s/veh]	47.28											
Intersection LOS	D											
Intersection V/C	1.022											

Sequence

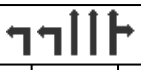
Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Haun Road (NS) / Newport Road (EW)

Control Type:	Signalized	Delay (sec / veh):	58.1
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.086

Intersection Setup

Name	Haun Rd			Haun Rd						Newport Rd		
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	2	0	1	2	0	0	2	0	0	2	0	1
Pocket Length [ft]	215.00	100.00	285.00	155.00	100.00	100.00	210.00	100.00	100.00	350.00	100.00	150.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Haun Rd			Haun Rd						Newport Rd		
Base Volume Input [veh/h]	281	109	911	146	64	62	149	1912	365	1188	1460	380
Base Volume Adjustment Factor	1.0000	1.0000	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]	281	109	911	146	64	62	149	1912	365	1188	1460	380
Peak Hour Factor	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480
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]	74	29	240	39	17	16	39	504	96	313	385	100
Total Analysis Volume [veh/h]	296	115	961	154	68	65	157	2017	385	1253	1540	401
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	1 - Coordination Group
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
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	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	2	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups			2,7									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	30	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	3.0	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	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	15	22	22	12	19	0	12	55	0	51	94	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	5	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	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	2.0	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	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	C	L	C	R	L	C	C
C, Cycle Length [s]	140	140	140	140	140	140	140	140	140	140	140	140
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	11	18	69	8	15	15	8	51	51	47	90	90
g / C, Green / Cycle	0.08	0.13	0.49	0.06	0.11	0.11	0.06	0.37	0.37	0.34	0.64	0.64
(v / s)_i Volume / Saturation Flow Rate	0.09	0.06	0.34	0.04	0.04	0.04	0.05	0.40	0.24	0.36	0.36	0.40
s, saturation flow rate [veh/h]	3445	1863	2803	3445	1863	1583	3445	5074	1583	3445	3547	1684
c, Capacity [veh/h]	271	237	1377	197	197	167	197	1856	579	1156	2284	1085
d1, Uniform Delay [s]	64.49	56.85	27.58	65.12	58.11	58.39	65.18	44.39	37.20	46.51	13.83	14.70
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.22	0.12	0.11	0.19
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	54.22	6.98	2.96	6.56	4.75	6.68	7.11	41.46	2.65	42.20	0.21	1.00
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

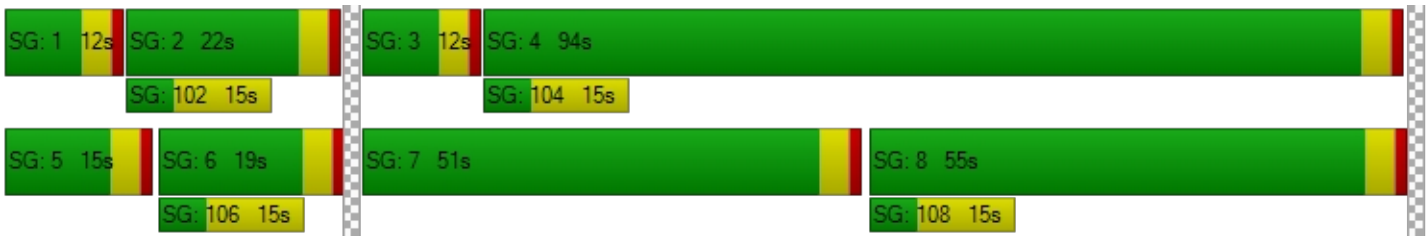
X, volume / capacity	1.09	0.49	0.70	0.78	0.35	0.39	0.80	1.09	0.66	1.08	0.56	0.62
d, Delay for Lane Group [s/veh]	118.71	63.82	30.54	71.68	62.86	65.06	72.29	85.85	39.85	88.72	14.05	15.71
Lane Group LOS	F	E	C	E	E	E	E	F	D	F	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh]	6.76	4.15	12.24	2.83	2.44	2.41	2.90	27.51	11.06	25.95	10.06	11.46
50th-Percentile Queue Length [ft]	168.92	103.78	306.01	70.73	61.12	60.22	72.46	687.79	276.41	648.78	251.51	286.50
95th-Percentile Queue Length [veh]	11.35	7.47	17.98	5.09	4.40	4.34	5.22	38.23	16.51	36.20	15.26	17.01
95th-Percentile Queue Length [ft]	283.75	186.81	449.46	127.32	110.02	108.40	130.43	955.86	412.74	904.88	381.55	425.29

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	118.71	63.82	30.54	71.68	62.86	65.06	72.29	85.85	39.85	88.72	14.33	15.71
Movement LOS	F	E	C	E	E	E	E	F	D	F	B	B
d_A, Approach Delay [s/veh]	52.35			68.09			78.10			43.69		
Approach LOS	D			E			E			D		
d_I, Intersection Delay [s/veh]	58.12											
Intersection LOS	E											
Intersection V/C	1.086											

Sequence

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



Intersection Level Of Service Report
Intersection 4: I-215 SB Ramps (NS) / Newport Road (EW)

Control Type:	Signalized	Delay (sec / veh):	23.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.356

Intersection Setup

Name	I-215 SB Ramps			I-215 SB Ramps			Newport Rd			Newport Rd		
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	1	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	800.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name	I-215 SB Ramps			I-215 SB Ramps			Newport Rd			Newport Rd		
Base Volume Input [veh/h]	0	0	0	563	0	781	0	2021	958	0	2264	1378
Base Volume Adjustment Factor	1.0000	1.0000	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	563	0	781	0	2021	958	0	2264	1378
Peak Hour Factor	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	151	0	209	0	541	256	0	606	369
Total Analysis Volume [veh/h]	0	0	0	603	0	836	0	2164	1026	0	2424	1475
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 - Coordination Group
Cycle Length [s]	140
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	Overlap	Protecte	Permiss	Overlap
Signal group	0	0	0	1	0	0	0	8	8	7	4	4
Auxiliary Signal Groups									1,4,8			1,4,8
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	7	0	0	0	7	7	0	7	7
Maximum Green [s]	0	0	0	30	0	0	0	30	30	0	30	30
Amber [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0
All red [s]	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0	1.0
Split [s]	0	0	0	53	0	0	0	87	87	0	87	87
Vehicle Extension [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0
Walk [s]	0	0	0	5	0	0	0	5	5	0	5	5
Pedestrian Clearance [s]	0	0	0	10	0	0	0	10	10	0	10	10
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	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0
Minimum Recall				No				No	No		No	No
Maximum Recall				No				No	No		No	No
Pedestrian Recall				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	C	R	C	R
C, Cycle Length [s]		140	140	140	140	140	140	140
L, Total Lost Time per Cycle [s]		4.00	4.00	4.00	4.00	0.00	4.00	0.00
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]		2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]		48	48	48	83	136	83	136
g / C, Green / Cycle		0.35	0.35	0.35	0.60	0.97	0.60	0.97
(v / s)_i Volume / Saturation Flow Rate		0.27	0.29	0.30	0.32	0.65	0.48	0.93
s, saturation flow rate [veh/h]		1774	1628	1583	6765	1583	5074	1583
c, Capacity [veh/h]		613	563	547	4039	1538	3029	1538
d1, Uniform Delay [s]		40.99	42.39	42.90	16.68	0.16	21.72	0.84
k, delay calibration		0.30	0.35	0.37	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		5.90	11.02	13.70	0.51	2.31	2.32	15.07
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		0.78	0.85	0.88	0.54	0.67	0.80	0.96
d, Delay for Lane Group [s/veh]		46.88	53.41	56.61	17.19	2.47	24.04	15.91
Lane Group LOS		D	D	E	B	A	C	B
Critical Lane Group		No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]		15.22	16.42	16.96	9.58	0.99	19.01	6.44
50th-Percentile Queue Length [ft]		380.44	410.59	424.02	239.58	24.67	475.24	160.99
95th-Percentile Queue Length [veh]		21.62	23.07	23.72	14.66	1.78	26.16	10.60
95th-Percentile Queue Length [ft]		540.38	576.74	592.88	366.50	44.40	654.00	265.04

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	48.22	0.00	55.24	0.00	17.19	2.47	0.00	24.04	15.91
Movement LOS				D		E		B	A		C	B
d_A, Approach Delay [s/veh]	0.00			52.30			12.46			20.97		
Approach LOS	A			D			B			C		
d_I, Intersection Delay [s/veh]	23.07											
Intersection LOS	C											
Intersection V/C	0.356											

Sequence

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

Intersection Level Of Service Report
Intersection 5: I-215 NB Ramps (NS) / Newport Road (EW)

Control Type:	Signalized	Delay (sec / veh):	23.8
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.826

Intersection Setup

Name	I-215 NB Ramps			I-215 NB Ramps			Newport Rd			Newport Rd		
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	1	0	1	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	375.00	100.00	375.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name	I-215 NB Ramps			I-215 NB Ramps			Newport Rd			Newport Rd		
Base Volume Input [veh/h]	637	0	720	0	0	0	0	1875	686	0	2997	721
Base Volume Adjustment Factor	1.0000	1.0000	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]	637	0	720	0	0	0	0	1875	686	0	2997	721
Peak Hour Factor	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	170	0	193	0	0	0	0	501	183	0	801	193
Total Analysis Volume [veh/h]	681	0	770	0	0	0	0	2005	734	0	3205	771
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 - Coordination Group
Cycle Length [s]	140
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	Split	Permiss	Split	Permiss	Permiss	Permiss	Protecte	Permiss	Overlap	Permiss	Permiss	Overlap
Signal group	5	0	0	0	0	0	3	8	5	0	4	4
Auxiliary Signal Groups									4,5,8			4,5,8
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	0	0	0	0	0	0	7	7	0	7	7
Maximum Green [s]	30	0	0	0	0	0	0	30	30	0	30	30
Amber [s]	3.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0
All red [s]	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0	1.0
Split [s]	66	0	0	0	0	0	0	74	66	0	74	74
Vehicle Extension [s]	3.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0
Walk [s]	5	0	0	0	0	0	0	5	5	0	5	5
Pedestrian Clearance [s]	10	0	0	0	0	0	0	10	10	0	10	10
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	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0
Minimum Recall	No							No	No		No	No
Maximum Recall	No							No	No		No	No
Pedestrian Recall	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		C	R	C	R
C, Cycle Length [s]	140	140	140		140	140	140	140
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00		4.00	0.00	4.00	0.00
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]	2.00	2.00	2.00		2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	52	52	52		80	136	80	136
g / C, Green / Cycle	0.37	0.37	0.37		0.57	0.97	0.57	0.97
(v / s)_i Volume / Saturation Flow Rate	0.27	0.29	0.31		0.40	0.46	0.47	0.49
s, saturation flow rate [veh/h]	1774	1656	1583		5074	1583	6765	1583
c, Capacity [veh/h]	656	612	585		2909	1538	3878	1538
d1, Uniform Delay [s]	38.21	39.26	40.02		21.06	0.11	24.20	0.11
k, delay calibration	0.18	0.22	0.24		0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.76	4.58	6.48		1.36	1.06	2.15	1.17
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

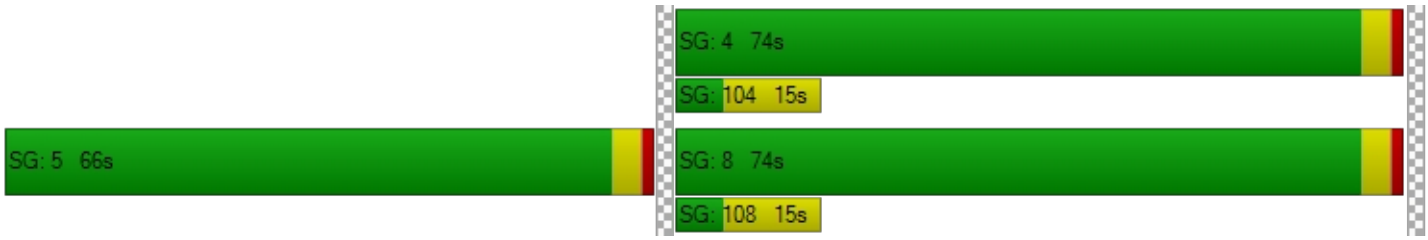
X, volume / capacity	0.74	0.79	0.83		0.69	0.48	0.83	0.50
d, Delay for Lane Group [s/veh]	40.98	43.84	46.50		22.42	1.17	26.35	1.28
Lane Group LOS	D	D	D		C	A	C	A
Critical Lane Group	No	No	Yes		No	No	Yes	No
50th-Percentile Queue Length [veh]	14.27	14.92	15.47		14.52	0.45	20.08	0.50
50th-Percentile Queue Length [ft]	356.70	373.02	386.73		362.90	11.36	501.90	12.50
95th-Percentile Queue Length [veh]	20.46	21.26	21.92		20.76	0.82	27.42	0.90
95th-Percentile Queue Length [ft]	511.57	531.39	547.98		519.10	20.45	685.60	22.50

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	41.80	0.00	45.51	0.00	0.00	0.00	0.00	22.42	1.17	0.00	26.35	1.28
Movement LOS	D		D					C	A		C	A
d_A, Approach Delay [s/veh]	43.77			0.00			16.72			21.49		
Approach LOS	D			A			B			C		
d_I, Intersection Delay [s/veh]	23.85											
Intersection LOS	C											
Intersection V/C	0.826											

Sequence

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



Intersection Level Of Service Report
Intersection 6: Antelope Rd (NS)/Newport Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	66.7
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.073

Intersection Setup

Name												
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	2	0	0	2	0	0	2	0	0	2	0	0
Pocket Length [ft]	330.00	100.00	100.00	100.00	100.00	100.00	325.00	100.00	100.00	200.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							Newport Rd			Newport Rd		
Base Volume Input [veh/h]	768	38	119	95	79	293	139	1582	862	169	2655	50
Base Volume Adjustment Factor	1.0000	1.0000	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]	768	38	119	95	79	293	139	1582	862	169	2655	50
Peak Hour Factor	0.9570	0.9570	0.9570	0.9570	0.9570	0.9570	0.9570	0.9570	0.9570	0.9570	0.9570	0.9570
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]	201	10	31	25	21	77	36	413	225	44	694	13
Total Analysis Volume [veh/h]	803	40	124	99	83	306	145	1653	901	177	2774	52
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	1 - Coordination Group
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
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	8	7	4	0
Auxiliary Signal Groups									5,8			
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	7	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	30	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0	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	1.0	1.0	1.0	0.0
Split [s]	34	25	0	28	19	0	15	76	76	11	72	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	5	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	10	0	10	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	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0	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	C	R	L	C	C	L	C	C
C, Cycle Length [s]	140	140	140	140	140	140	140	140	140	140	140	140	140
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	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	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	2.00
g_i, Effective Green Time [s]	30	38	38	7	15	15	15	8	72	72	7	71	71
g / C, Green / Cycle	0.21	0.27	0.27	0.05	0.11	0.11	0.11	0.06	0.51	0.51	0.05	0.51	0.51
(v / s)_i Volume / Saturation Flow Rate	0.23	0.02	0.08	0.03	0.04	0.10	0.10	0.04	0.47	0.57	0.05	0.52	0.53
s, saturation flow rate [veh/h]	3445	1863	1583	3445	1863	1583	1583	3445	3547	1583	3445	3547	1845
c, Capacity [veh/h]	738	509	433	169	201	171	171	194	1821	813	173	1799	936
d1, Uniform Delay [s]	55.00	37.78	40.11	65.18	58.29	61.65	61.65	65.08	31.05	34.07	66.49	34.50	34.50
k, delay calibration	0.12	0.50	0.50	0.11	0.50	0.50	0.50	0.11	0.11	0.50	0.11	0.11	0.50
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
d2, Incremental Delay [s]	45.53	0.30	1.66	3.21	6.14	45.52	45.52	5.67	2.01	65.69	38.60	18.90	40.30
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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	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	1.00

Lane Group Results

X, volume / capacity	1.09	0.08	0.29	0.59	0.41	0.89	0.89	0.75	0.91	1.11	1.03	1.03	1.04
d, Delay for Lane Group [s/veh]	100.53	38.08	41.77	68.39	64.42	107.1	107.1	70.75	33.07	99.76	105.09	53.40	74.80
Lane Group LOS	F	D	D	E	E	F	F	E	C	F	F	F	F
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	17.24	1.04	3.49	1.77	3.03	7.40	7.40	2.64	23.91	40.07	3.94	32.74	39.63
50th-Percentile Queue Length [ft]	431.03	26.08	87.34	44.17	75.71	184.9	184.9	66.08	597.68	1001.82	98.39	818.53	990.82
95th-Percentile Queue Length [veh]	25.18	1.88	6.29	3.18	5.45	11.86	11.86	4.76	31.93	54.70	7.08	43.16	51.60
95th-Percentile Queue Length [ft]	629.45	46.95	157.21	79.51	136.2	296.4	296.4	118.95	798.15	1367.44	177.10	1079.05	1290.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	100.53	38.08	41.77	68.39	64.42	107.17	70.75	33.07	99.76	105.09	60.51	74.80
Movement LOS	F	D	D	E	E	F	E	C	F	F	F	E
d_A, Approach Delay [s/veh]	90.41			92.03			57.35			63.38		
Approach LOS	F			F			E			E		
d_I, Intersection Delay [s/veh]	66.71											
Intersection LOS	E											
Intersection V/C	1.073											

Sequence

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

Intersection Level Of Service Report
Intersection 7: Menifee Rd (NS)/NewportRd (EW)

Control Type:	Signalized	Delay (sec / veh):	109.4
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.250

Intersection Setup

Name							Newport Rd			Newport Rd		
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	1	0	1	1	0	0	1	0	0	2	0	0
Pocket Length [ft]	250.00	100.00	200.00	100.00	100.00	100.00	400.00	100.00	100.00	295.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							Newport Rd			Newport Rd		
Base Volume Input [veh/h]	387	301	151	93	283	542	374	1119	283	225	1739	59
Base Volume Adjustment Factor	1.0000	1.0000	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]	387	301	151	93	283	542	374	1119	283	225	1739	59
Peak Hour Factor	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	104	81	41	25	76	146	100	300	76	60	467	16
Total Analysis Volume [veh/h]	416	323	162	100	304	582	402	1202	304	242	1868	63
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	1 - Coordination Group
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]	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]	16	19	0	36	39	0	26	52	0	13	39	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
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	C	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]	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]	12	38	38	9	35	35	22	48	48	9	35	35
g / C, Green / Cycle	0.10	0.32	0.32	0.07	0.29	0.29	0.18	0.40	0.40	0.08	0.29	0.29
(v / s)_i Volume / Saturation Flow Rate	0.12	0.09	0.10	0.06	0.09	0.37	0.23	0.29	0.29	0.07	0.37	0.04
s, saturation flow rate [veh/h]	3445	3547	1583	1774	3547	1583	1774	3547	1678	3445	5074	1583
c, Capacity [veh/h]	345	1136	507	126	1033	461	329	1414	669	264	1472	459
d1, Uniform Delay [s]	54.00	30.49	30.87	54.87	32.95	42.52	48.89	30.44	30.56	55.03	42.59	31.49
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.38	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	99.49	0.14	0.36	10.66	0.16	134.18	119.88	3.20	6.81	12.28	126.59	0.62
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

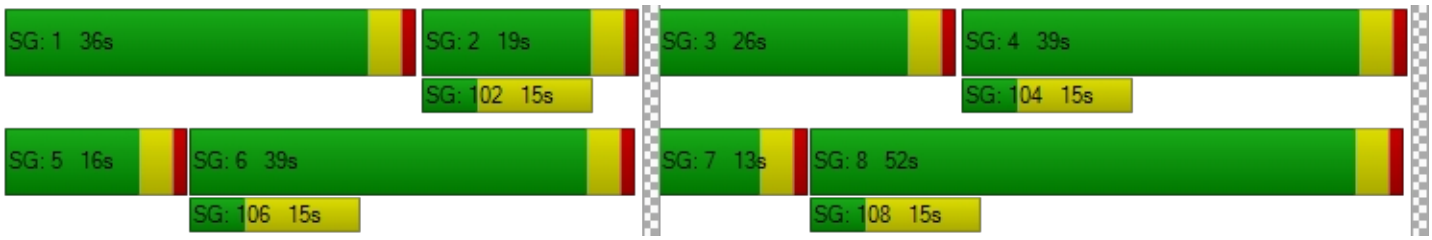
X, volume / capacity	1.21	0.28	0.32	0.79	0.29	1.26	1.22	0.72	0.73	0.92	1.27	0.14
d, Delay for Lane Group [s/veh]	153.49	30.63	31.23	65.53	33.11	176.70	168.77	33.65	37.37	67.31	169.19	32.11
Lane Group LOS	F	C	C	E	C	F	F	C	D	E	F	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	9.78	3.37	3.45	3.25	3.32	30.10	20.37	12.24	12.40	3.97	30.97	1.38
50th-Percentile Queue Length [ft]	244.43	84.30	86.34	81.31	82.95	752.55	509.31	305.97	309.90	99.13	774.30	34.54
95th-Percentile Queue Length [veh]	15.95	6.07	6.22	5.85	5.97	44.61	30.62	17.98	18.17	7.14	45.89	2.49
95th-Percentile Queue Length [ft]	398.86	151.74	155.41	146.37	149.32	1115.36	765.40	449.40	454.25	178.43	1147.30	62.17

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	153.49	30.63	31.23	65.53	33.11	176.70	168.77	34.21	37.37	67.31	169.19	32.11
Movement LOS	F	C	C	E	C	F	F	C	D	E	F	C
d_A, Approach Delay [s/veh]	87.46			121.15			63.07			153.87		
Approach LOS	F			F			E			F		
d_I, Intersection Delay [s/veh]	109.41											
Intersection LOS	F											
Intersection V/C	1.250											

Sequence

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



Intersection Level Of Service Report
Intersection 8: Bradley Rd (N/S) / La Piedra Rd (E/W)

Control Type:	Signalized	Delay (sec / veh):	28.4
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.695

Intersection Setup

Name												
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	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	150.00	100.00	100.00	155.00	100.00	100.00	100.00	100.00	100.00	150.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	30	701	73	162	649	11	41	24	33	99	77	223
Base Volume Adjustment Factor	1.0000	1.0000	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]	30	701	73	162	649	11	41	24	33	99	77	223
Peak Hour Factor	0.7990	0.7990	0.7990	0.7990	0.7990	0.7990	0.7990	0.7990	0.7990	0.7990	0.7990	0.7990
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	219	23	51	203	3	13	8	10	31	24	70
Total Analysis Volume [veh/h]	38	877	91	203	812	14	51	30	41	124	96	279
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 Coordinated
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]	11	33	0	17	39	0	11	19	0	31	39	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
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	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	5	46	46	13	54	54	5	17	17	9	20	20
g / C, Green / Cycle	0.05	0.46	0.46	0.13	0.54	0.54	0.05	0.17	0.17	0.09	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.02	0.26	0.26	0.11	0.22	0.22	0.03	0.02	0.03	0.07	0.05	0.18
s, saturation flow rate [veh/h]	1774	1863	1802	1774	1863	1852	1774	1863	1583	1774	1863	1583
c, Capacity [veh/h]	83	847	820	231	1003	997	96	309	263	157	374	318
d1, Uniform Delay [s]	46.49	20.21	20.21	42.75	13.71	13.71	46.12	35.39	35.75	44.70	33.73	38.84
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.89	2.90	2.99	10.12	1.26	1.26	4.49	0.14	0.27	8.42	0.36	7.74
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	0.46	0.58	0.58	0.88	0.41	0.41	0.53	0.10	0.16	0.79	0.26	0.88
d, Delay for Lane Group [s/veh]	50.38	23.11	23.21	52.87	14.96	14.97	50.61	35.53	36.02	53.12	34.09	46.57
Lane Group LOS	D	C	C	D	B	B	D	D	D	D	C	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.97	8.26	8.01	5.32	5.14	5.11	1.30	0.60	0.84	3.24	1.90	6.93
50th-Percentile Queue Length [ft]	24.30	206.41	200.23	133.09	128.52	127.81	32.55	15.08	20.91	81.03	47.59	173.18
95th-Percentile Queue Length [veh]	1.75	12.97	12.65	9.11	8.86	8.82	2.34	1.09	1.51	5.83	3.43	11.24
95th-Percentile Queue Length [ft]	43.74	324.22	316.27	227.69	221.48	220.52	58.59	27.14	37.64	145.86	85.66	281.09

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	50.38	23.15	23.21	52.87	14.97	14.97	50.61	35.53	36.02	53.12	34.09	46.57
Movement LOS	D	C	C	D	B	B	D	D	D	D	C	D
d_A, Approach Delay [s/veh]	24.18			22.44			42.00			45.80		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	28.39											
Intersection LOS	C											
Intersection V/C	0.695											

Sequence

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

Intersection Level Of Service Report
Intersection 9: Bradley Rd (NS)/Holland Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	68.5
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.057

Intersection Setup

Name											
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	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	130.00	100.00	100.00	150.00	100.00	100.00	145.00	100.00	100.00	140.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	57	390	210	111	517	251	130	328	224	214	279	150
Base Volume Adjustment Factor	1.0000	1.0000	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	390	210	111	517	251	130	328	224	214	279	150
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	106	57	30	140	68	35	89	61	58	76	41
Total Analysis Volume [veh/h]	62	424	228	121	562	273	141	357	243	233	303	163
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	1 - Coordination Group
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]	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]	11	46	0	12	47	0	40	43	0	19	22	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	R	L	C	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	42	8	44	44	12	39	15	42	42
g / C, Green / Cycle	0.05	0.35	0.07	0.37	0.37	0.10	0.32	0.13	0.35	0.35
(v / s)_i Volume / Saturation Flow Rate	0.03	0.37	0.07	0.30	0.17	0.08	0.35	0.13	0.16	0.10
s, saturation flow rate [veh/h]	1774	1754	1774	1863	1583	1774	1738	1774	1863	1583
c, Capacity [veh/h]	90	617	118	684	582	171	562	222	656	558
d1, Uniform Delay [s]	55.99	38.90	56.00	34.39	29.02	53.25	40.60	52.50	30.07	28.07
k, delay calibration	0.11	0.50	0.11	0.50	0.50	0.11	0.50	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.81	52.17	44.26	10.67	2.71	9.67	57.25	42.31	0.51	0.29
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
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

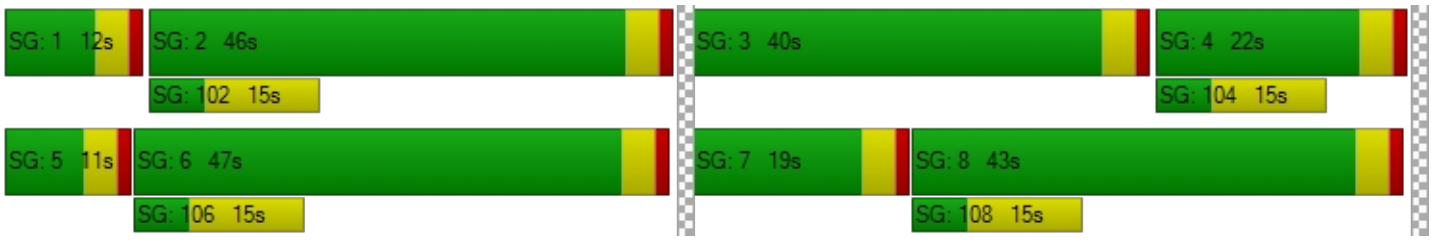
X, volume / capacity	0.69	1.06	1.02	0.82	0.47	0.83	1.07	1.05	0.46	0.29
d, Delay for Lane Group [s/veh]	64.81	91.08	100.26	45.07	31.73	62.92	97.85	94.81	30.58	28.36
Lane Group LOS	E	F	F	D	C	E	F	F	C	C
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	2.01	25.92	4.92	15.97	6.15	4.49	24.50	9.04	6.52	3.27
50th-Percentile Queue Length [ft]	50.25	648.05	122.97	399.26	153.79	112.31	612.51	225.97	163.10	81.85
95th-Percentile Queue Length [veh]	3.62	35.60	8.62	22.52	10.22	7.97	34.06	14.26	10.71	5.89
95th-Percentile Queue Length [ft]	90.46	890.10	215.40	563.11	255.48	199.21	851.50	356.62	267.83	147.34

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	64.81	91.08	91.08	100.26	45.07	31.73	62.92	97.85	97.85	94.81	30.58	28.36
Movement LOS	E	F	F	F	D	C	E	F	F	F	C	C
d_A, Approach Delay [s/veh]	88.79			48.24			91.21			51.47		
Approach LOS	F			D			F			D		
d_I, Intersection Delay [s/veh]	68.52											
Intersection LOS	E											
Intersection V/C	1.057											

Sequence

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



Intersection Level Of Service Report
Intersection 10: Town Center Dr-Sherman Rd (NS) / La Piedra Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	28.4
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.453

Intersection Setup

Name												
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	1	0	1	1	0	0	0	0	0	1	0	0
Pocket Length [ft]	210.00	100.00	500.00	150.00	100.00	100.00	100.00	100.00	100.00	800.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	61	134	222	10	98	10	62	53	12	135	22	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
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	61	134	222	10	98	10	62	53	12	135	22	7
Peak Hour Factor	0.6790	0.6790	0.6790	0.6790	0.6790	0.6790	0.6790	0.6790	0.6790	0.6790	0.6790	0.6790
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	49	82	4	36	4	23	20	4	50	8	3
Total Analysis Volume [veh/h]	90	197	327	15	144	15	91	78	18	199	32	10
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 Coordinated
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]	11	19	0	11	19	0	51	19	0	51	19	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
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	L	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	61	61	2	57	7	7	13	14	14
g / C, Green / Cycle	0.06	0.61	0.61	0.02	0.57	0.07	0.07	0.13	0.14	0.14
(v / s)_i Volume / Saturation Flow Rate	0.05	0.11	0.21	0.01	0.09	0.05	0.05	0.11	0.01	0.01
s, saturation flow rate [veh/h]	1774	1863	1583	1774	1832	1774	1803	1774	1863	1716
c, Capacity [veh/h]	116	1138	967	44	1045	120	127	238	255	235
d1, Uniform Delay [s]	46.08	8.48	9.56	48.00	10.11	45.88	45.72	42.28	37.75	37.77
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.54	0.33	0.95	4.38	0.31	9.38	8.93	7.56	0.14	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	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.78	0.17	0.34	0.34	0.15	0.76	0.76	0.84	0.08	0.09
d, Delay for Lane Group [s/veh]	56.61	8.81	10.51	52.38	10.42	55.26	54.66	49.83	37.89	37.93
Lane Group LOS	E	A	B	D	B	E	D	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	2.44	1.64	3.13	0.41	1.50	2.44	2.55	5.05	0.45	0.43
50th-Percentile Queue Length [ft]	61.11	41.09	78.35	10.17	37.53	60.90	63.79	126.17	11.18	10.81
95th-Percentile Queue Length [veh]	4.40	2.96	5.64	0.73	2.70	4.39	4.59	8.73	0.80	0.78
95th-Percentile Queue Length [ft]	110.00	73.97	141.03	18.31	67.56	109.63	114.82	218.27	20.12	19.45

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	56.61	8.81	10.51	52.38	10.42	10.42	55.26	54.66	54.66	49.83	37.90	37.93
Movement LOS	E	A	B	D	B	B	E	D	D	D	D	D
d_A, Approach Delay [s/veh]	16.72			14.04			54.95			47.76		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	28.37											
Intersection LOS	C											
Intersection V/C	0.453											

Sequence

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

Intersection Level Of Service Report
Intersection 11: Town Center Dr-Sherman Rd (NS)/Holland Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	547.7
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.522

Intersection Setup

Name												
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	1	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	500.00	100.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	4	1	28	34	0	53	164	653	5	6	607	144
Base Volume Adjustment Factor	1.0000	1.0000	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]	4	1	28	34	0	53	164	653	5	6	607	144
Peak Hour Factor	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	8	10	0	16	49	197	2	2	183	43
Total Analysis Volume [veh/h]	5	1	34	41	0	64	198	788	6	7	732	174
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.22	0.04	0.09	1.52	0.00	0.15	0.26	0.01	0.00	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	176.47	153.69	29.33	547.66	518.75	422.56	11.50	0.00	0.00	9.39	0.00	0.00
Movement LOS	F	F	D	F	F	F	B	A	A	A	A	A
95th-Percentile Queue Length [veh]	1.36	1.36	1.36	9.45	9.45	9.45	38.89	38.89	0.00	12.02	12.02	0.00
95th-Percentile Queue Length [ft]	34.04	34.04	34.04	236.27	236.27	236.27	972.18	972.18	0.00	300.60	300.60	0.00
d_A, Approach Delay [s/veh]	50.83			471.41			2.30			0.07		
Approach LOS	F			F			A			A		
d_I, Intersection Delay [s/veh]	26.28											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 12: Haun Rd (NS)/Village-Market Dr (EW)

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):	0.650

Intersection Setup

Name	Haun Rd			Haun Rd								
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	1	0	0	2	0	0	0	0	0	0	0	1
Pocket Length [ft]	100.00	100.00	100.00	175.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	65.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Haun Rd			Haun Rd								
Base Volume Input [veh/h]	21	1155	46	135	1393	68	53	6	15	22	6	117
Base Volume Adjustment Factor	1.0000	1.0000	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]	21	1155	46	135	1393	68	53	6	15	22	6	117
Peak Hour Factor	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	335	13	39	404	20	15	2	4	6	2	34
Total Analysis Volume [veh/h]	24	1341	53	157	1618	79	62	7	17	26	7	136
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	1 - Coordination Group
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
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	Permiss	Permiss	Overlap
Signal group	5	2	0	1	6	0	3	8	0	0	4	4
Auxiliary Signal Groups												1,4
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	0	7	7
Maximum Green [s]	30	30	0	30	30	0	7	30	0	0	30	30
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	3.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	1.0
Split [s]	11	51	0	11	51	0	11	38	0	0	27	27
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	3.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	5
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	10
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	0.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0
Minimum Recall	No	No		No	No		Yes	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	C	L	C	C	L	C	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	0.00	0.00	2.00	0.00
g_i, Effective Green Time [s]	3	63	63	7	67	67	18	18	7	18
g / C, Green / Cycle	0.03	0.63	0.63	0.07	0.67	0.67	0.18	0.18	0.07	0.18
(v / s)_i Volume / Saturation Flow Rate	0.01	0.38	0.38	0.05	0.46	0.46	0.02	0.03	0.02	0.05
s, saturation flow rate [veh/h]	1774	1863	1838	3445	1863	1833	1588	1641	1547	2802
c, Capacity [veh/h]	62	1173	1158	241	1238	1218	372	386	173	505
d1, Uniform Delay [s]	47.21	10.98	11.00	45.33	10.34	10.46	34.37	34.60	44.09	35.34
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.84	2.25	2.29	2.95	3.11	3.30	0.12	0.14	0.53	0.28
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

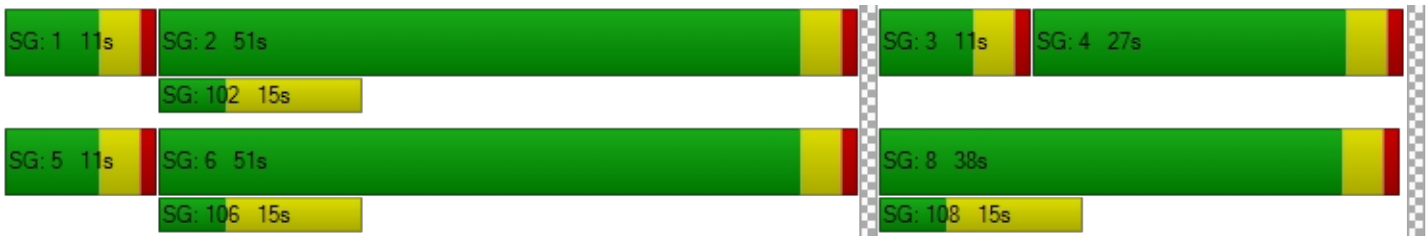
X, volume / capacity	0.38	0.60	0.60	0.65	0.69	0.70	0.10	0.12	0.19	0.27
d, Delay for Lane Group [s/veh]	51.05	13.23	13.29	48.29	13.45	13.76	34.48	34.74	44.62	35.62
Lane Group LOS	D	B	B	D	B	B	C	C	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	0.63	8.00	7.94	1.91	9.66	9.78	0.75	0.96	0.77	1.38
50th-Percentile Queue Length [ft]	15.67	199.92	198.43	47.83	241.51	244.44	18.64	23.95	19.20	34.46
95th-Percentile Queue Length [veh]	1.13	12.63	12.56	3.44	14.76	14.91	1.34	1.72	1.38	2.48
95th-Percentile Queue Length [ft]	28.21	315.87	313.94	86.10	368.94	372.65	33.55	43.11	34.55	62.03

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	51.05	13.26	13.29	48.29	13.60	13.76	34.58	34.74	34.74	44.62	44.62	35.62
Movement LOS	D	B	B	D	B	B	C	C	C	D	D	D
d_A, Approach Delay [s/veh]	13.90			16.54			34.63			37.38		
Approach LOS	B			B			C			D		
d_I, Intersection Delay [s/veh]	16.92											
Intersection LOS	B											
Intersection V/C	0.650											

Sequence

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



Intersection Level Of Service Report
Intersection 13: Haun Rd (NS)/Countryside Marketplace (EW)

Control Type:	Signalized	Delay (sec / veh):	10.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.568

Intersection Setup

Name	Haun Rd			Haun Rd								
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	1	0	0	2	0	0	0	0	1	1	0	0
Pocket Length [ft]	200.00	100.00	100.00	235.00	100.00	100.00	100.00	100.00	40.00	100.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Haun Rd			Haun Rd								
Base Volume Input [veh/h]	11	1179	52	118	1298	8	10	0	15	25	1	91
Base Volume Adjustment Factor	1.0000	1.0000	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]	11	1179	52	118	1298	8	10	0	15	25	1	91
Peak Hour Factor	0.7950	0.7950	0.7950	0.7950	0.7950	0.7950	0.7950	0.7950	0.7950	0.7950	0.7950	0.7950
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	371	16	37	408	3	3	0	5	8	0	29
Total Analysis Volume [veh/h]	14	1483	65	148	1633	10	13	0	19	31	1	114
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	1 - Coordination Group
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
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	Overlap
Signal group	5	2	0	1	6	0	0	8	0	0	4	4
Auxiliary Signal Groups												1,4
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	7
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	30
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0
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	1.0
Split [s]	11	65	0	11	65	0	0	24	0	0	24	24
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	5
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	10
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	2.0
I2, Clearance 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	2.0
Minimum Recall	No	No		No	No			No			No	No
Maximum Recall	No	No		No	No			No			No	No
Pedestrian Recall	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	C	L	C	C	L	C	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	2	74	74	7	79	79	7	7	7	18
g / C, Green / Cycle	0.02	0.74	0.74	0.07	0.79	0.79	0.07	0.07	0.07	0.18
(v / s)_i Volume / Saturation Flow Rate	0.01	0.42	0.42	0.04	0.44	0.44	0.01	0.01	0.04	0.04
s, saturation flow rate [veh/h]	1774	1863	1835	3445	1863	1859	1410	1583	853	2803
c, Capacity [veh/h]	42	1379	1359	240	1465	1462	87	110	130	503
d1, Uniform Delay [s]	48.05	5.78	5.80	45.21	4.07	4.08	49.42	43.80	46.81	35.10
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.57	1.67	1.72	2.56	1.56	1.56	0.79	0.73	0.97	0.23
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.33	0.56	0.57	0.62	0.56	0.56	0.15	0.17	0.25	0.23
d, Delay for Lane Group [s/veh]	52.62	7.45	7.52	47.77	5.63	5.64	50.21	44.53	47.78	35.32
Lane Group LOS	D	A	A	D	A	A	D	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.38	5.21	5.19	1.79	3.78	3.78	0.33	0.45	0.78	1.14
50th-Percentile Queue Length [ft]	9.57	130.23	129.80	44.78	94.47	94.56	8.24	11.15	19.53	28.61
95th-Percentile Queue Length [veh]	0.69	8.95	8.93	3.22	6.80	6.81	0.59	0.80	1.41	2.06
95th-Percentile Queue Length [ft]	17.22	223.81	223.22	80.60	170.04	170.21	14.84	20.07	35.16	51.50

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	52.62	7.48	7.52	47.77	5.63	5.64	50.21	44.53	44.53	47.78	47.78	35.32
Movement LOS	D	A	A	D	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	7.89			9.12			46.84			38.05		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	10.11											
Intersection LOS	B											
Intersection V/C	0.568											

Sequence

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

Intersection Level Of Service Report
Intersection 14: Haun Rd (N/S)/La Piedra Rd (E/W)

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):	0.753

Intersection Setup

Name				Haun Rd								
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	1	0	1	1	0	1	0	0	0	0	0	0
Pocket Length [ft]	165.00	100.00	75.00	150.00	100.00	150.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			Yes		

Volumes

Name				Haun Rd								
Base Volume Input [veh/h]	48	839	67	48	913	373	284	43	184	36	16	21
Base Volume Adjustment Factor	1.0000	1.0000	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]	48	839	67	48	913	373	284	43	184	36	16	21
Peak Hour Factor	0.7640	0.7640	0.7640	0.7640	0.7640	0.7640	0.7640	0.7640	0.7640	0.7640	0.7640	0.7640
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	275	22	16	299	122	93	14	60	12	5	7
Total Analysis Volume [veh/h]	63	1098	88	63	1195	488	372	56	241	47	21	27
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
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 - Coordination Group
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
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	Split	Split	Split	Split	Split	Split
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]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	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]	11	43	0	12	44	0	0	65	0	0	20	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
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]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	R	C	R	C
C, Cycle Length [s]	140	140	140	140	140	140	140	140	140
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
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
l2, Clearance Lost Time [s]	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	72	72	6	72	72	36	36	9
g / C, Green / Cycle	0.05	0.51	0.51	0.05	0.51	0.51	0.26	0.26	0.07
(v / s)_i Volume / Saturation Flow Rate	0.04	0.32	0.32	0.04	0.34	0.31	0.24	0.15	0.05
s, saturation flow rate [veh/h]	1774	1863	1815	1774	3547	1583	1785	1583	1733
c, Capacity [veh/h]	82	954	929	82	1817	811	463	411	117
d1, Uniform Delay [s]	66.00	24.57	24.60	66.00	25.12	24.08	50.47	45.26	64.38
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	13.72	3.14	3.24	13.72	1.88	3.29	8.19	1.33	12.46
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	0.77	0.63	0.63	0.77	0.66	0.60	0.92	0.59	0.81
d, Delay for Lane Group [s/veh]	79.72	27.71	27.83	79.72	27.00	27.37	58.66	46.59	76.84
Lane Group LOS	E	C	C	E	C	C	E	D	E
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	2.49	14.26	13.95	2.49	14.14	11.44	15.12	7.26	3.67
50th-Percentile Queue Length [ft]	62.22	356.39	348.84	62.22	353.42	285.92	378.12	181.42	91.73
95th-Percentile Queue Length [veh]	4.48	20.45	20.08	4.48	20.30	16.98	21.50	11.67	6.60
95th-Percentile Queue Length [ft]	112.00	511.20	501.99	112.00	507.58	424.57	537.58	291.87	165.11

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	79.72	27.77	27.83	79.72	27.00	27.37	58.66	58.66	46.59	76.84	76.84	76.84
Movement LOS	E	C	C	E	C	C	E	E	D	E	E	E
d_A, Approach Delay [s/veh]	30.39			29.01			54.31			76.84		
Approach LOS	C			C			D			E		
d_I, Intersection Delay [s/veh]	35.18											
Intersection LOS	D											
Intersection V/C	0.753											

Sequence

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

Intersection Level Of Service Report
Intersection 15: Haun Road (NS) / Holland Road (EW)

Control Type:	All-way stop	Delay (sec / veh):	136.2
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.351

Intersection Setup

Name												
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	1	0	0	1	0	0	1	0	1	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	150.00	100.00	100.00	150.00	100.00	150.00	100.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	337	415	3	11	338	415	426	2	280	3	7	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]	337	415	3	11	338	415	426	2	280	3	7	9
Peak Hour Factor	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380
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]	101	124	1	3	101	124	127	1	84	1	2	3
Total Analysis Volume [veh/h]	402	495	4	13	403	495	508	2	334	4	8	11
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	402	499	360	403	495	508	397	430	290
Degree of Utilization, x	1.12	1.32	0.04	1.06	1.21	1.35	0.01	0.78	0.08

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	15.27	23.23	0.11	13.92	20.09	24.32	0.02	6.71	0.26
95th-Percentile Queue Length [ft]	381.78	580.79	2.81	348.12	502.20	608.02	0.38	167.69	6.42
Approach Delay [s/veh]	156.41		120.65			134.71			16.49
Approach LOS	F		F			F			C
Intersection Delay [s/veh]	136.21								
Intersection LOS	F								

Intersection Level Of Service Report
Intersection 16: Haun Rd-Zeiders Rd (N/S)/Scott Rd (E/W)

Control Type:	Signalized	Delay (sec / veh):	165.3
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.412

Intersection Setup

Name												
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	1	0	0	1	0	0	1	0	0	1	0	1
Pocket Length [ft]	345.00	100.00	100.00	200.00	100.00	100.00	135.00	100.00	100.00	185.00	100.00	200.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	62	233	108	951	148	71	126	922	39	203	675	894
Base Volume Adjustment Factor	1.0000	1.0000	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]	62	233	108	951	148	71	126	922	39	203	675	894
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	63	29	258	40	19	34	251	11	55	183	243
Total Analysis Volume [veh/h]	67	253	117	1034	161	77	137	1002	42	221	734	972
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	1 - Coordination Group
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	19	0	0	27	0	11	42	0	12	43	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	C	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
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
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
g_i, Effective Green Time [s]	15	15	15	23	23	7	31	31	15	39	39
g / C, Green / Cycle	0.15	0.15	0.15	0.23	0.23	0.07	0.31	0.31	0.15	0.39	0.39
(v / s)_i Volume / Saturation Flow Rate	0.04	0.14	0.07	0.36	0.36	0.08	0.28	0.28	0.12	0.21	0.61
s, saturation flow rate [veh/h]	1774	1863	1583	1774	1770	1774	1863	1836	1774	3547	1583
c, Capacity [veh/h]	266	279	238	407	406	128	585	577	259	1378	615
d1, Uniform Delay [s]	37.54	41.80	39.01	38.53	38.53	46.40	32.75	32.76	41.64	23.58	30.58
k, delay calibration	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.50	0.50
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
d2, Incremental Delay [s]	0.49	10.65	1.58	264.57	266.33	57.98	19.08	19.36	7.75	1.48	268.91
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
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
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

Lane Group Results

X, volume / capacity	0.25	0.91	0.49	1.56	1.57	1.07	0.90	0.90	0.85	0.53	1.58
d, Delay for Lane Group [s/veh]	38.04	52.45	40.59	303.10	304.86	104.38	51.83	52.12	49.39	25.06	299.49
Lane Group LOS	D	D	D	F	F	F	D	D	D	C	F
Critical Lane Group	No	Yes	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	1.42	6.63	2.61	39.23	39.33	5.09	14.27	14.13	5.59	6.38	59.20
50th-Percentile Queue Length [ft]	35.41	165.72	65.20	980.78	983.27	127.16	356.85	353.19	139.71	159.55	1479.90
95th-Percentile Queue Length [veh]	2.55	10.85	4.69	60.51	60.70	8.98	20.47	20.29	9.47	10.53	91.93
95th-Percentile Queue Length [ft]	63.73	271.28	117.36	1512.85	1517.41	224.48	511.75	507.30	236.64	263.13	2298.21

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	38.04	52.45	40.59	303.78	304.86	304.86	104.38	51.97	52.12	49.39	25.06	299.49
Movement LOS	D	D	D	F	F	F	F	D	D	D	C	F
d_A, Approach Delay [s/veh]	47.06			303.98			58.05			166.28		
Approach LOS	D			F			E			F		
d_I, Intersection Delay [s/veh]	165.29											
Intersection LOS	F											
Intersection V/C	1.412											

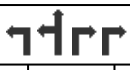
Sequence

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

Intersection Level Of Service Report
Intersection 17: I-215 SB Ramps (N/S) / Scott Rd (E/W)

Control Type:	Signalized	Delay (sec / veh):	10.9
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.645

Intersection Setup

Name												
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	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	245.00	100.00	100.00
Speed [mph]		50.00			50.00			50.00			50.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		No			Yes			No			No	

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	510	0	359	0	995	648	0	1054	455
Base Volume Adjustment Factor	1.0000	1.0000	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	510	0	359	0	995	648	0	1054	455
Peak Hour Factor	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	138	0	97	0	269	175	0	285	123
Total Analysis Volume [veh/h]	0	0	0	551	0	388	0	1076	701	0	1139	492
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 - Coordination Group
Cycle Length [s]	110
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	Split	Split	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	0	0	0	6	0	0	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	0	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	69	0	0	41	0	0	41	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	10	0	0	10	0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall					No			No			No	
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]		110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]		4.00	4.00	4.00	4.00	4.00	4.00	4.00
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]		2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]		21	21	21	81	81	81	81
g / C, Green / Cycle		0.19	0.19	0.19	0.74	0.74	0.74	0.74
(v / s)_i Volume / Saturation Flow Rate		0.16	0.16	0.14	0.30	0.44	0.32	0.31
s, saturation flow rate [veh/h]		1774	1774	2803	3547	1583	3547	1583
c, Capacity [veh/h]		334	334	527	2621	1170	2621	1170
d1, Uniform Delay [s]		42.86	42.86	42.02	0.21	0.22	0.22	0.22
k, delay calibration		0.11	0.11	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		5.18	5.18	2.02	0.48	2.27	0.53	1.11
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	1.33	1.33	1.33	1.33
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	0.83	0.74	0.41	0.60	0.43	0.42
d, Delay for Lane Group [s/veh]		48.03	48.03	44.04	0.69	2.49	0.74	1.33
Lane Group LOS		D	D	D	A	A	A	A
Critical Lane Group		Yes	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh]		7.32	7.32	4.87	0.31	0.91	0.33	0.48
50th-Percentile Queue Length [ft]		183.10	183.10	121.83	7.64	22.77	8.28	12.04
95th-Percentile Queue Length [veh]		11.76	11.76	8.49	0.55	1.64	0.60	0.87
95th-Percentile Queue Length [ft]		294.06	294.06	212.34	13.75	40.99	14.91	21.68

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	48.03	48.03	44.04	0.00	0.69	2.49	0.00	0.74	1.33
Movement LOS				D	D	D		A	A		A	A
d_A, Approach Delay [s/veh]	0.00			46.38			1.40			0.92		
Approach LOS	A			D			A			A		
d_I, Intersection Delay [s/veh]	10.94											
Intersection LOS	B											
Intersection V/C	0.645											

Sequence

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

Intersection Level Of Service Report
Intersection 18: I-215 NB Ramps (N/S) / Scott Rd (E/W)

Control Type:	Signalized	Delay (sec / veh):	20.8
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.815

Intersection Setup

Name												
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	1	0	0	0	1	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	425.00	100.00	100.00	100.00	250.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		50.00			50.00			50.00			50.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		No			Yes			No			No	

Volumes

Name												
Base Volume Input [veh/h]	0	0	402	0	0	502	271	1215	0	0	1237	502
Base Volume Adjustment Factor	1.0000	1.0000	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	402	0	0	502	271	1215	0	0	1237	502
Peak Hour Factor	0.9380	0.9380	0.9380	0.9380	0.9380	0.9380	0.9380	0.9380	0.9380	0.9380	0.9380	0.9380
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	107	0	0	134	72	324	0	0	330	134
Total Analysis Volume [veh/h]	0	0	429	0	0	535	289	1295	0	0	1319	535
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	1 - Coordination Group
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
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	Split	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	0	6	3	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	0	7	7	7	0	0	7	0
Maximum Green [s]	0	30	0	0	0	30	30	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	3.0	3.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	1.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	34	0	0	0	34	57	76	0	0	19	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	3.0	3.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	5	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	10	0	10	0	0	10	0
Rest In Walk		No				No		No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	2.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	0.0	2.0	2.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No				No	No	No			No	
Maximum Recall		No				No	No	No			No	
Pedestrian Recall		No				No	No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	R	R	L	C	C	R
C, Cycle Length [s]	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00
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]	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	23	23	23	20	79	55	55
g / C, Green / Cycle	0.21	0.21	0.21	0.18	0.71	0.50	0.50
(v / s)_i Volume / Saturation Flow Rate	0.14	0.14	0.19	0.16	0.37	0.37	0.34
s, saturation flow rate [veh/h]	1583	1583	2803	1774	3547	3547	1583
c, Capacity [veh/h]	337	337	597	322	2533	1760	786
d1, Uniform Delay [s]	39.39	39.39	42.09	40.67	0.84	14.02	13.24
k, delay calibration	0.11	0.11	0.11	0.11	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.99	1.99	5.08	8.80	0.74	2.98	4.73
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	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.64	0.64	0.90	0.90	0.51	0.75	0.68
d, Delay for Lane Group [s/veh]	41.39	41.39	47.18	49.47	1.58	17.00	17.98
Lane Group LOS	D	D	D	D	A	B	B
Critical Lane Group	No	No	Yes	Yes	No	Yes	No
50th-Percentile Queue Length [veh]	5.21	5.21	7.12	7.47	0.83	7.64	6.43
50th-Percentile Queue Length [ft]	130.27	130.27	177.90	186.78	20.72	191.05	160.68
95th-Percentile Queue Length [veh]	8.95	8.95	11.49	11.95	1.49	12.18	10.58
95th-Percentile Queue Length [ft]	223.86	223.86	287.28	298.84	37.30	304.40	264.62

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	41.39	41.39	0.00	0.00	47.18	49.47	1.58	0.00	0.00	17.00	17.98
Movement LOS		D	D			D	D	A			B	B
d_A, Approach Delay [s/veh]	41.39			47.18			10.32			17.28		
Approach LOS	D			D			B			B		
d_I, Intersection Delay [s/veh]	20.76											
Intersection LOS	C											
Intersection V/C	0.815											

Sequence

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

Intersection Level Of Service Report
Intersection 19: Antelope Rd (NS)/Scott Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	44.9
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.943

Intersection Setup

Name												
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	2	0	0	1	0	1	2	0	0	1	0	0
Pocket Length [ft]	215.00	100.00	100.00	200.00	100.00	200.00	375.00	100.00	100.00	200.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	335	164	166	43	194	558	438	834	405	26	839	50
Base Volume Adjustment Factor	1.0000	1.0000	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]	335	164	166	43	194	558	438	834	405	26	839	50
Peak Hour Factor	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	91	44	45	12	53	151	119	226	110	7	227	14
Total Analysis Volume [veh/h]	363	178	180	47	210	605	475	904	439	28	909	54
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	1 - Coordination Group
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
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]	16	22	0	21	27	0	30	45	0	22	37	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
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	C
C, Cycle Length [s]	110	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	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]	12	48	48	5	41	41	18	37	37	4	23	23
g / C, Green / Cycle	0.11	0.43	0.43	0.05	0.37	0.37	0.16	0.33	0.33	0.04	0.21	0.21
(v / s)_i Volume / Saturation Flow Rate	0.11	0.05	0.11	0.03	0.11	0.38	0.14	0.25	0.28	0.01	0.18	0.18
s, saturation flow rate [veh/h]	3445	3547	1583	1774	1863	1583	3445	3547	1583	3445	3547	1810
c, Capacity [veh/h]	378	1538	686	88	695	591	558	1185	529	130	744	379
d1, Uniform Delay [s]	48.78	18.60	19.93	51.09	24.36	34.50	44.84	32.76	33.78	50.73	38.09	38.12
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.14	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	14.09	0.15	0.93	4.99	1.12	43.09	3.76	1.05	4.33	0.82	2.99	5.73
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33
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

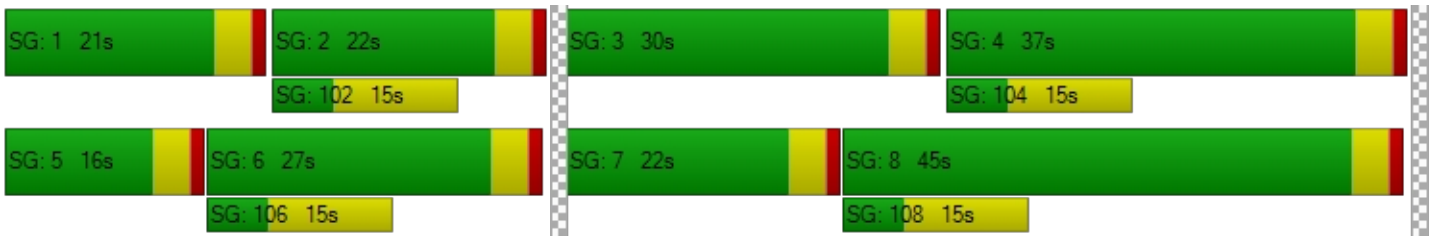
X, volume / capacity	0.96	0.12	0.26	0.54	0.30	1.02	0.85	0.76	0.83	0.22	0.86	0.86
d, Delay for Lane Group [s/veh]	62.88	18.75	20.86	56.08	25.48	77.59	48.60	33.81	38.11	51.55	41.08	43.85
Lane Group LOS	E	B	C	E	C	F	D	C	D	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	5.49	1.30	2.92	1.34	3.85	21.55	6.31	10.22	10.70	0.37	7.42	7.89
50th-Percentile Queue Length [ft]	137.34	32.43	72.96	33.55	96.17	538.71	157.66	255.51	267.45	9.30	185.44	197.20
95th-Percentile Queue Length [veh]	9.34	2.34	5.25	2.42	6.92	29.64	10.42	15.46	16.06	0.67	11.88	12.49
95th-Percentile Queue Length [ft]	233.43	58.38	131.32	60.40	173.10	741.08	260.62	386.58	401.55	16.74	297.11	312.35

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	62.88	18.75	20.86	56.08	25.48	77.59	48.60	33.81	38.11	51.55	41.91	43.85
Movement LOS	E	B	C	E	C	F	D	C	D	D	D	D
d_A, Approach Delay [s/veh]	41.49			63.72			38.71			42.29		
Approach LOS	D			E			D			D		
d_I, Intersection Delay [s/veh]	44.88											
Intersection LOS	D											
Intersection V/C	0.943											

Sequence

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



Intersection Level Of Service Report
Intersection 20: Haun Rd (NS)/Driveway 1 (EW)

Control Type:	Two-way stop	Delay (sec / veh):	13.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.155

Intersection Setup

Name						
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]	50.00		50.00		50.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	888	30	0	1171	0	59
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]	37	12	0	50	0	12
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]	925	42	0	1221	0	71
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	251	11	0	332	0	19
Total Analysis Volume [veh/h]	1005	46	0	1327	0	77
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	0.01	0.00	0.00	0.01	0.00	0.15
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	13.57
Movement LOS	A	A		A		B
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.00	0.54
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	0.00	13.61
d_A, Approach Delay [s/veh]	0.00		0.00		13.57	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.43					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 21: Haun Rd (NS)/Driveway 2 (EW)

Control Type:	Signalized	Delay (sec / veh):	25.5
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.598

Intersection Setup

Name						
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	2	0	0	0
Pocket Length [ft]	100.00	100.00	300.00	100.00	100.00	100.00
Speed [mph]	50.00		50.00		50.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	746	103	473	698	65	172
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]	24	25	50	-50	50	24
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]	770	128	523	648	115	196
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	209	35	142	176	31	53
Total Analysis Volume [veh/h]	837	139	568	704	125	213
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]	140
Coordination Type	Time of Day Pattern Coordinated
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	Overlap
Signal group	2	0	1	6	7	4
Auxiliary Signal Groups						1,4
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	7	0	7	7	7	7
Maximum Green [s]	30	0	30	30	30	30
Amber [s]	3.0	0.0	3.0	3.0	3.0	3.0
All red [s]	1.0	0.0	1.0	1.0	1.0	1.0
Split [s]	37	0	84	121	19	19
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	3.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	2.0
Minimum Recall	No		No	No	No	No
Maximum Recall	No		No	No	No	No
Pedestrian Recall	No		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]	140	140	140	140	140	140
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	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	0.00
g_i, Effective Green Time [s]	86	86	27	117	15	46
g / C, Green / Cycle	0.62	0.62	0.19	0.84	0.11	0.33
(v / s)_i Volume / Saturation Flow Rate	0.26	0.28	0.16	0.20	0.07	0.13
s, saturation flow rate [veh/h]	1863	1774	3445	3547	1774	1583
c, Capacity [veh/h]	1149	1094	655	2963	190	516
d1, Uniform Delay [s]	13.93	14.18	54.93	2.36	59.98	36.71
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.15	1.32	3.64	0.19	3.81	0.53
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	0.42	0.45	0.87	0.24	0.66	0.41
d, Delay for Lane Group [s/veh]	15.08	15.50	58.57	2.55	63.79	37.24
Lane Group LOS	B	B	E	A	E	D
Critical Lane Group	No	Yes	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	7.71	7.88	9.75	1.22	4.36	5.59
50th-Percentile Queue Length [ft/ln]	192.87	197.03	243.64	30.47	108.98	139.74
95th-Percentile Queue Length [veh/ln]	12.27	12.49	14.87	2.19	7.78	9.47
95th-Percentile Queue Length [ft/ln]	306.75	312.14	371.63	54.85	194.58	236.67

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	15.25	15.50	58.57	2.55	63.79	37.24
Movement LOS	B	B	E	A	E	D
d_A, Approach Delay [s/veh]	15.29		27.57		47.06	
Approach LOS	B		C		D	
d_I, Intersection Delay [s/veh]	25.48					
Intersection LOS	C					
Intersection V/C	0.598					

Sequence

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

Intersection Level Of Service Report
Intersection 1: Murrieta Rd (NS)/Newport Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	47.0
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.910

Intersection Setup

Name							Newport Rd			Newport Rd		
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	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	190.00	100.00	100.00	225.00	100.00	100.00	275.00	100.00	100.00	180.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							Newport Rd			Newport Rd		
Base Volume Input [veh/h]	181	308	133	379	314	231	376	1161	86	218	1105	296
Base Volume Adjustment Factor	1.0000	1.0000	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]	181	308	133	379	314	231	376	1161	86	218	1105	296
Peak Hour Factor	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390
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	82	35	101	84	62	100	309	23	58	294	79
Total Analysis Volume [veh/h]	193	328	142	404	334	246	400	1236	92	232	1177	315
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	1 - Coordination Group
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
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]	26	19	0	30	23	0	30	40	0	21	31	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
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]	110	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	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]	14	15	15	26	27	27	26	37	37	16	27	27
g / C, Green / Cycle	0.13	0.14	0.14	0.24	0.25	0.25	0.24	0.33	0.33	0.15	0.24	0.24
(v / s)_i Volume / Saturation Flow Rate	0.11	0.09	0.09	0.23	0.09	0.16	0.23	0.24	0.06	0.13	0.23	0.20
s, saturation flow rate [veh/h]	1774	3547	1583	1774	3547	1583	1774	5074	1583	1774	5074	1583
c, Capacity [veh/h]	226	489	218	419	875	391	419	1690	527	262	1239	387
d1, Uniform Delay [s]	47.04	45.08	44.94	41.58	34.48	36.97	41.46	32.38	26.00	46.03	40.94	39.26
k, delay calibration	0.11	0.50	0.50	0.33	0.50	0.50	0.32	0.11	0.11	0.11	0.11	0.25
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.88	7.15	14.07	27.86	1.26	7.49	25.78	0.62	0.16	9.75	4.89	9.30
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

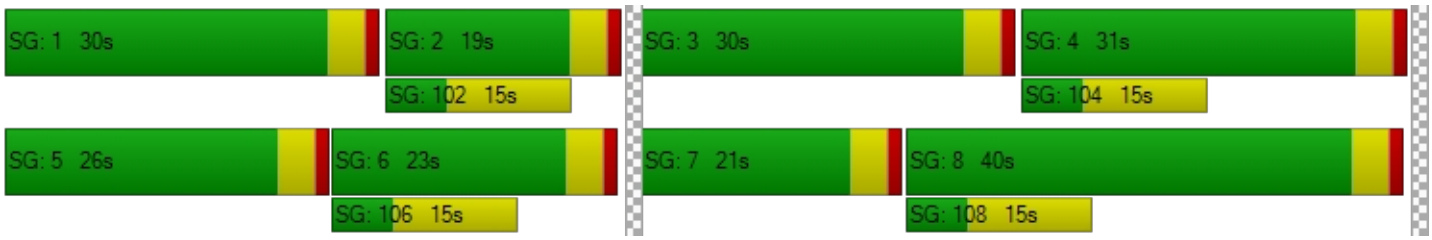
X, volume / capacity	0.85	0.67	0.65	0.96	0.38	0.63	0.95	0.73	0.17	0.89	0.95	0.81
d, Delay for Lane Group [s/veh]	55.92	52.23	59.02	69.44	35.74	44.46	67.24	33.01	26.16	55.78	45.83	48.56
Lane Group LOS	E	D	E	E	D	D	E	C	C	E	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	5.52	4.57	4.38	13.47	3.70	6.42	13.10	9.12	1.64	6.65	10.42	8.59
50th-Percentile Queue Length [ft]	137.88	114.16	109.41	336.81	92.53	160.43	327.50	228.08	41.03	166.36	260.43	214.67
95th-Percentile Queue Length [veh]	9.37	8.07	7.81	19.49	6.66	10.57	19.04	14.08	2.95	10.89	15.71	13.39
95th-Percentile Queue Length [ft]	234.16	201.78	195.18	487.30	166.55	264.29	475.89	351.92	73.86	272.13	392.76	334.81

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	55.92	52.23	59.02	69.44	35.74	44.46	67.24	33.01	26.16	55.78	45.83	48.56
Movement LOS	E	D	E	E	D	D	E	C	C	E	D	D
d_A, Approach Delay [s/veh]	54.76			51.75			40.56			47.67		
Approach LOS	D			D			D			D		
d_I, Intersection Delay [s/veh]	46.97											
Intersection LOS	D											
Intersection V/C	0.910											

Sequence

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



Intersection Level Of Service Report
Intersection 2: Bradley Rd (N/S)/Newport Rd (E/W)

Control Type:	Signalized	Delay (sec / veh):	44.8
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.003

Intersection Setup

Name				Bradley Rd			Newport Rd			Newport Rd		
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	1	0	0	1	0	0	1	0	0	2	0	1
Pocket Length [ft]	100.00	100.00	100.00	125.00	100.00	100.00	165.00	100.00	100.00	155.00	100.00	150.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name				Bradley Rd			Newport Rd			Newport Rd		
Base Volume Input [veh/h]	196	330	418	275	231	127	183	1493	98	394	1645	354
Base Volume Adjustment Factor	1.0000	1.0000	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	330	418	275	231	127	183	1493	98	394	1645	354
Peak Hour Factor	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410
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	88	111	73	61	34	49	397	26	105	437	94
Total Analysis Volume [veh/h]	208	351	444	292	245	135	194	1587	104	419	1748	376
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	1 - Coordination Group
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
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	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	2	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups			2,7									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	30	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	3.0	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	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	19	26	26	23	30	0	17	43	0	18	44	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	5	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	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	2.0	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	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	C	L	C	C	L	C	R
C, Cycle Length [s]	110	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	15	22	40	19	27	27	13	39	39	14	40	40
g / C, Green / Cycle	0.13	0.20	0.37	0.17	0.24	0.24	0.12	0.35	0.35	0.13	0.36	0.36
(v / s)_i Volume / Saturation Flow Rate	0.12	0.19	0.28	0.16	0.11	0.11	0.11	0.32	0.32	0.12	0.34	0.24
s, saturation flow rate [veh/h]	1774	1863	1583	1774	1863	1644	1774	3547	1805	3445	5074	1583
c, Capacity [veh/h]	237	377	580	307	450	398	210	1248	635	439	1832	572
d1, Uniform Delay [s]	46.80	43.12	30.71	45.06	35.44	35.49	48.02	33.76	33.80	47.69	34.26	29.45
k, delay calibration	0.11	0.50	0.50	0.16	0.50	0.50	0.11	0.11	0.38	0.11	0.11	0.20
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.07	31.78	9.33	19.63	3.17	3.66	15.54	2.57	14.64	11.83	3.74	2.43
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

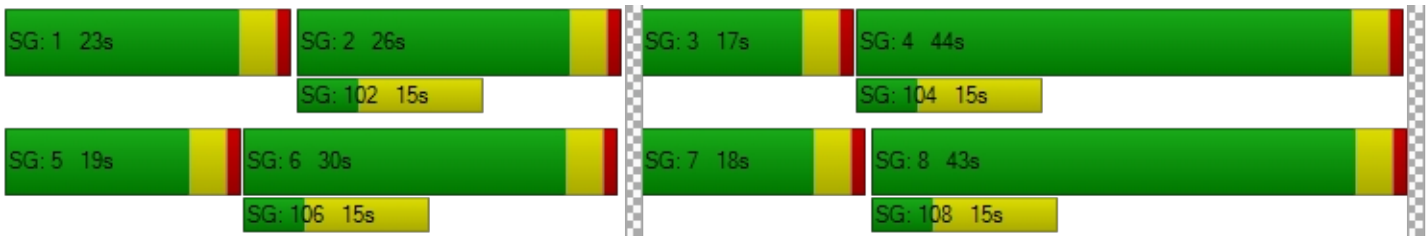
X, volume / capacity	0.88	0.93	0.77	0.95	0.45	0.45	0.92	0.90	0.90	0.95	0.95	0.66
d, Delay for Lane Group [s/veh]	56.87	74.90	40.04	64.69	38.62	39.15	63.56	36.33	48.44	59.51	38.00	31.89
Lane Group LOS	E	E	D	E	D	D	E	D	D	E	D	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	6.01	12.24	11.12	9.18	4.76	4.31	5.95	13.53	15.95	6.18	14.60	8.13
50th-Percentile Queue Length [ft]	150.22	305.93	278.12	229.55	119.02	107.63	148.73	338.21	398.73	154.42	365.03	203.36
95th-Percentile Queue Length [veh]	10.03	17.97	16.59	14.15	8.34	7.71	9.95	19.56	22.50	10.25	20.87	12.81
95th-Percentile Queue Length [ft]	250.72	449.36	414.87	353.79	208.48	192.70	248.74	489.01	562.47	256.31	521.70	320.29

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	56.87	74.90	40.04	64.69	38.71	39.15	63.56	39.90	48.44	59.51	38.00	31.89
Movement LOS	E	E	D	E	D	D	E	D	D	E	D	C
d_A, Approach Delay [s/veh]	55.73			50.09			42.80			40.64		
Approach LOS	E			D			D			D		
d_I, Intersection Delay [s/veh]	44.83											
Intersection LOS	D											
Intersection V/C	1.003											

Sequence

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



Intersection Level Of Service Report
Intersection 3: Haun Road (NS) / Newport Road (EW)

Control Type:	Signalized	Delay (sec / veh):	78.5
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.130

Intersection Setup

Name	Haun Rd			Haun Rd						Newport Rd		
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	2	0	1	2	0	0	2	0	0	2	0	1
Pocket Length [ft]	215.00	100.00	285.00	155.00	100.00	100.00	210.00	100.00	100.00	350.00	100.00	150.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Haun Rd			Haun Rd						Newport Rd		
Base Volume Input [veh/h]	553	122	1452	415	159	134	190	1510	463	1379	1661	307
Base Volume Adjustment Factor	1.0000	1.0000	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]	553	122	1452	415	159	134	190	1510	463	1379	1661	307
Peak Hour Factor	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770
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]	142	31	372	106	41	34	49	386	118	353	425	79
Total Analysis Volume [veh/h]	566	125	1486	425	163	137	194	1546	474	1411	1700	314
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	1 - Coordination Group
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
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	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	2	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups			2,7									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	30	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	3.0	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	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	25	23	23	21	19	0	13	42	0	54	83	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	5	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	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	2.0	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	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	C	L	C	R	L	C	C
C, Cycle Length [s]	140	140	140	140	140	140	140	140	140	140	140	140
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	21	19	73	17	15	15	9	38	38	50	79	79
g / C, Green / Cycle	0.15	0.13	0.52	0.12	0.11	0.11	0.06	0.27	0.27	0.36	0.56	0.56
(v / s)_i Volume / Saturation Flow Rate	0.16	0.07	0.53	0.12	0.09	0.09	0.06	0.30	0.30	0.41	0.37	0.40
s, saturation flow rate [veh/h]	3445	1863	2803	3445	1863	1586	3445	5074	1583	3445	3547	1725
c, Capacity [veh/h]	517	250	1457	419	197	168	222	1385	432	1230	2006	975
d1, Uniform Delay [s]	59.49	56.23	33.61	61.49	61.28	61.34	64.92	50.89	50.89	45.01	21.06	22.10
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.50	0.15	0.11	0.26
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	50.05	6.97	28.73	24.28	30.15	35.27	10.28	54.95	72.13	69.50	0.37	2.33
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

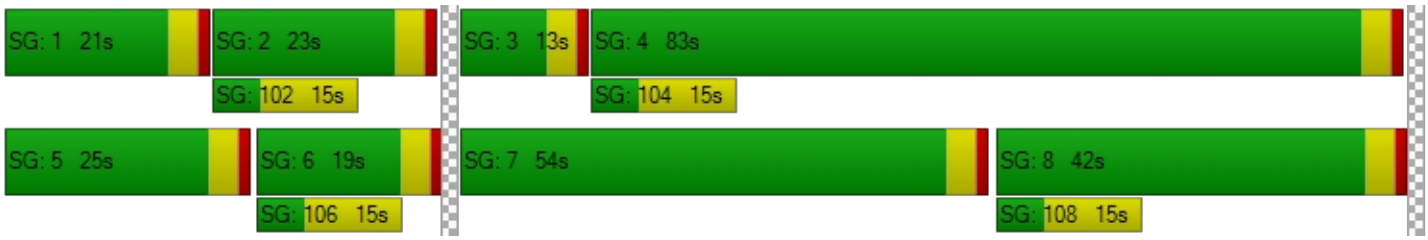
X, volume / capacity	1.09	0.50	1.02	1.02	0.82	0.83	0.87	1.12	1.10	1.15	0.66	0.71
d, Delay for Lane Group [s/veh]	109.54	63.20	62.34	85.77	91.44	96.61	75.20	105.85	123.02	114.51	21.43	24.43
Lane Group LOS	F	E	F	F	F	F	E	F	F	F	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh]	12.49	4.48	28.35	8.65	7.12	6.35	3.67	22.61	23.22	32.15	13.91	15.85
50th-Percentile Queue Length [ft]	312.33	112.10	708.65	216.23	177.93	158.72	91.68	565.13	580.58	803.87	347.74	396.37
95th-Percentile Queue Length [veh]	19.07	7.96	37.68	13.56	11.49	10.48	6.60	32.47	32.93	45.40	20.03	22.38
95th-Percentile Queue Length [ft]	476.73	198.91	942.07	338.98	287.31	262.03	165.02	811.70	823.16	1135.01	500.66	559.62

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	109.54	63.20	62.34	85.77	91.49	96.61	75.20	105.85	123.02	114.51	22.10	24.43
Movement LOS	F	E	F	F	F	F	E	F	F	F	C	C
d_A, Approach Delay [s/veh]	74.66			89.11			106.84			60.38		
Approach LOS	E			F			F			E		
d_I, Intersection Delay [s/veh]	78.50											
Intersection LOS	E											
Intersection V/C	1.130											

Sequence

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



Intersection Level Of Service Report
Intersection 4: I-215 SB Ramps (NS) / Newport Road (EW)

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):	0.856

Intersection Setup

Name	I-215 SB Ramps			I-215 SB Ramps			Newport Rd			Newport Rd		
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	1	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	800.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		50.00			50.00			50.00			50.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			No			No	

Volumes

Name	I-215 SB Ramps			I-215 SB Ramps			Newport Rd			Newport Rd		
Base Volume Input [veh/h]	0	0	0	640	0	971	0	2590	795	0	2319	688
Base Volume Adjustment Factor	1.0000	1.0000	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	640	0	971	0	2590	795	0	2319	688
Peak Hour Factor	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	162	0	246	0	656	201	0	587	174
Total Analysis Volume [veh/h]	0	0	0	648	0	984	0	2624	805	0	2350	697
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 - Coordination Group
Cycle Length [s]	140
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	Overlap	Protecte	Permiss	Overlap
Signal group	0	0	0	1	0	0	0	8	8	7	4	4
Auxiliary Signal Groups									1,4,8			1,4,8
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	7	0	0	0	7	7	0	7	7
Maximum Green [s]	0	0	0	30	0	0	0	30	30	0	30	30
Amber [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0
All red [s]	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0	1.0
Split [s]	0	0	0	67	0	0	0	73	73	0	73	73
Vehicle Extension [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0
Walk [s]	0	0	0	5	0	0	0	5	5	0	5	5
Pedestrian Clearance [s]	0	0	0	10	0	0	0	10	10	0	10	10
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	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0
Minimum Recall				No				No	No		No	No
Maximum Recall				No				No	No		No	No
Pedestrian Recall				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	C	R	C	R
C, Cycle Length [s]		140	140	140	140	140	140	140
L, Total Lost Time per Cycle [s]		4.00	4.00	4.00	4.00	0.00	4.00	0.00
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]		2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]		56	56	56	76	136	76	136
g / C, Green / Cycle		0.40	0.40	0.40	0.54	0.97	0.54	0.97
(v / s)_i Volume / Saturation Flow Rate		0.31	0.34	0.34	0.39	0.51	0.46	0.44
s, saturation flow rate [veh/h]		1774	1617	1583	6765	1583	5074	1583
c, Capacity [veh/h]		713	650	636	3660	1538	2745	1538
d1, Uniform Delay [s]		36.09	37.72	38.12	24.07	0.12	27.44	0.10
k, delay calibration		0.23	0.28	0.30	0.50	0.50	0.50	0.46
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		3.67	7.36	8.71	1.23	1.28	3.69	0.89
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

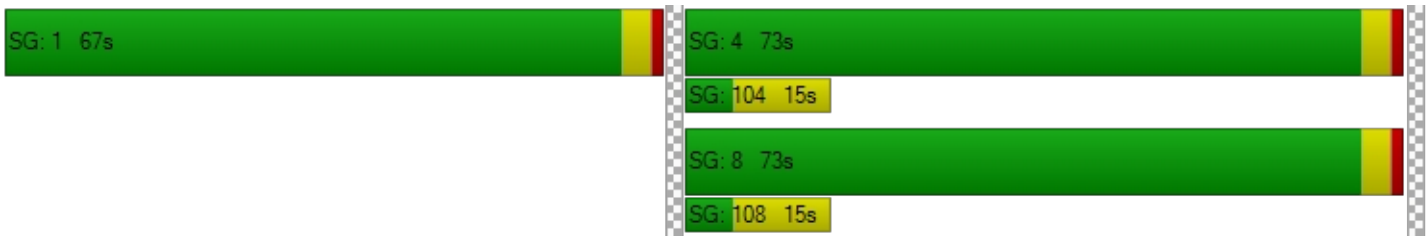
X, volume / capacity		0.76	0.84	0.86	0.72	0.52	0.86	0.45
d, Delay for Lane Group [s/veh]		39.76	45.08	46.83	25.30	1.39	31.13	0.99
Lane Group LOS		D	D	D	C	A	C	A
Critical Lane Group		No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh]		15.99	17.27	17.66	15.38	0.55	21.45	0.38
50th-Percentile Queue Length [ft]		399.64	431.87	441.41	384.46	13.65	536.23	9.47
95th-Percentile Queue Length [veh]		22.54	24.09	24.55	21.81	0.98	29.04	0.68
95th-Percentile Queue Length [ft]		563.57	602.27	613.69	545.24	24.56	726.12	17.04

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	40.62	0.00	46.05	0.00	25.30	1.39	0.00	31.13	0.99
Movement LOS				D		D		C	A		C	A
d_A, Approach Delay [s/veh]	0.00			43.89			19.69			24.24		
Approach LOS	A			D			B			C		
d_I, Intersection Delay [s/veh]	26.27											
Intersection LOS	C											
Intersection V/C	0.856											

Sequence

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



Intersection Level Of Service Report
Intersection 5: I-215 NB Ramps (NS) / Newport Road (EW)

Control Type:	Signalized	Delay (sec / veh):	31.6
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.944

Intersection Setup

Name	I-215 NB Ramps			I-215 NB Ramps			Newport Rd			Newport Rd		
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	1	0	1	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	375.00	100.00	375.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name	I-215 NB Ramps			I-215 NB Ramps			Newport Rd			Newport Rd		
Base Volume Input [veh/h]	794	0	1004	0	0	0	0	2509	625	0	2238	699
Base Volume Adjustment Factor	1.0000	1.0000	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]	794	0	1004	0	0	0	0	2509	625	0	2238	699
Peak Hour Factor	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810
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]	202	0	256	0	0	0	0	639	159	0	570	178
Total Analysis Volume [veh/h]	809	0	1023	0	0	0	0	2558	637	0	2281	713
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 - Coordination Group
Cycle Length [s]	140
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	Split	Permiss	Split	Permiss	Permiss	Permiss	Protecte	Permiss	Overlap	Permiss	Permiss	Overlap
Signal group	5	0	0	0	0	0	3	8	5	0	4	4
Auxiliary Signal Groups									4,5,8			4,5,8
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	0	0	0	0	0	0	7	7	0	7	7
Maximum Green [s]	30	0	0	0	0	0	0	30	30	0	30	30
Amber [s]	3.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0
All red [s]	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0	1.0
Split [s]	62	0	0	0	0	0	0	78	62	0	78	78
Vehicle Extension [s]	3.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0
Walk [s]	5	0	0	0	0	0	0	5	5	0	5	5
Pedestrian Clearance [s]	10	0	0	0	0	0	0	10	10	0	10	10
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	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0
Minimum Recall	No							No	No		No	No
Maximum Recall	No							No	No		No	No
Pedestrian Recall	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		C	R	C	R
C, Cycle Length [s]	140	140	140		140	140	140	140
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00		4.00	0.00	4.00	0.00
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]	2.00	2.00	2.00		2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	57	57	57		75	136	75	136
g / C, Green / Cycle	0.41	0.41	0.41		0.53	0.97	0.53	0.97
(v / s)_i Volume / Saturation Flow Rate	0.34	0.37	0.39		0.50	0.40	0.34	0.45
s, saturation flow rate [veh/h]	1774	1641	1583		5074	1583	6765	1583
c, Capacity [veh/h]	725	671	647		2709	1538	3612	1538
d1, Uniform Delay [s]	37.26	38.92	39.78		30.63	0.10	22.92	0.10
k, delay calibration	0.35	0.40	0.42		0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.18	15.58	21.25		8.42	0.82	0.85	1.01
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

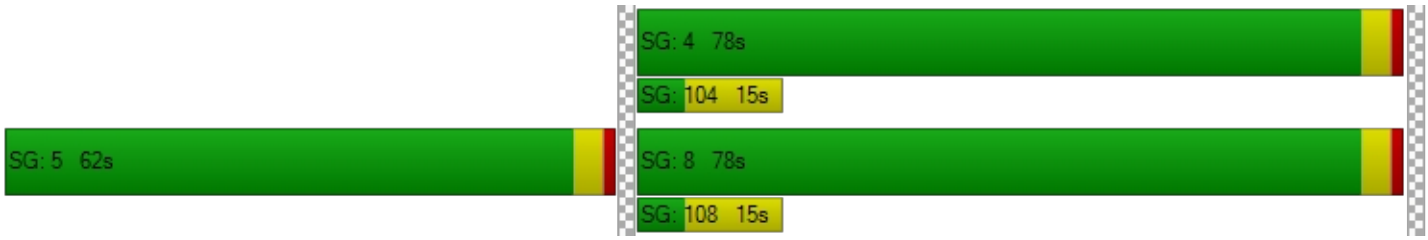
X, volume / capacity	0.84	0.91	0.94		0.94	0.41	0.63	0.46
d, Delay for Lane Group [s/veh]	45.44	54.51	61.02		39.05	0.92	23.77	1.11
Lane Group LOS	D	D	E		D	A	C	A
Critical Lane Group	No	No	Yes		Yes	No	No	No
50th-Percentile Queue Length [veh]	19.50	21.56	22.88		26.75	0.35	12.54	0.43
50th-Percentile Queue Length [ft]	487.61	538.89	572.05		668.83	8.81	313.54	10.76
95th-Percentile Queue Length [veh]	26.75	29.17	30.73		35.24	0.63	18.35	0.77
95th-Percentile Queue Length [ft]	668.68	729.25	768.18		880.90	15.86	458.74	19.36

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	47.66	0.00	58.40	0.00	0.00	0.00	0.00	39.05	0.92	0.00	23.77	1.11
Movement LOS	D		E					D	A		C	A
d_A, Approach Delay [s/veh]	53.66			0.00			31.45			18.37		
Approach LOS	D			A			C			B		
d_I, Intersection Delay [s/veh]	31.64											
Intersection LOS	C											
Intersection V/C	0.944											

Sequence

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



Intersection Level Of Service Report
Intersection 6: Antelope Rd (NS)/Newport Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	104.0
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.229

Intersection Setup

Name												
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	2	0	0	2	0	0	2	0	0	2	0	0
Pocket Length [ft]	330.00	100.00	100.00	100.00	100.00	100.00	325.00	100.00	100.00	200.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							Newport Rd			Newport Rd		
Base Volume Input [veh/h]	899	133	232	34	96	268	247	2255	811	214	1794	33
Base Volume Adjustment Factor	1.0000	1.0000	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]	899	133	232	34	96	268	247	2255	811	214	1794	33
Peak Hour Factor	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660
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]	233	34	60	9	25	69	64	584	210	55	464	9
Total Analysis Volume [veh/h]	931	138	240	35	99	277	256	2334	840	222	1857	34
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	1 - Coordination Group
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
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	8	7	4	0
Auxiliary Signal Groups									5,8			
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	7	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	30	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0	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	1.0	1.0	1.0	0.0
Split [s]	34	21	0	32	19	0	13	76	76	11	74	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	5	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	10	0	10	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	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0	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	C	R	L	C	C	L	C	C
C, Cycle Length [s]	140	140	140	140	140	140	140	140	140	140	140	140	140
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	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	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	2.00
g_i, Effective Green Time [s]	30	40	40	5	15	15	15	9	72	72	7	70	70
g / C, Green / Cycle	0.21	0.28	0.28	0.04	0.11	0.11	0.11	0.06	0.51	0.51	0.05	0.50	0.50
(v / s)_i Volume / Saturation Flow Rate	0.27	0.07	0.15	0.01	0.05	0.09	0.09	0.07	0.59	0.67	0.06	0.35	0.35
s, saturation flow rate [veh/h]	3445	1863	1583	3445	1863	1583	1583	3445	3547	1640	3445	3547	1846
c, Capacity [veh/h]	738	531	451	128	201	171	171	222	1820	842	173	1770	921
d1, Uniform Delay [s]	55.00	38.64	42.17	65.54	58.81	61.02	61.02	65.49	34.07	34.07	66.49	27.05	27.08
k, delay calibration	0.18	0.50	0.50	0.11	0.50	0.50	0.50	0.11	0.15	0.50	0.11	0.11	0.25
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
d2, Incremental Delay [s]	121.56	1.19	4.43	1.13	8.34	32.40	32.40	80.82	66.75	142.95	138.43	0.52	2.29
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	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	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	1.00

Lane Group Results

X, volume / capacity	1.26	0.26	0.53	0.27	0.49	0.81	0.81	1.15	1.14	1.30	1.29	0.70	0.70
d, Delay for Lane Group [s/veh]	176.56	39.82	46.60	66.68	67.15	93.42	93.42	146.32	100.82	177.02	204.92	27.57	29.37
Lane Group LOS	F	D	D	E	E	F	F	F	F	F	F	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	25.04	3.76	7.35	0.62	3.70	6.23	6.23	6.35	45.14	59.58	6.33	15.12	16.24
50th-Percentile Queue Length [ft]	625.95	93.89	183.79	15.38	92.46	155.7	155.7	158.78	1128.60	1489.44	158.20	378.08	405.97
95th-Percentile Queue Length [veh]	37.38	6.76	11.80	1.11	6.66	10.33	10.33	10.95	62.26	86.75	11.15	21.50	22.85
95th-Percentile Queue Length [ft]	934.57	168.99	294.96	27.68	166.4	258.1	258.1	273.64	1556.51	2168.80	278.69	537.52	571.19

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	176.56	39.82	46.60	66.68	67.15	93.42	146.32	109.08	177.02	204.92	28.17	29.37
Movement LOS	F	D	D	E	E	F	F	F	F	F	C	C
d_A, Approach Delay [s/veh]	138.32			84.82			128.50			46.76		
Approach LOS	F			F			F			D		
d_I, Intersection Delay [s/veh]	104.01											
Intersection LOS	F											
Intersection V/C	1.229											

Sequence

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

Intersection Level Of Service Report
Intersection 7: Menifee Rd (NS)/NewportRd (EW)

Control Type:	Signalized	Delay (sec / veh):	47.6
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.948

Intersection Setup

Name							Newport Rd			Newport Rd		
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	1	0	1	1	0	0	1	0	0	2	0	0
Pocket Length [ft]	250.00	100.00	200.00	100.00	100.00	100.00	400.00	100.00	100.00	295.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							Newport Rd			Newport Rd		
Base Volume Input [veh/h]	262	289	115	92	247	346	442	1521	368	170	1327	57
Base Volume Adjustment Factor	1.0000	1.0000	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]	262	289	115	92	247	346	442	1521	368	170	1327	57
Peak Hour Factor	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810
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]	67	74	29	23	63	88	113	388	94	43	338	15
Total Analysis Volume [veh/h]	267	295	117	94	252	353	451	1550	375	173	1353	58
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	1 - Coordination Group
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]	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]	14	28	0	19	33	0	36	61	0	12	37	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
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	C	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]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	10	30	30	8	28	28	32	58	58	8	34	34
g / C, Green / Cycle	0.08	0.25	0.25	0.07	0.24	0.24	0.27	0.48	0.48	0.07	0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.08	0.08	0.07	0.05	0.07	0.22	0.25	0.36	0.38	0.05	0.27	0.04
s, saturation flow rate [veh/h]	3445	3547	1583	1774	3547	1583	1774	3547	1687	3445	5074	1583
c, Capacity [veh/h]	287	897	401	118	838	374	473	1705	811	229	1422	444
d1, Uniform Delay [s]	54.65	36.52	36.16	55.20	37.69	45.06	43.25	25.41	25.98	55.07	42.38	32.26
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.37	0.40	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	12.69	0.21	0.40	11.42	0.20	28.39	27.19	3.17	7.51	5.05	14.76	0.61
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	0.93	0.33	0.29	0.80	0.30	0.94	0.95	0.76	0.78	0.76	0.95	0.13
d, Delay for Lane Group [s/veh]	67.34	36.73	36.56	66.62	37.89	73.44	70.44	28.58	33.49	60.12	57.14	32.87
Lane Group LOS	E	D	D	E	D	E	E	C	C	E	E	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	4.38	3.42	2.71	3.09	2.96	12.79	16.05	14.44	15.52	2.65	14.38	1.29
50th-Percentile Queue Length [ft]	109.49	85.50	67.73	77.17	74.01	319.63	401.36	360.91	388.00	66.25	359.52	32.32
95th-Percentile Queue Length [veh]	7.81	6.16	4.88	5.56	5.33	18.65	22.63	20.67	21.98	4.77	20.60	2.33
95th-Percentile Queue Length [ft]	195.29	153.89	121.92	138.90	133.21	466.23	565.64	516.69	549.52	119.25	515.00	58.17

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	67.34	36.73	36.56	66.62	37.89	73.44	70.44	29.41	33.49	60.12	57.14	32.87
Movement LOS	E	D	D	E	D	E	E	C	C	E	E	C
d_A, Approach Delay [s/veh]	48.74			59.71			37.84			56.57		
Approach LOS	D			E			D			E		
d_I, Intersection Delay [s/veh]	47.65											
Intersection LOS	D											
Intersection V/C	0.948											

Sequence

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

Intersection Level Of Service Report
Intersection 8: Bradley Rd (N/S) / La Piedra Rd (E/W)

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):	0.419

Intersection Setup

Name												
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	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	150.00	100.00	100.00	155.00	100.00	100.00	100.00	100.00	100.00	150.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	39	498	44	84	701	19	15	52	32	70	75	104
Base Volume Adjustment Factor	1.0000	1.0000	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]	39	498	44	84	701	19	15	52	32	70	75	104
Peak Hour Factor	0.8240	0.8240	0.8240	0.8240	0.8240	0.8240	0.8240	0.8240	0.8240	0.8240	0.8240	0.8240
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	151	13	25	213	6	5	16	10	21	23	32
Total Analysis Volume [veh/h]	47	604	53	102	851	23	18	63	39	85	91	126
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 Coordinated
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]	11	19	0	37	45	0	11	19	0	25	33	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
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	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	5	64	64	7	66	66	3	7	7	6	10	10
g / C, Green / Cycle	0.05	0.64	0.64	0.07	0.66	0.66	0.03	0.07	0.07	0.06	0.10	0.10
(v / s)_i Volume / Saturation Flow Rate	0.03	0.18	0.18	0.06	0.24	0.24	0.01	0.03	0.03	0.05	0.05	0.08
s, saturation flow rate [veh/h]	1774	1863	1811	1774	1863	1846	1774	1863	1638	1774	1863	1583
c, Capacity [veh/h]	92	1183	1150	132	1225	1214	50	124	109	113	191	162
d1, Uniform Delay [s]	46.23	8.11	8.12	45.49	7.67	7.67	47.74	44.82	44.95	46.05	42.37	43.78
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.39	0.59	0.61	9.25	0.82	0.83	4.31	2.21	2.97	9.48	1.84	7.70
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	0.51	0.28	0.28	0.77	0.36	0.36	0.36	0.42	0.46	0.75	0.48	0.78
d, Delay for Lane Group [s/veh]	50.62	8.71	8.73	54.75	8.49	8.49	52.05	47.02	47.92	55.53	44.21	51.49
Lane Group LOS	D	A	A	D	A	A	D	D	D	E	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	1.20	2.76	2.69	2.71	3.55	3.52	0.48	1.26	1.24	2.28	2.12	3.24
50th-Percentile Queue Length [ft]	30.03	68.98	67.36	67.82	88.76	88.00	12.05	31.41	30.93	57.07	53.03	81.07
95th-Percentile Queue Length [veh]	2.16	4.97	4.85	4.88	6.39	6.34	0.87	2.26	2.23	4.11	3.82	5.84
95th-Percentile Queue Length [ft]	54.06	124.17	121.25	122.08	159.76	158.40	21.70	56.53	55.68	102.73	95.45	145.93

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	50.62	8.72	8.73	54.75	8.49	8.49	52.05	47.18	47.92	55.53	44.21	51.49
Movement LOS	D	A	A	D	A	A	D	D	D	E	D	D
d_A, Approach Delay [s/veh]	11.52			13.32			48.15			50.43		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	20.04											
Intersection LOS	C											
Intersection V/C	0.419											

Sequence

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

Intersection Level Of Service Report
Intersection 9: Bradley Rd (NS)/Holland Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	48.8
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.873

Intersection Setup

Name											
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	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	130.00	100.00	100.00	150.00	100.00	100.00	145.00	100.00	100.00	140.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	69	368	150	155	267	172	216	313	69	137	363	228
Base Volume Adjustment Factor	1.0000	1.0000	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]	69	368	150	155	267	172	216	313	69	137	363	228
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	100	41	42	73	47	59	85	19	37	99	62
Total Analysis Volume [veh/h]	75	400	163	168	290	187	235	340	75	149	395	248
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 Coordinated
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]	16	45	0	17	46	0	22	42	0	16	36	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	R	L	C	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	7	46	13	52	52	18	34	12	28	28
g / C, Green / Cycle	0.05	0.38	0.11	0.43	0.43	0.15	0.28	0.10	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.04	0.32	0.09	0.16	0.12	0.13	0.23	0.08	0.21	0.16
s, saturation flow rate [veh/h]	1774	1772	1774	1863	1583	1774	1805	1774	1863	1583
c, Capacity [veh/h]	98	671	194	805	685	262	504	177	431	366
d1, Uniform Delay [s]	55.96	34.01	52.63	22.92	21.95	50.28	40.50	53.15	45.05	42.09
k, delay calibration	0.11	0.50	0.11	0.50	0.50	0.11	0.26	0.11	0.30	0.15
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	11.51	12.04	10.98	1.25	0.99	10.45	7.81	10.28	18.57	3.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

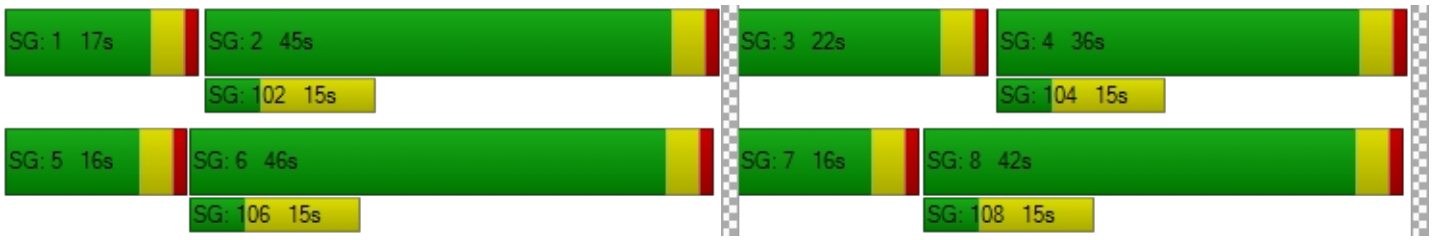
X, volume / capacity	0.76	0.84	0.87	0.36	0.27	0.90	0.82	0.84	0.92	0.68
d, Delay for Lane Group [s/veh]	67.46	46.05	63.61	24.18	22.93	60.73	48.31	63.43	63.62	45.09
Lane Group LOS	E	D	E	C	C	E	D	E	E	D
Critical Lane Group	No	Yes	Yes	No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh]	2.49	16.20	5.40	5.47	3.39	7.44	12.00	4.78	13.17	6.73
50th-Percentile Queue Length [ft]	62.15	404.92	135.08	136.72	84.76	185.90	299.96	119.38	329.32	168.21
95th-Percentile Queue Length [veh]	4.47	22.80	9.22	9.30	6.10	11.91	17.68	8.36	19.13	10.98
95th-Percentile Queue Length [ft]	111.87	569.92	230.38	232.59	152.57	297.70	441.98	208.97	478.13	274.56

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	67.46	46.05	46.05	63.61	24.18	22.93	60.73	48.31	48.31	63.43	63.62	45.09
Movement LOS	E	D	D	E	C	C	E	D	D	E	E	D
d_A, Approach Delay [s/veh]	48.57			34.09			52.80			57.78		
Approach LOS	D			C			D			E		
d_I, Intersection Delay [s/veh]	48.83											
Intersection LOS	D											
Intersection V/C	0.873											

Sequence

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



Intersection Level Of Service Report
Intersection 10: Town Center Dr-Sherman Rd (NS) / La Piedra Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	32.2
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.259

Intersection Setup

Name												
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	1	0	1	1	0	0	0	0	0	1	0	0
Pocket Length [ft]	210.00	100.00	500.00	150.00	100.00	100.00	100.00	100.00	100.00	800.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	4	55	116	32	56	7	13	59	9	143	89	34
Base Volume Adjustment Factor	1.0000	1.0000	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]	4	55	116	32	56	7	13	59	9	143	89	34
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]	1	14	30	8	15	2	3	15	2	37	23	9
Total Analysis Volume [veh/h]	4	57	121	33	58	7	14	61	9	149	93	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]	100
Coordination Type	Time of Day Pattern Coordinated
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]	11	19	0	11	19	0	50	19	0	51	20	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
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	L	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	1	63	63	4	67	2	6	10	14	14
g / C, Green / Cycle	0.01	0.63	0.63	0.04	0.67	0.02	0.06	0.10	0.14	0.14
(v / s)_i Volume / Saturation Flow Rate	0.00	0.03	0.08	0.02	0.04	0.01	0.04	0.08	0.04	0.04
s, saturation flow rate [veh/h]	1774	1863	1583	1774	1828	1774	1821	1774	1863	1695
c, Capacity [veh/h]	15	1176	1000	77	1218	42	111	186	264	240
d1, Uniform Delay [s]	49.33	7.02	7.37	46.71	5.79	48.10	45.91	43.83	38.22	38.29
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.92	0.08	0.25	3.78	0.08	4.51	5.75	7.85	0.48	0.57
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.26	0.05	0.12	0.43	0.05	0.33	0.63	0.80	0.25	0.26
d, Delay for Lane Group [s/veh]	58.24	7.09	7.61	50.49	5.87	52.61	51.67	51.68	38.70	38.85
Lane Group LOS	E	A	A	D	A	D	D	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	0.13	0.40	0.91	0.85	0.40	0.38	1.80	3.84	1.40	1.34
50th-Percentile Queue Length [ft]	3.32	10.06	22.73	21.20	9.89	9.56	45.07	95.96	34.96	33.51
95th-Percentile Queue Length [veh]	0.24	0.72	1.64	1.53	0.71	0.69	3.24	6.91	2.52	2.41
95th-Percentile Queue Length [ft]	5.98	18.12	40.91	38.15	17.80	17.21	81.12	172.73	62.93	60.31

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	58.24	7.09	7.61	50.49	5.87	5.87	52.61	51.67	51.67	51.68	38.75	38.85
Movement LOS	E	A	A	D	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	8.56			20.90			51.82			45.72		
Approach LOS	A			C			D			D		
d_I, Intersection Delay [s/veh]	32.17											
Intersection LOS	C											
Intersection V/C	0.259											

Sequence

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

Intersection Level Of Service Report
Intersection 11: Town Center Dr-Sherman Rd (NS)/Holland Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	84.0
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.437

Intersection Setup

Name												
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	1	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	500.00	100.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	5	0	11	33	1	94	65	528	4	27	726	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
Total Hourly Volume [veh/h]	5	0	11	33	1	94	65	528	4	27	726	55
Peak Hour Factor	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	3	9	0	25	17	141	1	7	193	15
Total Analysis Volume [veh/h]	5	0	12	35	1	100	69	562	4	29	773	59
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.08	0.00	0.02	0.44	0.01	0.25	0.09	0.01	0.00	0.03	0.01	0.00
d_M, Delay for Movement [s/veh]	68.89	48.05	14.57	84.00	76.40	48.11	9.92	0.00	0.00	8.69	0.00	0.00
Movement LOS	F	E	B	F	F	E	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.36	0.36	0.36	4.35	4.35	4.35	8.08	8.08	0.00	8.78	8.78	0.00
95th-Percentile Queue Length [ft]	8.88	8.88	8.88	108.81	108.81	108.81	202.07	202.07	0.00	219.44	219.44	0.00
d_A, Approach Delay [s/veh]	30.55			57.55			1.08			0.29		
Approach LOS	D			F			A			A		
d_I, Intersection Delay [s/veh]	5.63											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 12: Haun Rd (NS)/Village-Market Dr (EW)

Control Type:	Signalized	Delay (sec / veh):	31.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.922

Intersection Setup

Name	Haun Rd			Haun Rd								
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	1	0	0	2	0	0	0	0	0	0	0	1
Pocket Length [ft]	100.00	100.00	100.00	175.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	65.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Haun Rd			Haun Rd								
Base Volume Input [veh/h]	111	1356	104	519	1160	260	266	35	82	64	37	505
Base Volume Adjustment Factor	1.0000	1.0000	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]	111	1356	104	519	1160	260	266	35	82	64	37	505
Peak Hour Factor	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530
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	356	27	136	304	68	70	9	22	17	10	132
Total Analysis Volume [veh/h]	116	1423	109	545	1217	273	279	37	86	67	39	530
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	1 - Coordination Group
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
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	Overlap
Signal group	5	2	0	1	6	0	3	8	0	0	4	4
Auxiliary Signal Groups												1,4
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	7
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	30
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0
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	1.0
Split [s]	12	51	0	23	62	0	0	26	0	0	26	26
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	5
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	10
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	2.0
I2, Clearance 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	2.0
Minimum Recall	No	No		No	No			No			No	No
Maximum Recall	No	No		No	No			No			No	No
Pedestrian Recall	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	C	L	C	C	L	C	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	2.00	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	0.00
g_i, Effective Green Time [s]	8	48	48	18	58	58	22	22	22	44
g / C, Green / Cycle	0.08	0.48	0.48	0.18	0.58	0.58	0.22	0.22	0.22	0.44
(v / s)_i Volume / Saturation Flow Rate	0.07	0.41	0.42	0.16	0.40	0.43	0.11	0.23	0.07	0.19
s, saturation flow rate [veh/h]	1774	1863	1817	3445	1863	1750	1363	1075	1478	2803
c, Capacity [veh/h]	143	892	870	624	1078	1013	268	291	384	1237
d1, Uniform Delay [s]	45.21	23.19	23.38	39.84	14.77	15.44	41.21	41.99	32.55	19.25
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.29	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.31	10.93	11.95	4.03	3.63	4.75	1.84	17.67	0.38	0.24
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.81	0.86	0.88	0.87	0.69	0.74	0.56	0.86	0.28	0.43
d, Delay for Lane Group [s/veh]	55.51	34.12	35.34	43.88	18.41	20.19	43.06	59.66	32.93	19.48
Lane Group LOS	E	C	D	D	B	C	D	E	C	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh]	3.11	16.76	16.87	6.49	10.88	11.57	3.52	7.35	2.07	3.88
50th-Percentile Queue Length [ft]	77.75	418.96	421.87	162.18	272.08	289.31	87.97	183.87	51.84	96.88
95th-Percentile Queue Length [veh]	5.60	23.47	23.61	10.66	16.29	17.15	6.33	11.80	3.73	6.98
95th-Percentile Queue Length [ft]	139.95	586.81	590.29	266.61	407.34	428.79	158.34	295.06	93.32	174.39

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	55.51	34.68	35.34	43.88	19.10	20.19	49.59	59.66	59.66	32.93	32.93	19.48
Movement LOS	E	C	D	D	B	C	D	E	E	C	C	B
d_A, Approach Delay [s/veh]	36.19			25.88			53.45			21.72		
Approach LOS	D			C			D			C		
d_I, Intersection Delay [s/veh]	31.27											
Intersection LOS	C											
Intersection V/C	0.922											

Sequence

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

Intersection Level Of Service Report
Intersection 13: Haun Rd (NS)/Countryside Marketplace (EW)

Control Type:	Signalized	Delay (sec / veh):	21.0
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.756

Intersection Setup

Name	Haun Rd			Haun Rd								
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	1	0	0	2	0	0	0	0	1	1	0	0
Pocket Length [ft]	200.00	100.00	100.00	235.00	100.00	100.00	100.00	100.00	40.00	100.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Haun Rd			Haun Rd								
Base Volume Input [veh/h]	55	1222	109	356	948	68	46	9	115	84	9	330
Base Volume Adjustment Factor	1.0000	1.0000	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]	55	1222	109	356	948	68	46	9	115	84	9	330
Peak Hour Factor	0.9640	0.9640	0.9640	0.9640	0.9640	0.9640	0.9640	0.9640	0.9640	0.9640	0.9640	0.9640
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	317	28	92	246	18	12	2	30	22	2	86
Total Analysis Volume [veh/h]	57	1268	113	369	983	71	48	9	119	87	9	342
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	1 - Coordination Group
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
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	Overlap
Signal group	5	2	0	1	6	0	0	8	0	0	4	4
Auxiliary Signal Groups												1,4
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	7
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	30
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0
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	1.0
Split [s]	12	19	0	62	69	0	0	19	0	0	19	19
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	5
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	10
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	2.0
I2, Clearance 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	2.0
Minimum Recall	No	No		No	No			No			No	No
Maximum Recall	No	No		No	No			No			No	No
Pedestrian Recall	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	C	L	C	C	L	C	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	6	59	59	14	67	67	15	15	15	33
g / C, Green / Cycle	0.06	0.59	0.59	0.14	0.67	0.67	0.15	0.15	0.15	0.33
(v / s)_i Volume / Saturation Flow Rate	0.03	0.37	0.38	0.11	0.29	0.29	0.03	0.08	0.18	0.12
s, saturation flow rate [veh/h]	1774	1863	1810	3445	1863	1819	1400	1600	532	2803
c, Capacity [veh/h]	100	1093	1062	492	1253	1224	73	241	149	934
d1, Uniform Delay [s]	45.98	13.67	13.72	41.15	7.49	7.51	50.00	39.22	47.07	25.31
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.16	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.96	2.87	3.00	2.32	1.05	1.09	9.77	1.81	6.70	0.24
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

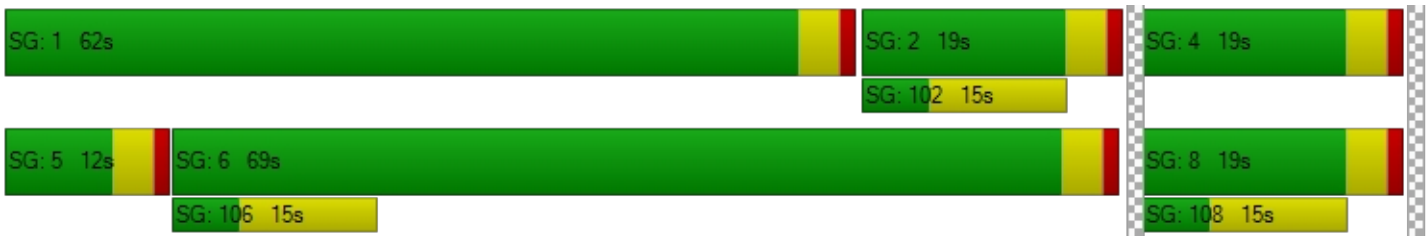
X, volume / capacity	0.57	0.64	0.64	0.75	0.42	0.43	0.66	0.53	0.65	0.37
d, Delay for Lane Group [s/veh]	50.94	16.53	16.72	43.47	8.55	8.60	59.77	41.03	53.77	25.55
Lane Group LOS	D	B	B	D	A	A	E	D	D	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	1.46	9.45	9.31	4.30	4.29	4.23	1.35	2.88	2.58	2.90
50th-Percentile Queue Length [ft]	36.48	236.17	232.65	107.39	107.35	105.80	33.71	71.94	64.49	72.53
95th-Percentile Queue Length [veh]	2.63	14.49	14.31	7.69	7.69	7.61	2.43	5.18	4.64	5.22
95th-Percentile Queue Length [ft]	65.66	362.19	357.72	192.37	192.31	190.15	60.69	129.50	116.07	130.55

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	50.94	16.62	16.72	43.47	8.57	8.60	59.77	41.03	41.03	53.77	53.77	25.55
Movement LOS	D	B	B	D	A	A	E	D	D	D	D	C
d_A, Approach Delay [s/veh]	17.99			17.62			46.14			31.73		
Approach LOS	B			B			D			C		
d_I, Intersection Delay [s/veh]	21.00											
Intersection LOS	C											
Intersection V/C	0.756											

Sequence

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



Intersection Level Of Service Report
Intersection 14: Haun Rd (N/S)/La Piedra Rd (E/W)

Control Type:	Signalized	Delay (sec / veh):	44.6
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.891

Intersection Setup

Name				Haun Rd								
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	1	0	1	1	0	1	0	0	0	0	0	0
Pocket Length [ft]	165.00	100.00	75.00	150.00	100.00	150.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			Yes		

Volumes

Name				Haun Rd								
Base Volume Input [veh/h]	54	1198	187	68	904	154	181	38	124	172	48	90
Base Volume Adjustment Factor	1.0000	1.0000	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]	54	1198	187	68	904	154	181	38	124	172	48	90
Peak Hour Factor	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170
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	327	51	19	246	42	49	10	34	47	13	25
Total Analysis Volume [veh/h]	59	1306	204	74	986	168	197	41	135	188	52	98
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	1 - Coordination Group
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
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	Split	Split	Split	Split	Split	Split
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]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	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]	11	52	0	11	52	0	0	11	0	0	66	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
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]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	R	C	R	C
C, Cycle Length [s]	140	140	140	140	140	140	140	140	140
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
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
l2, Clearance Lost Time [s]	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	66	66	7	67	67	21	21	30
g / C, Green / Cycle	0.05	0.47	0.47	0.05	0.48	0.48	0.15	0.15	0.21
(v / s)_i Volume / Saturation Flow Rate	0.03	0.41	0.42	0.04	0.28	0.11	0.13	0.09	0.20
s, saturation flow rate [veh/h]	1774	1863	1777	1774	3547	1583	1789	1583	1726
c, Capacity [veh/h]	82	880	839	91	1693	756	269	238	365
d1, Uniform Delay [s]	65.85	33.10	33.52	65.73	26.48	21.39	58.27	55.22	54.08
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	11.12	11.52	13.27	15.72	1.47	0.68	9.39	2.11	10.09
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

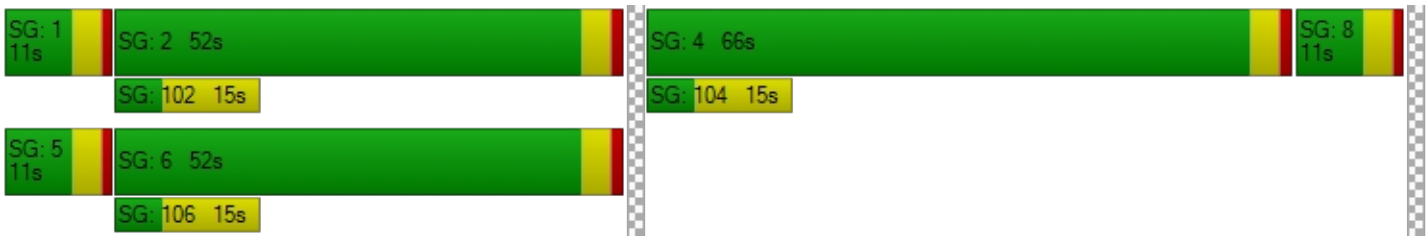
X, volume / capacity	0.72	0.87	0.89	0.81	0.58	0.22	0.88	0.57	0.92
d, Delay for Lane Group [s/veh]	76.97	44.62	46.79	81.45	27.95	22.07	67.66	57.34	64.16
Lane Group LOS	E	D	D	F	C	C	E	E	E
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	2.29	24.57	24.47	2.95	11.62	3.25	8.73	4.46	12.31
50th-Percentile Queue Length [ft]	57.18	614.13	611.72	73.87	290.55	81.16	218.22	111.38	307.76
95th-Percentile Queue Length [veh]	4.12	32.69	32.58	5.32	17.21	5.84	13.57	7.92	18.06
95th-Percentile Queue Length [ft]	102.92	817.34	814.53	132.97	430.32	146.08	339.36	197.92	451.62

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	76.97	45.52	46.79	81.45	27.95	22.07	67.66	67.66	57.34	64.16	64.16	64.16
Movement LOS	E	D	D	F	C	C	E	E	E	E	E	E
d_A, Approach Delay [s/veh]	46.87			30.37			63.92			64.16		
Approach LOS	D			C			E			E		
d_I, Intersection Delay [s/veh]	44.57											
Intersection LOS	D											
Intersection V/C	0.891											

Sequence

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



Intersection Level Of Service Report
Intersection 15: Haun Road (NS) / Holland Road (EW)

Control Type:	All-way stop	Delay (sec / veh):	146.8
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.488

Intersection Setup

Name												
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	1	0	0	1	0	0	1	0	1	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	150.00	100.00	100.00	150.00	100.00	150.00	100.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	342	533	4	6	454	479	372	5	178	2	6	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]	342	533	4	6	454	479	372	5	178	2	6	17
Peak Hour Factor	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	93	144	1	2	123	130	101	1	48	1	2	5
Total Analysis Volume [veh/h]	371	577	4	7	492	519	403	5	193	2	7	18
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	371	581	369	492	519	403	397	430	309
Degree of Utilization, x	1.00	1.49	0.02	1.26	1.23	1.07	0.01	0.45	0.09

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	11.83	30.87	0.06	21.44	21.37	14.11	0.04	2.27	0.28
95th-Percentile Queue Length [ft]	295.67	771.78	1.45	536.08	534.37	352.66	0.96	56.85	7.12
Approach Delay [s/veh]	187.40		156.50			71.80			15.76
Approach LOS	F		F			F			C
Intersection Delay [s/veh]	146.76								
Intersection LOS	F								

Intersection Level Of Service Report
Intersection 16: Haun Rd-Zeiders Rd (N/S)/Scott Rd (E/W)

Control Type:	Signalized	Delay (sec / veh):	83.1
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.109

Intersection Setup

Name												
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	1	0	0	1	0	0	1	0	0	1	0	1
Pocket Length [ft]	345.00	100.00	100.00	200.00	100.00	100.00	135.00	100.00	100.00	185.00	100.00	200.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	168	172	265	778	78	113	98	948	45	252	684	689
Base Volume Adjustment Factor	1.0000	1.0000	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]	168	172	265	778	78	113	98	948	45	252	684	689
Peak Hour Factor	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750
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	44	68	199	20	29	25	243	12	65	175	177
Total Analysis Volume [veh/h]	172	176	272	798	80	116	101	972	46	258	702	707
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	1 - Coordination Group
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]	16.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	23	0	0	35	0	11	43	0	19	51	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	C	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
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
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
g_i, Effective Green Time [s]	19	19	19	31	31	7	34	34	20	47	47
g / C, Green / Cycle	0.16	0.16	0.16	0.26	0.26	0.06	0.29	0.29	0.16	0.39	0.39
(v / s)_i Volume / Saturation Flow Rate	0.10	0.09	0.17	0.28	0.29	0.06	0.28	0.28	0.15	0.20	0.45
s, saturation flow rate [veh/h]	1774	1863	1583	1774	1738	1774	1863	1833	1774	3547	1583
c, Capacity [veh/h]	281	295	251	458	449	106	534	525	291	1385	618
d1, Uniform Delay [s]	47.07	46.94	50.50	44.52	44.52	56.25	42.16	42.17	49.09	27.79	36.57
k, delay calibration	0.11	0.11	0.22	0.50	0.50	0.11	0.50	0.50	0.11	0.50	0.50
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
d2, Incremental Delay [s]	2.16	1.93	62.85	67.19	75.19	30.47	30.49	30.85	8.97	1.33	82.62
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
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
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

Lane Group Results

X, volume / capacity	0.61	0.60	1.08	1.09	1.11	0.95	0.96	0.96	0.89	0.51	1.14
d, Delay for Lane Group [s/veh]	49.23	48.87	113.35	111.71	119.71	86.72	72.65	73.02	58.06	29.11	119.19
Lane Group LOS	D	D	F	F	F	F	E	E	E	C	F
Critical Lane Group	No	No	Yes	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	4.79	4.87	11.60	21.46	22.03	3.85	18.67	18.44	7.99	7.48	30.94
50th-Percentile Queue Length [ft]	119.74	121.85	290.12	536.46	550.64	96.24	466.86	460.98	199.86	186.99	773.54
95th-Percentile Queue Length [veh]	8.38	8.49	17.86	30.52	31.57	6.93	25.76	25.48	12.63	11.96	43.89
95th-Percentile Queue Length [ft]	209.48	212.37	446.45	762.92	789.27	173.23	644.04	637.04	315.79	299.12	1097.14

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	49.23	48.87	113.35	114.72	119.71	119.71	86.72	72.82	73.02	58.06	29.11	119.19
Movement LOS	D	D	F	F	F	F	F	E	E	E	C	F
d_A, Approach Delay [s/veh]	77.26			115.71			74.08			71.80		
Approach LOS	E			F			E			E		
d_I, Intersection Delay [s/veh]	83.07											
Intersection LOS	F											
Intersection V/C	1.109											

Sequence

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

Intersection Level Of Service Report
Intersection 17: I-215 SB Ramps (N/S) / Scott Rd (E/W)

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):	0.577

Intersection Setup

Name												
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	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	245.00	100.00	100.00
Speed [mph]		50.00			50.00			50.00			50.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		No			Yes			No			No	

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	608	0	353	0	1104	530	413	1134	487
Base Volume Adjustment Factor	1.0000	1.0000	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	608	0	353	0	1104	530	413	1134	487
Peak Hour Factor	1.0000	1.0000	1.0000	0.9470	0.9470	0.9470	1.0000	0.9470	0.9470	0.9470	0.9470	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	161	0	93	0	291	140	109	299	122
Total Analysis Volume [veh/h]	0	0	0	642	0	373	0	1166	560	436	1197	487
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 - Coordination Group
Cycle Length [s]	110
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	Split	Split	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	0	0	0	6	0	0	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	0	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	73	0	0	37	0	0	37	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	10	0	0	10	0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall					No			No			No	
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]		110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]		4.00	4.00	4.00	4.00	4.00	4.00	4.00
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]		2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]		24	24	24	78	78	78	78
g / C, Green / Cycle		0.21	0.21	0.21	0.71	0.71	0.71	0.71
(v / s)_i Volume / Saturation Flow Rate		0.18	0.18	0.13	0.33	0.35	0.34	0.31
s, saturation flow rate [veh/h]		1774	1774	2803	3547	1583	3547	1583
c, Capacity [veh/h]		380	380	600	2529	1129	2529	1129
d1, Uniform Delay [s]		41.40	41.40	39.11	0.86	0.87	0.86	0.85
k, delay calibration		0.11	0.11	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		5.18	5.18	1.06	0.61	1.56	0.64	1.20
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	1.33	1.33	1.33	1.33
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.84	0.84	0.62	0.46	0.50	0.47	0.43
d, Delay for Lane Group [s/veh]		46.58	46.58	40.17	1.47	2.43	1.50	2.05
Lane Group LOS		D	D	D	A	A	A	A
Critical Lane Group		Yes	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh]		8.46	8.46	4.43	0.75	1.01	0.77	0.82
50th-Percentile Queue Length [ft]		211.45	211.45	110.77	18.72	25.14	19.36	20.58
95th-Percentile Queue Length [veh]		13.23	13.23	7.88	1.35	1.81	1.39	1.48
95th-Percentile Queue Length [ft]		330.68	330.68	197.07	33.69	45.24	34.85	37.04

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	46.58	46.58	40.17	0.00	1.47	2.43	0.00	1.50	2.05
Movement LOS				D	D	D		A	A		A	A
d_A, Approach Delay [s/veh]	0.00			44.22			1.78			1.66		
Approach LOS	A			D			A			A		
d_I, Intersection Delay [s/veh]	11.47											
Intersection LOS	B											
Intersection V/C	0.577											

Sequence

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

Intersection Level Of Service Report
Intersection 18: I-215 NB Ramps (N/S) / Scott Rd (E/W)

Control Type:	Signalized	Delay (sec / veh):	21.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.760

Intersection Setup

Name												
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	1	0	0	0	1	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	425.00	100.00	100.00	100.00	250.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		50.00			50.00			50.00			50.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		No			Yes			No			No	

Volumes

Name												
Base Volume Input [veh/h]	345	1	529	0	0	467	293	1431	0	0	1125	427
Base Volume Adjustment Factor	1.0000	1.0000	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]	345	1	529	0	0	467	293	1431	0	0	1125	427
Peak Hour Factor	0.9600	0.9600	0.9600	1.0000	1.0000	1.0000	0.9600	0.9600	1.0000	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	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	90	0	138	0	0	117	76	373	0	0	293	111
Total Analysis Volume [veh/h]	359	1	551	0	0	467	305	1491	0	0	1172	445
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	1 - Coordination Group
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
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	Split	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	0	6	3	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	0	7	7	7	0	0	7	0
Maximum Green [s]	0	30	0	0	0	30	30	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	3.0	3.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	1.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	28	0	0	0	28	63	82	0	0	19	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	3.0	3.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	5	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	10	0	10	0	0	10	0
Rest In Walk		No				No		No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	2.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	0.0	2.0	2.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No				No	No	No			No	
Maximum Recall		No				No	No	No			No	
Pedestrian Recall		No				No	No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	R	R	L	C	C	R
C, Cycle Length [s]	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00
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]	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	21	21	21	21	81	56	56
g / C, Green / Cycle	0.19	0.19	0.19	0.19	0.73	0.51	0.51
(v / s)_i Volume / Saturation Flow Rate	0.17	0.17	0.17	0.17	0.42	0.33	0.28
s, saturation flow rate [veh/h]	1584	1583	2803	1774	3547	3547	1583
c, Capacity [veh/h]	307	307	543	338	2602	1797	802
d1, Uniform Delay [s]	43.30	43.30	42.90	40.01	0.35	12.23	11.41
k, delay calibration	0.19	0.19	0.11	0.11	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	14.76	14.79	4.15	8.79	0.92	1.86	2.76
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	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.90	0.90	0.86	0.90	0.57	0.65	0.55
d, Delay for Lane Group [s/veh]	58.05	58.09	47.05	48.79	1.27	14.09	14.17
Lane Group LOS	E	E	D	D	A	B	B
Critical Lane Group	No	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh]	8.22	8.23	6.15	7.84	0.61	6.02	4.67
50th-Percentile Queue Length [ft]	205.58	205.66	153.81	195.98	15.24	150.59	116.72
95th-Percentile Queue Length [veh]	12.93	12.93	10.22	12.43	1.10	10.05	8.21
95th-Percentile Queue Length [ft]	323.16	323.26	255.50	310.77	27.43	251.22	205.30

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	58.05	58.07	0.00	0.00	47.05	48.79	1.27	0.00	0.00	14.09	14.17
Movement LOS		E	E			D	D	A			B	B
d_A, Approach Delay [s/veh]	58.07			47.05			9.34			14.11		
Approach LOS	E			D			A			B		
d_I, Intersection Delay [s/veh]	21.12											
Intersection LOS	C											
Intersection V/C	0.760											

Sequence

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

Intersection Level Of Service Report
Intersection 19: Antelope Rd (NS)/Scott Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	41.2
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.902

Intersection Setup

Name											
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	2	0	0	1	0	1	2	0	0	1	0	0
Pocket Length [ft]	215.00	100.00	100.00	200.00	100.00	200.00	375.00	100.00	100.00	200.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	423	310	377	64	180	445	344	1169	458	65	653	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]	423	310	377	64	180	445	344	1169	458	65	653	58
Peak Hour Factor	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760
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	79	97	16	46	114	88	299	117	17	167	15
Total Analysis Volume [veh/h]	433	318	386	66	184	456	352	1198	469	67	669	59
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
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 - Coordination Group
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
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]	19	26	0	23	30	0	17	43	0	18	44	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
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	C
C, Cycle Length [s]	110	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	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]	15	40	40	6	32	32	13	41	41	6	34	34
g / C, Green / Cycle	0.14	0.37	0.37	0.06	0.29	0.29	0.12	0.38	0.38	0.06	0.31	0.31
(v / s)_i Volume / Saturation Flow Rate	0.13	0.09	0.24	0.04	0.10	0.29	0.10	0.34	0.30	0.02	0.14	0.14
s, saturation flow rate [veh/h]	3445	3547	1583	1774	1863	1583	3445	3547	1583	3445	3547	1787
c, Capacity [veh/h]	471	1303	582	99	534	454	409	1330	594	194	1109	559
d1, Uniform Delay [s]	46.92	24.20	29.14	50.95	31.08	39.27	47.63	32.48	30.56	48.99	25.19	25.22
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.24	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.72	0.45	5.88	7.35	1.76	43.40	5.42	2.52	5.21	1.05	0.27	0.54
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	1.33	1.33	1.33
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

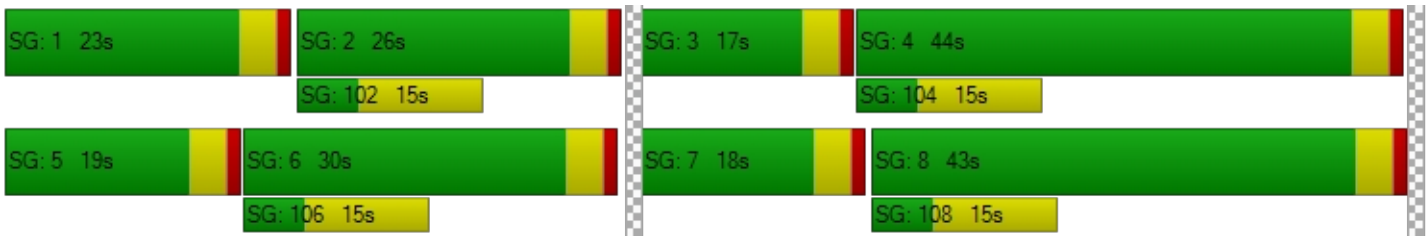
X, volume / capacity	0.92	0.24	0.66	0.66	0.34	1.00	0.86	0.90	0.79	0.35	0.44	0.44
d, Delay for Lane Group [s/veh]	54.64	24.65	35.01	58.30	32.84	82.67	53.04	35.00	35.78	50.04	25.46	25.76
Lane Group LOS	D	C	D	E	C	F	D	D	D	D	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh]	6.10	2.80	8.88	1.92	3.94	16.94	4.85	14.30	11.05	0.87	4.02	4.14
50th-Percentile Queue Length [ft]	152.55	69.88	222.07	48.05	98.49	423.39	121.18	357.50	276.31	21.69	100.59	103.39
95th-Percentile Queue Length [veh]	10.15	5.03	13.77	3.46	7.09	23.75	8.46	20.50	16.50	1.56	7.24	7.44
95th-Percentile Queue Length [ft]	253.83	125.78	344.27	86.50	177.28	593.86	211.44	512.55	412.62	39.04	181.06	186.10

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	54.64	24.65	35.01	58.30	32.84	82.67	53.04	35.00	35.78	50.04	25.54	25.76
Movement LOS	D	C	D	E	C	F	D	D	D	D	C	C
d_A, Approach Delay [s/veh]	39.59			67.40			38.33			27.62		
Approach LOS	D			E			D			C		
d_I, Intersection Delay [s/veh]	41.22											
Intersection LOS	D											
Intersection V/C	0.902											

Sequence

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



Intersection Level Of Service Report
Intersection 20: Haun Rd (NS)/Driveway 1 (EW)

Control Type:	Two-way stop	Delay (sec / veh):	21.8
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.437

Intersection Setup

Name						
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]	50.00		50.00		50.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	1191	22	0	1148	0	127
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]	72	24	0	92	0	24
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]	1263	46	0	1240	0	151
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	343	13	0	337	0	41
Total Analysis Volume [veh/h]	1373	50	0	1348	0	164
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	0.01	0.00	0.00	0.01	0.00	0.44
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	21.84
Movement LOS	A	A		A		C
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.00	2.15
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	0.00	53.86
d_A, Approach Delay [s/veh]	0.00		0.00		21.84	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	1.22					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 21: Haun Rd (NS)/Driveway 2 (EW)

Control Type:	Signalized	Delay (sec / veh):	29.7
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.709

Intersection Setup

Name						
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	2	0	0	0
Pocket Length [ft]	100.00	100.00	300.00	100.00	100.00	100.00
Speed [mph]	50.00		50.00		50.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	845	76	349	799	140	368
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]	48	0	92	-92	92	48
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]	893	76	441	707	232	416
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	243	21	120	192	63	113
Total Analysis Volume [veh/h]	971	83	479	768	252	452
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]	140
Coordination Type	Time of Day Pattern Coordinated
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	Overlap
Signal group	2	0	1	6	7	4
Auxiliary Signal Groups						1,4
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	7	0	7	7	7	7
Maximum Green [s]	30	0	30	30	30	30
Amber [s]	3.0	0.0	3.0	3.0	3.0	3.0
All red [s]	1.0	0.0	1.0	1.0	1.0	1.0
Split [s]	67	0	35	102	38	38
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	3.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	2.0
Minimum Recall	No		No	No	No	No
Maximum Recall	No		No	No	No	No
Pedestrian Recall	No		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]	140	140	140	140	140	140
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	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	0.00
g_i, Effective Green Time [s]	65	65	31	100	32	67
g / C, Green / Cycle	0.47	0.47	0.22	0.72	0.23	0.48
(v / s)_i Volume / Saturation Flow Rate	0.28	0.29	0.14	0.22	0.14	0.29
s, saturation flow rate [veh/h]	1863	1812	3445	3547	1774	1583
c, Capacity [veh/h]	870	846	762	2542	401	753
d1, Uniform Delay [s]	27.71	28.02	49.25	7.16	48.83	26.88
k, delay calibration	0.50	0.50	0.11	0.50	0.15	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.13	3.44	0.86	0.31	2.23	3.51
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	0.61	0.62	0.63	0.30	0.63	0.60
d, Delay for Lane Group [s/veh]	30.84	31.46	50.11	7.46	51.06	30.40
Lane Group LOS	C	C	D	A	D	C
Critical Lane Group	No	Yes	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	13.20	13.39	7.45	3.65	7.97	11.22
50th-Percentile Queue Length [ft/ln]	330.06	334.85	186.36	91.19	199.21	280.41
95th-Percentile Queue Length [veh/ln]	19.16	19.40	11.93	6.57	12.60	16.71
95th-Percentile Queue Length [ft/ln]	479.04	484.90	298.31	164.14	314.94	417.72

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	31.12	31.46	50.11	7.46	51.06	30.40
Movement LOS	C	C	D	A	D	C
d_A, Approach Delay [s/veh]	31.15		23.84		37.79	
Approach LOS	C		C		D	
d_I, Intersection Delay [s/veh]	29.67					
Intersection LOS	C					
Intersection V/C	0.709					

Sequence

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

EXISTING PLUS AMBIENT GROWTH PLUS CUMULATIVE PROJECTS PLUS PROJECT WITHOUT OVERPASS CONDITIONS WITH IMPROVEMENTS LEVELS OF SERVICE WORKSHEETS

Intersection Level Of Service Report
Intersection 6: Antelope Rd (NS)/Newport Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	64.8
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.073

Intersection Setup

Name												
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	2	0	0	2	0	0	2	0	0	2	0	0
Pocket Length [ft]	330.00	100.00	100.00	100.00	100.00	100.00	325.00	100.00	100.00	200.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							Newport Rd			Newport Rd		
Base Volume Input [veh/h]	768	38	119	95	79	293	139	1582	862	169	2655	50
Base Volume Adjustment Factor	1.0000	1.0000	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]	768	38	119	95	79	293	139	1582	862	169	2655	50
Peak Hour Factor	0.9570	0.9570	0.9570	0.9570	0.9570	0.9570	0.9570	0.9570	0.9570	0.9570	0.9570	0.9570
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]	201	10	31	25	21	77	36	413	225	44	694	13
Total Analysis Volume [veh/h]	803	40	124	99	83	306	145	1653	901	177	2774	52
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	1 - Coordination Group
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
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	8	7	4	0
Auxiliary Signal Groups									5,8			
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	7	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	30	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0	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	1.0	1.0	1.0	0.0
Split [s]	34	25	0	28	19	0	15	76	76	11	72	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	5	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	10	0	10	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	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0	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	C	R	L	C	R	L	C	C
C, Cycle Length [s]	140	140	140	140	140	140	140	140	140	140	140	140	140
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	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	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	2.00
g_i, Effective Green Time [s]	30	38	38	7	15	15	15	8	72	72	7	71	71
g / C, Green / Cycle	0.21	0.27	0.27	0.05	0.11	0.11	0.11	0.06	0.51	0.51	0.05	0.51	0.51
(v / s)_i Volume / Saturation Flow Rate	0.23	0.02	0.08	0.03	0.04	0.10	0.10	0.04	0.33	0.57	0.05	0.52	0.53
s, saturation flow rate [veh/h]	3445	1863	1583	3445	1863	1583	1583	3445	5074	1583	3445	3547	1845
c, Capacity [veh/h]	738	509	433	169	201	171	171	194	2605	813	173	1799	936
d1, Uniform Delay [s]	55.00	37.78	40.11	65.18	58.29	61.65	61.65	65.08	24.59	34.07	66.49	34.50	34.50
k, delay calibration	0.12	0.50	0.50	0.11	0.50	0.50	0.50	0.11	0.11	0.50	0.11	0.11	0.50
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
d2, Incremental Delay [s]	45.53	0.30	1.66	3.21	6.14	45.52	45.52	5.67	0.26	65.69	38.60	18.90	40.30
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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	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	1.00

Lane Group Results

X, volume / capacity	1.09	0.08	0.29	0.59	0.41	0.89	0.89	0.75	0.63	1.11	1.03	1.03	1.04
d, Delay for Lane Group [s/veh]	100.53	38.08	41.77	68.39	64.42	107.1	107.1	70.75	24.85	99.76	105.09	53.40	74.80
Lane Group LOS	F	D	D	E	E	F	F	E	C	F	F	F	F
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	17.24	1.04	3.49	1.77	3.03	7.40	7.40	2.64	12.42	40.07	3.94	32.74	39.63
50th-Percentile Queue Length [ft]	431.03	26.08	87.34	44.17	75.71	184.9	184.9	66.08	310.39	1001.82	98.39	818.53	990.82
95th-Percentile Queue Length [veh]	25.18	1.88	6.29	3.18	5.45	11.86	11.86	4.76	18.19	54.70	7.08	43.16	51.60
95th-Percentile Queue Length [ft]	629.45	46.95	157.21	79.51	136.2	296.4	296.4	118.95	454.86	1367.44	177.10	1079.05	1290.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	100.53	38.08	41.77	68.39	64.42	107.17	70.75	24.85	99.76	105.09	60.51	74.80
Movement LOS	F	D	D	E	E	F	E	C	F	F	F	E
d_A, Approach Delay [s/veh]	90.41			92.03			52.32			63.38		
Approach LOS	F			F			D			E		
d_I, Intersection Delay [s/veh]	64.82											
Intersection LOS	E											
Intersection V/C	1.073											

Sequence

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

Intersection Level Of Service Report
Intersection 7: Menifee Rd (NS)/NewportRd (EW)

Control Type:	Signalized	Delay (sec / veh):	46.1
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.008

Intersection Setup

Name							Newport Rd			Newport Rd		
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	1	0	1	1	0	0	1	0	0	2	0	0
Pocket Length [ft]	250.00	100.00	200.00	100.00	100.00	100.00	400.00	100.00	100.00	295.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							Newport Rd			Newport Rd		
Base Volume Input [veh/h]	387	301	151	93	283	542	374	1119	283	225	1739	59
Base Volume Adjustment Factor	1.0000	1.0000	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]	387	301	151	93	283	542	374	1119	283	225	1739	59
Peak Hour Factor	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	104	81	41	25	76	146	100	300	76	60	467	16
Total Analysis Volume [veh/h]	416	323	162	100	304	582	402	1202	304	242	1868	63
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	1 - Coordination Group
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]	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]	7	7	0	7	7	7	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	19	19	0	19	19	19	32	68	0	14	50	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	5	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	10	0	10	0	0	10	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]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	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	C	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]	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	0.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	15	22	22	8	15	47	28	64	64	10	46	46
g / C, Green / Cycle	0.13	0.18	0.18	0.07	0.12	0.39	0.23	0.53	0.53	0.08	0.38	0.38
(v / s)_i Volume / Saturation Flow Rate	0.12	0.09	0.10	0.06	0.09	0.37	0.23	0.29	0.29	0.07	0.37	0.04
s, saturation flow rate [veh/h]	3445	3547	1583	1774	3547	1583	1774	3547	1678	3445	5074	1583
c, Capacity [veh/h]	431	635	284	125	441	620	415	1888	893	292	1945	607
d1, Uniform Delay [s]	52.24	44.49	45.05	54.96	50.32	35.11	45.53	18.41	18.48	54.05	36.12	23.77
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.38	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	13.52	0.63	1.81	11.17	1.93	23.81	31.60	1.11	2.39	5.93	13.00	0.34
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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	0.97	0.51	0.57	0.80	0.69	0.94	0.97	0.54	0.54	0.83	0.96	0.10
d, Delay for Lane Group [s/veh]	65.76	45.12	46.86	66.13	52.25	58.92	77.13	19.53	20.87	59.97	49.11	24.11
Lane Group LOS	E	D	D	E	D	E	E	B	C	E	D	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	6.81	4.24	4.39	3.27	4.34	19.27	14.95	8.72	8.67	3.72	18.87	1.16
50th-Percentile Queue Length [ft]	170.29	106.06	109.87	81.74	108.46	481.64	373.63	218.04	216.85	92.98	471.72	28.96
95th-Percentile Queue Length [veh]	11.09	7.62	7.83	5.89	7.75	26.46	21.29	13.57	13.50	6.69	25.99	2.08
95th-Percentile Queue Length [ft]	277.30	190.50	195.82	147.13	193.86	661.60	532.13	339.13	337.61	167.37	649.81	52.12

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	65.76	45.12	46.86	66.13	52.25	58.92	77.13	19.73	20.87	59.97	49.11	24.11
Movement LOS	E	D	D	E	D	E	E	B	C	E	D	C
d_A, Approach Delay [s/veh]	54.96			57.60			32.01			49.60		
Approach LOS	D			E			C			D		
d_I, Intersection Delay [s/veh]	46.11											
Intersection LOS	D											
Intersection V/C	1.008											

Sequence

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

Intersection Level Of Service Report
Intersection 9: Bradley Rd (NS)/Holland Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	44.4
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.880

Intersection Setup

Name												
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	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	130.00	100.00	100.00	150.00	100.00	100.00	145.00	100.00	100.00	140.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	57	390	210	111	517	251	130	328	224	214	279	150
Base Volume Adjustment Factor	1.0000	1.0000	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	390	210	111	517	251	130	328	224	214	279	150
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	106	57	30	140	68	35	89	61	58	76	41
Total Analysis Volume [veh/h]	62	424	228	121	562	273	141	357	243	233	303	163
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	1 - Coordination Group
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]	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]	11	48	0	13	50	0	32	37	0	22	27	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
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
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
g_i, Effective Green Time [s]	6	52	9	55	55	12	26	26	18	32	32
g / C, Green / Cycle	0.05	0.43	0.08	0.46	0.46	0.10	0.21	0.21	0.15	0.26	0.26
(v / s)_i Volume / Saturation Flow Rate	0.03	0.37	0.07	0.30	0.17	0.08	0.19	0.15	0.13	0.16	0.10
s, saturation flow rate [veh/h]	1774	1754	1774	1863	1583	1774	1863	1583	1774	1863	1583
c, Capacity [veh/h]	92	758	134	849	722	171	396	337	260	490	416
d1, Uniform Delay [s]	55.93	30.83	55.05	25.46	21.48	53.25	46.02	43.94	50.36	38.96	36.36
k, delay calibration	0.11	0.50	0.11	0.50	0.50	0.11	0.23	0.12	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.33	12.26	18.68	4.04	1.51	9.56	14.13	3.35	10.63	1.28	0.60
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
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
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

Lane Group Results

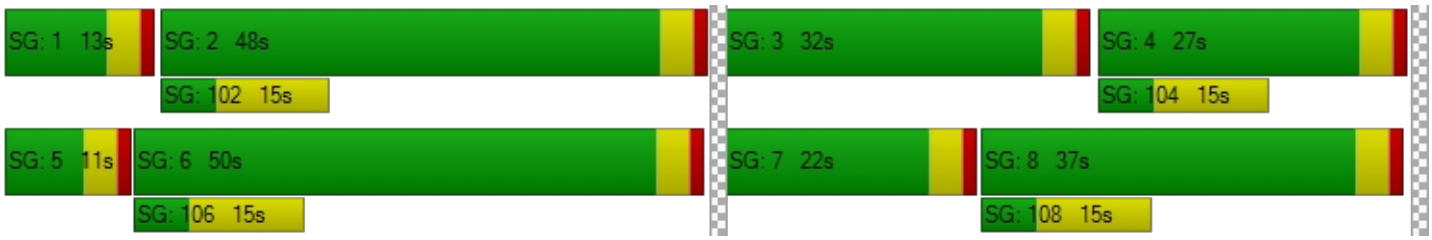
X, volume / capacity	0.68	0.86	0.90	0.66	0.38	0.82	0.90	0.72	0.90	0.62	0.39
d, Delay for Lane Group [s/veh]	64.27	43.09	73.73	29.51	22.99	62.82	60.15	47.29	60.99	40.24	36.96
Lane Group LOS	E	D	E	C	C	E	E	D	E	D	D
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh]	2.00	18.28	4.21	12.49	5.03	4.49	11.47	6.76	7.39	7.70	3.85
50th-Percentile Queue Length [ft]	50.02	456.95	105.19	312.18	125.75	112.24	286.85	169.00	184.64	192.40	96.16
95th-Percentile Queue Length [veh]	3.60	25.29	7.57	18.28	8.71	7.96	17.03	11.02	11.84	12.25	6.92
95th-Percentile Queue Length [ft]	90.04	632.23	189.29	457.06	217.70	199.11	425.72	275.60	296.06	306.14	173.09

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	64.27	43.09	43.09	73.73	29.51	22.99	62.82	60.15	47.29	60.99	40.24	36.96
Movement LOS	E	D	D	E	C	C	E	E	D	E	D	D
d_A, Approach Delay [s/veh]	44.93			33.24			56.44			46.39		
Approach LOS	D			C			E			D		
d_I, Intersection Delay [s/veh]	44.41											
Intersection LOS	D											
Intersection V/C	0.880											

Sequence

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



Intersection Level Of Service Report
Intersection 11: Town Center Dr-Sherman Rd (NS)/Holland Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	34.4
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.654

Intersection Setup

Name											
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	1	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	500.00	100.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	4	1	28	34	0	53	164	653	5	6	607	144
Base Volume Adjustment Factor	1.0000	1.0000	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]	4	1	28	34	0	53	164	653	5	6	607	144
Peak Hour Factor	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	8	10	0	16	49	197	2	2	183	43
Total Analysis Volume [veh/h]	5	1	34	41	0	64	198	788	6	7	732	174
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 Coordinated
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]	11	19	0	11	19	0	16	50	0	20	54	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	1	25	5	29	12	52	52	1	42	42
g / C, Green / Cycle	0.01	0.25	0.05	0.29	0.12	0.52	0.52	0.01	0.42	0.42
(v / s)_i Volume / Saturation Flow Rate	0.00	0.02	0.02	0.04	0.11	0.42	0.00	0.00	0.39	0.11
s, saturation flow rate [veh/h]	1774	1590	1774	1583	1774	1863	1583	1774	1863	1583
c, Capacity [veh/h]	18	404	86	463	214	976	830	24	777	660
d1, Uniform Delay [s]	49.18	28.50	46.38	26.13	43.59	19.66	11.39	48.91	28.03	19.12
k, delay calibration	0.11	0.50	0.11	0.50	0.11	0.25	0.11	0.11	0.31	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.86	0.42	3.99	0.62	15.52	3.67	0.00	6.48	14.94	0.21
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.27	0.09	0.47	0.14	0.93	0.81	0.01	0.29	0.94	0.26
d, Delay for Lane Group [s/veh]	57.05	28.92	50.37	26.75	59.11	23.33	11.39	55.39	42.97	19.33
Lane Group LOS	E	C	D	C	E	C	B	E	D	B
Critical Lane Group	No	Yes	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.16	0.65	1.05	1.14	5.53	13.87	0.06	0.21	18.19	2.46
50th-Percentile Queue Length [ft]	3.97	16.33	26.18	28.45	138.17	346.71	1.44	5.24	454.67	61.61
95th-Percentile Queue Length [veh]	0.29	1.18	1.88	2.05	9.38	19.98	0.10	0.38	25.18	4.44
95th-Percentile Queue Length [ft]	7.15	29.40	47.12	51.20	234.55	499.40	2.59	9.43	629.52	110.89

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	57.05	28.92	28.92	50.37	26.75	26.75	59.11	23.33	11.39	55.39	42.97	19.33
Movement LOS	E	C	C	D	C	C	E	C	B	E	D	B
d_A, Approach Delay [s/veh]	32.44			35.97			30.40			38.56		
Approach LOS	C			D			C			D		
d_I, Intersection Delay [s/veh]	34.36											
Intersection LOS	C											
Intersection V/C	0.654											

Sequence

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

Intersection Level Of Service Report
Intersection 15: Haun Road (NS) / Holland Road (EW)

Control Type:	Signalized	Delay (sec / veh):	41.2
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.893

Intersection Setup

Name												
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	1	0	0	1	0	0	1	0	1	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	150.00	100.00	100.00	150.00	100.00	150.00	100.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	337	415	3	11	338	415	426	2	280	3	7	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 Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	337	415	3	11	338	415	426	2	280	3	7	9
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	92	113	1	3	92	113	116	1	76	1	2	2
Total Analysis Volume [veh/h]	366	451	3	12	367	451	463	2	304	3	8	10
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 Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis
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]	31	31	0	11	11	0	49	57	0	11	19	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
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	C	L	C	R	L	C	R	L	C
C, Cycle Length [s]	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
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
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
g_i, Effective Green Time [s]	25	58	58	2	36	36	31	33	33	1	3
g / C, Green / Cycle	0.22	0.53	0.53	0.02	0.32	0.32	0.28	0.30	0.30	0.01	0.03
(v / s)_i Volume / Saturation Flow Rate	0.21	0.12	0.12	0.01	0.10	0.28	0.26	0.00	0.19	0.00	0.01
s, saturation flow rate [veh/h]	1774	1863	1858	1774	3547	1583	1774	1863	1583	1774	1696
c, Capacity [veh/h]	396	979	977	36	1144	511	499	564	480	11	47
d1, Uniform Delay [s]	41.85	14.11	14.11	53.20	28.17	35.31	38.43	26.77	33.09	54.45	52.60
k, delay calibration	0.27	0.50	0.50	0.11	0.50	0.50	0.20	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	19.40	0.56	0.56	5.45	0.74	19.43	12.84	0.00	1.39	13.18	5.16
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
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
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

Lane Group Results

X, volume / capacity	0.92	0.23	0.23	0.34	0.32	0.88	0.93	0.00	0.63	0.28	0.39
d, Delay for Lane Group [s/veh]	61.25	14.66	14.67	58.65	28.91	54.74	51.27	26.77	34.49	67.63	57.76
Lane Group LOS	E	B	B	E	C	D	D	C	C	E	E
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	11.33	2.92	2.91	0.37	3.58	13.41	13.16	0.04	6.78	0.12	0.54
50th-Percentile Queue Length [ft/ln]	283.37	72.94	72.78	9.25	89.40	335.30	329.12	0.89	169.40	2.99	13.47
95th-Percentile Queue Length [veh/ln]	16.86	5.25	5.24	0.67	6.44	19.42	19.12	0.06	11.05	0.22	0.97
95th-Percentile Queue Length [ft/ln]	421.41	131.29	131.01	16.65	160.92	485.45	477.88	1.60	276.13	5.38	24.24

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	61.25	14.66	14.67	58.65	28.91	54.74	51.27	26.77	34.49	67.63	57.76	57.76
Movement LOS	E	B	B	E	C	D	D	C	C	E	E	E
d_A, Approach Delay [s/veh]	35.46			43.38			44.57			59.17		
Approach LOS	D			D			D			E		
d_I, Intersection Delay [s/veh]	41.23											
Intersection LOS	D											
Intersection V/C	0.893											

Sequence

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

Intersection Level Of Service Report
Intersection 16: Haun Rd-Zeiders Rd (N/S)/Scott Rd (E/W)

Control Type:	Signalized	Delay (sec / veh):	72.7
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.112

Intersection Setup

Name												
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	1	0	0	1	0	0	1	0	0	1	0	1
Pocket Length [ft]	345.00	100.00	100.00	200.00	100.00	100.00	135.00	100.00	100.00	185.00	100.00	200.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	62	233	108	951	148	71	126	922	39	203	675	894
Base Volume Adjustment Factor	1.0000	1.0000	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]	62	233	108	951	148	71	126	922	39	203	675	894
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	63	29	258	40	19	34	251	11	55	183	243
Total Analysis Volume [veh/h]	67	253	117	1034	161	77	137	1002	42	221	734	972
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	1 - Coordination Group
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal group	0	2	0	0	6	0	3	8	0	7	4	4
Auxiliary Signal Groups												4,6
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	7
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	30
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	1.0
Split [s]	0	19	0	0	39	0	13	36	0	16	39	39
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	5
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	10
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
Minimum Recall		No			No		No	No		No	No	No
Maximum Recall		No			No		No	No		No	No	No
Pedestrian Recall		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	L	C	C	L	C	R
C, Cycle Length [s]	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	2.00	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	0.00
g_i, Effective Green Time [s]	15	15	15	35	35	9	28	28	16	35	87
g / C, Green / Cycle	0.14	0.14	0.14	0.32	0.32	0.08	0.26	0.26	0.14	0.32	0.79
(v / s)_i Volume / Saturation Flow Rate	0.04	0.14	0.07	0.36	0.36	0.10	0.28	0.28	0.12	0.21	0.61
s, saturation flow rate [veh/h]	1774	1863	1583	1774	1770	1412	1863	1836	1774	3547	1583
c, Capacity [veh/h]	242	254	216	564	563	160	477	470	256	1125	1252
d1, Uniform Delay [s]	42.63	47.47	44.30	37.52	37.52	52.48	40.92	40.92	46.00	32.35	6.23
k, delay calibration	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.50	0.50
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
d2, Incremental Delay [s]	0.61	25.29	2.11	78.15	79.25	12.32	72.05	72.57	8.43	2.95	4.76
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
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
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

Lane Group Results

X, volume / capacity	0.28	1.00	0.54	1.13	1.13	0.86	1.10	1.10	0.86	0.65	0.78
d, Delay for Lane Group [s/veh]	43.25	72.76	46.40	115.67	116.76	64.80	112.98	113.50	54.44	35.30	10.99
Lane Group LOS	D	E	D	F	F	E	F	F	D	D	B
Critical Lane Group	No	Yes	No	No	No	No	No	Yes	Yes	No	Yes
50th-Percentile Queue Length [veh]	1.61	8.40	2.98	26.34	26.44	4.30	21.68	21.44	6.24	8.36	8.19
50th-Percentile Queue Length [ft]	40.37	210.01	74.53	658.47	661.11	107.51	542.03	536.08	156.07	208.92	204.80
95th-Percentile Queue Length [veh]	2.91	13.15	5.37	37.50	37.69	7.70	31.05	30.76	10.34	13.10	12.89
95th-Percentile Queue Length [ft]	72.66	328.84	134.15	937.56	942.24	192.53	776.17	768.97	258.51	327.44	322.15

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	43.25	72.76	46.40	116.09	116.76	116.76	64.80	113.23	113.50	54.44	35.30	10.99
Movement LOS	D	E	D	F	F	F	E	F	F	D	D	B
d_A, Approach Delay [s/veh]	61.18			116.22			107.62			25.23		
Approach LOS	E			F			F			C		
d_I, Intersection Delay [s/veh]	72.72											
Intersection LOS	E											
Intersection V/C	1.112											

Sequence

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

Intersection Level Of Service Report
Intersection 6: Antelope Rd (NS)/Newport Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	61.1
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.076

Intersection Setup

Name												
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	2	0	0	2	0	0	2	0	0	2	0	0
Pocket Length [ft]	330.00	100.00	100.00	100.00	100.00	100.00	325.00	100.00	100.00	200.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							Newport Rd			Newport Rd		
Base Volume Input [veh/h]	899	133	232	34	96	268	247	2255	811	214	1794	33
Base Volume Adjustment Factor	1.0000	1.0000	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]	899	133	232	34	96	268	247	2255	811	214	1794	33
Peak Hour Factor	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660
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]	233	34	60	9	25	69	64	584	210	55	464	9
Total Analysis Volume [veh/h]	931	138	240	35	99	277	256	2334	840	222	1857	34
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	1 - Coordination Group
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
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	8	7	4	0
Auxiliary Signal Groups									5,8			
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	7	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	30	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0	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	1.0	1.0	1.0	0.0
Split [s]	38	23	0	34	19	0	16	71	71	12	67	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	5	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	10	0	10	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	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0	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	C	R	L	C	R	L	C	C
C, Cycle Length [s]	140	140	140	140	140	140	140	140	140	140	140	140	140
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	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	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	2.00
g_i, Effective Green Time [s]	34	44	44	5	15	15	15	12	67	67	8	63	63
g / C, Green / Cycle	0.24	0.31	0.31	0.04	0.11	0.11	0.11	0.09	0.48	0.48	0.06	0.45	0.45
(v / s)_i Volume / Saturation Flow Rate	0.27	0.07	0.15	0.01	0.05	0.09	0.09	0.07	0.46	0.53	0.06	0.35	0.35
s, saturation flow rate [veh/h]	3445	1863	1583	3445	1863	1583	1583	3445	5074	1583	3445	3547	1846
c, Capacity [veh/h]	837	584	497	128	201	171	171	296	2423	756	197	1593	829
d1, Uniform Delay [s]	53.00	35.62	38.87	65.54	58.82	61.03	61.03	63.20	35.37	36.57	65.99	32.71	32.74
k, delay calibration	0.13	0.50	0.50	0.11	0.50	0.50	0.50	0.11	0.11	0.50	0.11	0.11	0.31
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
d2, Incremental Delay [s]	55.70	0.95	3.34	1.13	8.36	32.47	32.47	7.58	3.46	67.48	70.87	0.86	4.60
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	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	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	1.00

Lane Group Results

X, volume / capacity	1.11	0.24	0.48	0.27	0.49	0.81	0.81	0.87	0.96	1.11	1.13	0.78	0.78
d, Delay for Lane Group [s/veh]	108.70	36.57	42.21	66.68	67.18	93.50	93.50	70.78	38.84	104.05	136.86	33.57	37.34
Lane Group LOS	F	D	D	E	E	F	F	E	D	F	F	C	D
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	20.64	3.57	6.94	0.62	3.70	6.23	6.23	4.70	24.56	38.07	5.38	17.05	18.65
50th-Percentile Queue Length [ft]	516.11	89.23	173.57	15.38	92.48	155.8	155.8	117.57	613.89	951.71	134.43	426.13	466.26
95th-Percentile Queue Length [veh]	29.86	6.42	11.26	1.11	6.66	10.33	10.33	8.26	32.68	52.19	9.50	23.82	25.73
95th-Percentile Queue Length [ft]	746.54	160.62	281.61	27.68	166.4	258.2	258.2	206.48	817.06	1304.84	237.38	595.40	643.32

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	108.70	36.57	42.21	66.68	67.18	93.50	70.78	38.84	104.05	136.86	34.82	37.34
Movement LOS	F	D	D	E	E	F	E	D	F	F	C	D
d_A, Approach Delay [s/veh]	88.90			84.88			57.19			45.58		
Approach LOS	F			F			E			D		
d_I, Intersection Delay [s/veh]	61.09											
Intersection LOS	E											
Intersection V/C	1.076											

Sequence

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

Intersection Level Of Service Report
Intersection 7: Menifee Rd (NS)/NewportRd (EW)

Control Type:	Signalized	Delay (sec / veh):	33.2
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.836

Intersection Setup

Name							Newport Rd			Newport Rd		
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	1	0	1	1	0	0	1	0	0	2	0	0
Pocket Length [ft]	250.00	100.00	200.00	100.00	100.00	100.00	400.00	100.00	100.00	295.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							Newport Rd			Newport Rd		
Base Volume Input [veh/h]	262	289	115	92	247	346	442	1521	368	170	1327	57
Base Volume Adjustment Factor	1.0000	1.0000	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]	262	289	115	92	247	346	442	1521	368	170	1327	57
Peak Hour Factor	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810
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]	67	74	29	23	63	88	113	388	94	43	338	15
Total Analysis Volume [veh/h]	267	295	117	94	252	353	451	1550	375	173	1353	58
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	1 - Coordination Group
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]	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]	7	7	0	7	7	7	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	15	20	0	14	19	19	44	75	0	11	42	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	5	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	10	0	10	0	0	10	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]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	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	C	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]	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	0.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	11	14	14	8	11	48	33	74	74	8	49	49
g / C, Green / Cycle	0.09	0.12	0.12	0.07	0.09	0.40	0.28	0.62	0.62	0.07	0.40	0.40
(v / s)_i Volume / Saturation Flow Rate	0.08	0.08	0.07	0.05	0.07	0.22	0.25	0.36	0.38	0.05	0.27	0.04
s, saturation flow rate [veh/h]	3445	3547	1583	1774	3547	1583	1774	3547	1687	3445	5074	1583
c, Capacity [veh/h]	316	419	187	117	328	639	492	2183	1039	230	2054	641
d1, Uniform Delay [s]	53.66	50.89	50.38	55.25	53.18	27.47	41.99	13.93	14.24	55.03	28.99	22.07
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.17	0.24	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.16	2.17	3.40	11.76	3.77	1.20	13.85	1.18	2.70	4.93	1.67	0.28
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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

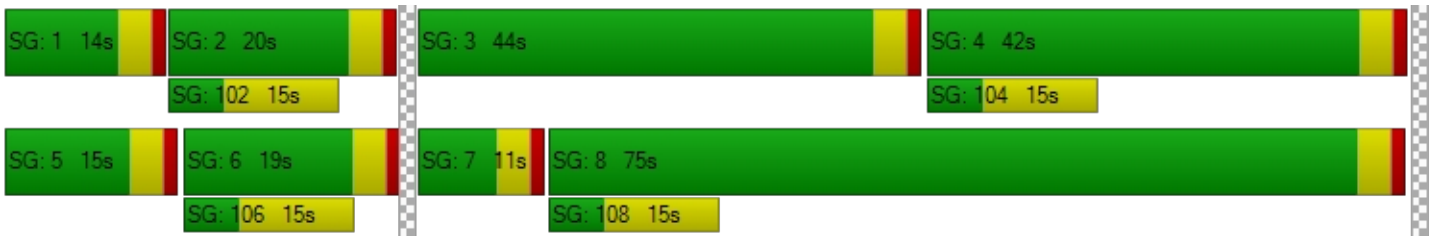
X, volume / capacity	0.84	0.70	0.63	0.80	0.77	0.55	0.92	0.59	0.61	0.75	0.66	0.09
d, Delay for Lane Group [s/veh]	59.81	53.06	53.78	67.01	56.95	28.67	55.84	15.11	16.94	59.95	30.67	22.35
Lane Group LOS	E	D	D	E	E	C	E	B	B	E	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	4.10	4.25	3.41	3.10	3.76	7.52	14.16	9.48	10.00	2.65	10.19	1.02
50th-Percentile Queue Length [ft]	102.57	106.14	85.28	77.43	94.01	187.94	353.90	237.07	250.00	66.13	254.86	25.41
95th-Percentile Queue Length [veh]	7.39	7.62	6.14	5.57	6.77	12.01	20.33	14.53	15.19	4.76	15.43	1.83
95th-Percentile Queue Length [ft]	184.63	190.62	153.51	139.37	169.21	300.36	508.16	363.32	379.65	119.03	385.77	45.75

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	59.81	53.06	53.78	67.01	56.95	28.67	55.84	15.41	16.94	59.95	30.67	22.35
Movement LOS	E	D	D	E	E	C	E	B	B	E	C	C
d_A, Approach Delay [s/veh]	55.84			44.02			23.33			33.56		
Approach LOS	E			D			C			C		
d_I, Intersection Delay [s/veh]	33.21											
Intersection LOS	C											
Intersection V/C	0.836											

Sequence

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



Intersection Level Of Service Report
Intersection 9: Bradley Rd (NS)/Holland Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	47.3
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.873

Intersection Setup

Name											
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	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	130.00	100.00	100.00	150.00	100.00	100.00	145.00	100.00	100.00	140.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	69	368	150	155	267	172	216	313	69	137	363	228
Base Volume Adjustment Factor	1.0000	1.0000	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]	69	368	150	155	267	172	216	313	69	137	363	228
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	100	41	42	73	47	59	85	19	37	99	62
Total Analysis Volume [veh/h]	75	400	163	168	290	187	235	340	75	149	395	248
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 Coordinated
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]	16	45	0	17	46	0	22	28	0	30	36	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
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
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
g_i, Effective Green Time [s]	7	46	13	52	52	18	33	33	12	28	28
g / C, Green / Cycle	0.05	0.38	0.11	0.43	0.43	0.15	0.28	0.28	0.10	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.04	0.32	0.09	0.16	0.12	0.13	0.18	0.05	0.08	0.21	0.16
s, saturation flow rate [veh/h]	1774	1772	1774	1863	1583	1774	1863	1583	1774	1863	1583
c, Capacity [veh/h]	98	671	194	805	685	262	517	440	180	431	366
d1, Uniform Delay [s]	55.96	34.01	52.63	22.92	21.95	50.28	38.34	32.90	52.95	45.05	42.09
k, delay calibration	0.11	0.50	0.11	0.50	0.50	0.11	0.15	0.11	0.11	0.30	0.15
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	11.51	12.04	10.98	1.25	0.99	10.45	1.97	0.18	9.31	18.57	3.00
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
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
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

Lane Group Results

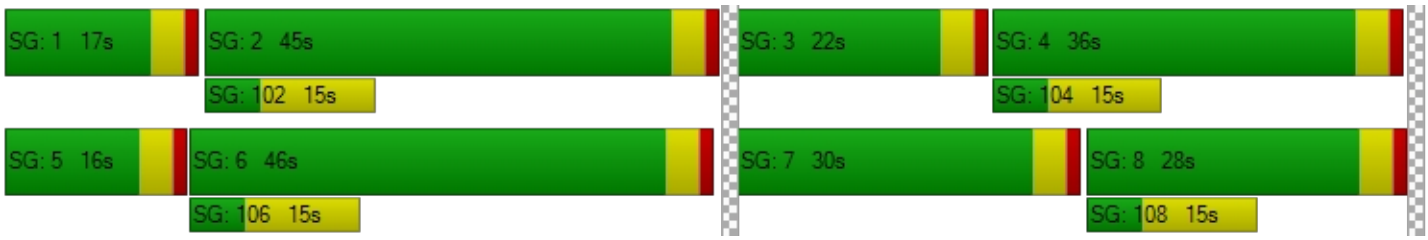
X, volume / capacity	0.76	0.84	0.87	0.36	0.27	0.90	0.66	0.17	0.83	0.92	0.68
d, Delay for Lane Group [s/veh]	67.46	46.05	63.61	24.18	22.93	60.73	40.30	33.08	62.25	63.62	45.09
Lane Group LOS	E	D	E	C	C	E	D	C	E	E	D
Critical Lane Group	No	Yes	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	2.49	16.20	5.40	5.47	3.39	7.44	8.72	1.62	4.73	13.17	6.73
50th-Percentile Queue Length [ft]	62.15	404.92	135.08	136.72	84.76	185.90	218.06	40.50	118.14	329.32	168.21
95th-Percentile Queue Length [veh]	4.47	22.80	9.22	9.30	6.10	11.91	13.57	2.92	8.29	19.13	10.98
95th-Percentile Queue Length [ft]	111.87	569.92	230.38	232.59	152.57	297.70	339.15	72.89	207.27	478.13	274.56

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	67.46	46.05	46.05	63.61	24.18	22.93	60.73	40.30	33.08	62.25	63.62	45.09
Movement LOS	E	D	D	E	C	C	E	D	C	E	E	D
d_A, Approach Delay [s/veh]	48.57			34.09			46.85			57.56		
Approach LOS	D			C			D			E		
d_I, Intersection Delay [s/veh]	47.34											
Intersection LOS	D											
Intersection V/C	0.873											

Sequence

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



Intersection Level Of Service Report
Intersection 11: Town Center Dr-Sherman Rd (NS)/Holland Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	15.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.619

Intersection Setup

Name											
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	1	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	500.00	100.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	5	0	11	33	1	94	65	528	4	27	726	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]	5	0	11	33	1	94	65	528	4	27	726	55
Peak Hour Factor	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	3	9	0	25	17	141	1	7	193	15
Total Analysis Volume [veh/h]	5	0	12	35	1	100	69	562	4	29	773	59
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
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 Coordinated
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]	11	19	0	42	50	0	11	28	0	11	28	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	1	5	4	8	6	71	71	4	69	69
g / C, Green / Cycle	0.01	0.05	0.04	0.08	0.06	0.71	0.71	0.04	0.69	0.69
(v / s)_i Volume / Saturation Flow Rate	0.00	0.01	0.02	0.06	0.04	0.30	0.00	0.02	0.41	0.04
s, saturation flow rate [veh/h]	1774	1583	1774	1586	1774	1863	1583	1774	1863	1583
c, Capacity [veh/h]	18	74	79	128	107	1321	1123	71	1282	1090
d1, Uniform Delay [s]	49.18	45.87	46.61	45.17	45.98	6.06	4.24	46.93	8.31	5.05
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.86	1.02	3.81	10.12	6.27	1.00	0.01	3.79	2.10	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
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

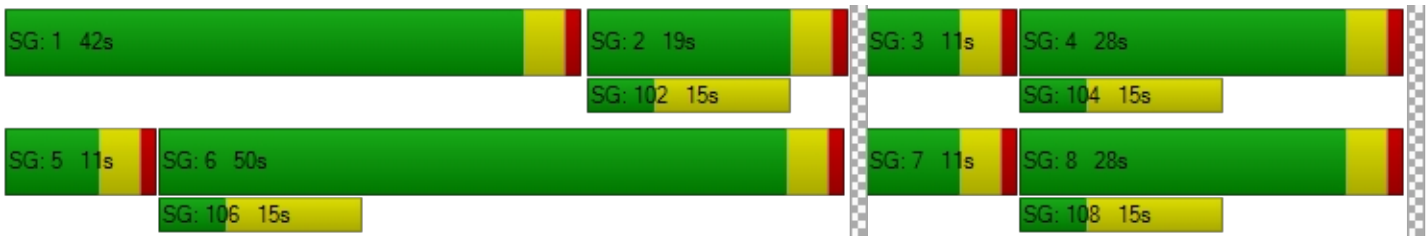
X, volume / capacity	0.27	0.16	0.44	0.79	0.64	0.43	0.00	0.41	0.60	0.05
d, Delay for Lane Group [s/veh]	57.05	46.89	50.43	55.29	52.26	7.07	4.25	50.72	10.41	5.14
Lane Group LOS	E	D	D	E	D	A	A	D	B	A
Critical Lane Group	Yes	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.16	0.30	0.90	2.71	1.79	3.79	0.02	0.75	7.13	0.32
50th-Percentile Queue Length [ft]	3.97	7.39	22.43	67.72	44.76	94.71	0.47	18.75	178.24	8.11
95th-Percentile Queue Length [veh]	0.29	0.53	1.62	4.88	3.22	6.82	0.03	1.35	11.51	0.58
95th-Percentile Queue Length [ft]	7.15	13.31	40.38	121.90	80.57	170.47	0.85	33.74	287.72	14.60

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	57.05	46.89	46.89	50.43	55.29	55.29	52.26	7.07	4.25	50.72	10.41	5.14
Movement LOS	E	D	D	D	E	E	D	A	A	D	B	A
d_A, Approach Delay [s/veh]	49.88			54.04			11.96			11.41		
Approach LOS	D			D			B			B		
d_I, Intersection Delay [s/veh]	15.53											
Intersection LOS	B											
Intersection V/C	0.619											

Sequence

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



Intersection Level Of Service Report
Intersection 15: Haun Road (NS) / Holland Road (EW)

Control Type:	Signalized	Delay (sec / veh):	41.9
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.912

Intersection Setup

Name												
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	1	0	0	1	0	0	1	0	1	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	150.00	100.00	100.00	150.00	100.00	150.00	100.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	342	533	4	6	454	479	372	5	178	2	6	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 Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	342	533	4	6	454	479	372	5	178	2	6	17
Peak Hour Factor	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	93	144	1	2	123	130	101	1	48	1	2	5
Total Analysis Volume [veh/h]	371	577	4	7	492	519	403	5	193	2	7	18
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 Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis
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]	30	16	0	42	28	0	33	41	0	11	19	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
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	C	L	C	R	L	C	R	L	C
C, Cycle Length [s]	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
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
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
g_i, Effective Green Time [s]	25	62	62	1	39	39	27	30	30	0	4
g / C, Green / Cycle	0.22	0.56	0.56	0.01	0.35	0.35	0.24	0.27	0.27	0.00	0.03
(v / s)_i Volume / Saturation Flow Rate	0.21	0.16	0.16	0.00	0.14	0.33	0.23	0.00	0.12	0.00	0.02
s, saturation flow rate [veh/h]	1774	1863	1858	1774	3547	1583	1774	1863	1583	1774	1653
c, Capacity [veh/h]	399	1050	1047	23	1247	557	432	510	434	8	57
d1, Uniform Delay [s]	41.79	12.41	12.41	53.84	26.87	34.42	40.74	29.10	33.05	54.61	52.08
k, delay calibration	0.28	0.50	0.50	0.11	0.50	0.50	0.33	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	20.31	0.66	0.66	7.46	0.94	24.65	21.96	0.01	0.72	17.14	5.21
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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
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

Lane Group Results

X, volume / capacity	0.93	0.28	0.28	0.31	0.39	0.93	0.93	0.01	0.45	0.26	0.44
d, Delay for Lane Group [s/veh]	62.10	13.07	13.07	61.30	27.80	59.07	62.70	29.10	33.76	71.75	57.29
Lane Group LOS	E	B	B	E	C	E	E	C	C	E	E
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	11.59	3.47	3.47	0.23	4.74	16.17	12.72	0.09	4.13	0.09	0.74
50th-Percentile Queue Length [ft/ln]	289.66	86.83	86.63	5.81	118.38	404.30	317.89	2.33	103.30	2.24	18.39
95th-Percentile Queue Length [veh/ln]	17.17	6.25	6.24	0.42	8.30	22.77	18.56	0.17	7.44	0.16	1.32
95th-Percentile Queue Length [ft/ln]	429.22	156.29	155.93	10.46	207.60	569.18	464.10	4.20	185.94	4.04	33.10

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	62.10	13.07	13.07	61.30	27.80	59.07	62.70	29.10	33.76	71.75	57.29	57.29
Movement LOS	E	B	B	E	C	E	E	C	C	E	E	E
d_A, Approach Delay [s/veh]	32.18			43.97			53.13			58.36		
Approach LOS	C			D			D			E		
d_I, Intersection Delay [s/veh]	41.92											
Intersection LOS	D											
Intersection V/C	0.912											

Sequence

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

Intersection Level Of Service Report
Intersection 16: Haun Rd-Zeiders Rd (N/S)/Scott Rd (E/W)

Control Type:	Signalized	Delay (sec / veh):	64.9
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.014

Intersection Setup

Name												
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	1	0	0	1	0	0	1	0	0	1	0	1
Pocket Length [ft]	345.00	100.00	100.00	200.00	100.00	100.00	135.00	100.00	100.00	185.00	100.00	200.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	168	172	265	778	78	113	98	948	45	252	684	689
Base Volume Adjustment Factor	1.0000	1.0000	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]	168	172	265	778	78	113	98	948	45	252	684	689
Peak Hour Factor	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750
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	44	68	199	20	29	25	243	12	65	175	177
Total Analysis Volume [veh/h]	172	176	272	798	80	116	101	972	46	258	702	707
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	1 - Coordination Group
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]	16.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal group	0	2	0	0	6	0	3	8	0	7	4	4
Auxiliary Signal Groups												4,6
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	7
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	30
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	1.0
Split [s]	0	24	0	0	37	0	11	38	0	21	48	48
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	5
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	10
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
Minimum Recall		No			No		No	No		No	No	No
Maximum Recall		No			No		No	No		No	No	No
Pedestrian Recall		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	L	C	C	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	2.00	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	0.00
g_i, Effective Green Time [s]	20	20	20	33	33	7	31	31	20	44	92
g / C, Green / Cycle	0.17	0.17	0.17	0.27	0.27	0.06	0.26	0.26	0.16	0.37	0.77
(v / s)_i Volume / Saturation Flow Rate	0.10	0.09	0.17	0.28	0.29	0.07	0.28	0.28	0.15	0.20	0.45
s, saturation flow rate [veh/h]	1774	1863	1583	1774	1738	1412	1863	1833	1774	3547	1583
c, Capacity [veh/h]	296	310	264	487	478	123	487	479	291	1297	1214
d1, Uniform Delay [s]	46.14	46.01	50.00	43.52	43.52	58.34	44.32	44.32	49.09	30.11	5.90
k, delay calibration	0.11	0.11	0.22	0.47	0.48	0.11	0.50	0.50	0.11	0.50	0.50
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
d2, Incremental Delay [s]	1.81	1.63	44.93	44.57	51.49	12.61	55.58	56.01	8.97	1.63	2.05
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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

Lane Group Results

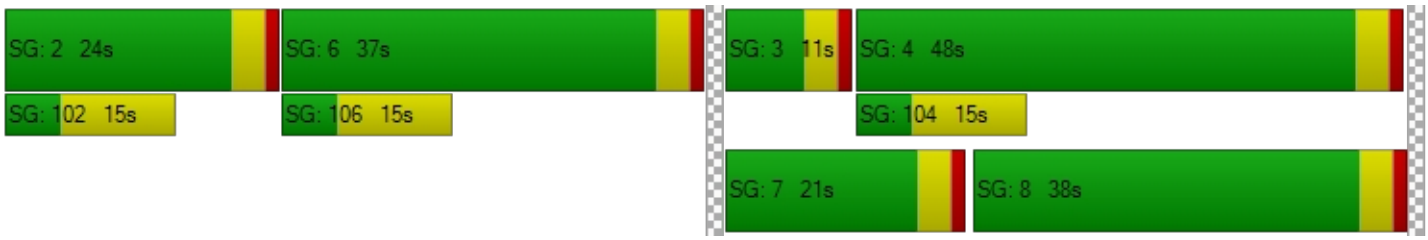
X, volume / capacity	0.58	0.57	1.03	1.02	1.04	0.82	1.05	1.05	0.89	0.54	0.58
d, Delay for Lane Group [s/veh]	47.95	47.64	94.93	88.09	95.01	70.95	99.89	100.33	58.06	31.73	7.95
Lane Group LOS	D	D	F	F	F	E	F	F	E	C	A
Critical Lane Group	No	No	Yes	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	4.72	4.80	10.89	19.73	20.25	3.48	21.25	20.97	7.99	7.88	5.78
50th-Percentile Queue Length [ft]	117.93	120.05	272.24	493.21	506.28	87.11	531.28	524.33	199.86	197.03	144.52
95th-Percentile Queue Length [veh]	8.28	8.40	16.54	27.35	28.33	6.27	29.75	29.41	12.63	12.49	9.72
95th-Percentile Queue Length [ft]	206.98	209.90	413.59	683.74	708.20	156.80	743.65	735.30	315.78	312.13	243.09

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	47.95	47.64	94.93	90.70	95.01	95.01	70.95	100.10	100.33	58.06	31.73	7.95
Movement LOS	D	D	F	F	F	F	E	F	F	E	C	A
d_A, Approach Delay [s/veh]	68.47			91.55			97.48			25.72		
Approach LOS	E			F			F			C		
d_I, Intersection Delay [s/veh]	64.86											
Intersection LOS	E											
Intersection V/C	1.014											

Sequence

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



EXISTING PLUS AMBIENT GROWTH PLUS CUMULATIVE PROJECT WITH OVERPASS CONDITIONS LEVEL OF SERVICE WORKSHEETS

Intersection Level Of Service Report
Intersection 1: Murrieta Rd (NS)/Newport Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	43.4
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.833

Intersection Setup

Name							Newport Rd			Newport Rd		
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	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	190.00	100.00	100.00	225.00	100.00	100.00	275.00	100.00	100.00	180.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							Newport Rd			Newport Rd		
Base Volume Input [veh/h]	212	440	135	330	379	201	315	970	133	155	810	119
Base Volume Adjustment Factor	1.0000	1.0000	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	440	135	330	379	201	315	970	133	155	810	119
Peak Hour Factor	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090
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]	58	121	37	91	104	55	87	267	37	43	223	33
Total Analysis Volume [veh/h]	233	484	149	363	417	221	347	1067	146	171	891	131
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	1 - Coordination Group
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
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]	23	20	0	34	31	0	31	40	0	16	25	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	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]	110	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	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]	16	24	24	25	32	32	23	34	34	12	22	22
g / C, Green / Cycle	0.15	0.22	0.22	0.22	0.29	0.29	0.21	0.30	0.30	0.11	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.13	0.14	0.09	0.20	0.12	0.14	0.20	0.21	0.09	0.10	0.18	0.08
s, saturation flow rate [veh/h]	1774	3547	1583	1774	3547	1583	1774	5074	1583	1774	5074	1583
c, Capacity [veh/h]	265	769	343	397	1033	461	379	1543	481	195	1017	317
d1, Uniform Delay [s]	45.89	39.13	37.30	41.75	31.37	32.18	42.34	33.79	29.40	48.28	42.73	38.41
k, delay calibration	0.11	0.50	0.50	0.27	0.50	0.50	0.24	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.13	3.88	3.96	17.83	1.18	3.54	17.17	0.56	0.35	11.55	2.59	0.86
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.88	0.63	0.43	0.91	0.40	0.48	0.91	0.69	0.30	0.87	0.88	0.41
d, Delay for Lane Group [s/veh]	55.03	43.02	41.26	59.57	32.55	35.72	59.50	34.36	29.75	59.84	45.32	39.27
Lane Group LOS	E	D	D	E	C	D	E	C	C	E	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	6.64	6.06	3.69	11.08	4.39	5.04	10.55	7.96	2.86	5.06	7.68	3.03
50th-Percentile Queue Length [ft]	165.94	151.44	92.24	276.93	109.73	126.04	263.80	198.88	71.48	126.56	192.12	75.64
95th-Percentile Queue Length [veh]	10.86	10.09	6.64	16.54	7.82	8.72	15.88	12.58	5.15	8.75	12.23	5.45
95th-Percentile Queue Length [ft]	271.57	252.36	166.02	413.39	195.62	218.10	396.98	314.51	128.66	218.82	305.78	136.15

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	55.03	43.02	41.26	59.57	32.55	35.72	59.50	34.36	29.75	59.84	45.32	39.27
Movement LOS	E	D	D	E	C	D	E	C	C	E	D	D
d_A, Approach Delay [s/veh]	45.95			43.05			39.52			46.74		
Approach LOS	D			D			D			D		
d_I, Intersection Delay [s/veh]	43.35											
Intersection LOS	D											
Intersection V/C	0.833											

Sequence

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

Intersection Level Of Service Report
Intersection 2: Bradley Rd (N/S)/Newport Rd (E/W)

Control Type:	Signalized	Delay (sec / veh):	48.6
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.043

Intersection Setup

Name				Bradley Rd			Newport Rd			Newport Rd		
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	1	0	0	1	0	0	1	0	0	2	0	1
Pocket Length [ft]	100.00	100.00	100.00	125.00	100.00	100.00	165.00	100.00	100.00	155.00	100.00	150.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name				Bradley Rd			Newport Rd			Newport Rd		
Base Volume Input [veh/h]	150	276	473	221	318	71	90	1447	82	435	1070	129
Base Volume Adjustment Factor	1.0000	1.0000	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]	150	276	473	221	318	71	90	1447	82	435	1070	129
Peak Hour Factor	0.8690	0.8690	0.8690	0.8690	0.8690	0.8690	0.8690	0.8690	0.8690	0.8690	0.8690	0.8690
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	79	136	64	91	20	26	416	24	125	308	37
Total Analysis Volume [veh/h]	173	318	544	254	366	82	104	1665	94	501	1231	148
Presence of On-Street Parking	No		Yes	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 - Coordination Group
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
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	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	2	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups			2,7									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	30	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	3.0	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	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	16	30	30	20	34	0	19	40	0	20	41	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	5	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	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	2.0	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	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	C	L	C	C	L	C	R
C, Cycle Length [s]	110	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	12	26	46	16	30	30	8	36	36	16	44	44
g / C, Green / Cycle	0.11	0.24	0.42	0.15	0.27	0.27	0.07	0.33	0.33	0.15	0.40	0.40
(v / s)_i Volume / Saturation Flow Rate	0.10	0.17	0.38	0.14	0.12	0.12	0.06	0.33	0.33	0.15	0.24	0.09
s, saturation flow rate [veh/h]	1774	1863	1425	1774	1863	1746	1774	3547	1812	3445	5074	1583
c, Capacity [veh/h]	194	443	598	258	511	479	131	1155	590	501	2017	629
d1, Uniform Delay [s]	48.37	38.53	29.96	46.88	33.08	33.10	50.14	37.10	37.10	47.00	26.37	22.03
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.46	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	13.14	9.60	20.20	22.42	2.87	3.08	10.40	14.13	38.00	18.48	0.30	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	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

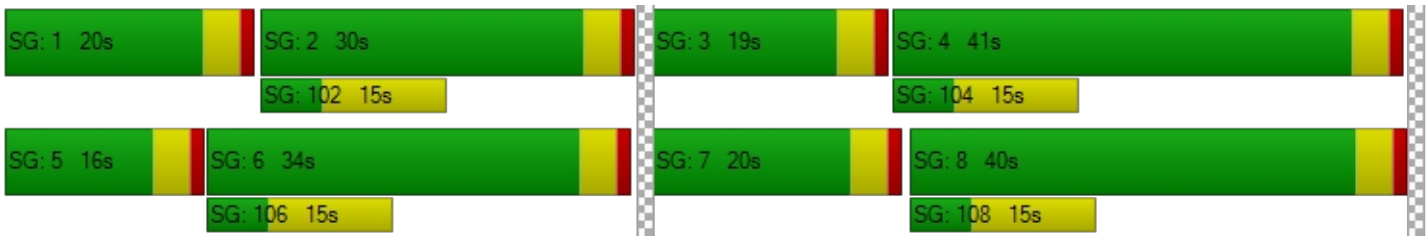
X, volume / capacity	0.89	0.72	0.91	0.98	0.45	0.45	0.80	1.01	1.01	1.00	0.61	0.24
d, Delay for Lane Group [s/veh]	61.51	48.13	50.15	69.29	35.94	36.18	60.54	51.23	75.10	65.48	26.67	22.22
Lane Group LOS	E	D	D	E	D	D	E	F	F	E	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	5.20	8.67	15.64	8.22	5.25	4.98	3.09	16.64	20.92	7.83	7.96	2.42
50th-Percentile Queue Length [ft]	129.97	216.65	391.01	205.61	131.33	124.48	77.16	416.08	523.05	195.74	199.08	60.40
95th-Percentile Queue Length [veh]	8.94	13.49	22.13	12.93	9.01	8.64	5.56	23.45	28.61	12.42	12.59	4.35
95th-Percentile Queue Length [ft]	223.45	337.35	553.15	323.19	225.31	215.97	138.88	586.19	715.17	310.47	314.78	108.72

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	61.51	48.13	50.15	69.29	36.03	36.18	60.54	58.42	75.10	65.48	26.67	22.22
Movement LOS	E	D	D	E	D	D	E	E	E	E	C	C
d_A, Approach Delay [s/veh]	51.43			48.08			59.38			36.66		
Approach LOS	D			D			E			D		
d_I, Intersection Delay [s/veh]	48.64											
Intersection LOS	D											
Intersection V/C	1.043											

Sequence

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



Intersection Level Of Service Report
Intersection 3: Haun Road (NS) / Newport Road (EW)

Control Type:	Signalized	Delay (sec / veh):	36.0
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.898

Intersection Setup

Name	Haun Rd			Haun Rd						Newport Rd		
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	2	0	1	2	0	0	2	0	0	2	0	1
Pocket Length [ft]	215.00	100.00	285.00	155.00	100.00	100.00	210.00	100.00	100.00	350.00	100.00	150.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Haun Rd			Haun Rd						Newport Rd		
Base Volume Input [veh/h]	236	106	600	146	58	62	149	1799	274	677	1257	380
Base Volume Adjustment Factor	1.0000	1.0000	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]	236	106	600	146	58	62	149	1799	274	677	1257	380
Peak Hour Factor	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	62	28	158	39	15	16	39	474	72	179	331	100
Total Analysis Volume [veh/h]	249	112	633	154	61	65	157	1898	289	714	1326	401
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	1 - Coordination Group
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
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	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	2	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups			2,7									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	30	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	3.0	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	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	16	22	22	13	19	0	12	62	0	43	93	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	5	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	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	2.0	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	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	C	L	C	R	L	C	C
C, Cycle Length [s]	140	140	140	140	140	140	140	140	140	140	140	140
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	12	22	59	8	18	18	8	61	61	33	86	86
g / C, Green / Cycle	0.09	0.16	0.42	0.06	0.13	0.13	0.06	0.44	0.44	0.24	0.61	0.61
(v / s)_i Volume / Saturation Flow Rate	0.07	0.06	0.23	0.04	0.03	0.04	0.05	0.37	0.18	0.21	0.33	0.34
s, saturation flow rate [veh/h]	3445	1863	2803	3445	1863	1583	3445	5074	1583	3445	3547	1657
c, Capacity [veh/h]	296	290	1178	203	240	204	199	2208	689	814	2176	1017
d1, Uniform Delay [s]	63.05	53.10	30.38	64.90	54.95	55.43	65.11	35.68	27.32	51.51	15.52	15.92
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.13
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.45	3.86	1.76	5.76	2.55	4.09	6.83	1.06	0.41	3.23	0.20	0.59
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

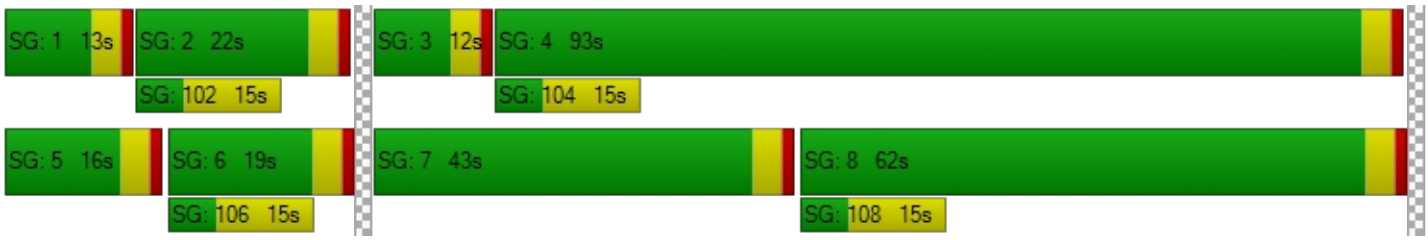
X, volume / capacity	0.84	0.39	0.54	0.76	0.25	0.32	0.79	0.86	0.42	0.88	0.53	0.56
d, Delay for Lane Group [s/veh]	69.50	56.96	32.14	70.66	57.50	59.52	71.94	36.74	27.73	54.74	15.72	16.51
Lane Group LOS	E	E	C	E	E	E	E	D	C	D	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh]	4.53	3.77	7.95	2.81	2.07	2.27	2.89	18.59	6.50	12.03	9.70	9.90
50th-Percentile Queue Length [ft]	113.18	94.27	198.74	70.18	51.68	56.77	72.28	464.66	162.58	300.79	242.60	247.45
95th-Percentile Queue Length [veh]	8.02	6.79	12.57	5.05	3.72	4.09	5.20	25.66	10.69	17.72	14.81	15.06
95th-Percentile Queue Length [ft]	200.42	169.69	314.33	126.33	93.02	102.19	130.11	641.42	267.13	443.00	370.32	376.44

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	69.50	56.96	32.14	70.66	57.50	59.52	71.94	36.74	27.73	54.74	15.82	16.51
Movement LOS	E	E	C	E	E	E	E	D	C	D	B	B
d_A, Approach Delay [s/veh]	44.30			65.21			37.99			27.32		
Approach LOS	D			E			D			C		
d_I, Intersection Delay [s/veh]	35.98											
Intersection LOS	D											
Intersection V/C	0.898											

Sequence

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



Intersection Level Of Service Report
Intersection 4: I-215 SB Ramps (NS) / Newport Road (EW)

Control Type:	Signalized	Delay (sec / veh):	20.5
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.391

Intersection Setup

Name	I-215 SB Ramps			I-215 SB Ramps			Newport Rd			Newport Rd		
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	1	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	800.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		50.00			50.00			50.00			50.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			No			No	

Volumes

Name	I-215 SB Ramps			I-215 SB Ramps			Newport Rd			Newport Rd		
Base Volume Input [veh/h]	0	0	0	563	0	672	0	1633	922	0	1759	1378
Base Volume Adjustment Factor	1.0000	1.0000	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	563	0	672	0	1633	922	0	1759	1378
Peak Hour Factor	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	151	0	180	0	437	247	0	471	369
Total Analysis Volume [veh/h]	0	0	0	603	0	719	0	1748	987	0	1883	1475
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 - Coordination Group
Cycle Length [s]	140
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	Overlap	Protecte	Permiss	Overlap
Signal group	0	0	0	1	0	0	0	8	8	7	4	4
Auxiliary Signal Groups									1,4,8			1,4,8
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	7	0	0	0	7	7	0	7	7
Maximum Green [s]	0	0	0	30	0	0	0	30	30	0	30	30
Amber [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0
All red [s]	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0	1.0
Split [s]	0	0	0	62	0	0	0	78	78	0	78	78
Vehicle Extension [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0
Walk [s]	0	0	0	5	0	0	0	5	5	0	5	5
Pedestrian Clearance [s]	0	0	0	10	0	0	0	10	10	0	10	10
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	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0
Minimum Recall				No				No	No		No	No
Maximum Recall				No				No	No		No	No
Pedestrian Recall				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	C	R	C	R
C, Cycle Length [s]		140	140	140	140	140	140	140
L, Total Lost Time per Cycle [s]		4.00	4.00	4.00	4.00	0.00	4.00	0.00
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]		2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]		53	53	53	79	136	79	136
g / C, Green / Cycle		0.38	0.38	0.38	0.56	0.97	0.56	0.97
(v / s)_i Volume / Saturation Flow Rate		0.25	0.27	0.28	0.26	0.62	0.37	0.93
s, saturation flow rate [veh/h]		1774	1649	1583	6765	1583	5074	1583
c, Capacity [veh/h]		677	629	604	3798	1538	2848	1538
d1, Uniform Delay [s]		35.60	36.52	37.07	18.14	0.15	21.39	0.84
k, delay calibration		0.17	0.20	0.22	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		1.67	2.69	3.51	0.40	2.07	1.22	15.07
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

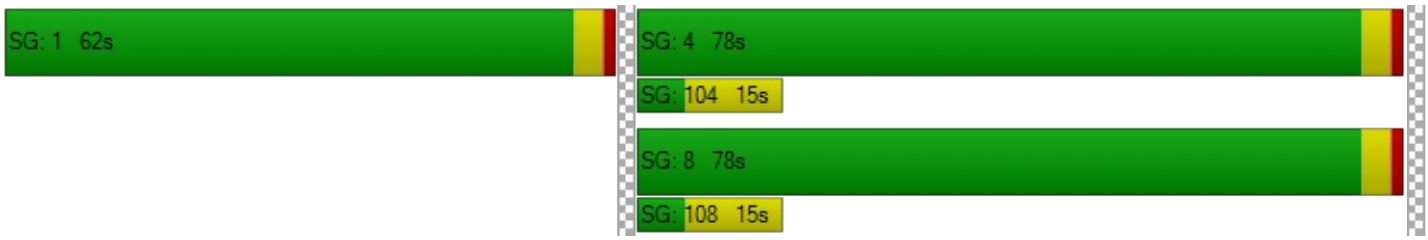
X, volume / capacity		0.65	0.70	0.73	0.46	0.64	0.66	0.96
d, Delay for Lane Group [s/veh]		37.27	39.20	40.59	18.55	2.22	22.62	15.90
Lane Group LOS		D	D	D	B	A	C	B
Critical Lane Group		No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]		12.18	12.64	12.95	7.92	0.88	13.56	6.44
50th-Percentile Queue Length [ft]		304.56	316.10	323.74	198.04	22.11	338.99	160.95
95th-Percentile Queue Length [veh]		17.91	18.48	18.85	12.54	1.59	19.60	10.60
95th-Percentile Queue Length [ft]		447.67	461.89	471.29	313.43	39.79	489.96	264.98

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	37.79	0.00	40.05	0.00	18.55	2.22	0.00	22.62	15.90
Movement LOS				D		D		B	A		C	B
d_A, Approach Delay [s/veh]	0.00			39.02			12.65			19.67		
Approach LOS	A			D			B			B		
d_I, Intersection Delay [s/veh]	20.53											
Intersection LOS	C											
Intersection V/C	0.391											

Sequence

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



Intersection Level Of Service Report
Intersection 5: I-215 NB Ramps (NS) / Newport Road (EW)

Control Type:	Signalized	Delay (sec / veh):	21.0
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.736

Intersection Setup

Name	I-215 NB Ramps			I-215 NB Ramps			Newport Rd			Newport Rd		
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	1	0	1	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	375.00	100.00	375.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name	I-215 NB Ramps			I-215 NB Ramps			Newport Rd			Newport Rd		
Base Volume Input [veh/h]	564	0	720	0	0	0	0	1541	633	0	2564	721
Base Volume Adjustment Factor	1.0000	1.0000	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]	564	0	720	0	0	0	0	1541	633	0	2564	721
Peak Hour Factor	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	151	0	193	0	0	0	0	412	169	0	686	193
Total Analysis Volume [veh/h]	603	0	770	0	0	0	0	1648	677	0	2742	771
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 - Coordination Group
Cycle Length [s]	140
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	Split	Permiss	Split	Permiss	Permiss	Permiss	Protecte	Permiss	Overlap	Permiss	Permiss	Overlap
Signal group	5	0	0	0	0	0	3	8	5	0	4	4
Auxiliary Signal Groups									4,5,8			4,5,8
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	0	0	0	0	0	0	7	7	0	7	7
Maximum Green [s]	30	0	0	0	0	0	0	30	30	0	30	30
Amber [s]	3.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0
All red [s]	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0	1.0
Split [s]	121	0	0	0	0	0	0	19	121	0	19	19
Vehicle Extension [s]	3.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0
Walk [s]	5	0	0	0	0	0	0	5	5	0	5	5
Pedestrian Clearance [s]	10	0	0	0	0	0	0	10	10	0	10	10
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	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0
Minimum Recall	No							No	No		No	No
Maximum Recall	No							No	No		No	No
Pedestrian Recall	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		C	R	C	R
C, Cycle Length [s]	140	140	140		140	140	140	140
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00		4.00	0.00	4.00	0.00
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]	2.00	2.00	2.00		2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	52	52	52		80	136	80	136
g / C, Green / Cycle	0.37	0.37	0.37		0.57	0.97	0.57	0.97
(v / s)_i Volume / Saturation Flow Rate	0.26	0.28	0.29		0.32	0.43	0.41	0.49
s, saturation flow rate [veh/h]	1774	1639	1583		5074	1583	6765	1583
c, Capacity [veh/h]	656	606	585		2909	1538	3878	1538
d1, Uniform Delay [s]	37.46	38.56	39.09		18.86	0.10	21.42	0.11
k, delay calibration	0.11	0.11	0.11		0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.36	1.95	2.33		0.81	0.92	1.11	1.17
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	0.70	0.76	0.78		0.57	0.44	0.71	0.50
d, Delay for Lane Group [s/veh]	38.81	40.51	41.42		19.67	1.02	22.53	1.28
Lane Group LOS	D	D	D		B	A	C	A
Critical Lane Group	No	No	Yes		No	No	Yes	No
50th-Percentile Queue Length [veh]	13.01	13.47	13.70		10.64	0.39	15.06	0.50
50th-Percentile Queue Length [ft]	325.36	336.76	342.60		265.90	9.79	376.52	12.50
95th-Percentile Queue Length [veh]	18.93	19.49	19.77		15.98	0.71	21.43	0.90
95th-Percentile Queue Length [ft]	473.27	487.24	494.37		399.62	17.63	535.64	22.50

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	39.22	0.00	41.05	0.00	0.00	0.00	0.00	19.67	1.02	0.00	22.53	1.28
Movement LOS	D		D					B	A		C	A
d_A, Approach Delay [s/veh]	40.25			0.00			14.24			17.86		
Approach LOS	D			A			B			B		
d_I, Intersection Delay [s/veh]	20.96											
Intersection LOS	C											
Intersection V/C	0.736											

Sequence

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

Intersection Level Of Service Report
Intersection 6: Antelope Rd (NS)/Newport Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	50.4
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.015

Intersection Setup

Name												
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	2	0	0	2	0	0	2	0	0	2	0	0
Pocket Length [ft]	330.00	100.00	100.00	100.00	100.00	100.00	325.00	100.00	100.00	200.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							Newport Rd			Newport Rd		
Base Volume Input [veh/h]	699	38	119	95	94	260	121	1293	833	169	2327	50
Base Volume Adjustment Factor	1.0000	1.0000	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]	699	38	119	95	94	260	121	1293	833	169	2327	50
Peak Hour Factor	0.9570	0.9570	0.9570	0.9570	0.9570	0.9570	0.9570	0.9570	0.9570	0.9570	0.9570	0.9570
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]	183	10	31	25	25	68	32	338	218	44	608	13
Total Analysis Volume [veh/h]	730	40	124	99	98	272	126	1351	870	177	2432	52
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	1 - Coordination Group
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
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	8	7	4	0
Auxiliary Signal Groups									5,8			
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	7	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	30	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0	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	1.0	1.0	1.0	0.0
Split [s]	33	36	0	16	19	0	21	77	77	11	67	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	5	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	10	0	10	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	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0	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	C	R	L	C	C	L	C	C
C, Cycle Length [s]	140	140	140	140	140	140	140	140	140	140	140	140	140
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	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	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	2.00
g_i, Effective Green Time [s]	29	37	37	7	15	15	15	7	73	73	7	73	73
g / C, Green / Cycle	0.21	0.27	0.27	0.05	0.11	0.11	0.11	0.05	0.52	0.52	0.05	0.52	0.52
(v / s)_i Volume / Saturation Flow Rate	0.21	0.02	0.08	0.03	0.05	0.09	0.09	0.04	0.38	0.55	0.05	0.46	0.46
s, saturation flow rate [veh/h]	3445	1863	1583	3445	1863	1583	1583	3445	3547	1583	3445	3547	1843
c, Capacity [veh/h]	714	496	421	169	201	171	171	177	1846	824	172	1842	957
d1, Uniform Delay [s]	55.50	38.52	40.90	65.18	58.79	60.93	60.93	65.40	25.99	33.56	66.50	29.94	30.13
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.50	0.11	0.11	0.50	0.11	0.11	0.40
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
d2, Incremental Delay [s]	21.81	0.32	1.77	3.22	8.21	30.70	30.70	5.26	0.57	47.06	38.84	1.58	10.14
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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	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	1.00

Lane Group Results

X, volume / capacity	1.02	0.08	0.29	0.59	0.49	0.80	0.80	0.71	0.73	1.06	1.03	0.89	0.89
d, Delay for Lane Group [s/veh]	77.31	38.84	42.67	68.40	67.00	91.63	91.63	70.65	26.56	80.62	105.34	31.52	40.27
Lane Group LOS	F	D	D	E	E	F	F	E	C	F	F	C	D
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	14.33	1.06	3.54	1.77	3.66	6.06	6.06	2.29	16.34	36.28	3.94	22.87	26.36
50th-Percentile Queue Length [ft]	358.28	26.40	88.46	44.18	91.41	151.4	151.4	57.34	408.38	906.92	98.45	571.68	658.90
95th-Percentile Queue Length [veh]	20.80	1.90	6.37	3.18	6.58	10.09	10.09	4.13	22.96	48.23	7.09	30.71	34.78
95th-Percentile Queue Length [ft]	519.94	47.52	159.23	79.52	164.5	252.3	252.3	103.21	574.09	1205.85	177.22	767.74	869.38

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	77.31	38.84	42.67	68.40	67.00	91.63	70.65	26.56	80.62	105.34	34.40	40.27
Movement LOS	F	D	D	E	E	F	E	C	F	F	C	D
d_A, Approach Delay [s/veh]	70.78			81.58			48.97			39.24		
Approach LOS	E			F			D			D		
d_I, Intersection Delay [s/veh]	50.37											
Intersection LOS	D											
Intersection V/C	1.015											

Sequence

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

Intersection Level Of Service Report
Intersection 7: Menifee Rd (NS)/NewportRd (EW)

Control Type:	Signalized	Delay (sec / veh):	67.0
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.080

Intersection Setup

Name							Newport Rd			Newport Rd		
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	1	0	1	1	0	0	1	0	0	2	0	0
Pocket Length [ft]	250.00	100.00	200.00	100.00	100.00	100.00	400.00	100.00	100.00	295.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							Newport Rd			Newport Rd		
Base Volume Input [veh/h]	284	355	151	93	354	447	307	1069	205	225	1691	59
Base Volume Adjustment Factor	1.0000	1.0000	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]	284	355	151	93	354	447	307	1069	205	225	1691	59
Peak Hour Factor	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	76	95	41	25	95	120	82	287	55	60	454	16
Total Analysis Volume [veh/h]	305	381	162	100	380	480	330	1148	220	242	1816	63
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	1 - Coordination Group
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]	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]	14	26	0	25	37	0	25	57	0	12	44	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
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	C	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]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	10	35	35	8	33	33	21	53	53	8	40	40
g / C, Green / Cycle	0.08	0.29	0.29	0.07	0.27	0.27	0.18	0.44	0.44	0.07	0.33	0.33
(v / s)_i Volume / Saturation Flow Rate	0.09	0.11	0.10	0.06	0.11	0.30	0.19	0.26	0.26	0.07	0.36	0.04
s, saturation flow rate [veh/h]	3445	3547	1583	1774	3547	1583	1774	3547	1714	3445	5074	1583
c, Capacity [veh/h]	287	1020	455	125	975	435	313	1563	755	234	1686	526
d1, Uniform Delay [s]	55.00	34.12	33.93	54.92	35.34	43.51	49.43	25.36	25.38	55.93	40.06	27.86
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.26	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	43.07	0.23	0.47	10.94	0.25	74.10	52.47	1.64	3.38	36.91	45.93	0.46
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

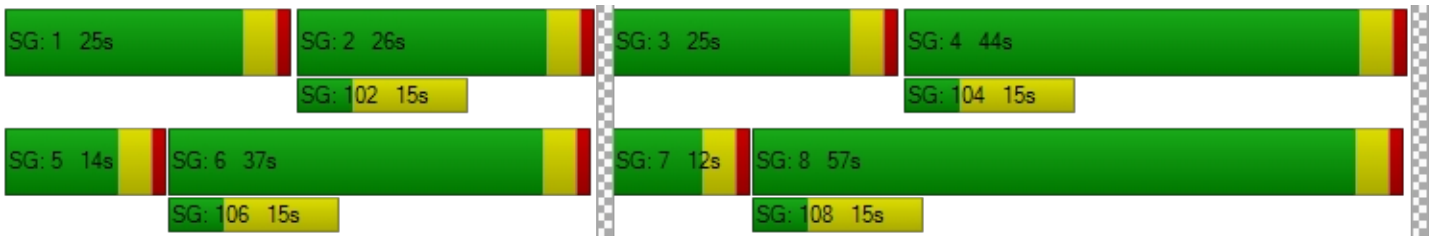
X, volume / capacity	1.06	0.37	0.36	0.80	0.39	1.10	1.06	0.59	0.59	1.04	1.08	0.12
d, Delay for Lane Group [s/veh]	98.07	34.35	34.40	65.86	35.59	117.61	101.90	27.00	28.76	92.84	85.99	28.32
Lane Group LOS	F	C	C	E	D	F	F	C	C	F	F	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	5.91	4.29	3.66	3.26	4.37	21.18	13.54	9.60	9.66	4.62	22.70	1.28
50th-Percentile Queue Length [ft]	147.72	107.27	91.51	81.55	109.27	529.59	338.58	239.88	241.59	115.51	567.51	31.96
95th-Percentile Queue Length [veh]	10.10	7.69	6.59	5.87	7.80	30.47	20.12	14.68	14.76	8.23	32.04	2.30
95th-Percentile Queue Length [ft]	252.53	192.20	164.72	146.78	194.98	761.83	503.05	366.88	369.04	205.83	800.93	57.53

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	98.07	34.35	34.40	65.86	35.59	117.61	101.90	27.35	28.76	92.84	85.99	28.32
Movement LOS	F	C	C	E	D	F	F	C	C	F	F	C
d_A, Approach Delay [s/veh]	57.28			79.75			42.02			85.06		
Approach LOS	E			E			D			F		
d_I, Intersection Delay [s/veh]	66.98											
Intersection LOS	E											
Intersection V/C	1.080											

Sequence

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



Intersection Level Of Service Report
Intersection 8: Bradley Rd (N/S) / La Piedra Rd (E/W)

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):	0.686

Intersection Setup

Name												
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	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	150.00	100.00	100.00	155.00	100.00	100.00	100.00	100.00	100.00	150.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	24	690	64	162	684	11	41	24	21	81	77	223
Base Volume Adjustment Factor	1.0000	1.0000	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]	24	690	64	162	684	11	41	24	21	81	77	223
Peak Hour Factor	0.7990	0.7990	0.7990	0.7990	0.7990	0.7990	0.7990	0.7990	0.7990	0.7990	0.7990	0.7990
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	216	20	51	214	3	13	8	7	25	24	70
Total Analysis Volume [veh/h]	30	864	80	203	856	14	51	30	26	101	96	279
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 Coordinated
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]	11	19	0	22	30	0	11	37	0	22	48	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
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	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	4	45	45	13	55	55	5	18	18	7	20	20
g / C, Green / Cycle	0.04	0.45	0.45	0.13	0.55	0.55	0.05	0.18	0.18	0.07	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.02	0.26	0.26	0.11	0.23	0.23	0.03	0.02	0.02	0.06	0.05	0.18
s, saturation flow rate [veh/h]	1774	1863	1808	1774	1863	1852	1774	1863	1597	1774	1863	1583
c, Capacity [veh/h]	71	842	817	237	1016	1010	95	338	290	130	374	318
d1, Uniform Delay [s]	46.89	20.24	20.24	42.39	13.50	13.50	46.14	34.05	34.12	45.59	33.69	38.79
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.90	2.78	2.87	8.54	1.33	1.33	4.63	0.11	0.14	9.67	0.36	7.69
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.42	0.57	0.57	0.86	0.43	0.43	0.54	0.08	0.10	0.78	0.26	0.88
d, Delay for Lane Group [s/veh]	50.79	23.02	23.10	50.93	14.82	14.83	50.77	34.16	34.26	55.26	34.05	46.48
Lane Group LOS	D	C	C	D	B	B	D	C	C	E	C	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.78	8.02	7.80	5.21	5.40	5.37	1.30	0.56	0.54	2.70	1.90	6.92
50th-Percentile Queue Length [ft]	19.39	200.39	194.96	130.32	134.89	134.19	32.61	13.96	13.56	67.53	47.54	172.95
95th-Percentile Queue Length [veh]	1.40	12.66	12.38	8.96	9.21	9.17	2.35	1.00	0.98	4.86	3.42	11.23
95th-Percentile Queue Length [ft]	34.91	316.47	309.45	223.93	230.13	229.18	58.70	25.12	24.41	121.56	85.58	280.79

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	50.79	23.06	23.10	50.93	14.83	14.83	50.77	34.16	34.26	55.26	34.05	46.48
Movement LOS	D	C	C	D	B	B	D	C	C	E	C	D
d_A, Approach Delay [s/veh]	23.92			21.66			42.10			45.84		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	27.70											
Intersection LOS	C											
Intersection V/C	0.686											

Sequence

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

Intersection Level Of Service Report
Intersection 9: Bradley Rd (NS)/Holland Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	74.4
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.090

Intersection Setup

Name												
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	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	130.00	100.00	100.00	150.00	100.00	100.00	145.00	100.00	100.00	140.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	57	390	233	129	517	251	130	310	224	235	275	179
Base Volume Adjustment Factor	1.0000	1.0000	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	390	233	129	517	251	130	310	224	235	275	179
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	106	63	35	140	68	35	84	61	64	75	49
Total Analysis Volume [veh/h]	62	424	253	140	562	273	141	337	243	255	299	195
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 Coordinated
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]	11	46	0	13	48	0	39	41	0	20	22	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	R	L	C	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	42	9	45	45	12	37	16	41	41
g / C, Green / Cycle	0.05	0.35	0.08	0.37	0.37	0.10	0.31	0.13	0.35	0.35
(v / s)_i Volume / Saturation Flow Rate	0.03	0.39	0.08	0.30	0.17	0.08	0.33	0.14	0.16	0.12
s, saturation flow rate [veh/h]	1774	1748	1774	1863	1583	1774	1735	1774	1863	1583
c, Capacity [veh/h]	90	613	133	699	594	171	533	237	642	546
d1, Uniform Delay [s]	55.99	38.94	55.50	33.56	28.32	53.25	41.56	52.00	30.71	29.40
k, delay calibration	0.11	0.50	0.11	0.50	0.50	0.11	0.50	0.14	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.81	68.12	50.58	9.56	2.55	9.69	65.08	53.99	0.53	0.40
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

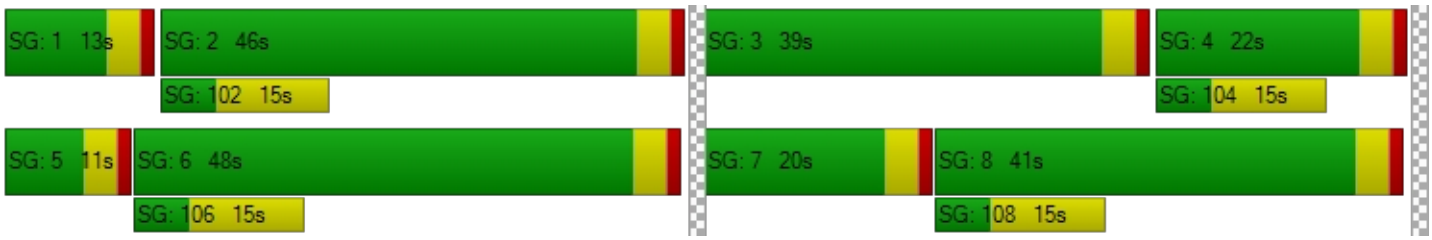
X, volume / capacity	0.69	1.10	1.05	0.80	0.46	0.83	1.09	1.08	0.47	0.36
d, Delay for Lane Group [s/veh]	64.81	107.06	106.08	43.13	30.87	62.94	106.65	105.99	31.24	29.80
Lane Group LOS	E	F	F	D	C	E	F	F	C	C
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	2.01	28.48	5.76	15.58	6.05	4.49	24.47	10.40	6.52	4.07
50th-Percentile Queue Length [ft]	50.25	712.01	144.05	389.57	151.19	112.33	611.80	259.97	162.98	101.80
95th-Percentile Queue Length [veh]	3.62	39.78	9.86	22.06	10.08	7.97	34.40	16.21	10.71	7.33
95th-Percentile Queue Length [ft]	90.46	994.62	246.53	551.42	252.01	199.23	859.91	405.21	267.66	183.23

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	64.81	107.06	107.06	106.08	43.13	30.87	62.94	106.65	106.65	105.99	31.24	29.80
Movement LOS	E	F	F	F	D	C	E	F	F	F	C	C
d_A, Approach Delay [s/veh]	103.51			48.74			98.10			56.31		
Approach LOS	F			D			F			E		
d_I, Intersection Delay [s/veh]	74.41											
Intersection LOS	E											
Intersection V/C	1.090											

Sequence

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



Intersection Level Of Service Report
Intersection 10: Town Center Dr-Sherman Rd (NS) / La Piedra Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	27.6
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.448

Intersection Setup

Name												
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	1	0	1	1	0	0	0	0	0	1	0	0
Pocket Length [ft]	210.00	100.00	500.00	150.00	100.00	100.00	100.00	100.00	100.00	800.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	84	162	222	10	124	10	62	23	33	135	7	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
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	84	162	222	10	124	10	62	23	33	135	7	7
Peak Hour Factor	0.6790	0.6790	0.6790	0.6790	0.6790	0.6790	0.6790	0.6790	0.6790	0.6790	0.6790	0.6790
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]	31	60	82	4	46	4	23	8	12	50	3	3
Total Analysis Volume [veh/h]	124	239	327	15	183	15	91	34	49	199	10	10
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 Coordinated
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]	23	44	0	11	32	0	18	19	0	26	27	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
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	L	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	9	62	62	2	56	7	6	13	13	13
g / C, Green / Cycle	0.09	0.62	0.62	0.02	0.56	0.07	0.06	0.13	0.13	0.13
(v / s)_i Volume / Saturation Flow Rate	0.07	0.13	0.21	0.01	0.11	0.05	0.05	0.11	0.01	0.01
s, saturation flow rate [veh/h]	1774	1863	1583	1774	1838	1774	1687	1774	1863	1583
c, Capacity [veh/h]	157	1152	979	44	1020	118	108	236	243	206
d1, Uniform Delay [s]	44.75	8.37	9.20	48.00	11.11	45.98	46.13	42.41	38.08	38.12
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.66	0.41	0.92	4.38	0.42	10.01	10.81	8.04	0.07	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
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.79	0.21	0.33	0.34	0.19	0.77	0.77	0.84	0.04	0.05
d, Delay for Lane Group [s/veh]	53.41	8.78	10.11	52.38	11.53	55.99	56.94	50.45	38.15	38.22
Lane Group LOS	D	A	B	D	B	E	E	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	3.25	1.99	3.04	0.41	2.01	2.46	2.27	5.08	0.21	0.21
50th-Percentile Queue Length [ft]	81.29	49.73	76.09	10.17	50.37	61.38	56.64	127.05	5.24	5.27
95th-Percentile Queue Length [veh]	5.85	3.58	5.48	0.73	3.63	4.42	4.08	8.78	0.38	0.38
95th-Percentile Queue Length [ft]	146.32	89.52	136.96	18.31	90.66	110.48	101.95	219.47	9.44	9.48

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	53.41	8.78	10.11	52.38	11.53	11.53	55.99	56.94	56.94	50.45	38.15	38.22
Movement LOS	D	A	B	D	B	B	E	E	E	D	D	D
d_A, Approach Delay [s/veh]	17.43			14.41			56.44			49.33		
Approach LOS	B			B			E			D		
d_I, Intersection Delay [s/veh]	27.56											
Intersection LOS	C											
Intersection V/C	0.448											

Sequence

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

Intersection Level Of Service Report
Intersection 11: Sherman Rd (NS)/Holland Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	6,100.7
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	13.168

Intersection Setup

Name												
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	1	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	500.00	100.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	4	1	28	128	0	53	164	759	5	6	730	230
Base Volume Adjustment Factor	1.0000	1.0000	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]	4	1	28	128	0	53	164	759	5	6	730	230
Peak Hour Factor	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	8	39	0	16	49	229	2	2	220	69
Total Analysis Volume [veh/h]	5	1	34	154	0	64	198	916	6	7	881	277
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.53	0.10	0.10	13.17	0.00	0.19	0.33	0.01	0.00	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	490.60	481.84	117.57	6100.73	6044.61	5803.31	13.85	0.00	0.00	9.91	0.00	0.00
Movement LOS	F	F	F	F	F	F	B	A	A	A	A	A
95th-Percentile Queue Length [veh]	3.09	3.09	3.09	28.12	28.12	28.12	69.82	69.82	0.00	29.65	29.65	0.00
95th-Percentile Queue Length [ft]	77.37	77.37	77.37	702.92	702.92	702.92	1745.50	1745.50	0.00	741.25	741.25	0.00
d_A, Approach Delay [s/veh]	173.30			6013.41			2.45			0.06		
Approach LOS	F			F			A			A		
d_I, Intersection Delay [s/veh]	519.33											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 12: Haun Rd (NS)/Village-Market Dr (EW)

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):	0.530

Intersection Setup

Name	Haun Rd			Haun Rd								
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	1	0	0	2	0	0	0	0	0	0	0	1
Pocket Length [ft]	100.00	100.00	100.00	175.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	65.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Haun Rd			Haun Rd								
Base Volume Input [veh/h]	21	989	46	135	1076	68	53	6	15	22	6	117
Base Volume Adjustment Factor	1.0000	1.0000	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]	21	989	46	135	1076	68	53	6	15	22	6	117
Peak Hour Factor	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	287	13	39	312	20	15	2	4	6	2	34
Total Analysis Volume [veh/h]	24	1149	53	157	1250	79	62	7	17	26	7	136
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	1 - Coordination Group
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
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	Permiss	Permiss	Overlap
Signal group	5	2	0	1	6	0	3	8	0	0	4	4
Auxiliary Signal Groups												1,4
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	0	7	7
Maximum Green [s]	30	30	0	30	30	0	7	30	0	0	30	30
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	3.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	1.0
Split [s]	11	51	0	11	51	0	11	38	0	0	27	27
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	3.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	5
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	10
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	0.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0
Minimum Recall	No	No		No	No		Yes	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	C	L	C	C	L	C	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	0.00	0.00	2.00	0.00
g_i, Effective Green Time [s]	3	63	63	7	67	67	18	18	7	18
g / C, Green / Cycle	0.03	0.63	0.63	0.07	0.67	0.67	0.18	0.18	0.07	0.18
(v / s)_i Volume / Saturation Flow Rate	0.01	0.32	0.33	0.05	0.36	0.36	0.02	0.03	0.02	0.05
s, saturation flow rate [veh/h]	1774	1863	1834	3445	1863	1824	1588	1641	1547	2802
c, Capacity [veh/h]	62	1173	1155	241	1238	1213	372	386	173	505
d1, Uniform Delay [s]	47.21	10.15	10.16	45.33	8.78	8.81	34.37	34.60	44.09	35.34
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.84	1.62	1.65	2.95	1.70	1.75	0.12	0.14	0.53	0.28
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

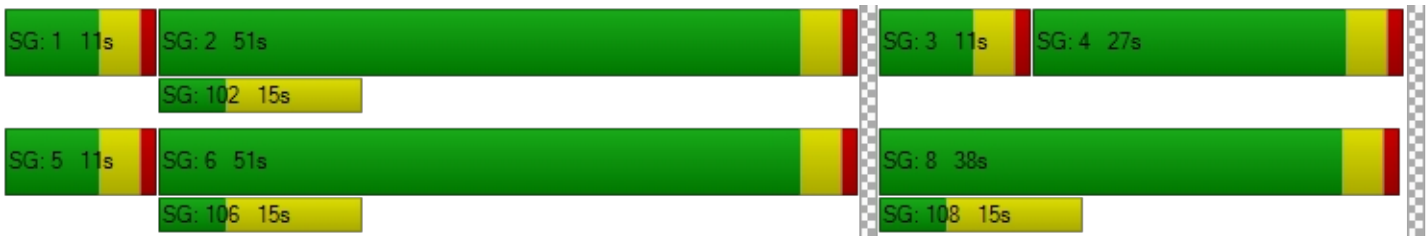
X, volume / capacity	0.38	0.52	0.52	0.65	0.54	0.54	0.10	0.12	0.19	0.27
d, Delay for Lane Group [s/veh]	51.05	11.77	11.81	48.29	10.48	10.56	34.48	34.74	44.62	35.62
Lane Group LOS	D	B	B	D	B	B	C	C	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	0.63	6.33	6.25	1.91	6.33	6.27	0.75	0.96	0.77	1.38
50th-Percentile Queue Length [ft]	15.67	158.23	156.24	47.83	158.25	156.73	18.64	23.95	19.20	34.46
95th-Percentile Queue Length [veh]	1.13	10.46	10.35	3.44	10.46	10.38	1.34	1.72	1.38	2.48
95th-Percentile Queue Length [ft]	28.21	261.38	258.74	86.10	261.40	259.38	33.55	43.11	34.55	62.03

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	51.05	11.79	11.81	48.29	10.52	10.56	34.58	34.74	34.74	44.62	44.62	35.62
Movement LOS	D	B	B	D	B	B	C	C	C	D	D	D
d_A, Approach Delay [s/veh]	12.56			14.51			34.63			37.38		
Approach LOS	B			B			C			D		
d_I, Intersection Delay [s/veh]	15.59											
Intersection LOS	B											
Intersection V/C	0.530											

Sequence

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



Intersection Level Of Service Report
Intersection 13: Haun Rd (NS)/Countryside Marketplace (EW)

Control Type:	Signalized	Delay (sec / veh):	13.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.539

Intersection Setup

Name	Haun Rd			Haun Rd								
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	1	0	0	2	0	0	0	0	1	1	0	0
Pocket Length [ft]	200.00	100.00	100.00	235.00	100.00	100.00	100.00	100.00	40.00	100.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Haun Rd			Haun Rd								
Base Volume Input [veh/h]	11	1007	43	118	970	8	10	0	15	7	1	91
Base Volume Adjustment Factor	1.0000	1.0000	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]	11	1007	43	118	970	8	10	0	15	7	1	91
Peak Hour Factor	0.7950	0.7950	0.7950	0.7950	0.7950	0.7950	0.7950	0.7950	0.7950	0.7950	0.7950	0.7950
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	317	14	37	305	3	3	0	5	2	0	29
Total Analysis Volume [veh/h]	14	1267	54	148	1220	10	13	0	19	9	1	114
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	1 - Coordination Group
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
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	Split	Split	Split	Split	Split	Split
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]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	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]	15	59	0	11	55	0	0	19	0	0	11	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
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]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	66	66	7	71	71	4	4	7	7
g / C, Green / Cycle	0.02	0.66	0.66	0.07	0.71	0.71	0.04	0.04	0.07	0.07
(v / s)_i Volume / Saturation Flow Rate	0.01	0.36	0.36	0.04	0.33	0.33	0.01	0.01	0.01	0.04
s, saturation flow rate [veh/h]	1774	1863	1836	3445	1863	1857	1774	1583	1783	2803
c, Capacity [veh/h]	42	1229	1211	240	1314	1311	75	67	122	192
d1, Uniform Delay [s]	48.10	9.02	9.02	45.28	6.48	6.48	46.27	46.49	43.68	45.27
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.51	1.71	1.74	2.56	1.20	1.21	1.09	2.30	0.28	2.89
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
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.33	0.54	0.54	0.62	0.47	0.47	0.17	0.28	0.08	0.59
d, Delay for Lane Group [s/veh]	52.61	10.73	10.77	47.84	7.68	7.69	47.36	48.79	43.96	48.17
Lane Group LOS	D	B	B	D	A	A	D	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	0.38	6.40	6.34	1.79	4.44	4.43	0.32	0.48	0.23	1.39
50th-Percentile Queue Length [ft]	9.56	160.12	158.54	44.82	111.03	110.83	8.05	12.05	5.80	34.77
95th-Percentile Queue Length [veh]	0.69	10.56	10.47	3.23	7.90	7.89	0.58	0.87	0.42	2.50
95th-Percentile Queue Length [ft]	17.21	263.88	261.79	80.67	197.43	197.15	14.48	21.69	10.44	62.59

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	52.61	10.75	10.77	47.84	7.69	7.69	47.36	48.79	48.79	43.96	43.96	48.17
Movement LOS	D	B	B	D	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	11.19			12.00			48.21			47.83		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	13.57											
Intersection LOS	B											
Intersection V/C	0.539											

Sequence

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

Intersection Level Of Service Report
Intersection 14: Haun Rd (N/S)/La Piedra Rd (E/W)

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):	0.746

Intersection Setup

Name				Haun Rd								
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	1	0	1	1	0	1	0	0	0	0	0	0
Pocket Length [ft]	165.00	100.00	100.00	150.00	100.00	150.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			Yes		

Volumes

Name				Haun Rd								
Base Volume Input [veh/h]	33	659	67	48	566	373	284	43	154	36	16	21
Base Volume Adjustment Factor	1.0000	1.0000	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]	33	659	67	48	566	373	284	43	154	36	16	21
Peak Hour Factor	0.7640	0.7640	0.7640	0.7640	0.7640	0.7640	0.7640	0.7640	0.7640	0.7640	0.7640	0.7640
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	216	22	16	185	122	93	14	50	12	5	7
Total Analysis Volume [veh/h]	43	863	88	63	741	488	372	56	202	47	21	27
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
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 - Coordination Group
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
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	Split	Split	Split	Split	Split	Split
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]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	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]	11	33	0	11	33	0	0	37	0	0	19	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
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]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	R	C	R	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
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
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	5	45	45	6	45	45	27	27	7
g / C, Green / Cycle	0.05	0.45	0.45	0.06	0.45	0.45	0.27	0.27	0.07
(v / s)_i Volume / Saturation Flow Rate	0.02	0.26	0.26	0.04	0.21	0.31	0.24	0.13	0.05
s, saturation flow rate [veh/h]	1774	1863	1803	1774	3547	1583	1785	1583	1733
c, Capacity [veh/h]	89	827	800	104	1606	717	476	422	122
d1, Uniform Delay [s]	46.32	20.90	20.90	45.98	18.94	21.66	35.41	30.85	45.76
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.16	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.07	3.01	3.11	5.48	0.96	5.16	8.75	0.84	10.07
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

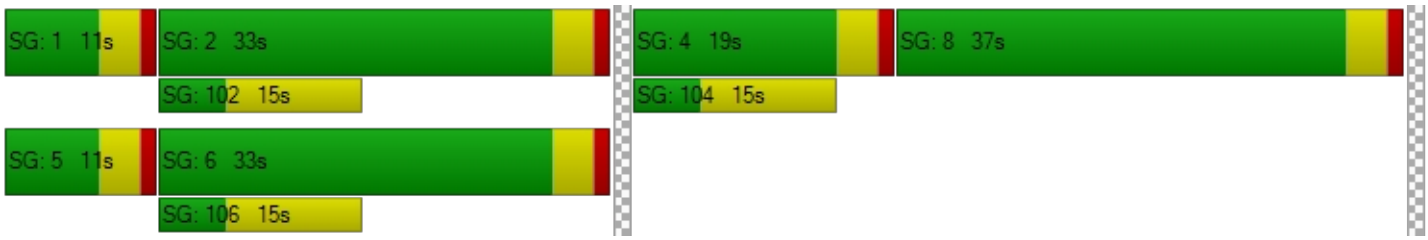
X, volume / capacity	0.49	0.58	0.58	0.60	0.46	0.68	0.90	0.48	0.78
d, Delay for Lane Group [s/veh]	50.38	23.91	24.01	51.46	19.90	26.82	44.16	31.69	55.83
Lane Group LOS	D	C	C	D	B	C	D	C	E
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	Yes
50th-Percentile Queue Length [veh]	1.10	8.28	8.04	1.62	5.54	9.05	10.50	3.94	2.56
50th-Percentile Queue Length [ft]	27.44	206.99	200.89	40.53	138.56	226.36	262.54	98.54	63.97
95th-Percentile Queue Length [veh]	1.98	13.00	12.68	2.92	9.40	13.99	15.82	7.10	4.61
95th-Percentile Queue Length [ft]	49.38	324.97	317.12	72.95	235.08	349.73	395.41	177.38	115.15

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	50.38	23.96	24.01	51.46	19.90	26.82	44.16	44.16	31.69	55.83	55.83	55.83
Movement LOS	D	C	C	D	B	C	D	D	C	E	E	E
d_A, Approach Delay [s/veh]	25.11			24.05			40.16			55.83		
Approach LOS	C			C			D			E		
d_I, Intersection Delay [s/veh]	28.77											
Intersection LOS	C											
Intersection V/C	0.746											

Sequence

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



Intersection Level Of Service Report
Intersection 15: Haun Road (NS) / Holland Road (EW)

Control Type:	Signalized	Delay (sec / veh):	56.0
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.908

Intersection Setup

Name												
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	1	0	0	1	0	0	1	0	1	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	150.00	100.00	100.00	150.00	100.00	150.00	150.00	100.00	150.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	337	283	80	107	302	385	365	241	280	186	226	57
Base Volume Adjustment Factor	1.0000	1.0000	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]	337	283	80	107	302	385	365	241	280	186	226	57
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	92	77	22	29	82	105	99	65	76	51	61	15
Total Analysis Volume [veh/h]	366	308	87	116	328	418	397	262	304	202	246	62
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 Coordinated
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]	24	22	0	39	37	0	30	32	0	17	19	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
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]	110	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	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]	20	48	48	9	38	38	26	23	23	13	10	10
g / C, Green / Cycle	0.18	0.44	0.44	0.08	0.34	0.34	0.24	0.21	0.21	0.12	0.10	0.10
(v / s)_i Volume / Saturation Flow Rate	0.21	0.17	0.05	0.07	0.18	0.26	0.22	0.14	0.19	0.11	0.07	0.04
s, saturation flow rate [veh/h]	1774	1863	1583	1774	1863	1583	1774	1863	1583	1774	3547	1583
c, Capacity [veh/h]	323	818	695	148	634	539	419	397	337	211	341	152
d1, Uniform Delay [s]	45.06	20.77	18.34	49.53	29.10	32.58	41.41	39.70	42.23	48.24	48.38	46.86
k, delay calibration	0.27	0.50	0.50	0.11	0.50	0.50	0.32	0.11	0.23	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	79.15	1.32	0.37	8.74	3.00	10.47	24.40	1.88	16.58	19.84	2.90	1.75
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	1.13	0.38	0.13	0.78	0.52	0.78	0.95	0.66	0.90	0.96	0.72	0.41
d, Delay for Lane Group [s/veh]	124.21	22.09	18.71	58.27	32.10	43.04	65.81	41.58	58.80	68.08	51.28	48.61
Lane Group LOS	F	C	B	E	C	D	E	D	E	E	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	15.49	5.22	1.30	3.37	7.04	10.86	12.85	6.39	9.18	6.44	3.29	1.61
50th-Percentile Queue Length [ft]	387.36	130.41	32.45	84.26	176.02	271.43	321.15	159.76	229.60	161.12	82.32	40.36
95th-Percentile Queue Length [veh]	23.34	8.96	2.34	6.07	11.39	16.26	18.72	10.54	14.15	10.61	5.93	2.91
95th-Percentile Queue Length [ft]	583.44	224.05	58.40	151.67	284.81	406.52	468.10	263.40	353.85	265.20	148.18	72.66

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	124.21	22.09	18.71	58.27	32.10	43.04	65.81	41.58	58.80	68.08	51.28	48.61
Movement LOS	F	C	B	E	C	D	E	D	E	E	D	D
d_A, Approach Delay [s/veh]	70.82			40.93			57.01			57.61		
Approach LOS	E			D			E			E		
d_I, Intersection Delay [s/veh]	56.02											
Intersection LOS	E											
Intersection V/C	0.908											

Sequence

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

Intersection Level Of Service Report
Intersection 16: Haun Rd-Zeiders Rd (N/S)/Scott Rd (E/W)

Control Type:	Signalized	Delay (sec / veh):	73.5
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.067

Intersection Setup

Name												
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	1	0	0	1	0	0	1	0	0	1	0	1
Pocket Length [ft]	345.00	100.00	100.00	200.00	100.00	100.00	135.00	100.00	100.00	185.00	100.00	200.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	62	136	103	864	148	62	108	797	39	203	650	656
Base Volume Adjustment Factor	1.0000	1.0000	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]	62	136	103	864	148	62	108	797	39	203	650	656
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	37	28	235	40	17	29	217	11	55	177	178
Total Analysis Volume [veh/h]	67	148	112	939	161	67	117	866	42	221	707	713
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	1 - Coordination Group
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]	16.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	19	0	0	37	0	11	47	0	17	53	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	C	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
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
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
g_i, Effective Green Time [s]	12	12	12	36	36	7	39	39	17	49	49
g / C, Green / Cycle	0.10	0.10	0.10	0.30	0.30	0.06	0.32	0.32	0.14	0.41	0.41
(v / s)_i Volume / Saturation Flow Rate	0.04	0.08	0.07	0.33	0.33	0.07	0.25	0.25	0.12	0.20	0.45
s, saturation flow rate [veh/h]	1774	1863	1583	1774	1773	1774	1863	1833	1774	3547	1583
c, Capacity [veh/h]	172	181	154	537	537	106	604	594	253	1443	644
d1, Uniform Delay [s]	50.85	53.15	52.65	41.83	41.83	56.40	36.33	36.33	50.37	26.36	35.58
k, delay calibration	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.50	0.50
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
d2, Incremental Delay [s]	1.43	8.80	6.48	64.34	64.61	70.70	8.64	8.78	9.10	1.19	68.30
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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

Lane Group Results

X, volume / capacity	0.39	0.82	0.73	1.09	1.09	1.10	0.76	0.76	0.87	0.49	1.11
d, Delay for Lane Group [s/veh]	52.28	61.94	59.13	106.17	106.44	127.10	44.97	45.11	59.48	27.55	103.88
Lane Group LOS	D	E	E	F	F	F	D	D	E	C	F
Critical Lane Group	No	Yes	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	1.90	4.67	3.45	24.58	24.60	5.21	12.82	12.64	6.90	7.28	29.56
50th-Percentile Queue Length [ft]	47.51	116.78	86.18	614.44	615.01	130.17	320.50	315.88	172.42	182.09	739.05
95th-Percentile Queue Length [veh]	3.42	8.22	6.20	34.48	34.53	9.20	18.69	18.46	11.20	11.71	41.33
95th-Percentile Queue Length [ft]	85.51	205.39	155.12	862.11	863.17	230.01	467.30	461.61	280.10	292.74	1033.21

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	52.28	61.94	59.13	106.27	106.44	106.44	127.10	45.04	45.11	59.48	27.55	103.88
Movement LOS	D	E	E	F	F	F	F	D	D	E	C	F
d_A, Approach Delay [s/veh]	59.00			106.31			54.41			65.01		
Approach LOS	E			F			D			E		
d_I, Intersection Delay [s/veh]	73.51											
Intersection LOS	E											
Intersection V/C	1.067											

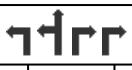
Sequence

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

Intersection Level Of Service Report
Intersection 17: I-215 SB Ramps (N/S) / Scott Rd (E/W)

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):	0.633

Intersection Setup

Name												
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	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	245.00	100.00	100.00
Speed [mph]		50.00			50.00			50.00			50.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		No			Yes			No			No	

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	510	0	359	0	799	633	385	846	400
Base Volume Adjustment Factor	1.0000	1.0000	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	510	0	359	0	799	633	385	846	400
Peak Hour Factor	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	138	0	97	0	216	171	104	229	108
Total Analysis Volume [veh/h]	0	0	0	551	0	388	0	864	684	416	915	432
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 - Coordination Group
Cycle Length [s]	110
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	Split	Split	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	0	0	0	6	0	0	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	0	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	69	0	0	41	0	0	41	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	10	0	0	10	0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall					No			No			No	
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]		110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]		4.00	4.00	4.00	4.00	4.00	4.00	4.00
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]		2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]		21	21	21	81	81	81	81
g / C, Green / Cycle		0.19	0.19	0.19	0.74	0.74	0.74	0.74
(v / s)_i Volume / Saturation Flow Rate		0.16	0.16	0.14	0.24	0.43	0.26	0.27
s, saturation flow rate [veh/h]		1774	1774	2803	3547	1583	3547	1583
c, Capacity [veh/h]		334	334	527	2621	1170	2621	1170
d1, Uniform Delay [s]		42.86	42.86	42.02	0.21	0.22	0.21	0.21
k, delay calibration		0.11	0.11	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		5.18	5.18	2.02	0.34	2.14	0.37	0.90
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	1.33	1.33	1.33	1.33
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	0.83	0.74	0.33	0.58	0.35	0.37
d, Delay for Lane Group [s/veh]		48.03	48.03	44.04	0.55	2.36	0.58	1.11
Lane Group LOS		D	D	D	A	A	A	A
Critical Lane Group		Yes	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh]		7.32	7.32	4.87	0.23	0.86	0.25	0.40
50th-Percentile Queue Length [ft]		183.10	183.10	121.83	5.71	21.61	6.14	9.93
95th-Percentile Queue Length [veh]		11.76	11.76	8.49	0.41	1.56	0.44	0.72
95th-Percentile Queue Length [ft]		294.06	294.06	212.34	10.27	38.89	11.05	17.88

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	48.03	48.03	44.04	0.00	0.55	2.36	0.00	0.58	1.11
Movement LOS				D	D	D		A	A		A	A
d_A, Approach Delay [s/veh]	0.00			46.38			1.35			0.75		
Approach LOS	A			D			A			A		
d_I, Intersection Delay [s/veh]	12.17											
Intersection LOS	B											
Intersection V/C	0.633											

Sequence

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

Intersection Level Of Service Report
Intersection 18: I-215 NB Ramps (N/S) / Scott Rd (E/W)

Control Type:	Signalized	Delay (sec / veh):	20.5
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.742

Intersection Setup

Name											
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	1	0	0	0	1	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	425.00	100.00	100.00	100.00	250.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		50.00			50.00			50.00			50.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		No			Yes			No			No	

Volumes

Name												
Base Volume Input [veh/h]	0	0	402	0	0	472	271	1018	0	0	1060	447
Base Volume Adjustment Factor	1.0000	1.0000	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	402	0	0	472	271	1018	0	0	1060	447
Peak Hour Factor	0.9380	0.9380	0.9380	0.9380	0.9380	0.9380	0.9380	0.9380	0.9380	0.9380	0.9380	0.9380
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	107	0	0	126	72	271	0	0	283	119
Total Analysis Volume [veh/h]	0	0	429	0	0	503	289	1085	0	0	1130	477
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	1 - Coordination Group
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
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	Split	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	0	6	3	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	0	7	7	7	0	0	7	0
Maximum Green [s]	0	30	0	0	0	30	30	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	3.0	3.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	1.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	60	0	0	0	60	31	50	0	0	19	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	3.0	3.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	5	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	10	0	10	0	0	10	0
Rest In Walk		No				No		No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	2.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	0.0	2.0	2.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No				No	No	No			No	
Maximum Recall		No				No	No	No			No	
Pedestrian Recall		No				No	No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	R	R	L	C	C	R
C, Cycle Length [s]	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00
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]	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	23	23	23	20	79	55	55
g / C, Green / Cycle	0.20	0.20	0.20	0.18	0.72	0.50	0.50
(v / s)_i Volume / Saturation Flow Rate	0.14	0.14	0.18	0.16	0.31	0.32	0.30
s, saturation flow rate [veh/h]	1583	1583	2803	1774	3547	3547	1583
c, Capacity [veh/h]	324	324	574	322	2563	1789	799
d1, Uniform Delay [s]	40.23	40.23	42.39	40.66	0.60	12.18	11.89
k, delay calibration	0.11	0.11	0.11	0.11	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.31	2.31	4.47	8.79	0.51	1.71	3.28
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	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

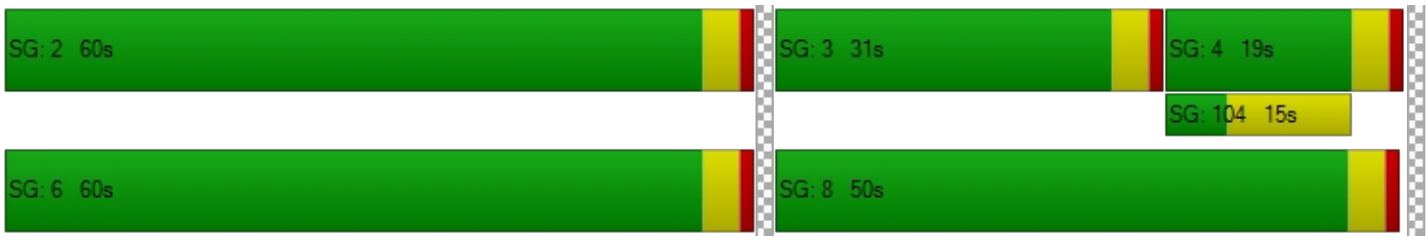
X, volume / capacity	0.66	0.66	0.88	0.90	0.42	0.63	0.60
d, Delay for Lane Group [s/veh]	42.54	42.54	46.85	49.45	1.11	13.89	15.17
Lane Group LOS	D	D	D	D	A	B	B
Critical Lane Group	No	No	Yes	Yes	No	Yes	No
50th-Percentile Queue Length [veh]	5.30	5.30	6.64	7.47	0.53	5.79	5.19
50th-Percentile Queue Length [ft]	132.38	132.38	166.01	186.75	13.33	144.78	129.86
95th-Percentile Queue Length [veh]	9.07	9.07	10.87	11.95	0.96	9.74	8.93
95th-Percentile Queue Length [ft]	226.73	226.73	271.66	298.81	24.00	243.45	223.30

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	42.54	42.54	0.00	0.00	46.85	49.45	1.11	0.00	0.00	13.89	15.17
Movement LOS		D	D			D	D	A			B	B
d_A, Approach Delay [s/veh]	42.54			46.85			11.28			14.27		
Approach LOS	D			D			B			B		
d_I, Intersection Delay [s/veh]	20.51											
Intersection LOS	C											
Intersection V/C	0.742											

Sequence

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



Intersection Level Of Service Report
Intersection 19: Antelope Rd (NS)/Scott Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	38.8
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.786

Intersection Setup

Name												
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	2	0	0	1	0	1	2	0	0	1	0	0
Pocket Length [ft]	215.00	100.00	100.00	200.00	100.00	200.00	375.00	100.00	100.00	200.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	335	164	166	43	194	411	322	754	405	26	754	50
Base Volume Adjustment Factor	1.0000	1.0000	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]	335	164	166	43	194	411	322	754	405	26	754	50
Peak Hour Factor	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	91	44	45	12	53	111	87	204	110	7	204	14
Total Analysis Volume [veh/h]	363	178	180	47	210	445	349	817	439	28	817	54
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	1 - Coordination Group
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
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]	16	30	0	20	34	0	19	40	0	20	41	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
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	C
C, Cycle Length [s]	110	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	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]	12	50	50	5	44	44	13	34	34	4	25	25
g / C, Green / Cycle	0.11	0.46	0.46	0.05	0.40	0.40	0.12	0.31	0.31	0.04	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.11	0.05	0.11	0.03	0.11	0.28	0.10	0.23	0.28	0.01	0.16	0.16
s, saturation flow rate [veh/h]	3445	3547	1583	1774	1863	1583	3445	3547	1583	3445	3547	1804
c, Capacity [veh/h]	378	1613	720	88	735	625	414	1109	495	130	816	415
d1, Uniform Delay [s]	48.78	17.22	18.45	51.09	22.73	28.05	47.42	33.79	35.98	50.73	34.87	34.90
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.20	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	14.09	0.14	0.83	4.99	0.98	6.77	4.72	0.97	9.47	0.82	1.14	2.25
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	1.33	1.33	1.33
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

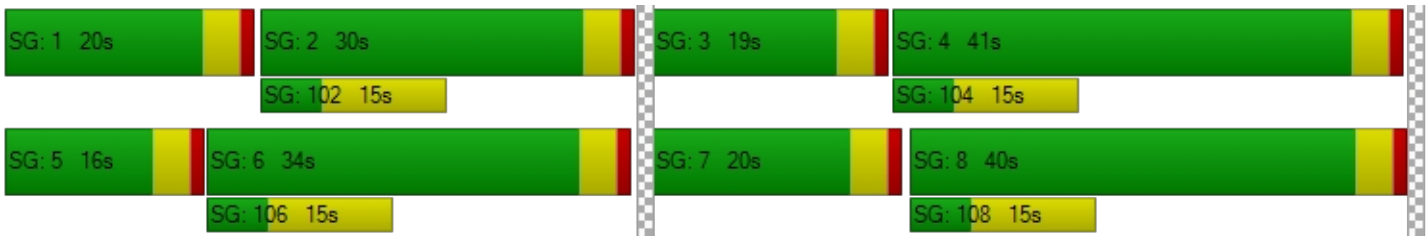
X, volume / capacity	0.96	0.11	0.25	0.54	0.29	0.71	0.84	0.74	0.89	0.22	0.71	0.71
d, Delay for Lane Group [s/veh]	62.88	17.36	19.29	56.08	23.70	34.82	52.14	34.76	45.45	51.55	36.01	37.15
Lane Group LOS	E	B	B	E	C	C	D	C	D	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	5.49	1.23	2.77	1.34	3.67	10.26	4.76	9.29	11.76	0.37	6.13	6.40
50th-Percentile Queue Length [ft]	137.34	30.85	69.33	33.55	91.86	256.57	118.98	232.28	294.08	9.30	153.36	160.09
95th-Percentile Queue Length [veh]	9.34	2.22	4.99	2.42	6.61	15.52	8.34	14.29	17.39	0.67	10.20	10.55
95th-Percentile Queue Length [ft]	233.43	55.53	124.80	60.40	165.35	387.92	208.42	357.26	434.71	16.74	254.91	263.84

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	62.88	17.36	19.29	56.08	23.70	34.82	52.14	34.76	45.45	51.55	36.34	37.15
Movement LOS	E	B	B	E	C	C	D	C	D	D	D	D
d_A, Approach Delay [s/veh]	40.76			32.92			41.46			36.86		
Approach LOS	D			C			D			D		
d_I, Intersection Delay [s/veh]	38.75											
Intersection LOS	D											
Intersection V/C	0.786											

Sequence

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



Intersection Level Of Service Report
Intersection 22: Antelope Rd (NS)/Albion Ln (EW)

Control Type:	Two-way stop	Delay (sec / veh):	71.1
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.483

Intersection Setup

Name						
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	1	0	1	0
Pocket Length [ft]	100.00	100.00	200.00	100.00	175.00	100.00
Speed [mph]	50.00		50.00		50.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	754	49	106	415	42	112
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]	754	49	106	415	42	112
Peak Hour Factor	0.8840	0.8840	0.8840	0.8840	0.8840	0.8840
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	213	14	30	117	12	32
Total Analysis Volume [veh/h]	853	55	120	469	48	127
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	0.01	0.00	0.16	0.00	0.48	0.37
d_M, Delay for Movement [s/veh]	0.00	0.00	10.72	0.00	71.11	21.31
Movement LOS	A	A	B	A	F	C
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.57	0.00	2.11	1.64
95th-Percentile Queue Length [ft/ln]	0.00	0.00	14.19	0.00	52.69	41.03
d_A, Approach Delay [s/veh]	0.00		2.18		34.97	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	4.43					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 23: Hanover Lane (NS) / Holland Road (EW)

Control Type:	Signalized	Delay (sec / veh):	20.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.630

Intersection Setup

Name												
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	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	150.00	100.00	100.00	150.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	119	0	49	78	0	43	86	346	99	14	610	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
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	119	0	49	78	0	43	86	346	99	14	610	17
Peak Hour Factor	0.9070	0.9070	0.9070	0.9070	0.9070	0.9070	0.9070	0.9070	0.9070	0.9070	0.9070	0.9070
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	33	0	14	21	0	12	24	95	27	4	168	5
Total Analysis Volume [veh/h]	131	0	54	86	0	47	95	381	109	15	673	19
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
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 - Coordination Group
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	21	0	0	21	0	28	78	0	11	61	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	L	C	R	L	C
C, Cycle Length [s]	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	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
g_i, Effective Green Time [s]	17	17	8	79	79	3	74
g / C, Green / Cycle	0.15	0.15	0.07	0.72	0.72	0.02	0.67
(v / s)_i Volume / Saturation Flow Rate	0.13	0.09	0.05	0.20	0.07	0.01	0.37
s, saturation flow rate [veh/h]	1373	1489	1774	1863	1583	1774	1854
c, Capacity [veh/h]	262	278	123	1333	1133	44	1244
d1, Uniform Delay [s]	45.93	43.43	50.32	5.59	4.78	52.71	9.48
k, delay calibration	0.11	0.11	0.11	0.50	0.50	0.11	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.45	1.28	9.90	0.54	0.17	4.47	1.80
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

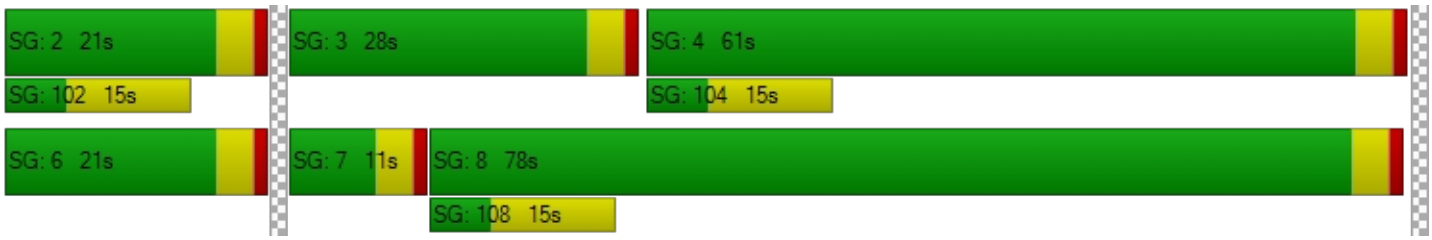
X, volume / capacity	0.70	0.48	0.77	0.29	0.10	0.34	0.56
d, Delay for Lane Group [s/veh]	49.38	44.71	60.22	6.13	4.95	57.18	11.28
Lane Group LOS	D	D	E	A	A	E	B
Critical Lane Group	Yes	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	5.00	3.33	2.81	2.54	0.62	0.45	7.51
50th-Percentile Queue Length [ft/ln]	124.89	83.24	70.31	63.39	15.60	11.21	187.69
95th-Percentile Queue Length [veh/ln]	8.66	5.99	5.06	4.56	1.12	0.81	12.00
95th-Percentile Queue Length [ft/ln]	216.53	149.83	126.56	114.10	28.08	20.18	300.02

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	49.38	49.38	49.38	44.71	44.71	44.71	60.22	6.13	4.95	57.18	11.28	11.28
Movement LOS	D	D	D	D	D	D	E	A	A	E	B	B
d_A, Approach Delay [s/veh]	49.38			44.71			14.70			12.25		
Approach LOS	D			D			B			B		
d_I, Intersection Delay [s/veh]	20.09											
Intersection LOS	C											
Intersection V/C	0.630											

Sequence

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



Intersection Level Of Service Report
Intersection 24: Palomar Rd (NS)/Holland Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	126.9
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.784

Intersection Setup

Name												
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]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	66	4	54	0	2	38	6	468	13	32	545	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]	66	4	54	0	2	38	6	468	13	32	545	1
Peak Hour Factor	0.8130	0.8130	0.8130	0.8130	0.8130	0.8130	0.8130	0.8130	0.8130	0.8130	0.8130	0.8130
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	1	17	0	1	12	2	144	4	10	168	0
Total Analysis Volume [veh/h]	81	5	66	0	2	47	7	576	16	39	670	1
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.78	0.04	0.13	0.00	0.01	0.10	0.01	0.01	0.00	0.04	0.01	0.00
d_M, Delay for Movement [s/veh]	126.92	117.81	99.11	41.34	32.13	14.02	8.95	0.00	0.00	8.81	0.00	0.00
Movement LOS	F	F	F	E	D	B	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	7.05	7.05	7.05	0.40	0.40	0.40	0.02	0.02	0.02	0.10	0.10	0.00
95th-Percentile Queue Length [ft/ln]	176.34	176.34	176.34	9.88	9.88	9.88	0.49	0.49	0.49	2.52	2.52	0.00
d_A, Approach Delay [s/veh]	114.55			14.76			0.10			0.48		
Approach LOS	F			B			A			A		
d_I, Intersection Delay [s/veh]	12.28											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 25: Menifee Rd (NS)/Holland Rd (EW)

Control Type:	All-way stop	Delay (sec / veh):	14.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.568

Intersection Setup

Name												
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	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	150.00	100.00	100.00	125.00	100.00	100.00	150.00	100.00	100.00	150.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	78	375	113	184	332	174	243	174	60	91	288	160
Base Volume Adjustment Factor	1.0000	1.0000	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]	78	375	113	184	332	174	243	174	60	91	288	160
Peak Hour Factor	0.7880	0.7880	0.7880	0.7880	0.7880	0.7880	0.7880	0.7880	0.7880	0.7880	0.7880	0.7880
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]	25	119	36	58	105	55	77	55	19	29	91	51
Total Analysis Volume [veh/h]	99	476	143	234	421	221	308	221	76	115	365	203
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	583	616	640	534	565	600	568	601	626	567	599	635
Degree of Utilization, x	0.17	0.50	0.48	0.44	0.57	0.54	0.54	0.25	0.24	0.20	0.47	0.45

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.61	2.82	2.64	2.21	3.53	3.17	3.23	0.97	0.92	0.75	2.54	2.31
95th-Percentile Queue Length [ft]	15.20	70.49	65.98	55.27	88.30	79.23	80.73	24.23	22.98	18.86	63.56	57.64
Approach Delay [s/veh]	13.37			15.81			13.41			12.98		
Approach LOS	B			C			B			B		
Intersection Delay [s/veh]	14.03											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 1: Murrieta Rd (NS)/Newport Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	43.8
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.867

Intersection Setup

Name							Newport Rd			Newport Rd		
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	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	190.00	100.00	100.00	225.00	100.00	100.00	275.00	100.00	100.00	180.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							Newport Rd			Newport Rd		
Base Volume Input [veh/h]	181	308	110	357	314	231	376	1112	86	218	1062	264
Base Volume Adjustment Factor	1.0000	1.0000	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]	181	308	110	357	314	231	376	1112	86	218	1062	264
Peak Hour Factor	0.9570	0.9570	0.9570	0.9570	0.9570	0.9570	0.9570	0.9570	0.9570	0.9570	0.9570	0.9570
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	47	80	29	93	82	60	98	290	22	57	277	69
Total Analysis Volume [veh/h]	189	322	115	373	328	241	393	1162	90	228	1110	276
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	1 - Coordination Group
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
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	19	0	29	19	0	43	39	0	23	19	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
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]	110	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	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]	14	16	16	25	27	27	27	37	37	16	26	26
g / C, Green / Cycle	0.13	0.15	0.15	0.23	0.25	0.25	0.24	0.34	0.34	0.15	0.24	0.24
(v / s)_i Volume / Saturation Flow Rate	0.11	0.09	0.07	0.21	0.09	0.15	0.22	0.23	0.06	0.13	0.22	0.17
s, saturation flow rate [veh/h]	1774	3547	1583	1774	3547	1583	1774	5074	1583	1774	5074	1583
c, Capacity [veh/h]	224	523	233	401	876	391	430	1700	530	260	1214	379
d1, Uniform Delay [s]	47.10	44.06	43.19	41.82	34.42	36.85	40.62	31.61	25.84	46.04	40.82	38.62
k, delay calibration	0.11	0.50	0.50	0.28	0.50	0.50	0.18	0.11	0.11	0.11	0.11	0.19
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.45	5.36	7.26	20.71	1.22	7.09	12.32	0.49	0.15	9.08	3.16	4.59
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

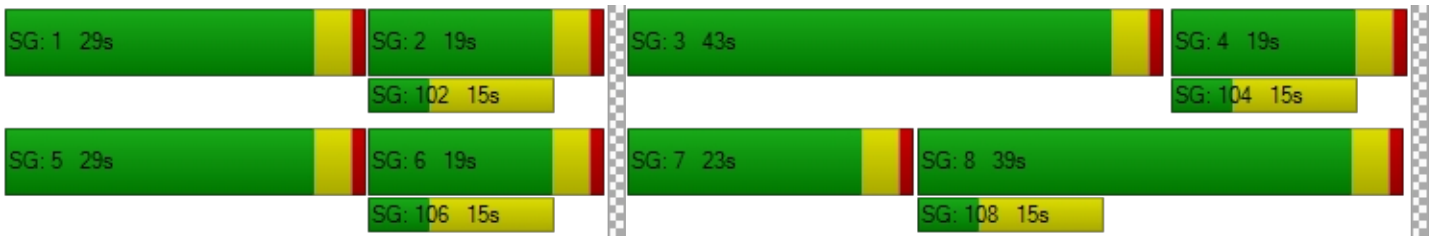
X, volume / capacity	0.84	0.62	0.49	0.93	0.37	0.62	0.91	0.68	0.17	0.88	0.91	0.73
d, Delay for Lane Group [s/veh]	55.55	49.42	50.46	62.53	35.65	43.94	52.94	32.10	25.99	55.12	43.98	43.21
Lane Group LOS	E	D	D	E	D	D	D	C	C	E	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	5.38	4.33	3.23	11.70	3.62	6.24	11.26	8.38	1.60	6.50	9.57	6.98
50th-Percentile Queue Length [ft]	134.52	108.37	80.85	292.54	90.59	155.92	281.54	209.43	39.96	162.42	239.17	174.61
95th-Percentile Queue Length [veh]	9.18	7.75	5.82	17.31	6.52	10.33	16.77	13.12	2.88	10.68	14.64	11.32
95th-Percentile Queue Length [ft]	229.62	193.74	145.54	432.80	163.07	258.31	419.13	328.10	71.93	266.92	365.99	282.97

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	55.55	49.42	50.46	62.53	35.65	43.94	52.94	32.10	25.99	55.12	43.98	43.21
Movement LOS	E	D	D	E	D	D	D	C	C	E	D	D
d_A, Approach Delay [s/veh]	51.46			48.41			36.74			45.42		
Approach LOS	D			D			D			D		
d_I, Intersection Delay [s/veh]	43.83											
Intersection LOS	D											
Intersection V/C	0.867											

Sequence

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



Intersection Level Of Service Report
Intersection 2: Bradley Rd (N/S)/Newport Rd (E/W)

Control Type:	Signalized	Delay (sec / veh):	43.8
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.952

Intersection Setup

Name				Bradley Rd			Newport Rd			Newport Rd		
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	1	0	0	1	0	0	1	0	0	2	0	1
Pocket Length [ft]	100.00	100.00	100.00	125.00	100.00	100.00	165.00	100.00	100.00	155.00	100.00	150.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name				Bradley Rd			Newport Rd			Newport Rd		
Base Volume Input [veh/h]	196	330	401	253	231	127	183	1395	98	364	1530	322
Base Volume Adjustment Factor	1.0000	1.0000	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	330	401	253	231	127	183	1395	98	364	1530	322
Peak Hour Factor	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410
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	88	107	67	61	34	49	371	26	97	406	86
Total Analysis Volume [veh/h]	208	351	426	269	245	135	194	1482	104	387	1626	342
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	1 - Coordination Group
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
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	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	2	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups			2,7									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	30	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	3.0	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	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	28	31	31	21	24	0	17	41	0	17	41	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	5	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	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	2.0	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	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	C	L	C	C	L	C	R
C, Cycle Length [s]	110	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	15	27	44	17	29	29	13	37	37	13	37	37
g / C, Green / Cycle	0.14	0.25	0.40	0.15	0.27	0.27	0.12	0.33	0.33	0.12	0.33	0.33
(v / s)_i Volume / Saturation Flow Rate	0.12	0.19	0.27	0.15	0.11	0.11	0.11	0.30	0.30	0.11	0.32	0.22
s, saturation flow rate [veh/h]	1774	1863	1583	1774	1863	1644	1774	3547	1801	3445	5074	1583
c, Capacity [veh/h]	241	461	637	274	496	438	210	1185	602	408	1696	529
d1, Uniform Delay [s]	46.56	38.39	26.90	46.34	33.18	33.23	48.02	34.66	34.68	48.18	35.89	31.11
k, delay calibration	0.11	0.50	0.50	0.12	0.50	0.50	0.11	0.11	0.37	0.11	0.11	0.19
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.97	11.28	5.51	22.87	2.44	2.82	15.54	2.46	13.92	11.81	4.33	2.38
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.86	0.76	0.67	0.98	0.40	0.41	0.92	0.89	0.89	0.95	0.96	0.65
d, Delay for Lane Group [s/veh]	55.53	49.67	32.42	69.22	35.62	36.05	63.56	37.12	48.60	59.98	40.22	33.48
Lane Group LOS	E	D	C	E	D	D	E	D	D	E	D	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	5.93	9.76	9.42	8.73	4.53	4.10	5.95	12.76	14.90	5.72	13.87	7.56
50th-Percentile Queue Length [ft]	148.27	243.96	235.62	218.30	113.17	102.43	148.73	318.90	372.47	142.88	346.66	189.04
95th-Percentile Queue Length [veh]	9.92	14.88	14.46	13.58	8.02	7.37	9.95	18.61	21.23	9.64	19.97	12.07
95th-Percentile Queue Length [ft]	248.11	372.03	361.48	339.46	200.40	184.37	248.74	465.34	530.73	240.90	499.33	301.78

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	55.53	49.67	32.42	69.22	35.69	36.05	63.56	40.45	48.60	59.98	40.22	33.48
Movement LOS	E	D	C	E	D	D	E	D	D	E	D	C
d_A, Approach Delay [s/veh]	43.45			49.66			43.45			42.49		
Approach LOS	D			D			D			D		
d_I, Intersection Delay [s/veh]	43.76											
Intersection LOS	D											
Intersection V/C	0.952											

Sequence

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

Intersection Level Of Service Report
Intersection 3: Haun Road (NS) / Newport Road (EW)

Control Type:	Signalized	Delay (sec / veh):	45.2
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.963

Intersection Setup

Name	Haun Rd			Haun Rd						Newport Rd		
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	2	0	1	2	0	0	2	0	0	2	0	1
Pocket Length [ft]	215.00	100.00	285.00	155.00	100.00	100.00	210.00	100.00	100.00	350.00	100.00	150.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Haun Rd			Haun Rd						Newport Rd		
Base Volume Input [veh/h]	458	116	883	415	155	134	190	1334	396	1027	1457	307
Base Volume Adjustment Factor	1.0000	1.0000	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]	458	116	883	415	155	134	190	1334	396	1027	1457	307
Peak Hour Factor	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770
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]	117	30	226	106	40	34	49	341	101	263	373	79
Total Analysis Volume [veh/h]	469	119	904	425	159	137	194	1365	405	1051	1491	314
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	1 - Coordination Group
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
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	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	2	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups			2,7									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	30	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	3.0	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	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	25	19	19	25	19	0	36	44	0	52	60	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	5	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	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	2.0	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	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	C	L	C	R	L	C	C
C, Cycle Length [s]	140	140	140	140	140	140	140	140	140	140	140	140
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	21	18	68	19	16	16	10	41	41	46	77	77
g / C, Green / Cycle	0.15	0.13	0.49	0.14	0.12	0.12	0.07	0.29	0.29	0.33	0.55	0.55
(v / s)_i Volume / Saturation Flow Rate	0.14	0.06	0.32	0.12	0.09	0.09	0.06	0.27	0.26	0.31	0.33	0.36
s, saturation flow rate [veh/h]	3445	1863	2803	3445	1863	1583	3445	5074	1583	3445	3547	1710
c, Capacity [veh/h]	513	236	1359	475	215	183	252	1479	462	1137	1944	937
d1, Uniform Delay [s]	58.71	57.04	27.40	59.35	59.86	59.94	63.70	48.07	47.21	45.23	21.48	22.40
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.36	0.11	0.11	0.21
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.92	7.53	2.59	6.19	20.18	24.16	4.88	2.91	15.53	3.78	0.31	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	0.92	0.50	0.67	0.90	0.74	0.75	0.77	0.92	0.88	0.92	0.61	0.66
d, Delay for Lane Group [s/veh]	65.63	64.58	29.99	65.54	80.04	84.10	68.58	50.97	62.74	49.01	21.79	23.98
Lane Group LOS	E	E	C	E	F	F	E	D	E	D	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh]	8.45	4.33	11.31	7.62	6.52	5.82	3.49	15.20	14.93	17.43	12.37	13.77
50th-Percentile Queue Length [ft]	211.22	108.18	282.69	190.41	163.09	145.38	87.15	379.92	373.23	435.75	309.36	344.29
95th-Percentile Queue Length [veh]	13.22	7.74	16.82	12.14	10.71	9.77	6.27	21.59	21.27	24.28	18.14	19.86
95th-Percentile Queue Length [ft]	330.40	193.46	420.56	303.56	267.81	244.25	156.87	539.75	531.65	606.93	453.59	496.44

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	65.63	64.58	29.99	65.54	80.04	84.10	68.58	50.97	62.74	49.01	22.24	23.98
Movement LOS	E	E	C	E	F	F	E	D	E	D	C	C
d_A, Approach Delay [s/veh]	43.95			72.27			55.14			32.28		
Approach LOS	D			E			E			C		
d_I, Intersection Delay [s/veh]	45.24											
Intersection LOS	D											
Intersection V/C	0.963											

Sequence

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

Intersection Level Of Service Report
Intersection 4: I-215 SB Ramps (NS) / Newport Road (EW)

Control Type:	Signalized	Delay (sec / veh):	21.9
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.736

Intersection Setup

Name	I-215 SB Ramps			I-215 SB Ramps			Newport Rd			Newport Rd		
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	1	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	800.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		50.00			50.00			50.00			50.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			No			No	

Volumes

Name	I-215 SB Ramps			I-215 SB Ramps			Newport Rd			Newport Rd		
Base Volume Input [veh/h]	0	0	0	640	0	890	0	1921	719	0	1843	688
Base Volume Adjustment Factor	1.0000	1.0000	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	640	0	890	0	1921	719	0	1843	688
Peak Hour Factor	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	162	0	225	0	487	182	0	467	174
Total Analysis Volume [veh/h]	0	0	0	648	0	902	0	1946	728	0	1867	697
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 - Coordination Group
Cycle Length [s]	140
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	Overlap	Protecte	Permiss	Overlap
Signal group	0	0	0	1	0	0	0	8	8	7	4	4
Auxiliary Signal Groups									1,4,8			1,4,8
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	7	0	0	0	7	7	0	7	7
Maximum Green [s]	0	0	0	30	0	0	0	30	30	0	30	30
Amber [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0
All red [s]	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0	1.0
Split [s]	0	0	0	121	0	0	0	19	19	0	19	19
Vehicle Extension [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0
Walk [s]	0	0	0	5	0	0	0	5	5	0	5	5
Pedestrian Clearance [s]	0	0	0	10	0	0	0	10	10	0	10	10
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	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0
Minimum Recall				No				No	No		No	No
Maximum Recall				No				No	No		No	No
Pedestrian Recall				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	C	R	C	R
C, Cycle Length [s]		140	140	140	140	140	140	140
L, Total Lost Time per Cycle [s]		4.00	4.00	4.00	4.00	0.00	4.00	0.00
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]		2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]		57	57	57	75	136	75	136
g / C, Green / Cycle		0.41	0.41	0.41	0.53	0.97	0.53	0.97
(v / s)_i Volume / Saturation Flow Rate		0.29	0.32	0.33	0.29	0.46	0.37	0.44
s, saturation flow rate [veh/h]		1774	1628	1583	6765	1583	5074	1583
c, Capacity [veh/h]		728	668	649	3604	1538	2703	1538
d1, Uniform Delay [s]		34.33	35.65	36.12	21.44	0.11	24.16	0.10
k, delay calibration		0.11	0.11	0.11	0.50	0.14	0.50	0.12
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		1.30	1.96	2.28	0.58	0.29	1.47	0.24
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

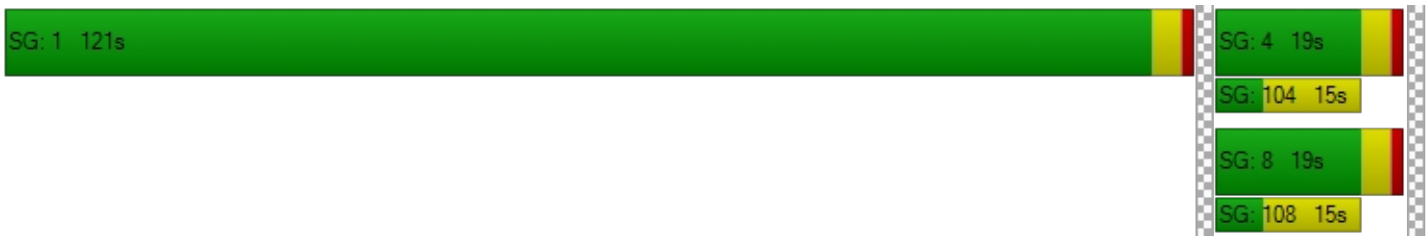
X, volume / capacity		0.71	0.77	0.80	0.54	0.47	0.69	0.45
d, Delay for Lane Group [s/veh]		35.63	37.61	38.40	22.02	0.40	25.63	0.34
Lane Group LOS		D	D	D	C	A	C	A
Critical Lane Group		No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh]		14.20	14.84	15.08	9.97	0.13	14.53	0.10
50th-Percentile Queue Length [ft]		355.08	370.96	376.94	249.20	3.13	363.22	2.52
95th-Percentile Queue Length [veh]		20.38	21.16	21.45	15.15	0.23	20.78	0.18
95th-Percentile Queue Length [ft]		509.60	528.89	536.14	378.64	5.64	519.49	4.53

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	36.03	0.00	38.06	0.00	22.02	0.40	0.00	25.63	0.34
Movement LOS				D		D		C	A		C	A
d_A, Approach Delay [s/veh]	0.00			37.21			16.13			18.76		
Approach LOS	A			D			B			B		
d_I, Intersection Delay [s/veh]	21.94											
Intersection LOS	C											
Intersection V/C	0.736											

Sequence

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



Intersection Level Of Service Report
Intersection 5: I-215 NB Ramps (NS) / Newport Road (EW)

Control Type:	Signalized	Delay (sec / veh):	25.6
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.813

Intersection Setup

Name	I-215 NB Ramps			I-215 NB Ramps			Newport Rd			Newport Rd		
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	1	0	1	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	375.00	100.00	375.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name	I-215 NB Ramps			I-215 NB Ramps			Newport Rd			Newport Rd		
Base Volume Input [veh/h]	740	0	1004	0	0	0	0	1953	511	0	1815	699
Base Volume Adjustment Factor	1.0000	1.0000	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]	740	0	1004	0	0	0	0	1953	511	0	1815	699
Peak Hour Factor	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810
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]	189	0	256	0	0	0	0	498	130	0	463	178
Total Analysis Volume [veh/h]	754	0	1023	0	0	0	0	1991	521	0	1850	713
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 - Coordination Group
Cycle Length [s]	140
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	Split	Permiss	Split	Permiss	Permiss	Permiss	Protecte	Permiss	Overlap	Permiss	Permiss	Overlap
Signal group	5	0	0	0	0	0	3	8	5	0	4	4
Auxiliary Signal Groups									4,5,8			4,5,8
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	0	0	0	0	0	0	7	7	0	7	7
Maximum Green [s]	30	0	0	0	0	0	0	30	30	0	30	30
Amber [s]	3.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0
All red [s]	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0	1.0
Split [s]	121	0	0	0	0	0	0	19	121	0	19	19
Vehicle Extension [s]	3.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0
Walk [s]	5	0	0	0	0	0	0	5	5	0	5	5
Pedestrian Clearance [s]	10	0	0	0	0	0	0	10	10	0	10	10
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	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0
Minimum Recall	No							No	No		No	No
Maximum Recall	No							No	No		No	No
Pedestrian Recall	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		C	R	C	R
C, Cycle Length [s]	140	140	140		140	140	140	140
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00		4.00	0.00	4.00	0.00
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]	2.00	2.00	2.00		2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	63	63	63		69	136	69	136
g / C, Green / Cycle	0.45	0.45	0.45		0.49	0.97	0.49	0.97
(v / s)_i Volume / Saturation Flow Rate	0.33	0.36	0.37		0.39	0.33	0.27	0.45
s, saturation flow rate [veh/h]	1774	1631	1583		5074	1583	6765	1583
c, Capacity [veh/h]	802	738	716		2489	1538	3319	1538
d1, Uniform Delay [s]	31.49	32.94	33.52		29.87	0.09	24.98	0.10
k, delay calibration	0.11	0.11	0.11		0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.35	2.10	2.52		2.80	0.60	0.68	1.01
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	0.74	0.80	0.83		0.80	0.34	0.56	0.46
d, Delay for Lane Group [s/veh]	32.84	35.04	36.03		32.68	0.68	25.67	1.11
Lane Group LOS	C	D	D		C	A	C	A
Critical Lane Group	No	No	Yes		Yes	No	No	No
50th-Percentile Queue Length [veh]	15.85	16.69	17.05		18.14	0.26	10.36	0.43
50th-Percentile Queue Length [ft]	396.25	417.31	426.21		453.62	6.39	258.88	10.76
95th-Percentile Queue Length [veh]	22.38	23.39	23.82		25.13	0.46	15.63	0.77
95th-Percentile Queue Length [ft]	559.48	584.82	595.50		628.26	11.50	390.81	19.36

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	33.31	0.00	35.61	0.00	0.00	0.00	0.00	32.68	0.68	0.00	25.67	1.11
Movement LOS	C		D					C	A		C	A
d_A, Approach Delay [s/veh]	34.64			0.00			26.04			18.83		
Approach LOS	C			A			C			B		
d_I, Intersection Delay [s/veh]	25.58											
Intersection LOS	C											
Intersection V/C	0.813											

Sequence

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

Intersection Level Of Service Report
Intersection 6: Antelope Rd (NS)/Newport Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	61.7
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.064

Intersection Setup

Name												
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	2	0	0	2	0	0	2	0	0	2	0	0
Pocket Length [ft]	330.00	100.00	100.00	100.00	100.00	100.00	325.00	100.00	100.00	200.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							Newport Rd			Newport Rd		
Base Volume Input [veh/h]	798	133	232	34	107	244	209	1790	760	214	1498	33
Base Volume Adjustment Factor	1.0000	1.0000	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]	798	133	232	34	107	244	209	1790	760	214	1498	33
Peak Hour Factor	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660
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]	207	34	60	9	28	63	54	463	197	55	388	9
Total Analysis Volume [veh/h]	826	138	240	35	111	253	216	1853	787	222	1551	34
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	1 - Coordination Group
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
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	8	7	4	0
Auxiliary Signal Groups									5,8			
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	7	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	30	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0	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	1.0	1.0	1.0	0.0
Split [s]	34	23	0	30	19	0	15	74	74	13	72	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	5	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	10	0	10	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	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0	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	C	R	L	C	C	L	C	C
C, Cycle Length [s]	140	140	140	140	140	140	140	140	140	140	140	140	140
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	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	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	2.00
g_i, Effective Green Time [s]	30	40	40	5	15	15	15	11	70	70	9	68	68
g / C, Green / Cycle	0.21	0.28	0.28	0.04	0.11	0.11	0.11	0.08	0.50	0.50	0.06	0.49	0.49
(v / s)_i Volume / Saturation Flow Rate	0.24	0.07	0.15	0.01	0.06	0.08	0.08	0.06	0.49	0.56	0.06	0.29	0.29
s, saturation flow rate [veh/h]	3445	1863	1583	3445	1863	1583	1583	3445	3547	1614	3445	3547	1842
c, Capacity [veh/h]	738	531	452	128	202	171	171	263	1769	805	222	1727	897
d1, Uniform Delay [s]	55.00	38.62	42.15	65.54	59.20	60.50	60.50	63.73	34.49	35.08	65.49	26.10	26.11
k, delay calibration	0.13	0.50	0.50	0.11	0.50	0.50	0.50	0.11	0.11	0.50	0.11	0.11	0.18
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
d2, Incremental Delay [s]	58.79	1.18	4.43	1.13	10.40	24.52	24.52	6.35	6.71	69.90	28.38	0.34	1.07
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	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	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	1.00

Lane Group Results

X, volume / capacity	1.12	0.26	0.53	0.27	0.55	0.74	0.74	0.82	0.98	1.12	1.00	0.60	0.60
d, Delay for Lane Group [s/veh]	113.79	39.81	46.58	66.68	69.60	85.02	85.02	70.07	41.19	104.99	93.88	26.44	27.17
Lane Group LOS	F	D	D	E	E	F	F	E	D	F	F	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	18.60	3.75	7.35	0.62	4.23	5.42	5.42	3.93	28.38	40.82	4.74	12.00	12.66
50th-Percentile Queue Length [ft]	465.03	93.87	183.76	15.38	105.7	135.4	135.4	98.35	709.43	1020.47	118.41	300.08	316.54
95th-Percentile Queue Length [veh]	27.27	6.76	11.80	1.11	7.60	9.23	9.23	7.08	37.11	55.96	8.31	17.68	18.50
95th-Percentile Queue Length [ft]	681.84	168.97	294.92	27.68	190.1	230.8	230.8	177.02	927.84	1399.00	207.71	442.12	462.44

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	113.79	39.81	46.58	66.68	69.60	85.02	70.07	45.13	104.99	93.88	26.68	27.17
Movement LOS	F	D	D	E	E	F	E	D	F	F	C	C
d_A, Approach Delay [s/veh]	91.91			79.12			63.51			34.95		
Approach LOS	F			E			E			C		
d_I, Intersection Delay [s/veh]	61.72											
Intersection LOS	E											
Intersection V/C	1.064											

Sequence

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

Intersection Level Of Service Report
Intersection 7: Menifee Rd (NS)/NewportRd (EW)

Control Type:	Signalized	Delay (sec / veh):	42.9
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.925

Intersection Setup

Name							Newport Rd			Newport Rd		
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	1	0	1	1	0	0	1	0	0	2	0	0
Pocket Length [ft]	250.00	100.00	200.00	100.00	100.00	100.00	400.00	100.00	100.00	295.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							Newport Rd			Newport Rd		
Base Volume Input [veh/h]	150	331	115	92	330	245	376	1437	253	170	1288	57
Base Volume Adjustment Factor	1.0000	1.0000	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]	150	331	115	92	330	245	376	1437	253	170	1288	57
Peak Hour Factor	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290
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]	45	100	35	28	100	74	113	433	76	51	388	17
Total Analysis Volume [veh/h]	181	399	139	111	398	296	454	1733	305	205	1554	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	1 - Coordination Group
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]	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]	11	27	0	12	28	0	39	69	0	12	42	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
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	C	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]	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	23	23	8	24	24	32	65	65	8	41	41
g / C, Green / Cycle	0.06	0.19	0.19	0.07	0.20	0.20	0.27	0.54	0.54	0.07	0.34	0.34
(v / s)_i Volume / Saturation Flow Rate	0.05	0.11	0.09	0.06	0.11	0.19	0.26	0.38	0.40	0.06	0.31	0.04
s, saturation flow rate [veh/h]	3445	3547	1583	1774	3547	1583	1774	3547	1727	3445	5074	1583
c, Capacity [veh/h]	201	679	303	118	708	316	480	1916	933	235	1715	535
d1, Uniform Delay [s]	56.15	44.21	43.01	55.75	43.29	47.27	42.90	20.50	21.00	55.38	37.90	27.49
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.27	0.37	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	13.46	0.81	1.08	25.89	0.70	24.13	24.06	2.22	5.09	9.58	8.43	0.50
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

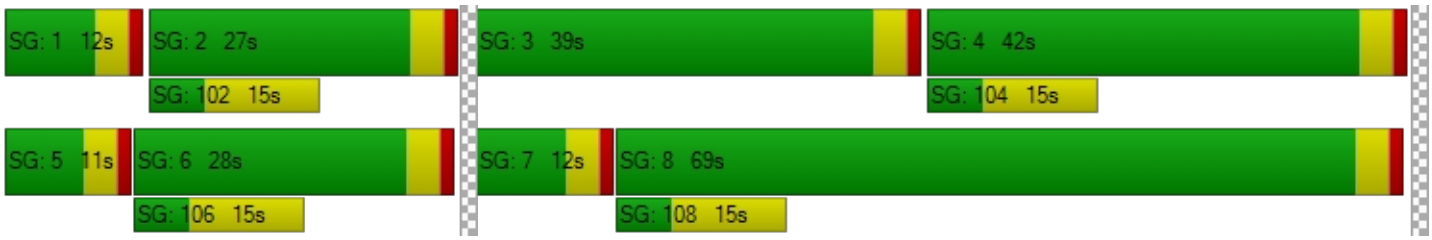
X, volume / capacity	0.90	0.59	0.46	0.94	0.56	0.94	0.95	0.71	0.73	0.87	0.91	0.13
d, Delay for Lane Group [s/veh]	69.61	45.02	44.09	81.65	43.99	71.39	66.96	22.73	26.08	64.96	46.33	27.99
Lane Group LOS	E	D	D	F	D	E	E	C	C	E	D	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	3.01	5.28	3.62	4.09	5.20	10.45	15.73	13.20	14.36	3.29	14.99	1.39
50th-Percentile Queue Length [ft]	75.29	132.06	90.50	102.14	129.94	261.21	393.17	329.89	359.06	82.18	374.72	34.82
95th-Percentile Queue Length [veh]	5.42	9.05	6.52	7.35	8.94	15.75	22.23	19.15	20.58	5.92	21.34	2.51
95th-Percentile Queue Length [ft]	135.52	226.29	162.89	183.85	223.41	393.74	555.76	478.83	514.44	147.92	533.46	62.67

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	69.61	45.02	44.09	81.65	43.99	71.39	66.96	23.46	26.08	64.96	46.33	27.99
Movement LOS	E	D	D	F	D	E	E	C	C	E	D	C
d_A, Approach Delay [s/veh]	51.03			59.26			31.71			47.73		
Approach LOS	D			E			C			D		
d_I, Intersection Delay [s/veh]	42.89											
Intersection LOS	D											
Intersection V/C	0.925											

Sequence

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



Intersection Level Of Service Report
Intersection 8: Bradley Rd (N/S) / La Piedra Rd (E/W)

Control Type:	Signalized	Delay (sec / veh):	19.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.474

Intersection Setup

Name												
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	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	150.00	100.00	100.00	155.00	100.00	100.00	100.00	100.00	100.00	150.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	26	481	25	84	744	19	15	52	23	57	75	104
Base Volume Adjustment Factor	1.0000	1.0000	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]	26	481	25	84	744	19	15	52	23	57	75	104
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]	9	163	8	28	251	6	5	18	8	19	25	35
Total Analysis Volume [veh/h]	35	650	34	114	1005	26	20	70	31	77	101	141
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 Coordinated
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]	11	19	0	38	46	0	11	23	0	20	32	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
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	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	4	62	62	8	65	65	3	8	8	6	11	11
g / C, Green / Cycle	0.04	0.62	0.62	0.08	0.65	0.65	0.03	0.08	0.08	0.06	0.11	0.11
(v / s)_i Volume / Saturation Flow Rate	0.02	0.19	0.19	0.06	0.28	0.28	0.01	0.03	0.03	0.04	0.05	0.09
s, saturation flow rate [veh/h]	1774	1863	1830	1774	1863	1846	1774	1863	1679	1774	1863	1583
c, Capacity [veh/h]	79	1143	1123	147	1214	1203	55	151	136	111	210	179
d1, Uniform Delay [s]	46.61	9.16	9.17	45.03	8.41	8.41	47.54	43.48	43.58	45.98	41.68	43.27
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.81	0.68	0.69	8.55	1.10	1.11	3.96	1.31	1.64	7.43	1.70	7.58
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

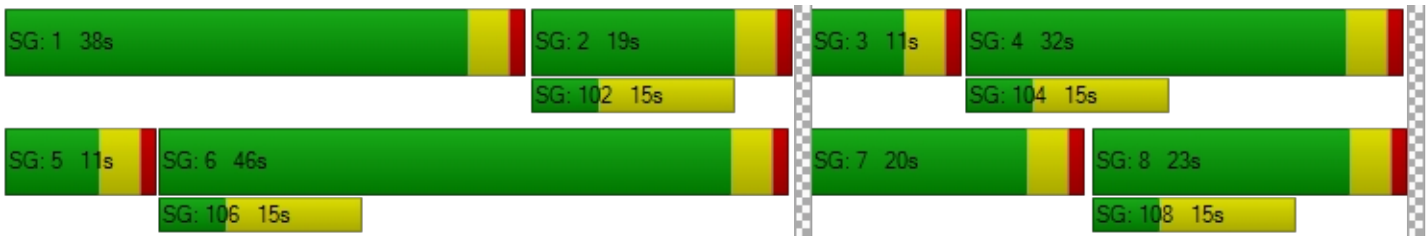
X, volume / capacity	0.44	0.30	0.30	0.78	0.43	0.43	0.36	0.34	0.37	0.69	0.48	0.79
d, Delay for Lane Group [s/veh]	50.43	9.84	9.86	53.58	9.51	9.52	51.51	44.79	45.22	53.41	43.38	50.85
Lane Group LOS	D	A	A	D	A	A	D	D	D	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.90	3.14	3.09	2.99	4.56	4.53	0.53	1.20	1.18	2.02	2.33	3.61
50th-Percentile Queue Length [ft]	22.43	78.42	77.27	74.86	114.09	113.20	13.23	29.99	29.52	50.57	58.23	90.20
95th-Percentile Queue Length [veh]	1.62	5.65	5.56	5.39	8.07	8.02	0.95	2.16	2.13	3.64	4.19	6.49
95th-Percentile Queue Length [ft]	40.38	141.16	139.08	134.75	201.67	200.45	23.81	53.98	53.13	91.03	104.82	162.36

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	50.43	9.85	9.86	53.58	9.52	9.52	51.51	44.91	45.22	53.41	43.38	50.85
Movement LOS	D	A	A	D	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	11.83			13.90			46.08			49.10		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	19.82											
Intersection LOS	B											
Intersection V/C	0.474											

Sequence

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



Intersection Level Of Service Report
Intersection 9: Bradley Rd (NS)/Holland Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	55.5
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.909

Intersection Setup

Name												
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	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	130.00	100.00	100.00	150.00	100.00	100.00	145.00	100.00	100.00	140.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	69	368	178	191	267	172	216	305	69	166	346	256
Base Volume Adjustment Factor	1.0000	1.0000	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]	69	368	178	191	267	172	216	305	69	166	346	256
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	100	48	52	73	47	59	83	19	45	94	70
Total Analysis Volume [veh/h]	75	400	193	208	290	187	235	332	75	180	376	278
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 Coordinated
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]	41	46	0	23	28	0	24	33	0	18	27	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	R	L	C	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	7	45	16	55	55	18	29	14	25	25
g / C, Green / Cycle	0.05	0.38	0.13	0.45	0.45	0.15	0.24	0.12	0.21	0.21
(v / s)_i Volume / Saturation Flow Rate	0.04	0.34	0.12	0.16	0.12	0.13	0.23	0.10	0.20	0.18
s, saturation flow rate [veh/h]	1774	1762	1774	1863	1583	1774	1804	1774	1863	1583
c, Capacity [veh/h]	97	663	236	847	720	262	435	206	390	332
d1, Uniform Delay [s]	55.98	35.18	51.10	21.15	20.24	50.22	44.64	52.15	46.99	45.49
k, delay calibration	0.11	0.50	0.11	0.50	0.50	0.11	0.38	0.11	0.31	0.23
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	12.07	16.94	10.31	1.10	0.88	10.41	24.73	10.84	28.00	11.32
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

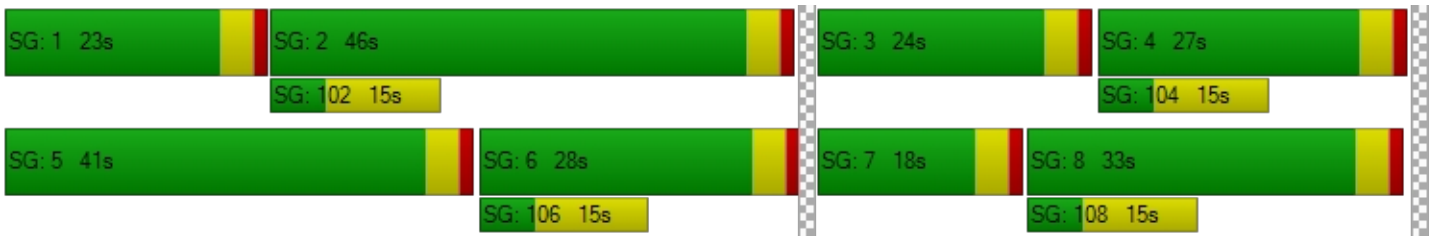
X, volume / capacity	0.77	0.89	0.88	0.34	0.26	0.90	0.94	0.87	0.96	0.84
d, Delay for Lane Group [s/veh]	68.05	52.12	61.41	22.25	21.12	60.63	69.36	62.99	74.99	56.82
Lane Group LOS	E	D	E	C	C	E	E	E	E	E
Critical Lane Group	No	Yes	Yes	No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh]	2.50	18.32	6.59	5.21	3.23	7.43	14.28	5.76	13.65	8.65
50th-Percentile Queue Length [ft]	62.42	458.10	164.81	130.16	80.72	185.66	357.04	144.08	341.37	216.13
95th-Percentile Queue Length [veh]	4.49	25.34	10.80	8.95	5.81	11.90	20.48	9.70	19.72	13.47
95th-Percentile Queue Length [ft]	112.35	633.61	270.08	223.71	145.30	297.39	511.98	242.51	492.88	336.68

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	68.05	52.12	52.12	61.41	22.25	21.12	60.63	69.36	69.36	62.99	74.99	56.82
Movement LOS	E	D	D	E	C	C	E	E	E	E	E	E
d_A, Approach Delay [s/veh]	53.90			33.83			66.17			66.34		
Approach LOS	D			C			E			E		
d_I, Intersection Delay [s/veh]	55.49											
Intersection LOS	E											
Intersection V/C	0.909											

Sequence

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



Intersection Level Of Service Report
Intersection 10: Town Center Dr-Sherman Rd (NS) / La Piedra Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	29.9
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.289

Intersection Setup

Name												
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	1	0	1	1	0	0	0	0	0	1	0	0
Pocket Length [ft]	210.00	100.00	500.00	150.00	100.00	100.00	100.00	100.00	100.00	800.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	32	89	144	32	90	7	13	37	37	143	57	34
Base Volume Adjustment Factor	1.0000	1.0000	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]	32	89	144	32	90	7	13	37	37	143	57	34
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]	8	23	38	8	23	2	3	10	10	37	15	9
Total Analysis Volume [veh/h]	33	93	150	33	94	7	14	39	39	149	59	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]	100
Coordination Type	Time of Day Pattern Coordinated
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]	11	19	0	11	19	0	16	19	0	51	54	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
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	L	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	4	63	63	4	63	2	6	10	14	14
g / C, Green / Cycle	0.04	0.63	0.63	0.04	0.63	0.02	0.06	0.10	0.14	0.14
(v / s)_i Volume / Saturation Flow Rate	0.02	0.05	0.09	0.02	0.05	0.01	0.05	0.08	0.03	0.03
s, saturation flow rate [veh/h]	1774	1863	1583	1774	1840	1774	1712	1774	1863	1641
c, Capacity [veh/h]	77	1173	997	77	1158	42	108	186	268	236
d1, Uniform Delay [s]	46.71	7.24	7.59	46.71	7.27	48.10	46.06	43.83	37.69	37.76
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.78	0.13	0.32	3.78	0.15	4.51	8.81	7.85	0.32	0.40
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.43	0.08	0.15	0.43	0.09	0.33	0.72	0.80	0.18	0.19
d, Delay for Lane Group [s/veh]	50.49	7.37	7.91	50.49	7.42	52.61	54.87	51.68	38.00	38.15
Lane Group LOS	D	A	A	D	A	D	D	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	0.85	0.68	1.16	0.85	0.74	0.38	2.08	3.84	1.02	0.97
50th-Percentile Queue Length [ft]	21.20	16.91	29.01	21.20	18.48	9.56	52.09	95.96	25.43	24.15
95th-Percentile Queue Length [veh]	1.53	1.22	2.09	1.53	1.33	0.69	3.75	6.91	1.83	1.74
95th-Percentile Queue Length [ft]	38.15	30.43	52.22	38.15	33.26	17.21	93.77	172.73	45.78	43.46

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	50.49	7.37	7.91	50.49	7.42	7.42	52.61	54.87	54.87	51.68	38.03	38.15
Movement LOS	D	A	A	D	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	12.82			18.03			54.53			46.42		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	29.87											
Intersection LOS	C											
Intersection V/C	0.289											

Sequence

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

Intersection Level Of Service Report
Intersection 11: Sherman Rd (NS)/Holland Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	1,435.8
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	3.518

Intersection Setup

Name												
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	1	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	500.00	100.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	5	0	11	146	1	94	65	686	4	27	872	173
Base Volume Adjustment Factor	1.0000	1.0000	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]	5	0	11	146	1	94	65	686	4	27	872	173
Peak Hour Factor	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	3	39	0	25	17	183	1	7	232	46
Total Analysis Volume [veh/h]	5	0	12	155	1	100	69	731	4	29	929	184
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.19	0.00	0.03	3.52	0.02	0.31	0.11	0.01	0.00	0.03	0.01	0.00
d_M, Delay for Movement [s/veh]	150.39	100.89	25.45	1435.76	1418.85	1365.16	11.45	0.00	0.00	9.28	0.00	0.00
Movement LOS	F	F	D	F	F	F	B	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.74	0.74	0.74	27.20	27.20	27.20	31.19	31.19	0.00	25.21	25.21	0.00
95th-Percentile Queue Length [ft]	18.62	18.62	18.62	680.10	680.10	680.10	779.69	779.69	0.00	630.35	630.35	0.00
d_A, Approach Delay [s/veh]	62.20			1408.12			0.98			0.24		
Approach LOS	F			F			A			A		
d_I, Intersection Delay [s/veh]	163.40											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 12: Haun Rd (NS)/Village-Market Dr (EW)

Control Type:	Signalized	Delay (sec / veh):	28.9
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.853

Intersection Setup

Name	Haun Rd			Haun Rd								
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	1	0	0	2	0	0	0	0	0	0	0	1
Pocket Length [ft]	100.00	100.00	100.00	175.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	65.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Haun Rd			Haun Rd								
Base Volume Input [veh/h]	111	965	104	519	977	260	266	35	82	64	37	505
Base Volume Adjustment Factor	1.0000	1.0000	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]	111	965	104	519	977	260	266	35	82	64	37	505
Peak Hour Factor	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530
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	253	27	136	256	68	70	9	22	17	10	132
Total Analysis Volume [veh/h]	116	1013	109	545	1025	273	279	37	86	67	39	530
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	1 - Coordination Group
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
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	Permiss	Permiss	Overlap
Signal group	5	2	0	1	6	0	3	8	0	0	4	4
Auxiliary Signal Groups												1,4
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	0	7	7
Maximum Green [s]	30	30	0	30	30	0	7	30	0	0	30	30
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	3.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	1.0
Split [s]	13	43	0	25	55	0	21	32	0	0	11	11
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	3.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	5
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	10
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	0.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0
Minimum Recall	No	No		No	No		Yes	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	C	L	C	C	L	C	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	0.00	0.00	2.00	0.00
g_i, Effective Green Time [s]	8	48	48	19	59	59	21	21	10	33
g / C, Green / Cycle	0.08	0.48	0.48	0.19	0.59	0.59	0.21	0.21	0.10	0.33
(v / s)_i Volume / Saturation Flow Rate	0.07	0.31	0.31	0.16	0.35	0.37	0.08	0.22	0.07	0.19
s, saturation flow rate [veh/h]	1774	1863	1800	3445	1863	1733	1538	1268	1495	2803
c, Capacity [veh/h]	146	897	866	646	1092	1016	347	314	210	922
d1, Uniform Delay [s]	45.08	19.40	19.42	39.26	13.20	13.64	33.65	38.84	43.36	27.80
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.25	3.43	3.57	3.13	2.43	3.01	0.61	29.21	1.86	0.57
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.79	0.64	0.64	0.84	0.60	0.63	0.35	0.89	0.50	0.58
d, Delay for Lane Group [s/veh]	54.33	22.83	22.99	42.39	15.63	16.65	34.25	68.05	45.22	28.37
Lane Group LOS	D	C	C	D	B	B	C	E	D	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	3.07	9.55	9.30	6.37	8.46	8.72	2.44	8.60	2.52	4.94
50th-Percentile Queue Length [ft]	76.81	238.87	232.44	159.16	211.61	217.88	61.10	215.09	63.10	123.46
95th-Percentile Queue Length [veh]	5.53	14.62	14.30	10.50	13.24	13.56	4.40	13.41	4.54	8.58
95th-Percentile Queue Length [ft]	138.27	365.61	357.45	262.62	330.89	338.92	109.98	335.35	113.58	214.57

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	54.33	22.90	22.99	42.39	16.00	16.65	50.13	68.05	68.05	45.22	45.22	28.37
Movement LOS	D	C	C	D	B	B	D	E	E	D	D	C
d_A, Approach Delay [s/veh]	25.85			23.90			57.76			31.18		
Approach LOS	C			C			E			C		
d_I, Intersection Delay [s/veh]	28.92											
Intersection LOS	C											
Intersection V/C	0.853											

Sequence

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

Intersection Level Of Service Report
Intersection 13: Haun Rd (NS)/Countryside Marketplace (EW)

Control Type:	Signalized	Delay (sec / veh):	28.9
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.674

Intersection Setup

Name	Haun Rd			Haun Rd								
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	1	0	0	2	0	0	0	0	1	1	0	0
Pocket Length [ft]	200.00	100.00	100.00	235.00	100.00	100.00	100.00	100.00	40.00	100.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Haun Rd			Haun Rd								
Base Volume Input [veh/h]	55	817	90	356	757	68	46	9	115	71	9	330
Base Volume Adjustment Factor	1.0000	1.0000	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]	55	817	90	356	757	68	46	9	115	71	9	330
Peak Hour Factor	0.9640	0.9640	0.9640	0.9640	0.9640	0.9640	0.9640	0.9640	0.9640	0.9640	0.9640	0.9640
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	212	23	92	196	18	12	2	30	18	2	86
Total Analysis Volume [veh/h]	57	848	93	369	785	71	48	9	119	74	9	342
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	1 - Coordination Group
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
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	Split	Split	Split	Split	Split	Split
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]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	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]	11	26	0	32	47	0	0	19	0	0	23	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
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]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	46	46	13	54	54	10	10	15	15
g / C, Green / Cycle	0.06	0.46	0.46	0.13	0.54	0.54	0.10	0.10	0.14	0.14
(v / s)_i Volume / Saturation Flow Rate	0.03	0.26	0.26	0.11	0.23	0.23	0.03	0.08	0.05	0.12
s, saturation flow rate [veh/h]	1774	1863	1799	3445	1863	1809	1774	1600	1783	2803
c, Capacity [veh/h]	101	857	827	462	1001	972	179	161	259	407
d1, Uniform Delay [s]	46.03	19.65	19.65	42.05	13.97	13.98	41.60	44.00	38.36	41.66
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.93	2.62	2.72	3.24	1.37	1.41	0.79	8.46	0.71	4.70
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

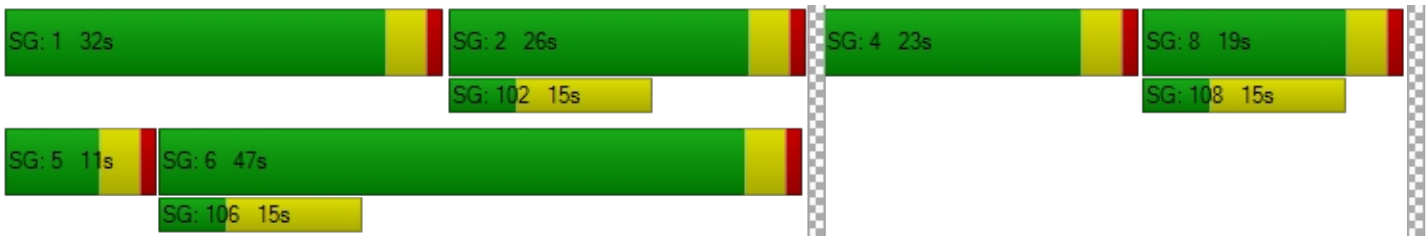
X, volume / capacity	0.57	0.56	0.56	0.80	0.43	0.43	0.27	0.79	0.32	0.84
d, Delay for Lane Group [s/veh]	50.96	22.27	22.37	45.29	15.34	15.40	42.40	52.46	39.06	46.35
Lane Group LOS	D	C	C	D	B	B	D	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	1.46	7.83	7.59	4.40	5.49	5.36	1.09	3.33	1.79	4.16
50th-Percentile Queue Length [ft]	36.48	195.81	189.63	110.01	137.27	133.93	27.15	83.26	44.74	103.91
95th-Percentile Queue Length [veh]	2.63	12.42	12.10	7.84	9.33	9.15	1.95	5.99	3.22	7.48
95th-Percentile Queue Length [ft]	65.67	310.55	302.55	196.01	233.34	228.83	48.87	149.87	80.54	187.04

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	50.96	22.31	22.37	45.29	15.37	15.40	42.40	52.46	52.46	39.06	39.06	46.35
Movement LOS	D	C	C	D	B	B	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	23.96			24.38			49.72			44.93		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	28.90											
Intersection LOS	C											
Intersection V/C	0.674											

Sequence

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



Intersection Level Of Service Report
Intersection 14: Haun Rd (N/S)/La Piedra Rd (E/W)

Control Type:	Signalized	Delay (sec / veh):	32.2
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.788

Intersection Setup

Name				Haun Rd								
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	1	0	1	1	0	1	0	0	0	0	0	0
Pocket Length [ft]	165.00	100.00	100.00	150.00	100.00	150.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			Yes		

Volumes

Name				Haun Rd								
Base Volume Input [veh/h]	22	775	187	68	699	154	181	38	102	172	48	90
Base Volume Adjustment Factor	1.0000	1.0000	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]	22	775	187	68	699	154	181	38	102	172	48	90
Peak Hour Factor	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	211	51	19	191	42	49	10	28	47	13	25
Total Analysis Volume [veh/h]	24	845	204	74	762	168	197	41	111	188	52	98
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	1 - Coordination Group
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
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	Split	Split	Split	Split	Split	Split
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]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	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]	11	36	0	12	37	0	0	11	0	0	41	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
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]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	R	C	R	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
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
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	41	41	6	43	43	16	16	22
g / C, Green / Cycle	0.03	0.41	0.41	0.06	0.43	0.43	0.16	0.16	0.22
(v / s)_i Volume / Saturation Flow Rate	0.01	0.29	0.29	0.04	0.21	0.11	0.13	0.07	0.20
s, saturation flow rate [veh/h]	1774	1863	1739	1774	3547	1583	1789	1583	1726
c, Capacity [veh/h]	63	753	703	110	1528	682	278	246	377
d1, Uniform Delay [s]	47.24	25.09	25.09	45.97	20.66	18.15	41.19	38.40	38.01
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.81	5.89	6.30	6.92	1.17	0.86	7.43	1.29	7.74
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

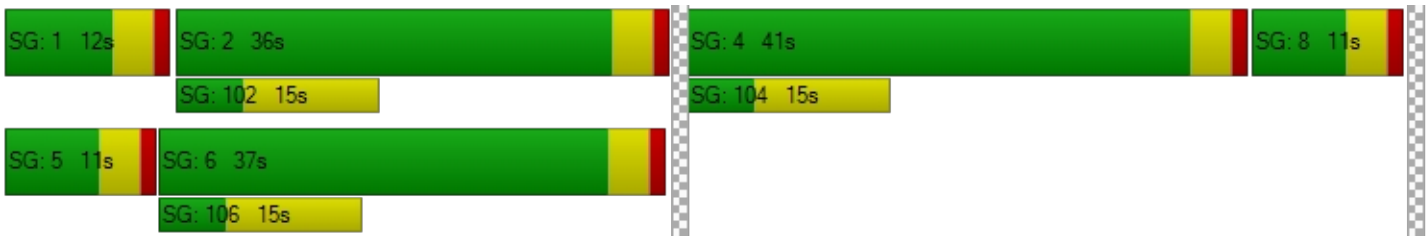
X, volume / capacity	0.38	0.72	0.72	0.67	0.50	0.25	0.86	0.45	0.90
d, Delay for Lane Group [s/veh]	51.05	30.98	31.40	52.88	21.83	19.01	48.62	39.69	45.75
Lane Group LOS	D	C	C	D	C	B	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	0.63	10.98	10.34	1.93	6.07	2.42	5.98	2.44	8.35
50th-Percentile Queue Length [ft]	15.67	274.48	258.52	48.33	151.70	60.43	149.50	60.97	208.78
95th-Percentile Queue Length [veh]	1.13	16.41	15.61	3.48	10.11	4.35	9.99	4.39	13.09
95th-Percentile Queue Length [ft]	28.21	410.34	390.36	86.99	252.69	108.78	249.76	109.74	327.26

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	51.05	31.13	31.40	52.88	21.83	19.01	48.62	48.62	39.69	45.75	45.75	45.75
Movement LOS	D	C	C	D	C	B	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	31.62			23.64			45.78			45.75		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	32.24											
Intersection LOS	C											
Intersection V/C	0.788											

Sequence

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



Intersection Level Of Service Report
Intersection 15: Haun Road (NS) / Holland Road (EW)

Control Type:	Signalized	Delay (sec / veh):	55.3
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.920

Intersection Setup

Name												
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	1	0	0	1	0	0	1	0	1	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	150.00	100.00	100.00	150.00	100.00	150.00	150.00	100.00	150.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	342	363	161	129	378	415	327	294	178	107	306	136
Base Volume Adjustment Factor	1.0000	1.0000	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]	342	363	161	129	378	415	327	294	178	107	306	136
Peak Hour Factor	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	93	98	44	35	102	112	89	80	48	29	83	37
Total Analysis Volume [veh/h]	371	393	174	140	410	450	354	319	193	116	332	147
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 Coordinated
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]	23	28	0	36	41	0	27	23	0	23	19	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
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]	110	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	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]	19	48	48	11	40	40	23	27	27	9	13	13
g / C, Green / Cycle	0.17	0.43	0.43	0.10	0.36	0.36	0.21	0.24	0.24	0.08	0.11	0.11
(v / s)_i Volume / Saturation Flow Rate	0.21	0.21	0.11	0.08	0.22	0.28	0.20	0.17	0.12	0.07	0.09	0.09
s, saturation flow rate [veh/h]	1774	1863	1583	1774	1863	1583	1774	1863	1583	1774	3547	1583
c, Capacity [veh/h]	307	808	687	174	668	567	371	448	381	147	404	181
d1, Uniform Delay [s]	45.56	22.40	19.86	48.68	29.08	31.69	43.05	38.36	36.21	49.60	47.72	47.68
k, delay calibration	0.28	0.50	0.50	0.11	0.50	0.50	0.25	0.18	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	109.67	2.09	0.89	8.46	4.19	10.88	23.80	3.46	1.05	9.07	4.20	8.57
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	1.21	0.49	0.25	0.81	0.61	0.79	0.95	0.71	0.51	0.79	0.82	0.81
d, Delay for Lane Group [s/veh]	155.23	24.49	20.74	57.13	33.27	42.56	66.85	41.82	37.25	58.67	51.92	56.25
Lane Group LOS	F	C	C	E	C	D	E	D	D	E	D	E
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	17.35	7.19	2.81	4.03	9.09	11.66	11.47	7.91	4.38	3.38	4.51	4.21
50th-Percentile Queue Length [ft]	433.75	179.83	70.20	100.70	227.26	291.41	286.82	197.72	109.52	84.60	112.64	105.20
95th-Percentile Queue Length [veh]	26.41	11.59	5.05	7.25	14.03	17.26	17.03	12.52	7.81	6.09	7.99	7.57
95th-Percentile Queue Length [ft]	660.31	289.80	126.37	181.26	350.87	431.39	425.70	313.02	195.34	152.28	199.67	189.30

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	155.23	24.49	20.74	57.13	33.27	42.56	66.85	41.82	37.25	58.67	51.92	56.25
Movement LOS	F	C	C	E	C	D	E	D	D	E	D	E
d_A, Approach Delay [s/veh]	75.51			40.79			51.03			54.31		
Approach LOS	E			D			D			D		
d_I, Intersection Delay [s/veh]	55.35											
Intersection LOS	E											
Intersection V/C	0.920											

Sequence

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

Intersection Level Of Service Report
Intersection 16: Haun Rd-Zeiders Rd (NS)/Scott Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	75.7
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.902

Intersection Setup

Name												
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	1	0	0	1	0	0	1	0	0	1	0	1
Pocket Length [ft]	345.00	100.00	100.00	200.00	100.00	100.00	135.00	100.00	100.00	185.00	100.00	200.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	168	192	246	605	78	94	85	854	45	252	587	502
Base Volume Adjustment Factor	1.0000	1.0000	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]	168	192	246	605	78	94	85	854	45	252	587	502
Peak Hour Factor	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750
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	63	155	20	24	22	219	12	65	151	129
Total Analysis Volume [veh/h]	172	197	252	621	80	96	87	876	46	258	602	515
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	1 - Coordination Group
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]	16.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	19	0	0	26	0	14	64	0	11	61	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	C	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
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
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
g_i, Effective Green Time [s]	15	15	15	22	22	7	47	47	20	60	60
g / C, Green / Cycle	0.13	0.13	0.13	0.18	0.18	0.06	0.40	0.40	0.16	0.50	0.50
(v / s)_i Volume / Saturation Flow Rate	0.10	0.11	0.16	0.23	0.23	0.05	0.25	0.25	0.15	0.17	0.33
s, saturation flow rate [veh/h]	1774	1863	1583	1774	1740	1774	1863	1830	1774	3547	1583
c, Capacity [veh/h]	222	233	198	323	317	110	737	724	291	1765	788
d1, Uniform Delay [s]	50.86	51.36	52.50	49.08	49.08	55.54	29.21	29.21	49.10	18.24	22.44
k, delay calibration	0.11	0.11	0.18	0.38	0.39	0.11	0.50	0.50	0.11	0.50	0.50
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
d2, Incremental Delay [s]	5.71	8.16	136.51	127.08	131.48	12.04	4.08	4.15	8.98	0.53	4.20
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
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
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

Lane Group Results

X, volume / capacity	0.77	0.85	1.27	1.24	1.25	0.79	0.63	0.63	0.89	0.34	0.65
d, Delay for Lane Group [s/veh]	56.58	59.53	189.01	176.17	180.56	67.58	33.28	33.35	58.07	18.76	26.64
Lane Group LOS	E	E	F	F	F	E	C	C	E	B	C
Critical Lane Group	No	No	Yes	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	5.19	6.12	13.26	20.66	20.65	2.88	10.98	10.80	8.00	4.83	10.82
50th-Percentile Queue Length [ft]	129.63	152.96	331.40	516.61	516.35	72.03	274.49	270.07	199.89	120.76	270.40
95th-Percentile Queue Length [veh]	8.92	10.17	21.12	31.17	31.25	5.19	16.41	16.19	12.63	8.43	16.21
95th-Percentile Queue Length [ft]	222.99	254.37	528.01	779.15	781.13	129.66	410.35	404.82	315.82	210.87	405.24

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	56.58	59.53	189.01	177.73	180.56	180.56	67.58	33.32	33.35	58.07	18.76	26.64
Movement LOS	E	E	F	F	F	F	E	C	C	E	B	C
d_A, Approach Delay [s/veh]	111.25			178.35			36.27			29.09		
Approach LOS	F			F			D			C		
d_I, Intersection Delay [s/veh]	75.70											
Intersection LOS	E											
Intersection V/C	0.902											

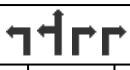
Sequence

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

Intersection Level Of Service Report
Intersection 17: I-215 SB Ramps (NS) / Scott Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	12.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.553

Intersection Setup

Name												
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	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	245.00	100.00	100.00
Speed [mph]		50.00			50.00			50.00			50.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		No			Yes			No			No	

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	608	0	353	0	868	498	413	850	487
Base Volume Adjustment Factor	1.0000	1.0000	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	608	0	353	0	868	498	413	850	487
Peak Hour Factor	1.0000	1.0000	1.0000	0.9470	0.9470	0.9470	1.0000	0.9470	0.9470	0.9470	0.9470	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	161	0	93	0	229	131	109	224	122
Total Analysis Volume [veh/h]	0	0	0	642	0	373	0	917	526	436	898	487
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 - Coordination Group
Cycle Length [s]	110
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	Split	Split	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	0	0	0	6	0	0	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	0	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	73	0	0	37	0	0	37	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	10	0	0	10	0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall					No			No			No	
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]		110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]		4.00	4.00	4.00	4.00	4.00	4.00	4.00
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]		2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]		24	24	24	78	78	78	78
g / C, Green / Cycle		0.21	0.21	0.21	0.71	0.71	0.71	0.71
(v / s)_i Volume / Saturation Flow Rate		0.18	0.18	0.13	0.26	0.33	0.25	0.31
s, saturation flow rate [veh/h]		1774	1774	2803	3547	1583	3547	1583
c, Capacity [veh/h]		380	380	600	2529	1129	2529	1129
d1, Uniform Delay [s]		41.40	41.40	39.11	0.83	0.86	0.83	0.85
k, delay calibration		0.11	0.11	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		5.18	5.18	1.06	0.40	1.38	0.39	1.20
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	1.33	1.33	1.33	1.33
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.84	0.84	0.62	0.36	0.47	0.36	0.43
d, Delay for Lane Group [s/veh]		46.58	46.58	40.17	1.24	2.24	1.22	2.05
Lane Group LOS		D	D	D	A	A	A	A
Critical Lane Group		Yes	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh]		8.46	8.46	4.43	0.56	0.92	0.54	0.82
50th-Percentile Queue Length [ft]		211.45	211.45	110.77	13.94	22.93	13.60	20.58
95th-Percentile Queue Length [veh]		13.23	13.23	7.88	1.00	1.65	0.98	1.48
95th-Percentile Queue Length [ft]		330.68	330.68	197.07	25.09	41.27	24.48	37.04

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	46.58	46.58	40.17	0.00	1.24	2.24	0.00	1.22	2.05
Movement LOS				D	D	D		A	A		A	A
d_A, Approach Delay [s/veh]	0.00			44.22			1.60			1.51		
Approach LOS	A			D			A			A		
d_I, Intersection Delay [s/veh]	12.83											
Intersection LOS	B											
Intersection V/C	0.553											

Sequence

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

Intersection Level Of Service Report
Intersection 18: I-215 NB Ramps (NS) / Scott Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	20.9
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.704

Intersection Setup

Name												
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	1	0	0	0	1	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	425.00	100.00	100.00	100.00	250.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		50.00			50.00			50.00			50.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		No			Yes			No			No	

Volumes

Name												
Base Volume Input [veh/h]	0	1	529	0	0	445	293	1195	0	0	863	427
Base Volume Adjustment Factor	1.0000	1.0000	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	1	529	0	0	445	293	1195	0	0	863	427
Peak Hour Factor	0.9600	0.9600	0.9600	1.0000	1.0000	1.0000	0.9600	0.9600	1.0000	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	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	138	0	0	111	76	311	0	0	225	111
Total Analysis Volume [veh/h]	0	1	551	0	0	445	305	1245	0	0	899	445
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	1 - Coordination Group
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
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	Split	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	0	6	3	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	0	7	7	7	0	0	7	0
Maximum Green [s]	0	30	0	0	0	30	30	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	3.0	3.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	1.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	71	0	0	0	71	11	39	0	0	28	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	3.0	3.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	5	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	10	0	10	0	0	10	0
Rest In Walk		No				No		No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	2.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	0.0	2.0	2.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No				No	No	No			No	
Maximum Recall		No				No	No	No			No	
Pedestrian Recall		No				No	No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	R	R	L	C	C	R
C, Cycle Length [s]	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00
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]	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	22	22	22	21	80	55	55
g / C, Green / Cycle	0.20	0.20	0.20	0.19	0.73	0.50	0.50
(v / s)_i Volume / Saturation Flow Rate	0.17	0.17	0.16	0.17	0.35	0.25	0.28
s, saturation flow rate [veh/h]	1584	1583	2803	1774	3547	3547	1583
c, Capacity [veh/h]	318	318	562	338	2577	1772	791
d1, Uniform Delay [s]	42.55	42.56	41.77	40.01	0.50	11.53	11.94
k, delay calibration	0.11	0.11	0.11	0.11	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.22	7.24	2.56	8.81	0.65	1.04	2.88
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	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.87	0.87	0.79	0.90	0.48	0.51	0.56
d, Delay for Lane Group [s/veh]	49.78	49.80	44.33	48.82	1.15	12.57	14.82
Lane Group LOS	D	D	D	D	A	B	B
Critical Lane Group	No	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh]	7.53	7.53	5.66	7.84	0.57	4.41	4.84
50th-Percentile Queue Length [ft]	188.31	188.34	141.40	196.05	14.26	110.18	120.90
95th-Percentile Queue Length [veh]	12.03	12.04	9.56	12.43	1.03	7.85	8.44
95th-Percentile Queue Length [ft]	300.83	300.88	238.90	310.86	25.67	196.25	211.06

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	49.78	49.79	0.00	0.00	44.33	48.82	1.15	0.00	0.00	12.57	14.82
Movement LOS		D	D			D	D	A			B	B
d_A, Approach Delay [s/veh]	49.79			44.33			10.53			13.31		
Approach LOS	D			D			B			B		
d_I, Intersection Delay [s/veh]	20.93											
Intersection LOS	C											
Intersection V/C	0.704											

Sequence

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

Intersection Level Of Service Report
Intersection 19: Antelope Rd (NS)/Scott Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	37.0
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.723

Intersection Setup

Name											
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	2	0	0	1	0	1	1	0	0	1	0	0
Pocket Length [ft]	215.00	100.00	100.00	200.00	100.00	200.00	375.00	100.00	100.00	200.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	423	310	377	64	180	273	241	1020	458	65	599	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]	423	310	377	64	180	273	241	1020	458	65	599	58
Peak Hour Factor	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760
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	79	97	16	46	70	62	261	117	17	153	15
Total Analysis Volume [veh/h]	433	318	386	66	184	280	247	1045	469	67	614	59
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
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 - Coordination Group
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
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]	28	31	0	21	24	0	17	41	0	17	41	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
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	C
C, Cycle Length [s]	110	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	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]	16	45	45	6	35	35	10	37	37	6	33	33
g / C, Green / Cycle	0.15	0.41	0.41	0.06	0.32	0.32	0.09	0.33	0.33	0.06	0.30	0.30
(v / s)_i Volume / Saturation Flow Rate	0.13	0.09	0.24	0.04	0.10	0.18	0.07	0.29	0.30	0.02	0.13	0.13
s, saturation flow rate [veh/h]	3445	3547	1583	1774	1863	1583	3445	3547	1583	3445	3547	1781
c, Capacity [veh/h]	514	1450	647	99	589	500	314	1182	528	194	1059	532
d1, Uniform Delay [s]	45.59	21.13	25.43	50.95	28.58	31.29	49.00	34.69	34.76	48.99	26.25	26.29
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.28	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.86	0.35	4.02	7.35	1.38	4.47	4.40	2.39	12.08	1.05	0.27	0.54
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	1.33	1.33	1.33
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	0.22	0.60	0.66	0.31	0.56	0.79	0.88	0.89	0.35	0.42	0.43
d, Delay for Lane Group [s/veh]	49.45	21.47	29.45	58.30	29.97	35.77	53.39	37.08	46.84	50.04	26.52	26.83
Lane Group LOS	D	C	C	E	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]	5.78	2.56	8.00	1.92	3.72	6.44	3.39	12.67	12.82	0.87	3.83	3.93
50th-Percentile Queue Length [ft]	144.50	64.02	200.04	48.05	92.98	161.02	84.63	316.81	320.44	21.69	95.65	98.23
95th-Percentile Queue Length [veh]	9.72	4.61	12.64	3.46	6.69	10.60	6.09	18.51	18.69	1.56	6.89	7.07
95th-Percentile Queue Length [ft]	243.07	115.24	316.01	86.50	167.37	265.07	152.33	462.76	467.22	39.04	172.18	176.81

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	49.45	21.47	29.45	58.30	29.97	35.77	53.39	37.08	46.84	50.04	26.60	26.83
Movement LOS	D	C	C	E	C	D	D	D	D	D	C	C
d_A, Approach Delay [s/veh]	34.84			36.56			41.97			28.74		
Approach LOS	C			D			D			C		
d_I, Intersection Delay [s/veh]	36.99											
Intersection LOS	D											
Intersection V/C	0.723											

Sequence

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

Intersection Level Of Service Report
Intersection 22: Antelope Rd (NS)/Albion Ln (EW)

Control Type:	Two-way stop	Delay (sec / veh):	210.6
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.079

Intersection Setup

Name						
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	1	0	1	0
Pocket Length [ft]	100.00	100.00	200.00	100.00	175.00	100.00
Speed [mph]	50.00		50.00		50.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	585	75	130	746	87	67
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]	585	75	130	746	87	67
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]	154	20	34	196	23	18
Total Analysis Volume [veh/h]	615	79	137	784	91	70
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	0.01	0.00	0.15	0.01	1.08	0.15
d_M, Delay for Movement [s/veh]	0.00	0.00	9.71	0.00	210.60	14.08
Movement LOS	A	A	A	A	F	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.53	0.00	6.27	0.52
95th-Percentile Queue Length [ft/ln]	0.00	0.00	13.37	0.00	156.85	13.11
d_A, Approach Delay [s/veh]	0.00		1.44		125.16	
Approach LOS	A		A		F	
d_I, Intersection Delay [s/veh]	12.09					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 23: Hanover Lane (NS) / Holland Road (EW)

Control Type:	Signalized	Delay (sec / veh):	17.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.545

Intersection Setup

Name												
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	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	150.00	100.00	100.00	150.00	100.00	100.00
Speed [mph]		50.00			50.00			50.00			50.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			No			Yes	

Volumes

Name												
Base Volume Input [veh/h]	145	3	5	8	3	71	79	567	123	5	425	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
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	145	3	5	8	3	71	79	567	123	5	425	19
Peak Hour Factor	0.9330	0.9330	0.9330	0.9330	0.9330	0.9330	0.9330	0.9330	0.9330	0.9330	0.9330	0.9330
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]	39	1	1	2	1	19	21	152	33	1	114	5
Total Analysis Volume [veh/h]	155	3	5	9	3	76	85	608	132	5	456	20
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
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 Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	26	0	0	26	0	33	73	0	11	51	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	L	C	R	L	C
C, Cycle Length [s]	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	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
g_i, Effective Green Time [s]	19	19	7	78	78	1	72
g / C, Green / Cycle	0.18	0.18	0.06	0.71	0.71	0.01	0.65
(v / s)_i Volume / Saturation Flow Rate	0.16	0.05	0.05	0.33	0.08	0.00	0.26
s, saturation flow rate [veh/h]	1043	1715	1774	1863	1583	1774	1849
c, Capacity [veh/h]	246	335	110	1317	1119	17	1210
d1, Uniform Delay [s]	46.16	39.62	50.82	7.02	5.16	54.10	8.85
k, delay calibration	0.14	0.11	0.11	0.50	0.50	0.11	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.84	0.41	10.86	1.17	0.21	9.44	0.96
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

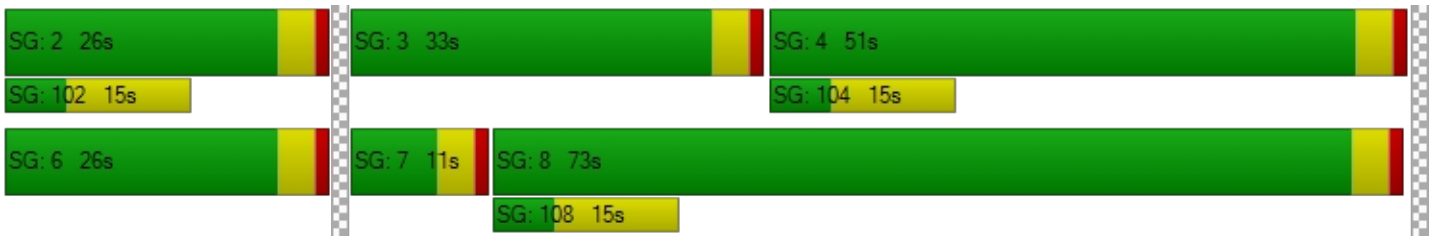
X, volume / capacity	0.66	0.26	0.77	0.46	0.12	0.30	0.39
d, Delay for Lane Group [s/veh]	50.00	40.04	61.68	8.18	5.37	63.54	9.81
Lane Group LOS	D	D	E	A	A	E	A
Critical Lane Group	Yes	No	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	4.45	2.03	2.55	5.10	0.81	0.18	4.68
50th-Percentile Queue Length [ft/ln]	111.29	50.75	63.81	127.61	20.33	4.42	116.89
95th-Percentile Queue Length [veh/ln]	7.91	3.65	4.59	8.81	1.46	0.32	8.22
95th-Percentile Queue Length [ft/ln]	197.79	91.36	114.85	220.24	36.59	7.96	205.54

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	50.00	50.00	50.00	40.04	40.04	40.04	61.68	8.18	5.37	63.54	9.81	9.81
Movement LOS	D	D	D	D	D	D	E	A	A	E	A	A
d_A, Approach Delay [s/veh]	50.00			40.04			13.25			10.37		
Approach LOS	D			D			B			B		
d_I, Intersection Delay [s/veh]	17.72											
Intersection LOS	B											
Intersection V/C	0.545											

Sequence

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



Intersection Level Of Service Report
Intersection 24: Palomar Rd (NS)/Holland Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	426.2
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.224

Intersection Setup

Name												
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]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	27	6	18	59	82	19	28	421	37	37	484	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]	27	6	18	59	82	19	28	421	37	37	484	1
Peak Hour Factor	0.7760	0.7760	0.7760	0.7760	0.7760	0.7760	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]	9	2	6	19	26	6	9	136	12	12	156	0
Total Analysis Volume [veh/h]	35	8	23	76	106	24	36	543	48	48	624	1
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	1.22	0.06	0.04	0.74	0.85	0.05	0.04	0.01	0.00	0.05	0.01	0.00
d_M, Delay for Movement [s/veh]	426.22	328.12	307.21	385.59	379.30	358.02	8.91	0.00	0.00	8.84	0.00	0.00
Movement LOS	F	F	F	F	F	F	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	6.10	6.10	6.10	15.10	15.10	15.10	0.09	0.09	0.09	0.12	0.12	0.00
95th-Percentile Queue Length [ft/ln]	152.55	152.55	152.55	377.48	377.48	377.48	2.26	2.26	2.26	2.93	2.93	0.00
d_A, Approach Delay [s/veh]	372.85			379.14			0.51			0.63		
Approach LOS	F			F			A			A		
d_I, Intersection Delay [s/veh]	65.81											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 25: Menifee Rd (NS)/Holland Rd (EW)

Control Type:	All-way stop	Delay (sec / veh):	13.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.518

Intersection Setup

Name												
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	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	150.00	100.00	100.00	125.00	100.00	100.00	150.00	100.00	100.00	150.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	88	374	31	66	293	163	162	185	68	66	223	133
Base Volume Adjustment Factor	1.0000	1.0000	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]	88	374	31	66	293	163	162	185	68	66	223	133
Peak Hour Factor	0.7340	0.7340	0.7340	0.7340	0.7340	0.7340	0.7340	0.7340	0.7340	0.7340	0.7340	0.7340
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	127	11	22	100	56	55	63	23	22	76	45
Total Analysis Volume [veh/h]	120	510	42	90	399	222	221	252	93	90	304	181
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	543	576	584	564	599	638	541	573	601	561	595	634
Degree of Utilization, x	0.22	0.48	0.47	0.16	0.52	0.49	0.41	0.30	0.29	0.16	0.41	0.38

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.84	2.58	2.53	0.56	2.98	2.67	1.97	1.26	1.18	0.57	1.98	1.79
95th-Percentile Queue Length [ft]	20.95	64.56	63.16	14.10	74.58	66.73	49.30	31.46	29.57	14.20	49.47	44.83
Approach Delay [s/veh]	13.85			13.78			12.34			12.05		
Approach LOS	B			B			B			B		
Intersection Delay [s/veh]	13.08											
Intersection LOS	B											

EXISTING PLUS PROJECT PLUS AMBIENT GROWTH PLUS CUMULATIVE PROJECTS WITH OVERPASS CONDITIONS LEVEL OF SERVICE WORKSHEETS

Intersection Level Of Service Report
Intersection 1: Murrieta Rd (NS)/Newport Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	44.1
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.859

Intersection Setup

Name							Newport Rd			Newport Rd		
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	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	190.00	100.00	100.00	225.00	100.00	100.00	275.00	100.00	100.00	180.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							Newport Rd			Newport Rd		
Base Volume Input [veh/h]	212	440	135	360	379	201	315	1000	133	155	825	134
Base Volume Adjustment Factor	1.0000	1.0000	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	440	135	360	379	201	315	1000	133	155	825	134
Peak Hour Factor	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090
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]	58	121	37	99	104	55	87	275	37	43	227	37
Total Analysis Volume [veh/h]	233	484	149	396	417	221	347	1100	146	171	908	147
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	1 - Coordination Group
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
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]	35	20	0	35	20	0	30	39	0	16	25	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	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]	110	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	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]	17	22	22	27	32	32	23	33	33	12	22	22
g / C, Green / Cycle	0.15	0.20	0.20	0.24	0.29	0.29	0.21	0.30	0.30	0.11	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.13	0.14	0.09	0.22	0.12	0.14	0.20	0.22	0.09	0.10	0.18	0.09
s, saturation flow rate [veh/h]	1774	3547	1583	1774	3547	1583	1774	5074	1583	1774	5074	1583
c, Capacity [veh/h]	269	707	316	429	1027	459	378	1539	480	195	1016	317
d1, Uniform Delay [s]	45.66	40.90	38.99	40.77	31.51	32.31	42.39	34.14	29.46	48.28	42.93	38.85
k, delay calibration	0.11	0.50	0.50	0.30	0.50	0.50	0.24	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.24	5.32	4.99	19.36	1.19	3.59	17.47	0.63	0.35	11.55	3.03	1.06
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.87	0.68	0.47	0.92	0.41	0.48	0.92	0.71	0.30	0.87	0.89	0.46
d, Delay for Lane Group [s/veh]	53.90	46.22	43.98	60.13	32.70	35.91	59.86	34.77	29.81	59.84	45.96	39.91
Lane Group LOS	D	D	D	E	C	D	E	C	C	E	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	6.56	6.32	3.84	12.20	4.40	5.06	10.59	8.28	2.86	5.06	7.90	3.44
50th-Percentile Queue Length [ft]	164.07	157.95	95.98	305.06	110.10	126.51	264.65	207.02	71.53	126.56	197.44	85.99
95th-Percentile Queue Length [veh]	10.76	10.44	6.91	17.93	7.85	8.75	15.92	13.00	5.15	8.75	12.51	6.19
95th-Percentile Queue Length [ft]	269.10	261.01	172.76	448.28	196.14	218.74	398.05	325.00	128.75	218.82	312.67	154.77

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	53.90	46.22	43.98	60.13	32.70	35.91	59.86	34.77	29.81	59.84	45.96	39.91
Movement LOS	D	D	D	E	C	D	E	C	C	E	D	D
d_A, Approach Delay [s/veh]	47.90			43.89			39.78			47.17		
Approach LOS	D			D			D			D		
d_I, Intersection Delay [s/veh]	44.09											
Intersection LOS	D											
Intersection V/C	0.859											

Sequence

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

Intersection Level Of Service Report
Intersection 2: Bradley Rd (N/S)/Newport Rd (E/W)

Control Type:	Signalized	Delay (sec / veh):	52.0
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.050

Intersection Setup

Name				Bradley Rd			Newport Rd			Newport Rd		
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	1	0	0	1	0	0	1	0	0	2	0	1
Pocket Length [ft]	100.00	100.00	100.00	125.00	100.00	100.00	165.00	100.00	100.00	155.00	100.00	150.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name				Bradley Rd			Newport Rd			Newport Rd		
Base Volume Input [veh/h]	150	276	473	251	318	71	90	1508	82	435	1100	144
Base Volume Adjustment Factor	1.0000	1.0000	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]	150	276	473	251	318	71	90	1508	82	435	1100	144
Peak Hour Factor	0.8690	0.8690	0.8690	0.8690	0.8690	0.8690	0.8690	0.8690	0.8690	0.8690	0.8690	0.8690
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	79	136	72	91	20	26	434	24	125	316	41
Total Analysis Volume [veh/h]	173	318	544	289	366	82	104	1735	94	501	1266	166
Presence of On-Street Parking	No		Yes	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 - Coordination Group
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
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	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	2	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups			2,7									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	30	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	3.0	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	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	15	27	27	22	34	0	29	41	0	20	32	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	5	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	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	2.0	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	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	C	L	C	C	L	C	R
C, Cycle Length [s]	110	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	11	23	43	18	30	30	8	37	37	16	45	45
g / C, Green / Cycle	0.10	0.21	0.39	0.16	0.27	0.27	0.07	0.34	0.34	0.15	0.41	0.41
(v / s)_i Volume / Saturation Flow Rate	0.10	0.17	0.38	0.16	0.12	0.12	0.06	0.34	0.34	0.15	0.25	0.10
s, saturation flow rate [veh/h]	1774	1863	1425	1774	1863	1746	1774	3547	1814	3445	5074	1583
c, Capacity [veh/h]	178	392	559	290	511	479	132	1187	607	501	2060	643
d1, Uniform Delay [s]	49.36	41.33	32.83	45.96	33.08	33.10	50.08	36.60	36.60	47.00	25.87	21.69
k, delay calibration	0.11	0.50	0.50	0.16	0.50	0.50	0.11	0.11	0.47	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	25.62	16.44	31.85	28.27	2.87	3.08	10.00	17.09	40.98	18.48	0.30	0.21
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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

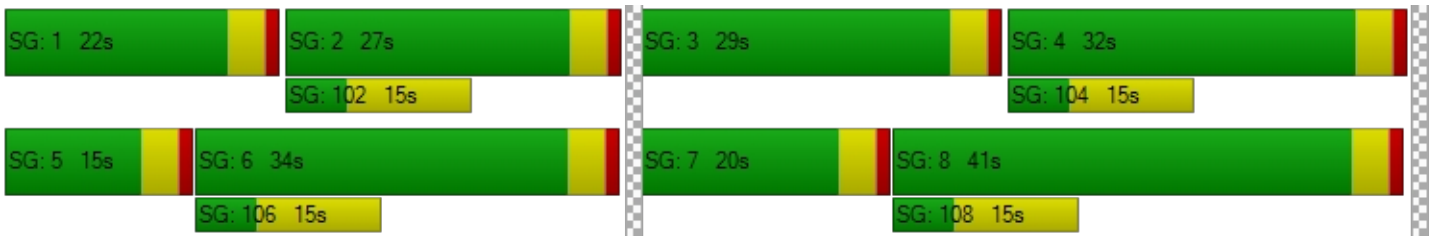
X, volume / capacity	0.97	0.81	0.97	1.00	0.45	0.45	0.79	1.02	1.02	1.00	0.61	0.26
d, Delay for Lane Group [s/veh]	74.98	57.78	64.68	74.23	35.95	36.18	60.08	53.69	77.58	65.48	26.17	21.90
Lane Group LOS	E	E	E	E	D	D	E	F	F	E	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	5.81	9.60	17.97	9.79	5.26	4.98	3.07	17.55	21.98	7.83	8.12	2.70
50th-Percentile Queue Length [ft]	145.23	239.90	449.13	244.86	131.42	124.39	76.81	438.75	549.60	195.74	202.95	67.40
95th-Percentile Queue Length [veh]	9.76	14.68	24.92	14.93	9.02	8.63	5.53	24.72	30.10	12.42	12.79	4.85
95th-Percentile Queue Length [ft]	244.05	366.91	622.91	373.18	225.43	215.84	138.26	618.00	752.62	310.47	319.77	121.32

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	74.98	57.78	64.68	74.23	36.03	36.18	60.08	60.94	77.58	65.48	26.17	21.90
Movement LOS	E	E	E	E	D	D	E	E	E	E	C	C
d_A, Approach Delay [s/veh]	64.28			51.03			61.70			35.99		
Approach LOS	E			D			E			D		
d_I, Intersection Delay [s/veh]	51.96											
Intersection LOS	D											
Intersection V/C	1.050											

Sequence

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



Intersection Level Of Service Report
Intersection 3: Haun Road (NS) / Newport Road (EW)

Control Type:	Signalized	Delay (sec / veh):	39.7
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.988

Intersection Setup

Name	Haun Rd			Haun Rd						Newport Rd		
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	2	0	1	2	0	0	2	0	0	2	0	1
Pocket Length [ft]	215.00	100.00	285.00	155.00	100.00	100.00	210.00	100.00	100.00	350.00	100.00	150.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Haun Rd			Haun Rd						Newport Rd		
Base Volume Input [veh/h]	281	109	725	146	64	62	149	1799	365	932	1257	380
Base Volume Adjustment Factor	1.0000	1.0000	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]	281	109	725	146	64	62	149	1799	365	932	1257	380
Peak Hour Factor	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480
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]	74	29	191	39	17	16	39	474	96	246	331	100
Total Analysis Volume [veh/h]	296	115	765	154	68	65	157	1898	385	983	1326	401
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	1 - Coordination Group
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
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	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	2	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups			2,7									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	30	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	3.0	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	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	17	24	24	12	19	0	13	58	0	46	91	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	5	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	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	2.0	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	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	C	L	C	R	L	C	C
C, Cycle Length [s]	140	140	140	140	140	140	140	140	140	140	140	140
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	13	20	66	8	15	15	8	54	54	42	88	88
g / C, Green / Cycle	0.09	0.14	0.47	0.06	0.11	0.11	0.06	0.39	0.39	0.30	0.63	0.63
(v / s)_i Volume / Saturation Flow Rate	0.09	0.06	0.27	0.04	0.04	0.04	0.05	0.37	0.24	0.29	0.32	0.35
s, saturation flow rate [veh/h]	3445	1863	2803	3445	1863	1583	3445	5074	1583	3445	3547	1661
c, Capacity [veh/h]	321	265	1314	198	198	169	205	1969	614	1027	2223	1041
d1, Uniform Delay [s]	62.98	54.90	27.16	65.10	58.00	58.28	64.88	41.89	34.64	48.24	14.40	15.02
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.19	0.11	0.11	0.15
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	11.01	5.12	1.89	6.48	4.66	6.55	5.90	4.21	1.85	6.34	0.19	0.64
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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

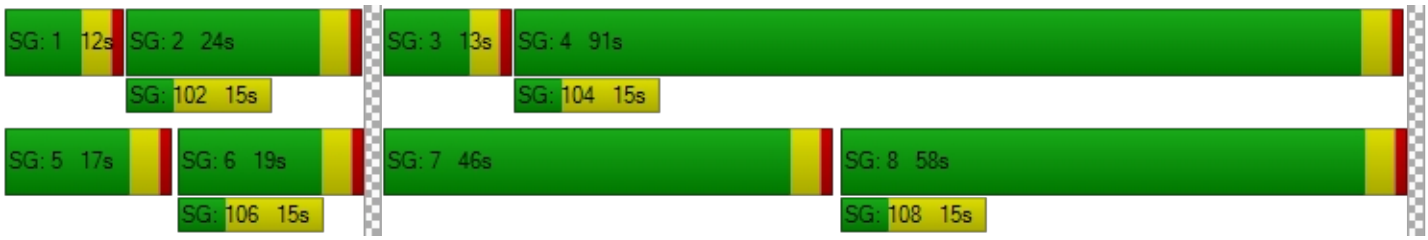
X, volume / capacity	0.92	0.43	0.58	0.78	0.34	0.39	0.77	0.96	0.63	0.96	0.51	0.56
d, Delay for Lane Group [s/veh]	73.99	60.02	29.05	71.58	62.66	64.82	70.78	46.10	36.49	54.58	14.59	15.66
Lane Group LOS	E	E	C	E	E	E	E	D	D	D	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh]	5.59	4.00	9.20	2.83	2.44	2.40	2.86	21.01	10.50	17.06	9.13	9.81
50th-Percentile Queue Length [ft]	139.69	99.95	230.09	70.68	61.00	60.08	71.61	525.20	262.56	426.60	228.23	245.29
95th-Percentile Queue Length [veh]	9.46	7.20	14.18	5.09	4.39	4.33	5.16	28.52	15.82	23.84	14.08	14.95
95th-Percentile Queue Length [ft]	236.60	179.90	354.48	127.23	109.80	108.15	128.90	713.12	395.44	595.97	352.11	373.72

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	73.99	60.02	29.05	71.58	62.66	64.82	70.78	46.10	36.49	54.58	14.74	15.66
Movement LOS	E	E	C	E	E	E	E	D	D	D	B	B
d_A, Approach Delay [s/veh]	43.39			67.93			46.17			29.33		
Approach LOS	D			E			D			C		
d_I, Intersection Delay [s/veh]	39.72											
Intersection LOS	D											
Intersection V/C	0.988											

Sequence

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



Intersection Level Of Service Report
Intersection 4: I-215 SB Ramps (NS) / Newport Road (EW)

Control Type:	Signalized	Delay (sec / veh):	21.9
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.393

Intersection Setup

Name	I-215 SB Ramps			I-215 SB Ramps			Newport Rd			Newport Rd		
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	1	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	800.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name	I-215 SB Ramps			I-215 SB Ramps			Newport Rd			Newport Rd		
Base Volume Input [veh/h]	0	0	0	563	0	781	0	1722	958	0	1905	1378
Base Volume Adjustment Factor	1.0000	1.0000	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	563	0	781	0	1722	958	0	1905	1378
Peak Hour Factor	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	151	0	209	0	461	256	0	510	369
Total Analysis Volume [veh/h]	0	0	0	603	0	836	0	1844	1026	0	2040	1475
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 - Coordination Group
Cycle Length [s]	140
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	Overlap	Protecte	Permiss	Overlap
Signal group	0	0	0	1	0	0	0	8	8	7	4	4
Auxiliary Signal Groups									1,4,8			1,4,8
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	7	0	0	0	7	7	0	7	7
Maximum Green [s]	0	0	0	30	0	0	0	30	30	0	30	30
Amber [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0
All red [s]	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0	1.0
Split [s]	0	0	0	60	0	0	0	80	80	0	80	80
Vehicle Extension [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0
Walk [s]	0	0	0	5	0	0	0	5	5	0	5	5
Pedestrian Clearance [s]	0	0	0	10	0	0	0	10	10	0	10	10
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	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0
Minimum Recall				No				No	No		No	No
Maximum Recall				No				No	No		No	No
Pedestrian Recall				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	C	R	C	R
C, Cycle Length [s]		140	140	140	140	140	140	140
L, Total Lost Time per Cycle [s]		4.00	4.00	4.00	4.00	0.00	4.00	0.00
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]		2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]		54	54	54	78	136	78	136
g / C, Green / Cycle		0.38	0.38	0.38	0.56	0.97	0.56	0.97
(v / s)_i Volume / Saturation Flow Rate		0.27	0.29	0.30	0.27	0.65	0.40	0.93
s, saturation flow rate [veh/h]		1774	1628	1583	6765	1583	5074	1583
c, Capacity [veh/h]		679	624	606	3788	1538	2841	1538
d1, Uniform Delay [s]		36.46	37.71	38.16	18.61	0.16	22.64	0.84
k, delay calibration		0.23	0.27	0.29	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		2.83	5.00	6.09	0.45	2.31	1.59	15.07
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

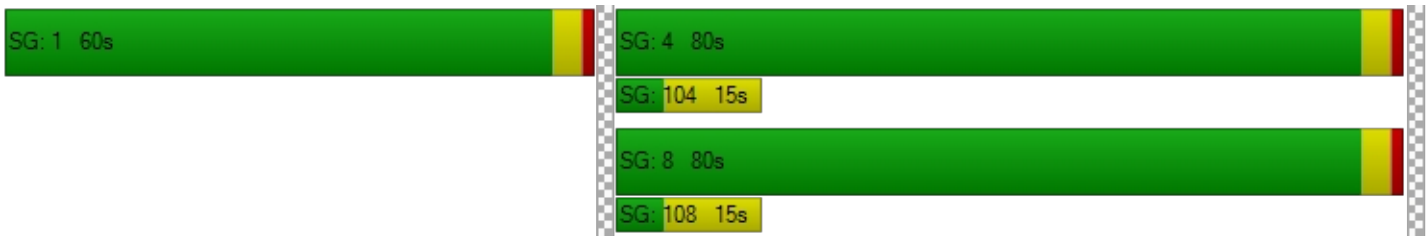
X, volume / capacity		0.71	0.77	0.79	0.49	0.67	0.72	0.96
d, Delay for Lane Group [s/veh]		39.29	42.71	44.25	19.06	2.47	24.23	15.91
Lane Group LOS		D	D	D	B	A	C	B
Critical Lane Group		No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]		13.79	14.58	14.90	8.56	0.99	15.56	6.44
50th-Percentile Queue Length [ft]		344.83	364.53	372.62	213.94	24.67	389.08	160.99
95th-Percentile Queue Length [veh]		19.88	20.84	21.24	13.36	1.78	22.03	10.60
95th-Percentile Queue Length [ft]		497.10	521.09	530.91	333.88	44.40	550.82	265.04

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	39.99	0.00	43.60	0.00	19.06	2.47	0.00	24.23	15.91
Movement LOS				D		D		B	A		C	B
d_A, Approach Delay [s/veh]	0.00			42.08			13.13			20.74		
Approach LOS	A			D			B			C		
d_I, Intersection Delay [s/veh]	21.87											
Intersection LOS	C											
Intersection V/C	0.393											

Sequence

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



Intersection Level Of Service Report
Intersection 5: I-215 NB Ramps (NS) / Newport Road (EW)

Control Type:	Signalized	Delay (sec / veh):	22.4
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.766

Intersection Setup

Name	I-215 NB Ramps			I-215 NB Ramps			Newport Rd			Newport Rd		
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	1	0	1	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	375.00	100.00	375.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name	I-215 NB Ramps			I-215 NB Ramps			Newport Rd			Newport Rd		
Base Volume Input [veh/h]	637	0	720	0	0	0	0	1577	686	0	2637	721
Base Volume Adjustment Factor	1.0000	1.0000	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]	637	0	720	0	0	0	0	1577	686	0	2637	721
Peak Hour Factor	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	170	0	193	0	0	0	0	422	183	0	705	193
Total Analysis Volume [veh/h]	681	0	770	0	0	0	0	1687	734	0	2820	771
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 - Coordination Group
Cycle Length [s]	140
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	Split	Permiss	Split	Permiss	Permiss	Permiss	Protecte	Permiss	Overlap	Permiss	Permiss	Overlap
Signal group	5	0	0	0	0	0	3	8	5	0	4	4
Auxiliary Signal Groups									4,5,8			4,5,8
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	0	0	0	0	0	0	7	7	0	7	7
Maximum Green [s]	30	0	0	0	0	0	0	30	30	0	30	30
Amber [s]	3.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0
All red [s]	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0	1.0
Split [s]	121	0	0	0	0	0	0	19	121	0	19	19
Vehicle Extension [s]	3.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0
Walk [s]	5	0	0	0	0	0	0	5	5	0	5	5
Pedestrian Clearance [s]	10	0	0	0	0	0	0	10	10	0	10	10
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	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0
Minimum Recall	No							No	No		No	No
Maximum Recall	No							No	No		No	No
Pedestrian Recall	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		C	R	C	R
C, Cycle Length [s]	140	140	140		140	140	140	140
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00		4.00	0.00	4.00	0.00
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]	2.00	2.00	2.00		2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	55	55	55		77	136	77	136
g / C, Green / Cycle	0.39	0.39	0.39		0.55	0.97	0.55	0.97
(v / s)_i Volume / Saturation Flow Rate	0.27	0.29	0.31		0.33	0.46	0.42	0.49
s, saturation flow rate [veh/h]	1774	1656	1583		5074	1583	6765	1583
c, Capacity [veh/h]	695	649	620		2797	1538	3729	1538
d1, Uniform Delay [s]	35.58	36.56	37.26		21.11	0.11	24.16	0.11
k, delay calibration	0.11	0.11	0.11		0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.27	1.73	2.18		0.97	1.06	1.48	1.17
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	0.70	0.75	0.78		0.60	0.48	0.76	0.50
d, Delay for Lane Group [s/veh]	36.85	38.29	39.44		22.08	1.17	25.64	1.28
Lane Group LOS	D	D	D		C	A	C	A
Critical Lane Group	No	No	Yes		No	No	Yes	No
50th-Percentile Queue Length [veh]	13.44	13.87	14.19		11.76	0.45	16.90	0.50
50th-Percentile Queue Length [ft]	335.97	346.71	354.81		294.08	11.36	422.54	12.50
95th-Percentile Queue Length [veh]	19.45	19.98	20.37		17.39	0.82	23.64	0.90
95th-Percentile Queue Length [ft]	486.28	499.39	509.26		434.70	20.45	591.10	22.50

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	37.27	0.00	39.01	0.00	0.00	0.00	0.00	22.08	1.17	0.00	25.64	1.28
Movement LOS	D		D					C	A		C	A
d_A, Approach Delay [s/veh]	38.19			0.00			15.74			20.41		
Approach LOS	D			A			B			C		
d_I, Intersection Delay [s/veh]	22.35											
Intersection LOS	C											
Intersection V/C	0.766											

Sequence

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

Intersection Level Of Service Report
Intersection 6: Antelope Rd (NS)/Newport Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	51.6
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.021

Intersection Setup

Name												
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	2	0	0	2	0	0	2	0	0	2	0	0
Pocket Length [ft]	330.00	100.00	100.00	100.00	100.00	100.00	325.00	100.00	100.00	200.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							Newport Rd			Newport Rd		
Base Volume Input [veh/h]	699	38	119	95	94	278	130	1320	833	169	2382	50
Base Volume Adjustment Factor	1.0000	1.0000	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]	699	38	119	95	94	278	130	1320	833	169	2382	50
Peak Hour Factor	0.9570	0.9570	0.9570	0.9570	0.9570	0.9570	0.9570	0.9570	0.9570	0.9570	0.9570	0.9570
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]	183	10	31	25	25	73	34	345	218	44	622	13
Total Analysis Volume [veh/h]	730	40	124	99	98	290	136	1379	870	177	2489	52
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	1 - Coordination Group
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
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	8	7	4	0
Auxiliary Signal Groups									5,8			
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	7	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	30	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0	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	1.0	1.0	1.0	0.0
Split [s]	33	36	0	16	19	0	20	77	77	11	68	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	5	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	10	0	10	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	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0	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	C	R	L	C	C	L	C	C
C, Cycle Length [s]	140	140	140	140	140	140	140	140	140	140	140	140	140
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	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	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	2.00
g_i, Effective Green Time [s]	29	37	37	7	15	15	15	8	73	73	7	72	72
g / C, Green / Cycle	0.21	0.27	0.27	0.05	0.11	0.11	0.11	0.05	0.52	0.52	0.05	0.52	0.52
(v / s)_i Volume / Saturation Flow Rate	0.21	0.02	0.08	0.03	0.05	0.09	0.09	0.04	0.39	0.55	0.05	0.47	0.47
s, saturation flow rate [veh/h]	3445	1863	1583	3445	1863	1583	1583	3445	3547	1583	3445	3547	1843
c, Capacity [veh/h]	714	496	421	169	201	171	171	187	1847	824	172	1832	952
d1, Uniform Delay [s]	55.50	38.53	40.91	65.18	58.80	61.33	61.33	65.18	26.32	33.56	66.50	30.90	31.11
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.50	0.11	0.11	0.50	0.11	0.11	0.42
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
d2, Incremental Delay [s]	21.81	0.32	1.77	3.22	8.23	37.96	37.96	5.33	0.62	47.00	38.84	2.05	12.95
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	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	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	1.00

Lane Group Results

X, volume / capacity	1.02	0.08	0.29	0.59	0.49	0.85	0.85	0.73	0.75	1.06	1.03	0.91	0.92
d, Delay for Lane Group [s/veh]	77.31	38.85	42.68	68.40	67.03	99.29	99.29	70.51	26.94	80.55	105.34	32.95	44.06
Lane Group LOS	F	D	D	E	E	F	F	E	C	F	F	C	D
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	14.33	1.06	3.54	1.77	3.66	6.74	6.74	2.47	16.89	36.27	3.94	24.13	28.32
50th-Percentile Queue Length [ft]	358.28	26.40	88.47	44.18	91.43	168.4	168.4	61.84	422.35	906.77	98.45	603.13	708.05
95th-Percentile Queue Length [veh]	20.80	1.90	6.37	3.18	6.58	10.99	10.99	4.45	23.63	48.22	7.09	32.18	37.05
95th-Percentile Queue Length [ft]	519.94	47.52	159.25	79.52	164.5	274.8	274.8	111.31	590.86	1205.51	177.22	804.52	926.25

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	77.31	38.85	42.68	68.40	67.03	99.29	70.51	26.94	80.55	105.34	36.62	44.06
Movement LOS	F	D	D	E	E	F	E	C	F	F	D	D
d_A, Approach Delay [s/veh]	70.78			86.52			48.98			41.23		
Approach LOS	E			F			D			D		
d_I, Intersection Delay [s/veh]	51.56											
Intersection LOS	D											
Intersection V/C	1.021											

Sequence

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

Intersection Level Of Service Report
Intersection 7: Menifee Rd (NS)/NewportRd (EW)

Control Type:	Signalized	Delay (sec / veh):	75.6
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.130

Intersection Setup

Name							Newport Rd			Newport Rd		
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	1	0	1	1	0	0	1	0	0	2	0	0
Pocket Length [ft]	250.00	100.00	200.00	100.00	100.00	100.00	400.00	100.00	100.00	295.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							Newport Rd			Newport Rd		
Base Volume Input [veh/h]	284	355	151	93	354	471	319	1084	205	225	1721	59
Base Volume Adjustment Factor	1.0000	1.0000	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]	284	355	151	93	354	471	319	1084	205	225	1721	59
Peak Hour Factor	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	76	95	41	25	95	126	86	291	55	60	462	16
Total Analysis Volume [veh/h]	305	381	162	100	380	506	343	1164	220	242	1849	63
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	1 - Coordination Group
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
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	6	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	7	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	13	21	0	27	35	35	23	47	0	15	39	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	5	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	10	0	10	0	0	10	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]	2.0	2.0	0.0	2.0	2.0	2.0	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	C	L	C	R
C, Cycle Length [s]	110	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	9	32	32	8	31	31	19	44	44	10	35	35
g / C, Green / Cycle	0.08	0.29	0.29	0.07	0.28	0.28	0.17	0.40	0.40	0.09	0.32	0.32
(v / s)_i Volume / Saturation Flow Rate	0.09	0.11	0.10	0.06	0.11	0.32	0.19	0.26	0.26	0.07	0.36	0.04
s, saturation flow rate [veh/h]	3445	3547	1583	1774	3547	1583	1774	3547	1715	3445	5074	1583
c, Capacity [veh/h]	282	1036	462	127	999	446	309	1430	691	303	1609	502
d1, Uniform Delay [s]	50.50	30.89	30.71	50.26	31.79	39.51	45.43	26.58	26.61	49.20	37.56	26.72
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.24	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	50.25	0.22	0.45	10.36	0.24	84.91	69.75	2.32	4.77	4.82	74.91	0.51
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

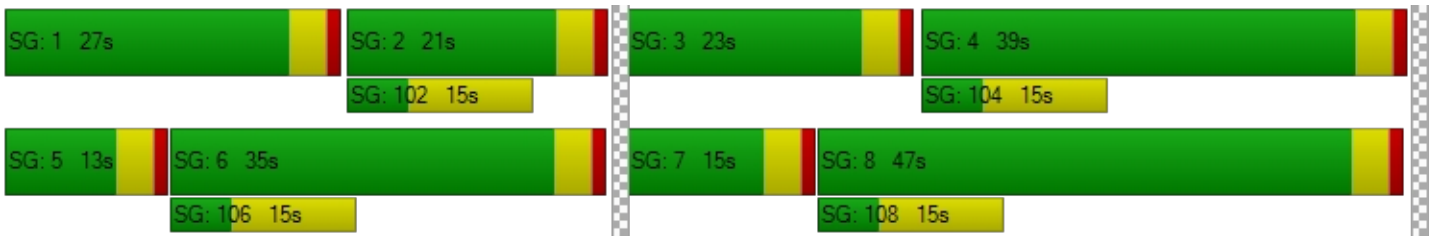
X, volume / capacity	1.08	0.37	0.35	0.79	0.38	1.13	1.11	0.65	0.65	0.80	1.15	0.13
d, Delay for Lane Group [s/veh]	100.75	31.10	31.16	60.61	32.03	124.42	115.18	28.91	31.37	54.02	112.47	27.23
Lane Group LOS	F	C	C	E	C	F	F	C	C	D	F	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	5.69	3.84	3.28	2.97	3.90	21.79	14.00	9.59	9.78	3.34	24.56	1.19
50th-Percentile Queue Length [ft]	142.30	95.96	81.93	74.24	97.41	544.67	350.11	239.85	244.55	83.40	613.89	29.78
95th-Percentile Queue Length [veh]	9.86	6.91	5.90	5.35	7.01	31.73	21.20	14.67	14.91	6.00	35.62	2.14
95th-Percentile Queue Length [ft]	246.48	172.72	147.47	133.63	175.34	793.27	529.95	366.85	372.78	150.12	890.38	53.60

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	100.75	31.10	31.16	60.61	32.03	124.42	115.18	29.40	31.37	54.02	112.47	27.23
Movement LOS	F	C	C	E	C	F	F	C	C	D	F	C
d_A, Approach Delay [s/veh]	56.16			82.34			46.69			103.41		
Approach LOS	E			F			D			F		
d_I, Intersection Delay [s/veh]	75.62											
Intersection LOS	E											
Intersection V/C	1.130											

Sequence

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



Intersection Level Of Service Report
Intersection 8: Bradley Rd (N/S) / La Piedra Rd (E/W)

Control Type:	Signalized	Delay (sec / veh):	28.2
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.690

Intersection Setup

Name												
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	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	150.00	100.00	100.00	155.00	100.00	100.00	100.00	100.00	100.00	150.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	30	690	73	162	684	11	41	24	33	99	77	223
Base Volume Adjustment Factor	1.0000	1.0000	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]	30	690	73	162	684	11	41	24	33	99	77	223
Peak Hour Factor	0.7990	0.7990	0.7990	0.7990	0.7990	0.7990	0.7990	0.7990	0.7990	0.7990	0.7990	0.7990
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	216	23	51	214	3	13	8	10	31	24	70
Total Analysis Volume [veh/h]	38	864	91	203	856	14	51	30	41	124	96	279
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 Coordinated
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]	11	33	0	17	39	0	11	19	0	31	39	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
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	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	5	46	46	13	54	54	5	17	17	9	20	20
g / C, Green / Cycle	0.05	0.46	0.46	0.13	0.54	0.54	0.05	0.17	0.17	0.09	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.02	0.26	0.26	0.11	0.23	0.23	0.03	0.02	0.03	0.07	0.05	0.18
s, saturation flow rate [veh/h]	1774	1863	1801	1774	1863	1852	1774	1863	1583	1774	1863	1583
c, Capacity [veh/h]	83	847	819	231	1003	998	96	309	263	157	374	318
d1, Uniform Delay [s]	46.49	20.12	20.12	42.75	13.92	13.92	46.12	35.39	35.75	44.70	33.73	38.84
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.89	2.81	2.90	10.12	1.37	1.38	4.49	0.14	0.27	8.42	0.36	7.74
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	0.46	0.57	0.57	0.88	0.43	0.43	0.53	0.10	0.16	0.79	0.26	0.88
d, Delay for Lane Group [s/veh]	50.38	22.93	23.02	52.87	15.29	15.30	50.61	35.53	36.02	53.12	34.09	46.57
Lane Group LOS	D	C	C	D	B	B	D	D	D	D	C	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.97	8.10	7.85	5.32	5.51	5.48	1.30	0.60	0.84	3.24	1.90	6.93
50th-Percentile Queue Length [ft]	24.30	202.52	196.36	133.09	137.64	136.93	32.55	15.08	20.91	81.03	47.59	173.18
95th-Percentile Queue Length [veh]	1.75	12.77	12.45	9.11	9.35	9.32	2.34	1.09	1.51	5.83	3.43	11.24
95th-Percentile Queue Length [ft]	43.74	319.21	311.27	227.69	233.84	232.88	58.59	27.14	37.64	145.86	85.66	281.09

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	50.38	22.97	23.02	52.87	15.29	15.30	50.61	35.53	36.02	53.12	34.09	46.57
Movement LOS	D	C	C	D	B	B	D	D	D	D	C	D
d_A, Approach Delay [s/veh]	24.02			22.40			42.00			45.80		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	28.24											
Intersection LOS	C											
Intersection V/C	0.690											

Sequence

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

Intersection Level Of Service Report
Intersection 9: Bradley Rd (NS)/Holland Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	82.7
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.132

Intersection Setup

Name											
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	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	130.00	100.00	100.00	150.00	100.00	100.00	145.00	100.00	100.00	140.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	57	390	233	159	517	251	130	340	224	235	290	194
Base Volume Adjustment Factor	1.0000	1.0000	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	390	233	159	517	251	130	340	224	235	290	194
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	106	63	43	140	68	35	92	61	64	79	53
Total Analysis Volume [veh/h]	62	424	253	173	562	273	141	370	243	255	315	211
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 Coordinated
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]	11	45	0	15	49	0	38	41	0	19	22	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	R	L	C	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	41	11	46	46	12	37	15	40	40
g / C, Green / Cycle	0.05	0.34	0.09	0.38	0.38	0.10	0.31	0.13	0.34	0.34
(v / s)_i Volume / Saturation Flow Rate	0.03	0.39	0.10	0.30	0.17	0.08	0.35	0.14	0.17	0.13
s, saturation flow rate [veh/h]	1774	1748	1774	1863	1583	1774	1741	1774	1863	1583
c, Capacity [veh/h]	90	599	163	714	607	170	535	222	626	532
d1, Uniform Delay [s]	55.99	39.43	54.50	32.66	27.56	53.26	41.57	52.50	31.83	30.51
k, delay calibration	0.11	0.50	0.11	0.50	0.50	0.11	0.50	0.14	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.81	78.16	50.98	8.54	2.40	9.70	86.02	81.62	0.63	0.48
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.69	1.13	1.06	0.79	0.45	0.83	1.15	1.15	0.50	0.40
d, Delay for Lane Group [s/veh]	64.81	117.59	105.48	41.20	29.96	62.96	127.59	134.12	32.46	30.99
Lane Group LOS	E	F	F	D	C	E	F	F	C	C
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	2.01	29.53	7.05	15.20	5.94	4.49	27.66	11.46	7.05	4.53
50th-Percentile Queue Length [ft]	50.25	738.27	176.18	379.89	148.47	112.34	691.53	286.52	176.35	113.26
95th-Percentile Queue Length [veh]	3.62	41.65	11.66	21.59	9.94	7.97	39.50	18.02	11.41	8.02
95th-Percentile Queue Length [ft]	90.46	1041.36	291.47	539.72	248.38	199.26	987.49	450.53	285.24	200.53

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	64.81	117.59	117.59	105.48	41.20	29.96	62.96	127.59	127.59	134.12	32.46	30.99
Movement LOS	E	F	F	F	D	C	E	F	F	F	C	C
d_A, Approach Delay [s/veh]	113.16			49.19			115.50			65.25		
Approach LOS	F			D			F			E		
d_I, Intersection Delay [s/veh]	82.65											
Intersection LOS	F											
Intersection V/C	1.132											

Sequence

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

Intersection Level Of Service Report
Intersection 10: Town Center Dr-Sherman Rd (NS) / La Piedra Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	29.0
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.476

Intersection Setup

Name												
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	1	0	1	1	0	0	0	0	0	1	0	0
Pocket Length [ft]	210.00	100.00	500.00	150.00	100.00	100.00	100.00	100.00	100.00	800.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	84	162	222	10	124	10	62	53	33	135	22	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
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	84	162	222	10	124	10	62	53	33	135	22	7
Peak Hour Factor	0.6790	0.6790	0.6790	0.6790	0.6790	0.6790	0.6790	0.6790	0.6790	0.6790	0.6790	0.6790
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]	31	60	82	4	46	4	23	20	12	50	8	3
Total Analysis Volume [veh/h]	124	239	327	15	183	15	91	78	49	199	32	10
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 Coordinated
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]	20	28	0	11	19	0	42	19	0	42	19	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
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	L	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	9	59	59	2	53	7	9	13	16	16
g / C, Green / Cycle	0.09	0.59	0.59	0.02	0.53	0.07	0.09	0.13	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.07	0.13	0.21	0.01	0.11	0.05	0.07	0.11	0.01	0.01
s, saturation flow rate [veh/h]	1774	1863	1583	1774	1838	1774	1744	1774	1863	1716
c, Capacity [veh/h]	156	1097	932	44	967	120	161	238	296	272
d1, Uniform Delay [s]	44.78	9.71	10.67	48.00	12.61	45.89	44.50	42.29	35.85	35.87
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.81	0.46	1.04	4.38	0.48	9.44	8.34	7.61	0.10	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
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

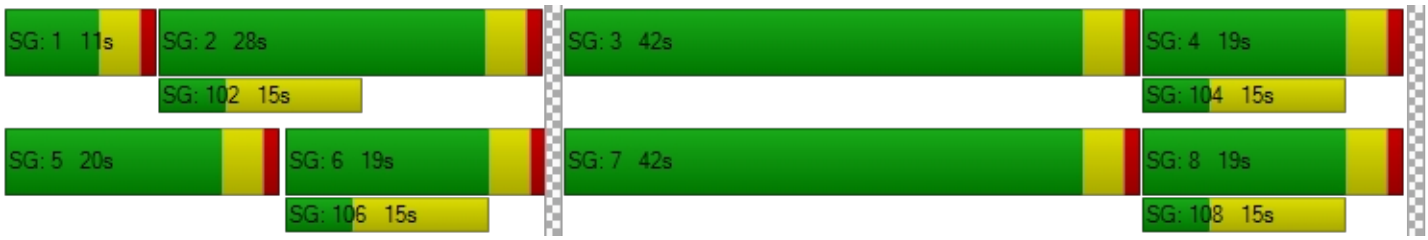
X, volume / capacity	0.79	0.22	0.35	0.34	0.20	0.76	0.79	0.84	0.07	0.08
d, Delay for Lane Group [s/veh]	53.59	10.16	11.70	52.38	13.09	55.33	52.84	49.90	35.95	35.98
Lane Group LOS	D	B	B	D	B	E	D	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	3.26	2.22	3.40	0.41	2.20	2.44	3.31	5.05	0.43	0.42
50th-Percentile Queue Length [ft]	81.45	55.55	84.99	10.17	55.07	60.95	82.78	126.26	10.81	10.45
95th-Percentile Queue Length [veh]	5.86	4.00	6.12	0.73	3.96	4.39	5.96	8.74	0.78	0.75
95th-Percentile Queue Length [ft]	146.60	99.98	152.99	18.31	99.12	109.71	149.00	218.40	19.46	18.81

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	53.59	10.16	11.70	52.38	13.09	13.09	55.33	52.84	52.84	49.90	35.96	35.98
Movement LOS	D	B	B	D	B	B	E	D	D	D	D	D
d_A, Approach Delay [s/veh]	18.70			15.85			53.88			47.47		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	28.98											
Intersection LOS	C											
Intersection V/C	0.476											

Sequence

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



Intersection Level Of Service Report
Intersection 11: Sherman Rd (NS)/Holland Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	9,447.0
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	19.999

Intersection Setup

Name												
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	1	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	500.00	100.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	4	1	28	128	0	53	164	820	5	6	760	230
Base Volume Adjustment Factor	1.0000	1.0000	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]	4	1	28	128	0	53	164	820	5	6	760	230
Peak Hour Factor	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	8	39	0	16	49	247	2	2	229	69
Total Analysis Volume [veh/h]	5	1	34	154	0	64	198	989	6	7	917	277
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.78	0.16	0.11	20.00	0.00	0.19	0.34	0.01	0.00	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	790.54	820.95	242.36	9447.05	9374.91	8990.46	14.28	0.00	0.00	10.23	0.00	0.00
Movement LOS	F	F	F	F	F	F	B	A	A	B	A	A
95th-Percentile Queue Length [veh]	4.01	4.01	4.01	28.74	28.74	28.74	80.80	80.80	0.00	37.77	37.77	0.00
95th-Percentile Queue Length [ft]	100.18	100.18	100.18	718.61	718.61	718.61	2020.11	2020.11	0.00	944.21	944.21	0.00
d_A, Approach Delay [s/veh]	325.35			9313.00			2.37			0.06		
Approach LOS	F			F			A			A		
d_I, Intersection Delay [s/veh]	771.55											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 12: Haun Rd (NS)/Village-Market Dr (EW)

Control Type:	Signalized	Delay (sec / veh):	17.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.676

Intersection Setup

Name	Haun Rd			Haun Rd								
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	1	0	0	2	0	0	0	0	0	0	0	1
Pocket Length [ft]	100.00	100.00	100.00	175.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	65.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Haun Rd			Haun Rd								
Base Volume Input [veh/h]	27	1161	46	135	1428	68	53	6	27	22	6	117
Base Volume Adjustment Factor	1.0000	1.0000	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]	27	1161	46	135	1428	68	53	6	27	22	6	117
Peak Hour Factor	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	337	13	39	415	20	15	2	8	6	2	34
Total Analysis Volume [veh/h]	31	1348	53	157	1659	79	62	7	31	26	7	136
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	1 - Coordination Group
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
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	Permiss	Permiss	Overlap
Signal group	5	2	0	1	6	0	3	8	0	0	4	4
Auxiliary Signal Groups												1,4
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	0	7	7
Maximum Green [s]	30	30	0	30	30	0	7	30	0	0	30	30
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	3.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	1.0
Split [s]	11	50	0	11	50	0	11	39	0	0	28	28
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	3.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	5
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	10
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	0.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0
Minimum Recall	No	No		No	No		Yes	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	C	L	C	C	L	C	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	0.00	0.00	2.00	0.00
g_i, Effective Green Time [s]	4	63	63	7	66	66	18	18	7	18
g / C, Green / Cycle	0.04	0.63	0.63	0.07	0.66	0.66	0.18	0.18	0.07	0.18
(v / s)_i Volume / Saturation Flow Rate	0.02	0.38	0.38	0.05	0.47	0.47	0.03	0.04	0.02	0.05
s, saturation flow rate [veh/h]	1774	1863	1838	3445	1863	1833	1588	1637	1465	2802
c, Capacity [veh/h]	74	1173	1158	241	1226	1207	370	379	167	505
d1, Uniform Delay [s]	46.78	11.02	11.04	45.33	10.95	11.09	34.41	34.87	44.14	35.34
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.79	2.27	2.32	2.95	3.49	3.71	0.13	0.19	0.57	0.28
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

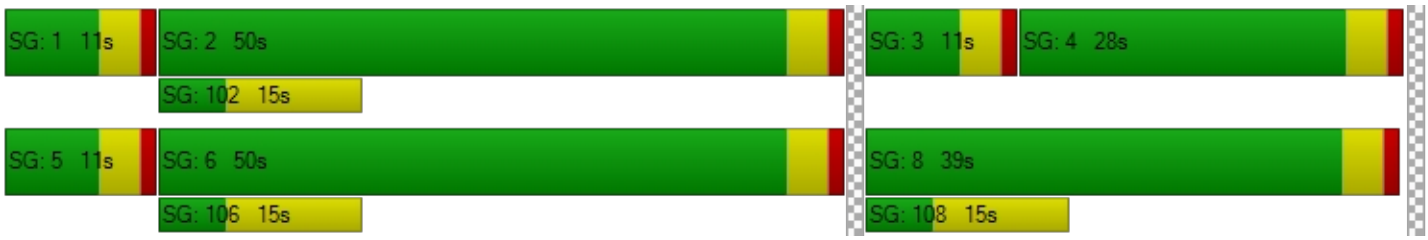
X, volume / capacity	0.42	0.60	0.60	0.65	0.71	0.72	0.11	0.16	0.20	0.27
d, Delay for Lane Group [s/veh]	50.57	13.29	13.36	48.29	14.44	14.80	34.54	35.06	44.71	35.62
Lane Group LOS	D	B	B	D	B	B	C	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	0.80	8.06	8.01	1.91	10.44	10.60	0.79	1.20	0.77	1.38
50th-Percentile Queue Length [ft]	19.96	201.57	200.14	47.83	261.08	265.09	19.80	30.02	19.25	34.46
95th-Percentile Queue Length [veh]	1.44	12.72	12.65	3.44	15.74	15.94	1.43	2.16	1.39	2.48
95th-Percentile Queue Length [ft]	35.93	318.00	316.15	86.10	393.58	398.60	35.64	54.04	34.65	62.03

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	50.57	13.32	13.36	48.29	14.61	14.80	34.68	35.06	35.06	44.71	44.71	35.62
Movement LOS	D	B	B	D	B	B	C	D	D	D	D	D
d_A, Approach Delay [s/veh]	14.13			17.41			34.85			37.39		
Approach LOS	B			B			C			D		
d_I, Intersection Delay [s/veh]	17.53											
Intersection LOS	B											
Intersection V/C	0.676											

Sequence

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



Intersection Level Of Service Report
Intersection 13: Haun Rd (NS)/Countryside Marketplace (EW)

Control Type:	Signalized	Delay (sec / veh):	10.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.574

Intersection Setup

Name	Haun Rd			Haun Rd								
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	1	0	0	2	0	0	0	0	1	1	0	0
Pocket Length [ft]	200.00	100.00	100.00	235.00	100.00	100.00	100.00	100.00	40.00	100.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Haun Rd			Haun Rd								
Base Volume Input [veh/h]	11	1185	52	118	1334	8	10	0	15	25	1	91
Base Volume Adjustment Factor	1.0000	1.0000	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]	11	1185	52	118	1334	8	10	0	15	25	1	91
Peak Hour Factor	0.7950	0.7950	0.7950	0.7950	0.7950	0.7950	0.7950	0.7950	0.7950	0.7950	0.7950	0.7950
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	373	16	37	419	3	3	0	5	8	0	29
Total Analysis Volume [veh/h]	14	1491	65	148	1678	10	13	0	19	31	1	114
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	1 - Coordination Group
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
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	Split	Split	Split	Split	Split	Split
Signal group	5	2	0	1	6	0	0	8	0	0	4	4
Auxiliary Signal Groups												1,4
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	7
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	30
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0
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	1.0
Split [s]	11	61	0	15	65	0	0	24	0	0	24	24
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	5
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	10
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	2.0
I2, Clearance 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	2.0
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	L	C	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	74	74	7	79	79	7	7	7	7
g / C, Green / Cycle	0.02	0.74	0.74	0.07	0.79	0.79	0.07	0.07	0.07	0.07
(v / s)_i Volume / Saturation Flow Rate	0.01	0.42	0.42	0.04	0.45	0.45	0.01	0.01	0.04	0.04
s, saturation flow rate [veh/h]	1774	1863	1836	3445	1863	1859	1410	1583	853	2803
c, Capacity [veh/h]	42	1379	1359	240	1465	1462	87	110	130	195
d1, Uniform Delay [s]	48.05	5.80	5.82	45.21	4.16	4.17	49.42	43.80	46.81	45.11
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.57	1.69	1.74	2.56	1.65	1.66	0.79	0.73	0.97	2.75
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
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.33	0.57	0.57	0.62	0.58	0.58	0.15	0.17	0.25	0.58
d, Delay for Lane Group [s/veh]	52.62	7.49	7.56	47.77	5.82	5.83	50.21	44.53	47.78	47.86
Lane Group LOS	D	A	A	D	A	A	D	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.38	5.26	5.24	1.79	3.98	3.98	0.33	0.45	0.78	1.38
50th-Percentile Queue Length [ft]	9.57	131.41	131.02	44.78	99.40	99.54	8.24	11.15	19.53	34.59
95th-Percentile Queue Length [veh]	0.69	9.02	9.00	3.22	7.16	7.17	0.59	0.80	1.41	2.49
95th-Percentile Queue Length [ft]	17.22	225.41	224.88	80.60	178.91	179.17	14.84	20.07	35.16	62.26

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	52.62	7.52	7.56	47.77	5.82	5.83	50.21	44.53	44.53	47.78	47.78	47.86
Movement LOS	D	A	A	D	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	7.93			9.21			46.84			47.85		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	10.56											
Intersection LOS	B											
Intersection V/C	0.574											

Sequence

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

Intersection Level Of Service Report
Intersection 14: Haun Rd (N/S)/La Piedra Rd (E/W)

Control Type:	Signalized	Delay (sec / veh):	35.3
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.768

Intersection Setup

Name				Haun Rd								
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	1	0	1	1	0	1	0	0	0	0	0	0
Pocket Length [ft]	165.00	100.00	100.00	150.00	100.00	150.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			Yes		

Volumes

Name				Haun Rd								
Base Volume Input [veh/h]	48	846	67	48	948	373	284	43	184	36	16	21
Base Volume Adjustment Factor	1.0000	1.0000	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]	48	846	67	48	948	373	284	43	184	36	16	21
Peak Hour Factor	0.7640	0.7640	0.7640	0.7640	0.7640	0.7640	0.7640	0.7640	0.7640	0.7640	0.7640	0.7640
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	277	22	16	310	122	93	14	60	12	5	7
Total Analysis Volume [veh/h]	63	1107	88	63	1241	488	372	56	241	47	21	27
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
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 - Coordination Group
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
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	Split	Split	Split	Split	Split	Split
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]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	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]	11	42	0	13	44	0	0	65	0	0	20	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
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]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	R	C	R	C
C, Cycle Length [s]	140	140	140	140	140	140	140	140	140
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
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
l2, Clearance Lost Time [s]	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	72	72	6	72	72	36	36	9
g / C, Green / Cycle	0.05	0.51	0.51	0.05	0.51	0.51	0.26	0.26	0.07
(v / s)_i Volume / Saturation Flow Rate	0.04	0.32	0.33	0.04	0.35	0.31	0.24	0.15	0.05
s, saturation flow rate [veh/h]	1774	1863	1815	1774	3547	1583	1785	1583	1733
c, Capacity [veh/h]	82	954	930	82	1817	811	463	411	117
d1, Uniform Delay [s]	66.00	24.66	24.68	66.00	25.62	24.08	50.47	45.26	64.38
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	13.72	3.20	3.30	13.72	2.11	3.29	8.19	1.33	12.46
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	0.77	0.63	0.64	0.77	0.68	0.60	0.92	0.59	0.81
d, Delay for Lane Group [s/veh]	79.72	27.86	27.99	79.72	27.72	27.37	58.66	46.59	76.84
Lane Group LOS	E	C	C	E	C	C	E	D	E
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	2.49	14.42	14.12	2.49	15.00	11.44	15.12	7.26	3.67
50th-Percentile Queue Length [ft]	62.22	360.49	352.99	62.22	375.05	285.92	378.12	181.42	91.73
95th-Percentile Queue Length [veh]	4.48	20.65	20.28	4.48	21.35	16.98	21.50	11.67	6.60
95th-Percentile Queue Length [ft]	112.00	516.19	507.06	112.00	533.86	424.57	537.58	291.87	165.11

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	79.72	27.92	27.99	79.72	27.72	27.37	58.66	58.66	46.59	76.84	76.84	76.84
Movement LOS	E	C	C	E	C	C	E	E	D	E	E	E
d_A, Approach Delay [s/veh]	30.52			29.46			54.31			76.84		
Approach LOS	C			C			D			E		
d_I, Intersection Delay [s/veh]	35.35											
Intersection LOS	D											
Intersection V/C	0.768											

Sequence

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

Intersection Level Of Service Report
Intersection 15: Haun Road (NS) / Holland Road (EW)

Control Type:	Signalized	Delay (sec / veh):	63.7
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.940

Intersection Setup

Name												
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	1	0	0	1	0	0	1	0	1	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	150.00	100.00	100.00	150.00	100.00	150.00	150.00	100.00	150.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	337	356	80	137	338	415	426	241	280	186	226	118
Base Volume Adjustment Factor	1.0000	1.0000	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]	337	356	80	137	338	415	426	241	280	186	226	118
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	92	97	22	37	92	113	116	65	76	51	61	32
Total Analysis Volume [veh/h]	366	387	87	149	367	451	463	262	304	202	246	128
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]	140
Coordination Type	Time of Day Pattern Coordinated
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]	34	34	0	45	45	0	42	38	0	23	19	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
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]	140	140	140	140	140	140	140	140	140	140	140	140
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]	30	59	59	14	43	43	38	34	34	18	13	13
g / C, Green / Cycle	0.21	0.42	0.42	0.10	0.30	0.30	0.27	0.24	0.24	0.13	0.10	0.10
(v / s)_i Volume / Saturation Flow Rate	0.21	0.21	0.05	0.08	0.20	0.28	0.26	0.14	0.19	0.11	0.07	0.08
s, saturation flow rate [veh/h]	1774	1863	1583	1774	1863	1583	1774	1863	1583	1774	3547	1583
c, Capacity [veh/h]	380	782	665	176	568	482	480	446	379	225	340	152
d1, Uniform Delay [s]	54.43	29.73	24.92	62.01	42.14	47.31	50.37	47.09	50.08	60.18	61.46	62.22
k, delay calibration	0.42	0.50	0.50	0.11	0.50	0.50	0.43	0.13	0.28	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	34.09	2.23	0.41	10.63	5.61	27.60	30.28	1.49	9.75	11.87	2.91	11.72
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	0.96	0.49	0.13	0.85	0.65	0.93	0.96	0.59	0.80	0.90	0.72	0.84
d, Delay for Lane Group [s/veh]	88.52	31.96	25.33	72.64	47.75	74.91	80.64	48.58	59.83	72.05	64.36	73.94
Lane Group LOS	F	C	C	E	D	E	F	D	E	E	E	E
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	15.94	9.65	1.80	5.60	11.51	18.36	19.42	8.04	10.72	7.62	4.28	4.86
50th-Percentile Queue Length [ft]	398.50	241.17	45.05	140.04	287.67	458.89	485.51	201.05	268.09	190.44	107.10	121.59
95th-Percentile Queue Length [veh]	22.49	14.74	3.24	9.48	17.07	25.38	26.65	12.69	16.09	12.14	7.68	8.48
95th-Percentile Queue Length [ft]	562.20	368.51	81.08	237.08	426.75	634.55	666.19	317.31	402.35	303.60	191.97	212.02

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	88.52	31.96	25.33	72.64	47.75	74.91	80.64	48.58	59.83	72.05	64.36	73.94
Movement LOS	F	C	C	E	D	E	F	D	E	E	E	E
d_A, Approach Delay [s/veh]	55.92			64.25			66.33			69.19		
Approach LOS	E			E			E			E		
d_I, Intersection Delay [s/veh]	63.66											
Intersection LOS	E											
Intersection V/C	0.940											

Sequence

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

Intersection Level Of Service Report
Intersection 16: Haun Rd-Zeiders Rd (N/S)/Scott Rd (E/W)

Control Type:	Signalized	Delay (sec / veh):	84.7
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.125

Intersection Setup

Name												
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	1	0	0	1	0	0	1	0	0	1	0	1
Pocket Length [ft]	345.00	100.00	100.00	200.00	100.00	100.00	135.00	100.00	100.00	185.00	100.00	200.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	62	136	103	885	148	71	126	797	39	203	650	698
Base Volume Adjustment Factor	1.0000	1.0000	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]	62	136	103	885	148	71	126	797	39	203	650	698
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	37	28	240	40	19	34	217	11	55	177	190
Total Analysis Volume [veh/h]	67	148	112	962	161	77	137	866	42	221	707	759
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	1 - Coordination Group
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]	16.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	19	0	0	37	0	11	47	0	17	53	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	C	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
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
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
g_i, Effective Green Time [s]	12	12	12	36	36	7	39	39	17	49	49
g / C, Green / Cycle	0.10	0.10	0.10	0.30	0.30	0.06	0.32	0.32	0.14	0.41	0.41
(v / s)_i Volume / Saturation Flow Rate	0.04	0.08	0.07	0.34	0.34	0.08	0.25	0.25	0.12	0.20	0.48
s, saturation flow rate [veh/h]	1774	1863	1583	1774	1769	1774	1863	1833	1774	3547	1583
c, Capacity [veh/h]	172	181	154	537	536	106	604	594	253	1443	644
d1, Uniform Delay [s]	50.85	53.15	52.65	41.83	41.83	56.40	36.33	36.33	50.37	26.36	35.58
k, delay calibration	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.50	0.50
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
d2, Incremental Delay [s]	1.43	8.80	6.48	75.11	76.24	144.20	8.64	8.78	9.10	1.19	95.59
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
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
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

Lane Group Results

X, volume / capacity	0.39	0.82	0.73	1.12	1.12	1.29	0.76	0.76	0.87	0.49	1.18
d, Delay for Lane Group [s/veh]	52.28	61.94	59.13	116.95	118.08	200.60	44.97	45.11	59.48	27.55	131.17
Lane Group LOS	D	E	E	F	F	F	D	D	E	C	F
Critical Lane Group	No	Yes	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	1.90	4.67	3.45	26.19	26.28	7.38	12.82	12.64	6.90	7.28	34.44
50th-Percentile Queue Length [ft]	47.51	116.78	86.18	654.64	657.11	184.52	320.49	315.89	172.42	182.10	861.09
95th-Percentile Queue Length [veh]	3.42	8.22	6.20	37.07	37.25	12.70	18.69	18.47	11.20	11.71	49.25
95th-Percentile Queue Length [ft]	85.51	205.39	155.12	926.70	931.21	317.38	467.29	461.63	280.10	292.75	1231.29

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	52.28	61.94	59.13	117.37	118.08	118.08	200.60	45.04	45.11	59.48	27.55	131.17
Movement LOS	D	E	E	F	F	F	F	D	D	E	C	F
d_A, Approach Delay [s/veh]	59.00			117.51			65.43			78.35		
Approach LOS	E			F			E			E		
d_I, Intersection Delay [s/veh]	84.73											
Intersection LOS	F											
Intersection V/C	1.125											

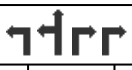
Sequence

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

Intersection Level Of Service Report
Intersection 17: I-215 SB Ramps (N/S) / Scott Rd (E/W)

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):	0.645

Intersection Setup

Name												
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	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	245.00	100.00	100.00
Speed [mph]		50.00			50.00			50.00			50.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		No			Yes			No			No	

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	510	0	359	0	805	648	385	888	400
Base Volume Adjustment Factor	1.0000	1.0000	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	510	0	359	0	805	648	385	888	400
Peak Hour Factor	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	138	0	97	0	218	175	104	240	108
Total Analysis Volume [veh/h]	0	0	0	551	0	388	0	870	701	416	960	432
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 - Coordination Group
Cycle Length [s]	110
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	Split	Split	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	0	0	0	6	0	0	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	0	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	69	0	0	41	0	0	41	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	10	0	0	10	0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall					No			No			No	
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]		110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]		4.00	4.00	4.00	4.00	4.00	4.00	4.00
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]		2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]		21	21	21	81	81	81	81
g / C, Green / Cycle		0.19	0.19	0.19	0.74	0.74	0.74	0.74
(v / s)_i Volume / Saturation Flow Rate		0.16	0.16	0.14	0.25	0.44	0.27	0.27
s, saturation flow rate [veh/h]		1774	1774	2803	3547	1583	3547	1583
c, Capacity [veh/h]		334	334	527	2621	1170	2621	1170
d1, Uniform Delay [s]		42.86	42.86	42.02	0.21	0.22	0.21	0.21
k, delay calibration		0.11	0.11	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		5.18	5.18	2.02	0.34	2.27	0.40	0.90
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	1.33	1.33	1.33	1.33
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	0.83	0.74	0.33	0.60	0.37	0.37
d, Delay for Lane Group [s/veh]		48.03	48.03	44.04	0.55	2.49	0.61	1.11
Lane Group LOS		D	D	D	A	A	A	A
Critical Lane Group		Yes	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh]		7.32	7.32	4.87	0.23	0.91	0.26	0.40
50th-Percentile Queue Length [ft]		183.10	183.10	121.83	5.76	22.77	6.54	9.93
95th-Percentile Queue Length [veh]		11.76	11.76	8.49	0.41	1.64	0.47	0.72
95th-Percentile Queue Length [ft]		294.06	294.06	212.34	10.36	40.99	11.77	17.88

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	48.03	48.03	44.04	0.00	0.55	2.49	0.00	0.61	1.11
Movement LOS				D	D	D		A	A		A	A
d_A, Approach Delay [s/veh]	0.00			46.38			1.42			0.77		
Approach LOS	A			D			A			A		
d_I, Intersection Delay [s/veh]	12.01											
Intersection LOS	B											
Intersection V/C	0.645											

Sequence

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

Intersection Level Of Service Report
Intersection 18: I-215 NB Ramps (N/S) / Scott Rd (E/W)

Control Type:	Signalized	Delay (sec / veh):	21.0
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.759

Intersection Setup

Name											
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	1	0	0	0	1	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	425.00	100.00	100.00	100.00	250.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	402	0	0	502	271	1024	0	0	1072	447
Base Volume Adjustment Factor	1.0000	1.0000	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	402	0	0	502	271	1024	0	0	1072	447
Peak Hour Factor	0.9380	0.9380	0.9380	0.9380	0.9380	0.9380	0.9380	0.9380	0.9380	0.9380	0.9380	0.9380
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	107	0	0	134	72	273	0	0	286	119
Total Analysis Volume [veh/h]	0	0	429	0	0	535	289	1092	0	0	1143	477
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	1 - Coordination Group
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
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	Split	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	0	6	3	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	0	7	7	7	0	0	7	0
Maximum Green [s]	0	30	0	0	0	30	30	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	3.0	3.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	1.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	60	0	0	0	60	31	50	0	0	19	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	3.0	3.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	5	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	10	0	10	0	0	10	0
Rest In Walk		No				No		No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	2.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	0.0	2.0	2.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No				No	No	No			No	
Maximum Recall		No				No	No	No			No	
Pedestrian Recall		No				No	No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	R	R	L	C	C	R
C, Cycle Length [s]	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00
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]	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	24	24	24	20	78	54	54
g / C, Green / Cycle	0.22	0.22	0.22	0.18	0.71	0.49	0.49
(v / s)_i Volume / Saturation Flow Rate	0.14	0.14	0.19	0.16	0.31	0.32	0.30
s, saturation flow rate [veh/h]	1583	1583	2803	1774	3547	3547	1583
c, Capacity [veh/h]	343	343	607	322	2521	1747	780
d1, Uniform Delay [s]	39.03	39.03	41.71	40.66	0.91	13.24	12.84
k, delay calibration	0.11	0.11	0.11	0.11	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.87	1.87	4.40	8.79	0.54	1.93	3.56
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	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

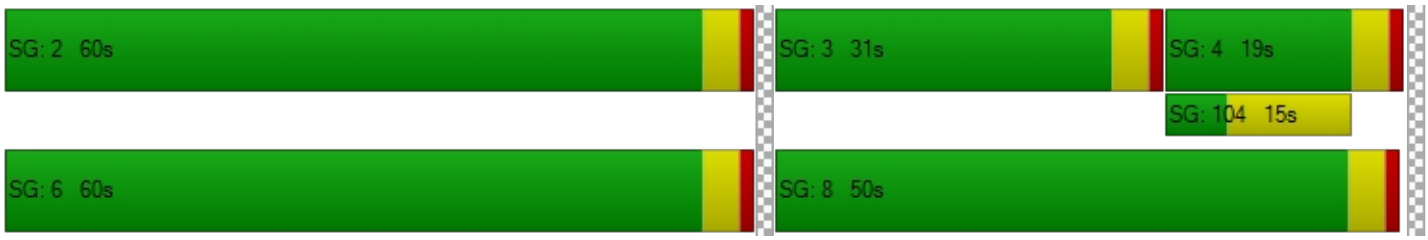
X, volume / capacity	0.63	0.63	0.88	0.90	0.43	0.65	0.61
d, Delay for Lane Group [s/veh]	40.91	40.91	46.11	49.46	1.46	15.16	16.40
Lane Group LOS	D	D	D	D	A	B	B
Critical Lane Group	No	No	Yes	Yes	No	Yes	No
50th-Percentile Queue Length [veh]	5.18	5.18	7.03	7.47	0.72	6.26	5.52
50th-Percentile Queue Length [ft]	129.38	129.38	175.73	186.75	18.02	156.47	137.98
95th-Percentile Queue Length [veh]	8.91	8.91	11.38	11.95	1.30	10.36	9.37
95th-Percentile Queue Length [ft]	222.65	222.65	284.43	298.81	32.44	259.05	234.30

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	40.91	40.91	0.00	0.00	46.11	49.46	1.46	0.00	0.00	15.16	16.40
Movement LOS		D	D			D	D	A			B	B
d_A, Approach Delay [s/veh]	40.91			46.11			11.50			15.53		
Approach LOS	D			D			B			B		
d_I, Intersection Delay [s/veh]	21.00											
Intersection LOS	C											
Intersection V/C	0.759											

Sequence

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



Intersection Level Of Service Report
Intersection 19: Antelope Rd (NS)/Scott Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	40.6
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.786

Intersection Setup

Name											
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	2	0	0	1	0	1	2	0	0	1	0	0
Pocket Length [ft]	215.00	100.00	100.00	200.00	100.00	200.00	375.00	100.00	100.00	200.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	335	164	166	43	194	411	322	760	405	26	766	50
Base Volume Adjustment Factor	1.0000	1.0000	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]	335	164	166	43	194	411	322	760	405	26	766	50
Peak Hour Factor	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	91	44	45	12	53	111	87	206	110	7	207	14
Total Analysis Volume [veh/h]	363	178	180	47	210	445	349	823	439	28	830	54
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	1 - Coordination Group
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
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]	15	27	0	22	34	0	29	41	0	20	32	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
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	C
C, Cycle Length [s]	110	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	11	50	50	5	44	44	14	34	34	4	25	25
g / C, Green / Cycle	0.10	0.46	0.46	0.05	0.40	0.40	0.12	0.31	0.31	0.04	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.11	0.05	0.11	0.03	0.11	0.28	0.10	0.23	0.28	0.01	0.16	0.17
s, saturation flow rate [veh/h]	3445	3547	1583	1774	1863	1583	3445	3547	1583	3445	3547	1805
c, Capacity [veh/h]	347	1612	720	88	751	639	430	1111	496	130	802	408
d1, Uniform Delay [s]	49.51	17.25	18.49	51.09	22.09	27.26	46.93	33.82	35.93	50.73	35.44	35.47
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.19	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	36.07	0.14	0.83	4.99	0.93	6.20	3.76	0.99	8.97	0.82	1.29	2.56
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33
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

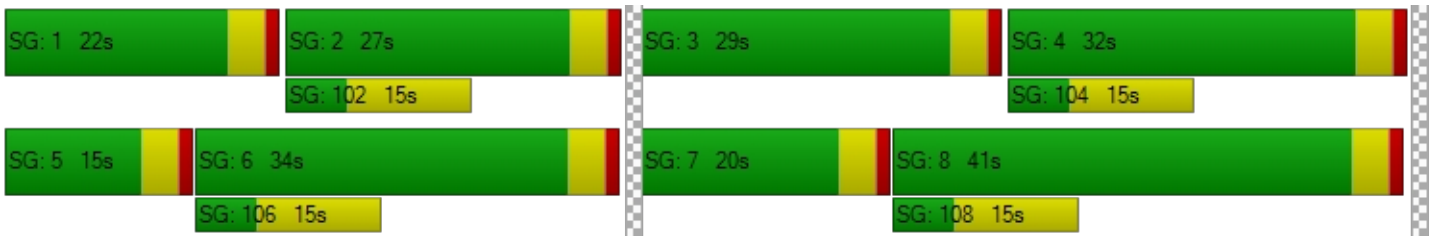
X, volume / capacity	1.05	0.11	0.25	0.54	0.28	0.70	0.81	0.74	0.89	0.22	0.73	0.73
d, Delay for Lane Group [s/veh]	85.58	17.39	19.32	56.08	23.02	33.46	50.69	34.81	44.90	51.55	36.73	38.03
Lane Group LOS	F	B	B	E	C	C	D	C	D	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	6.30	1.24	2.78	1.34	3.61	10.02	4.69	9.37	11.69	0.37	6.31	6.60
50th-Percentile Queue Length [ft]	157.59	30.88	69.41	33.55	90.16	250.62	117.13	234.36	292.19	9.30	157.77	164.99
95th-Percentile Queue Length [veh]	10.60	2.22	5.00	2.42	6.49	15.22	8.23	14.40	17.29	0.67	10.43	10.81
95th-Percentile Queue Length [ft]	265.04	55.59	124.94	60.40	162.29	380.44	205.87	359.89	432.36	16.74	260.77	270.32

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	85.58	17.39	19.32	56.08	23.02	33.46	50.69	34.81	44.90	51.55	37.11	38.03
Movement LOS	F	B	B	E	C	C	D	C	D	D	D	D
d_A, Approach Delay [s/veh]	52.20			31.85			41.00			37.61		
Approach LOS	D			C			D			D		
d_I, Intersection Delay [s/veh]	40.64											
Intersection LOS	D											
Intersection V/C	0.786											

Sequence

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



Intersection Level Of Service Report
Intersection 20: Haun Rd (NS)/Driveway 1 (EW)

Control Type:	Two-way stop	Delay (sec / veh):	13.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.123

Intersection Setup

Name						
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]	50.00		50.00		50.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	862	42	0	1207	0	45
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]	37	12	0	50	0	12
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]	899	54	0	1257	0	57
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	244	15	0	342	0	15
Total Analysis Volume [veh/h]	977	59	0	1366	0	62
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	0.01	0.00	0.00	0.01	0.00	0.12
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	13.17
Movement LOS	A	A		A		B
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.00	0.42
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	0.00	10.48
d_A, Approach Delay [s/veh]	0.00		0.00		13.17	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.33					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 21: Haun Rd (NS)/Driveway 2 (EW)

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):	0.593

Intersection Setup

Name						
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	2	0	0	0
Pocket Length [ft]	100.00	100.00	300.00	100.00	100.00	100.00
Speed [mph]	50.00		50.00		50.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	747	152	413	794	95	157
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]	24	25	50	-50	50	24
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]	771	177	463	744	145	181
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	210	48	126	202	39	49
Total Analysis Volume [veh/h]	838	192	503	809	158	197
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]	140
Coordination Type	Time of Day Pattern Coordinated
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	Overlap
Signal group	2	0	1	6	7	4
Auxiliary Signal Groups						1,4
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	7	0	7	7	7	7
Maximum Green [s]	30	0	30	30	30	30
Amber [s]	3.0	0.0	3.0	3.0	3.0	3.0
All red [s]	1.0	0.0	1.0	1.0	1.0	1.0
Split [s]	40	0	80	120	20	20
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	3.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	2.0
Minimum Recall	No		No	No	No	No
Maximum Recall	No		No	No	No	No
Pedestrian Recall	No		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]	140	140	140	140	140	140
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	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	0.00
g_i, Effective Green Time [s]	88	88	24	116	16	44
g / C, Green / Cycle	0.63	0.63	0.17	0.83	0.11	0.31
(v / s)_i Volume / Saturation Flow Rate	0.28	0.29	0.15	0.23	0.09	0.12
s, saturation flow rate [veh/h]	1863	1748	3445	3547	1774	1583
c, Capacity [veh/h]	1177	1104	587	2946	199	492
d1, Uniform Delay [s]	13.11	13.45	56.40	2.60	60.54	37.93
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.18	1.42	3.77	0.23	7.01	0.53
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

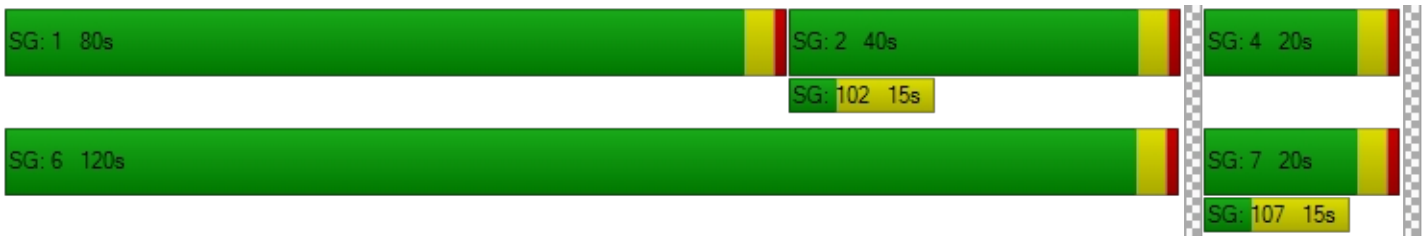
X, volume / capacity	0.44	0.47	0.86	0.27	0.79	0.40
d, Delay for Lane Group [s/veh]	14.29	14.86	60.16	2.83	67.55	38.46
Lane Group LOS	B	B	E	A	E	D
Critical Lane Group	No	Yes	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	7.88	8.12	8.69	1.56	5.72	5.24
50th-Percentile Queue Length [ft/ln]	197.02	203.04	217.20	38.92	142.91	131.10
95th-Percentile Queue Length [veh/ln]	12.48	12.80	13.52	2.80	9.64	9.00
95th-Percentile Queue Length [ft/ln]	312.12	319.88	338.05	70.06	240.94	224.99

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	14.51	14.86	60.16	2.83	67.55	38.46
Movement LOS	B	B	E	A	E	D
d_A, Approach Delay [s/veh]	14.58		24.81		51.41	
Approach LOS	B		C		D	
d_I, Intersection Delay [s/veh]	24.40					
Intersection LOS	C					
Intersection V/C	0.593					

Sequence

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



Intersection Level Of Service Report
Intersection 22: Antelope Rd (NS)/Albion Ln (EW)

Control Type:	Two-way stop	Delay (sec / veh):	91.3
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.562

Intersection Setup

Name						
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	1	0	1	0
Pocket Length [ft]	100.00	100.00	200.00	100.00	175.00	100.00
Speed [mph]	50.00		50.00		50.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	754	49	136	415	42	127
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]	754	49	136	415	42	127
Peak Hour Factor	0.8840	0.8840	0.8840	0.8840	0.8840	0.8840
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	213	14	38	117	12	36
Total Analysis Volume [veh/h]	853	55	154	469	48	144
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	0.01	0.00	0.21	0.00	0.56	0.42
d_M, Delay for Movement [s/veh]	0.00	0.00	11.04	0.00	91.27	22.62
Movement LOS	A	A	B	A	F	C
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.77	0.00	2.51	1.98
95th-Percentile Queue Length [ft/ln]	0.00	0.00	19.19	0.00	62.63	49.57
d_A, Approach Delay [s/veh]	0.00		2.73		39.78	
Approach LOS	A		A		E	
d_I, Intersection Delay [s/veh]	5.42					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 23: Hanover Lane (NS) / Holland Road (EW)

Control Type:	Signalized	Delay (sec / veh):	26.4
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.675

Intersection Setup

Name												
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	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	150.00	100.00	100.00	150.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	131	0	49	78	0	73	101	361	105	14	640	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
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	131	0	49	78	0	73	101	361	105	14	640	17
Peak Hour Factor	0.9070	0.9070	0.9070	0.9070	0.9070	0.9070	0.9070	0.9070	0.9070	0.9070	0.9070	0.9070
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]	36	0	14	21	0	20	28	100	29	4	176	5
Total Analysis Volume [veh/h]	144	0	54	86	0	80	111	398	116	15	706	19
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
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 - Coordination Group
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	48	0	0	48	0	56	81	0	11	36	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	L	C	R	L	C
C, Cycle Length [s]	140	140	140	140	140	140	140
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	25	25	11	100	100	3	92
g / C, Green / Cycle	0.18	0.18	0.08	0.71	0.71	0.02	0.66
(v / s)_i Volume / Saturation Flow Rate	0.16	0.11	0.06	0.21	0.07	0.01	0.39
s, saturation flow rate [veh/h]	1212	1570	1774	1863	1583	1774	1854
c, Capacity [veh/h]	262	320	136	1327	1128	40	1221
d1, Uniform Delay [s]	56.99	52.56	63.61	7.36	6.25	67.35	13.39
k, delay calibration	0.11	0.11	0.11	0.50	0.50	0.11	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.44	1.30	11.29	0.58	0.18	5.59	2.13
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

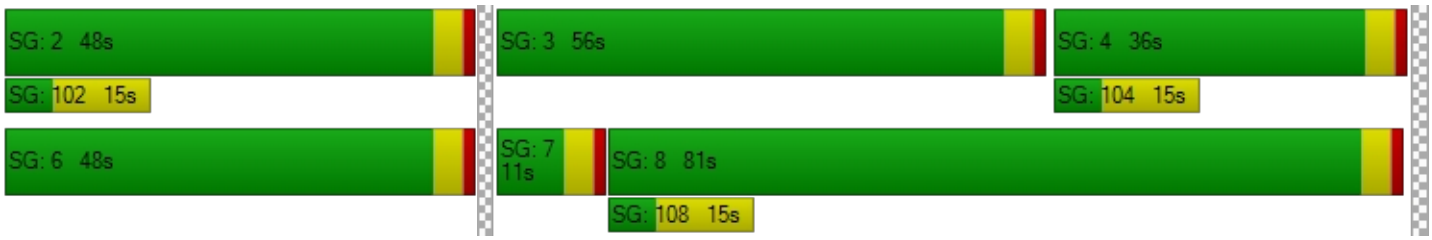
X, volume / capacity	0.76	0.52	0.82	0.30	0.10	0.37	0.59
d, Delay for Lane Group [s/veh]	61.43	53.86	74.90	7.94	6.43	72.94	15.52
Lane Group LOS	E	D	E	A	A	E	B
Critical Lane Group	Yes	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	7.01	5.32	4.23	3.96	0.98	0.58	12.04
50th-Percentile Queue Length [ft/ln]	175.28	133.09	105.67	98.98	24.59	14.50	300.89
95th-Percentile Queue Length [veh/ln]	11.35	9.11	7.60	7.13	1.77	1.04	17.73
95th-Percentile Queue Length [ft/ln]	283.85	227.69	189.96	178.16	44.26	26.10	443.13

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	61.43	61.43	61.43	53.86	53.86	53.86	74.90	7.94	6.43	72.94	15.52	15.52
Movement LOS	E	E	E	D	D	D	E	A	A	E	B	B
d_A, Approach Delay [s/veh]	61.43			53.86			19.55			16.69		
Approach LOS	E			D			B			B		
d_I, Intersection Delay [s/veh]	26.42											
Intersection LOS	C											
Intersection V/C	0.675											

Sequence

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



Intersection Level Of Service Report
Intersection 24: Palomar Rd (NS)/Holland Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	158.4
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.864

Intersection Setup

Name											
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]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	66	4	54	0	2	38	6	483	13	32	575	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]	66	4	54	0	2	38	6	483	13	32	575	1
Peak Hour Factor	0.8130	0.8130	0.8130	0.8130	0.8130	0.8130	0.8130	0.8130	0.8130	0.8130	0.8130	0.8130
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	1	17	0	1	12	2	149	4	10	177	0
Total Analysis Volume [veh/h]	81	5	66	0	2	47	7	594	16	39	707	1
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.86	0.04	0.13	0.00	0.02	0.11	0.01	0.01	0.00	0.04	0.01	0.00
d_M, Delay for Movement [s/veh]	158.42	147.90	127.22	45.04	34.44	14.55	9.07	0.00	0.00	8.87	0.00	0.00
Movement LOS	F	F	F	E	D	B	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	7.88	7.88	7.88	0.42	0.42	0.42	0.02	0.02	0.02	0.10	0.10	0.00
95th-Percentile Queue Length [ft/ln]	196.95	196.95	196.95	10.48	10.48	10.48	0.51	0.51	0.51	2.56	2.56	0.00
d_A, Approach Delay [s/veh]	144.53			15.36			0.10			0.46		
Approach LOS	F			C			A			A		
d_I, Intersection Delay [s/veh]	14.78											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 25: Menifee Rd (NS)/Holland Rd (EW)

Control Type:	All-way stop	Delay (sec / veh):	13.9
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.573

Intersection Setup

Name												
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	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	150.00	100.00	100.00	125.00	100.00	100.00	150.00	100.00	100.00	150.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	90	375	113	184	332	186	249	177	66	91	294	160
Base Volume Adjustment Factor	1.0000	1.0000	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]	90	375	113	184	332	186	249	177	66	91	294	160
Peak Hour Factor	0.7880	0.7880	0.7880	0.7880	0.7880	0.7880	0.7880	0.7880	0.7880	0.7880	0.7880	0.7880
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	119	36	58	105	59	79	56	21	29	93	51
Total Analysis Volume [veh/h]	114	476	143	234	421	236	316	225	84	115	373	203
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	581	615	639	542	573	610	581	613	641	579	612	649
Degree of Utilization, x	0.20	0.50	0.48	0.43	0.57	0.54	0.54	0.25	0.24	0.20	0.47	0.44

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.72	2.83	2.65	2.16	3.60	3.21	3.26	0.99	0.94	0.73	2.51	2.28
95th-Percentile Queue Length [ft]	18.07	70.76	66.22	54.04	90.00	80.29	81.60	24.83	23.46	18.34	62.69	56.94
Approach Delay [s/veh]	13.38			15.68			13.22			12.69		
Approach LOS	B			C			B			B		
Intersection Delay [s/veh]	13.88											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 1: Murrieta Rd (NS)/Newport Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	45.7
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.890

Intersection Setup

Name							Newport Rd			Newport Rd		
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	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	190.00	100.00	100.00	225.00	100.00	100.00	275.00	100.00	100.00	180.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							Newport Rd			Newport Rd		
Base Volume Input [veh/h]	181	308	110	379	314	231	376	1134	86	218	1094	296
Base Volume Adjustment Factor	1.0000	1.0000	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]	181	308	110	379	314	231	376	1134	86	218	1094	296
Peak Hour Factor	0.9570	0.9570	0.9570	0.9570	0.9570	0.9570	0.9570	0.9570	0.9570	0.9570	0.9570	0.9570
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	47	80	29	99	82	60	98	296	22	57	286	77
Total Analysis Volume [veh/h]	189	322	115	396	328	241	393	1185	90	228	1143	309
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	1 - Coordination Group
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
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]	26	19	0	30	23	0	30	40	0	21	31	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
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]	110	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	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]	14	15	15	26	28	28	26	37	37	16	27	27
g / C, Green / Cycle	0.13	0.14	0.14	0.24	0.25	0.25	0.24	0.33	0.33	0.15	0.24	0.24
(v / s)_i Volume / Saturation Flow Rate	0.11	0.09	0.07	0.22	0.09	0.15	0.22	0.23	0.06	0.13	0.23	0.20
s, saturation flow rate [veh/h]	1774	3547	1583	1774	3547	1583	1774	5074	1583	1774	5074	1583
c, Capacity [veh/h]	223	498	222	419	890	397	419	1686	526	259	1228	383
d1, Uniform Delay [s]	47.14	44.78	43.90	41.38	34.07	36.47	41.29	32.06	26.05	46.12	40.87	39.34
k, delay calibration	0.11	0.50	0.50	0.32	0.50	0.50	0.31	0.11	0.11	0.11	0.11	0.24
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.61	6.36	8.36	23.92	1.18	6.73	22.55	0.54	0.15	9.41	3.80	8.65
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

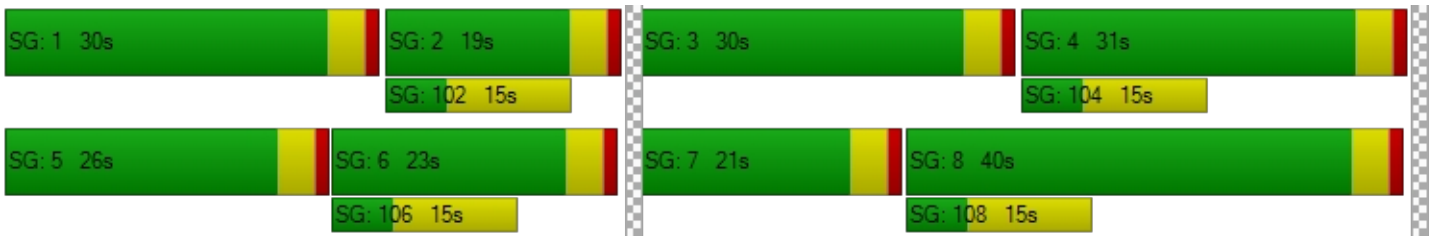
X, volume / capacity	0.85	0.65	0.52	0.94	0.37	0.61	0.94	0.70	0.17	0.88	0.93	0.81
d, Delay for Lane Group [s/veh]	55.75	51.14	52.26	65.30	35.25	43.20	63.84	32.60	26.20	55.53	44.67	47.99
Lane Group LOS	E	D	D	E	D	D	E	C	C	E	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	5.39	4.43	3.31	12.76	3.60	6.18	12.50	8.64	1.61	6.52	9.96	8.36
50th-Percentile Queue Length [ft]	134.78	110.66	82.69	318.96	89.98	154.40	312.61	216.03	40.16	163.07	249.03	209.01
95th-Percentile Queue Length [veh]	9.20	7.88	5.95	18.62	6.48	10.25	18.30	13.46	2.89	10.71	15.14	13.10
95th-Percentile Queue Length [ft]	229.98	196.92	148.85	465.40	161.96	256.29	457.59	336.55	72.30	267.79	378.44	327.56

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	55.75	51.14	52.26	65.30	35.25	43.20	63.84	32.60	26.20	55.53	44.67	47.99
Movement LOS	E	D	D	E	D	D	E	C	C	E	D	D
d_A, Approach Delay [s/veh]	52.74			49.57			39.62			46.75		
Approach LOS	D			D			D			D		
d_I, Intersection Delay [s/veh]	45.65											
Intersection LOS	D											
Intersection V/C	0.890											

Sequence

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



Intersection Level Of Service Report
Intersection 2: Bradley Rd (N/S)/Newport Rd (E/W)

Control Type:	Signalized	Delay (sec / veh):	43.5
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.975

Intersection Setup

Name				Bradley Rd			Newport Rd			Newport Rd		
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	1	0	0	1	0	0	1	0	0	2	0	1
Pocket Length [ft]	100.00	100.00	100.00	125.00	100.00	100.00	165.00	100.00	100.00	155.00	100.00	150.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name				Bradley Rd			Newport Rd			Newport Rd		
Base Volume Input [veh/h]	196	330	401	275	231	127	183	1440	98	364	1594	354
Base Volume Adjustment Factor	1.0000	1.0000	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	330	401	275	231	127	183	1440	98	364	1594	354
Peak Hour Factor	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410
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	88	107	73	61	34	49	383	26	97	423	94
Total Analysis Volume [veh/h]	208	351	426	292	245	135	194	1530	104	387	1694	376
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	1 - Coordination Group
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
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	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	2	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups			2,7									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	30	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	3.0	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	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	28	24	24	23	19	0	17	43	0	20	46	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	5	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	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	2.0	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	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	C	L	C	C	L	C	R
C, Cycle Length [s]	110	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	15	21	41	19	25	25	13	38	38	16	41	41
g / C, Green / Cycle	0.14	0.19	0.38	0.17	0.23	0.23	0.12	0.34	0.34	0.15	0.37	0.37
(v / s)_i Volume / Saturation Flow Rate	0.12	0.19	0.27	0.16	0.11	0.11	0.11	0.31	0.31	0.11	0.33	0.24
s, saturation flow rate [veh/h]	1774	1863	1583	1774	1863	1644	1774	3547	1803	3445	5074	1583
c, Capacity [veh/h]	241	361	595	307	430	379	210	1215	617	502	1876	585
d1, Uniform Delay [s]	46.55	44.08	29.34	45.07	36.50	36.55	48.01	34.24	34.27	45.25	32.82	28.67
k, delay calibration	0.11	0.50	0.50	0.16	0.50	0.50	0.11	0.11	0.36	0.11	0.11	0.18
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.90	41.04	7.23	19.58	3.62	4.18	15.42	2.50	13.68	2.55	1.85	1.99
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

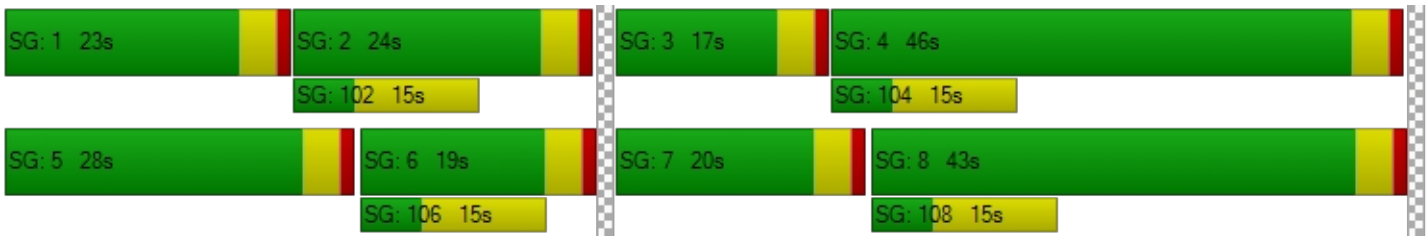
X, volume / capacity	0.86	0.97	0.72	0.95	0.47	0.47	0.92	0.89	0.89	0.77	0.90	0.64
d, Delay for Lane Group [s/veh]	55.46	85.12	36.57	64.65	40.12	40.73	63.43	36.74	47.96	47.80	34.67	30.66
Lane Group LOS	E	F	D	E	D	D	E	D	D	D	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	5.93	13.14	10.11	9.18	4.87	4.41	5.94	13.11	15.28	5.04	13.42	7.94
50th-Percentile Queue Length [ft]	148.17	328.42	252.87	229.48	121.80	110.23	148.58	327.73	382.07	126.09	335.51	198.58
95th-Percentile Queue Length [veh]	9.92	19.08	15.33	14.15	8.49	7.85	9.94	19.05	21.69	8.73	19.43	12.57
95th-Percentile Queue Length [ft]	247.98	477.02	383.27	353.70	212.29	196.32	248.53	476.18	542.36	218.17	485.71	314.13

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	55.46	85.12	36.57	64.65	40.23	40.73	63.43	40.02	47.96	47.80	34.67	30.66
Movement LOS	E	F	D	E	D	D	E	D	D	D	C	C
d_A, Approach Delay [s/veh]	57.86			50.94			42.96			36.13		
Approach LOS	E			D			D			D		
d_I, Intersection Delay [s/veh]	43.51											
Intersection LOS	D											
Intersection V/C	0.975											

Sequence

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



Intersection Level Of Service Report
Intersection 3: Haun Road (NS) / Newport Road (EW)

Control Type:	Signalized	Delay (sec / veh):	54.4
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.061

Intersection Setup

Name	Haun Rd			Haun Rd						Newport Rd		
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	2	0	1	2	0	0	2	0	0	2	0	1
Pocket Length [ft]	215.00	100.00	285.00	155.00	100.00	100.00	210.00	100.00	100.00	350.00	100.00	150.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Haun Rd			Haun Rd						Newport Rd		
Base Volume Input [veh/h]	553	122	1150	415	159	134	190	1334	463	1215	1457	307
Base Volume Adjustment Factor	1.0000	1.0000	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]	553	122	1150	415	159	134	190	1334	463	1215	1457	307
Peak Hour Factor	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770
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]	142	31	294	106	41	34	49	341	118	311	373	79
Total Analysis Volume [veh/h]	566	125	1177	425	163	137	194	1365	474	1244	1491	314
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	1 - Coordination Group
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
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	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	2	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups			2,7									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	30	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	3.0	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	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	26	22	22	23	19	0	42	43	0	52	53	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	5	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	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	2.0	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	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	C	L	C	R	L	C	C
C, Cycle Length [s]	140	140	140	140	140	140	140	140	140	140	140	140
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	22	18	70	19	15	15	10	39	39	48	77	77
g / C, Green / Cycle	0.16	0.13	0.50	0.14	0.11	0.11	0.07	0.28	0.28	0.34	0.55	0.55
(v / s)_i Volume / Saturation Flow Rate	0.16	0.07	0.42	0.12	0.09	0.09	0.06	0.27	0.30	0.36	0.33	0.36
s, saturation flow rate [veh/h]	3445	1863	2803	3445	1863	1586	3445	5074	1583	3445	3547	1710
c, Capacity [veh/h]	542	238	1398	466	197	168	252	1421	443	1181	1949	940
d1, Uniform Delay [s]	55.33	54.23	19.24	56.54	58.83	58.88	63.71	49.63	50.39	46.01	21.32	22.31
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.50	0.11	0.11	0.22
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	31.13	8.09	6.30	7.26	30.15	35.27	4.90	5.16	62.33	29.64	0.31	1.65
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	1.33	1.33	1.33	1.33	1.33	1.33	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	1.05	0.53	0.84	0.91	0.82	0.83	0.77	0.96	1.07	1.05	0.61	0.66
d, Delay for Lane Group [s/veh]	86.45	62.32	25.54	63.80	88.98	94.15	68.61	54.79	112.72	75.65	21.62	23.96
Lane Group LOS	F	E	C	E	F	F	E	D	F	F	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	11.14	4.36	10.72	7.29	6.88	6.15	3.49	15.76	22.60	24.41	12.29	13.85
50th-Percentile Queue Length [ft]	278.51	108.95	268.11	182.23	172.01	153.63	87.16	394.01	565.05	610.18	307.26	346.29
95th-Percentile Queue Length [veh]	16.97	7.78	16.10	11.72	11.18	10.21	6.28	22.27	31.69	33.69	18.04	19.96
95th-Percentile Queue Length [ft]	424.16	194.54	402.38	292.93	279.56	255.26	156.90	556.78	792.24	842.21	451.00	498.89

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	86.45	62.32	25.54	63.80	89.03	94.15	68.61	54.79	112.72	75.65	22.11	23.96
Movement LOS	F	E	C	E	F	F	E	D	F	F	C	C
d_A, Approach Delay [s/veh]	46.46			75.21			69.62			44.14		
Approach LOS	D			E			E			D		
d_I, Intersection Delay [s/veh]	54.39											
Intersection LOS	D											
Intersection V/C	1.061											

Sequence

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

Intersection Level Of Service Report
Intersection 4: I-215 SB Ramps (NS) / Newport Road (EW)

Control Type:	Signalized	Delay (sec / veh):	23.7
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.778

Intersection Setup

Name	I-215 SB Ramps			I-215 SB Ramps			Newport Rd			Newport Rd		
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	1	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	800.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		50.00			50.00			50.00			50.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			No			No	

Volumes

Name	I-215 SB Ramps			I-215 SB Ramps			Newport Rd			Newport Rd		
Base Volume Input [veh/h]	0	0	0	640	0	971	0	2112	795	0	1951	688
Base Volume Adjustment Factor	1.0000	1.0000	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	640	0	971	0	2112	795	0	1951	688
Peak Hour Factor	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	162	0	246	0	535	201	0	494	174
Total Analysis Volume [veh/h]	0	0	0	648	0	984	0	2140	805	0	1977	697
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 - Coordination Group
Cycle Length [s]	140
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	Overlap	Protecte	Permiss	Overlap
Signal group	0	0	0	1	0	0	0	8	8	7	4	4
Auxiliary Signal Groups									1,4,8			1,4,8
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	7	0	0	0	7	7	0	7	7
Maximum Green [s]	0	0	0	30	0	0	0	30	30	0	30	30
Amber [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0
All red [s]	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0	1.0
Split [s]	0	0	0	121	0	0	0	19	19	0	19	19
Vehicle Extension [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0
Walk [s]	0	0	0	5	0	0	0	5	5	0	5	5
Pedestrian Clearance [s]	0	0	0	10	0	0	0	10	10	0	10	10
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	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0
Minimum Recall				No				No	No		No	No
Maximum Recall				No				No	No		No	No
Pedestrian Recall				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	C	R	C	R
C, Cycle Length [s]		140	140	140	140	140	140	140
L, Total Lost Time per Cycle [s]		4.00	4.00	4.00	4.00	0.00	4.00	0.00
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]		2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]		61	61	61	71	136	71	136
g / C, Green / Cycle		0.44	0.44	0.44	0.51	0.97	0.51	0.97
(v / s)_i Volume / Saturation Flow Rate		0.31	0.34	0.34	0.32	0.51	0.39	0.44
s, saturation flow rate [veh/h]		1774	1617	1583	6765	1583	5074	1583
c, Capacity [veh/h]		772	704	689	3433	1538	2574	1538
d1, Uniform Delay [s]		32.15	33.59	33.96	24.82	0.12	27.80	0.10
k, delay calibration		0.11	0.11	0.11	0.50	0.18	0.50	0.12
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		1.19	1.85	2.07	0.86	0.47	2.26	0.24
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

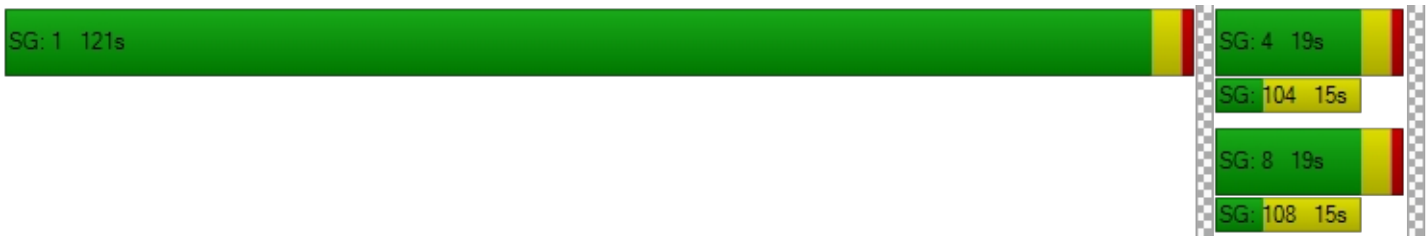
X, volume / capacity		0.70	0.77	0.79	0.62	0.52	0.77	0.45
d, Delay for Lane Group [s/veh]		33.33	35.44	36.02	25.69	0.59	30.07	0.34
Lane Group LOS		C	D	D	C	A	C	A
Critical Lane Group		No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh]		14.49	15.23	15.43	12.23	0.20	17.13	0.10
50th-Percentile Queue Length [ft]		362.19	380.87	385.73	305.74	5.05	428.24	2.52
95th-Percentile Queue Length [veh]		20.73	21.64	21.87	17.96	0.36	23.92	0.18
95th-Percentile Queue Length [ft]		518.25	540.90	546.78	449.12	9.10	597.93	4.53

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	33.67	0.00	35.76	0.00	25.69	0.59	0.00	30.07	0.34
Movement LOS				C		D		C	A		C	A
d_A, Approach Delay [s/veh]	0.00			34.93			18.83			22.32		
Approach LOS	A			C			B			C		
d_I, Intersection Delay [s/veh]	23.74											
Intersection LOS	C											
Intersection V/C	0.778											

Sequence

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



Intersection Level Of Service Report
Intersection 5: I-215 NB Ramps (NS) / Newport Road (EW)

Control Type:	Signalized	Delay (sec / veh):	26.7
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.841

Intersection Setup

Name	I-215 NB Ramps			I-215 NB Ramps			Newport Rd			Newport Rd		
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	1	0	1	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	375.00	100.00	375.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name	I-215 NB Ramps			I-215 NB Ramps			Newport Rd			Newport Rd		
Base Volume Input [veh/h]	794	0	1004	0	0	0	0	2029	625	0	1869	699
Base Volume Adjustment Factor	1.0000	1.0000	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]	794	0	1004	0	0	0	0	2029	625	0	1869	699
Peak Hour Factor	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810
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]	202	0	256	0	0	0	0	517	159	0	476	178
Total Analysis Volume [veh/h]	809	0	1023	0	0	0	0	2068	637	0	1905	713
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 - Coordination Group
Cycle Length [s]	140
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	Split	Permiss	Split	Permiss	Permiss	Permiss	Protecte	Permiss	Overlap	Permiss	Permiss	Overlap
Signal group	5	0	0	0	0	0	3	8	5	0	4	4
Auxiliary Signal Groups									4,5,8			4,5,8
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	0	0	0	0	0	0	7	7	0	7	7
Maximum Green [s]	30	0	0	0	0	0	0	30	30	0	30	30
Amber [s]	3.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0
All red [s]	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0	1.0
Split [s]	86	0	0	0	0	0	0	54	86	0	54	54
Vehicle Extension [s]	3.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0
Walk [s]	5	0	0	0	0	0	0	5	5	0	5	5
Pedestrian Clearance [s]	10	0	0	0	0	0	0	10	10	0	10	10
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	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0
Minimum Recall	No							No	No		No	No
Maximum Recall	No							No	No		No	No
Pedestrian Recall	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		C	R	C	R
C, Cycle Length [s]	140	140	140		140	140	140	140
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00		4.00	0.00	4.00	0.00
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]	2.00	2.00	2.00		2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	64	64	64		68	136	68	136
g / C, Green / Cycle	0.46	0.46	0.46		0.48	0.97	0.48	0.97
(v / s)_i Volume / Saturation Flow Rate	0.34	0.37	0.39		0.41	0.40	0.28	0.45
s, saturation flow rate [veh/h]	1774	1641	1583		5074	1583	6765	1583
c, Capacity [veh/h]	813	752	726		2457	1538	3277	1538
d1, Uniform Delay [s]	31.27	32.66	33.38		31.39	0.10	25.89	0.10
k, delay calibration	0.17	0.20	0.22		0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.16	3.98	5.36		3.70	0.82	0.76	1.01
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	0.75	0.81	0.84		0.84	0.41	0.58	0.46
d, Delay for Lane Group [s/veh]	33.43	36.64	38.74		35.09	0.92	26.65	1.11
Lane Group LOS	C	D	D		D	A	C	A
Critical Lane Group	No	No	Yes		Yes	No	No	No
50th-Percentile Queue Length [veh]	16.55	17.61	18.22		19.76	0.35	10.95	0.43
50th-Percentile Queue Length [ft]	413.68	440.16	455.59		494.06	8.81	273.82	10.76
95th-Percentile Queue Length [veh]	23.22	24.49	25.22		27.05	0.63	16.38	0.77
95th-Percentile Queue Length [ft]	580.46	612.20	630.62		676.32	15.86	409.51	19.36

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	34.22	0.00	37.90	0.00	0.00	0.00	0.00	35.09	0.92	0.00	26.65	1.11
Movement LOS	C		D					D	A		C	A
d_A, Approach Delay [s/veh]	36.27			0.00			27.04			19.69		
Approach LOS	D			A			C			B		
d_I, Intersection Delay [s/veh]	26.72											
Intersection LOS	C											
Intersection V/C	0.841											

Sequence

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

Intersection Level Of Service Report
Intersection 6: Antelope Rd (NS)/Newport Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	64.3
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.086

Intersection Setup

Name												
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	2	0	0	2	0	0	2	0	0	2	0	0
Pocket Length [ft]	330.00	100.00	100.00	100.00	100.00	100.00	325.00	100.00	100.00	200.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							Newport Rd			Newport Rd		
Base Volume Input [veh/h]	798	133	232	34	107	257	228	1847	760	214	1538	33
Base Volume Adjustment Factor	1.0000	1.0000	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]	798	133	232	34	107	257	228	1847	760	214	1538	33
Peak Hour Factor	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660
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]	207	34	60	9	28	67	59	478	197	55	398	9
Total Analysis Volume [veh/h]	826	138	240	35	111	266	236	1912	787	222	1592	34
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	1 - Coordination Group
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
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	8	7	4	0
Auxiliary Signal Groups									5,8			
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	7	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	30	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0	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	1.0	1.0	1.0	0.0
Split [s]	34	23	0	30	19	0	15	75	75	12	72	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	5	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	10	0	10	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	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0	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	C	R	L	C	C	L	C	C
C, Cycle Length [s]	140	140	140	140	140	140	140	140	140	140	140	140	140
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	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	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	2.00
g_i, Effective Green Time [s]	30	40	40	5	15	15	15	11	71	71	8	68	68
g / C, Green / Cycle	0.21	0.28	0.28	0.04	0.11	0.11	0.11	0.08	0.51	0.51	0.06	0.49	0.49
(v / s)_i Volume / Saturation Flow Rate	0.24	0.07	0.15	0.01	0.06	0.08	0.08	0.07	0.50	0.57	0.06	0.30	0.30
s, saturation flow rate [veh/h]	3445	1863	1583	3445	1863	1583	1583	3445	3547	1621	3445	3547	1843
c, Capacity [veh/h]	738	531	452	128	202	171	171	271	1795	820	197	1719	893
d1, Uniform Delay [s]	55.00	38.62	42.15	65.54	59.19	60.77	60.77	63.79	34.10	34.58	65.99	26.63	26.64
k, delay calibration	0.13	0.50	0.50	0.11	0.50	0.50	0.50	0.11	0.11	0.50	0.11	0.11	0.19
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	58.79	1.18	4.43	1.13	10.40	28.40	28.40	8.47	7.17	74.99	70.87	0.37	1.25
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	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	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	1.00

Lane Group Results

X, volume / capacity	1.12	0.26	0.53	0.27	0.55	0.78	0.78	0.87	0.99	1.13	1.13	0.62	0.62
d, Delay for Lane Group [s/veh]	113.79	39.80	46.57	66.68	69.60	89.17	89.17	72.26	41.27	109.58	136.86	27.00	27.89
Lane Group LOS	F	D	D	E	E	F	F	E	D	F	F	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	18.60	3.75	7.35	0.62	4.23	5.84	5.84	4.38	28.98	42.64	5.38	12.52	13.24
50th-Percentile Queue Length [ft]	465.03	93.87	183.76	15.38	105.7	145.9	145.9	109.43	724.44	1065.95	134.43	312.99	331.08
95th-Percentile Queue Length [veh]	27.27	6.76	11.80	1.11	7.60	9.80	9.80	7.81	37.81	58.74	9.50	18.32	19.21
95th-Percentile Queue Length [ft]	681.84	168.97	294.91	27.68	190.0	245.0	245.0	195.21	945.15	1468.48	237.38	458.07	480.28

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	113.79	39.80	46.57	66.68	69.60	89.17	72.26	46.35	109.58	136.86	27.29	27.89
Movement LOS	F	D	D	E	E	F	E	D	F	F	C	C
d_A, Approach Delay [s/veh]	91.91			81.99			65.39			40.47		
Approach LOS	F			F			E			D		
d_I, Intersection Delay [s/veh]	64.25											
Intersection LOS	E											
Intersection V/C	1.086											

Sequence

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

Intersection Level Of Service Report
Intersection 7: Menifee Rd (NS)/NewportRd (EW)

Control Type:	Signalized	Delay (sec / veh):	45.5
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.979

Intersection Setup

Name							Newport Rd			Newport Rd		
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	1	0	1	1	0	0	1	0	0	2	0	0
Pocket Length [ft]	250.00	100.00	200.00	100.00	100.00	100.00	400.00	100.00	100.00	295.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							Newport Rd			Newport Rd		
Base Volume Input [veh/h]	150	331	115	92	330	263	401	1469	253	170	1310	57
Base Volume Adjustment Factor	1.0000	1.0000	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]	150	331	115	92	330	263	401	1469	253	170	1310	57
Peak Hour Factor	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290
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]	45	100	35	28	100	79	121	443	76	51	395	17
Total Analysis Volume [veh/h]	181	399	139	111	398	317	484	1772	305	205	1580	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	1 - Coordination Group
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
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	6	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	7	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	22	0	15	26	26	34	62	0	11	39	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	5	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	10	0	10	0	0	10	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]	2.0	2.0	0.0	2.0	2.0	2.0	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	C	L	C	R
C, Cycle Length [s]	110	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	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	20	20	9	22	22	30	58	58	7	35	35
g / C, Green / Cycle	0.06	0.19	0.19	0.08	0.20	0.20	0.27	0.53	0.53	0.06	0.32	0.32
(v / s)_i Volume / Saturation Flow Rate	0.05	0.11	0.09	0.06	0.11	0.20	0.27	0.39	0.40	0.06	0.31	0.04
s, saturation flow rate [veh/h]	3445	3547	1583	1774	3547	1583	1774	3547	1730	3445	5074	1583
c, Capacity [veh/h]	219	660	294	137	708	316	482	1866	910	224	1620	505
d1, Uniform Delay [s]	50.90	41.07	39.95	49.94	39.67	44.01	40.05	20.19	20.74	51.13	37.02	26.65
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.26	0.45	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.64	0.90	1.18	10.62	0.70	36.75	39.70	2.66	6.22	13.81	17.23	0.56
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

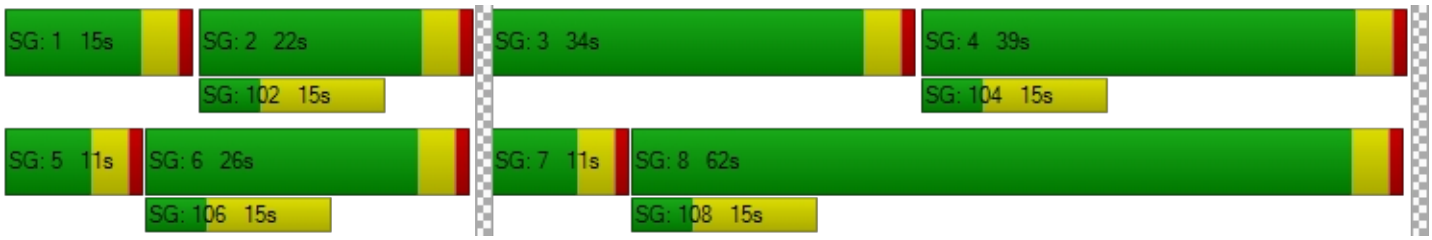
X, volume / capacity	0.83	0.60	0.47	0.81	0.56	1.00	1.00	0.74	0.77	0.92	0.98	0.14
d, Delay for Lane Group [s/veh]	58.54	41.96	41.13	60.56	40.38	80.76	79.75	22.84	26.96	64.93	54.25	27.21
Lane Group LOS	E	D	D	E	D	F	F	C	C	E	D	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	2.60	4.82	3.31	3.29	4.70	11.39	17.54	12.70	14.12	3.13	15.61	1.31
50th-Percentile Queue Length [ft]	65.08	120.50	82.69	82.35	117.48	284.80	438.41	317.47	353.05	78.29	390.21	32.68
95th-Percentile Queue Length [veh]	4.69	8.42	5.95	5.93	8.25	16.95	24.46	18.54	20.28	5.64	22.09	2.35
95th-Percentile Queue Length [ft]	117.15	210.52	148.85	148.23	206.35	423.70	611.39	463.58	507.12	140.92	552.19	58.83

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	58.54	41.96	41.13	60.56	40.38	80.76	79.75	23.76	26.96	64.93	54.25	27.21
Movement LOS	E	D	D	E	D	F	F	C	C	E	D	C
d_A, Approach Delay [s/veh]	45.97			58.59			34.72			54.43		
Approach LOS	D			E			C			D		
d_I, Intersection Delay [s/veh]	45.52											
Intersection LOS	D											
Intersection V/C	0.979											

Sequence

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



Intersection Level Of Service Report
Intersection 8: Bradley Rd (N/S) / La Piedra Rd (E/W)

Control Type:	Signalized	Delay (sec / veh):	20.8
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.486

Intersection Setup

Name												
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	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	150.00	100.00	100.00	155.00	100.00	100.00	100.00	100.00	100.00	150.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	39	481	44	84	744	19	15	52	32	70	75	104
Base Volume Adjustment Factor	1.0000	1.0000	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]	39	481	44	84	744	19	15	52	32	70	75	104
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]	13	163	15	28	251	6	5	18	11	24	25	35
Total Analysis Volume [veh/h]	53	650	59	114	1005	26	20	70	43	95	101	141
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 Coordinated
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]	11	19	0	38	46	0	11	23	0	20	32	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
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	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	5	62	62	8	64	64	3	7	7	7	11	11
g / C, Green / Cycle	0.05	0.62	0.62	0.08	0.64	0.64	0.03	0.07	0.07	0.07	0.11	0.11
(v / s)_i Volume / Saturation Flow Rate	0.03	0.19	0.19	0.06	0.28	0.28	0.01	0.03	0.03	0.05	0.05	0.09
s, saturation flow rate [veh/h]	1774	1863	1809	1774	1863	1846	1774	1863	1639	1774	1863	1583
c, Capacity [veh/h]	98	1143	1110	147	1195	1184	55	139	122	123	210	179
d1, Uniform Delay [s]	46.09	9.25	9.26	45.03	8.92	8.92	47.54	44.27	44.41	45.81	41.68	43.27
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.62	0.72	0.74	8.55	1.15	1.16	3.96	1.98	2.64	9.71	1.70	7.58
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

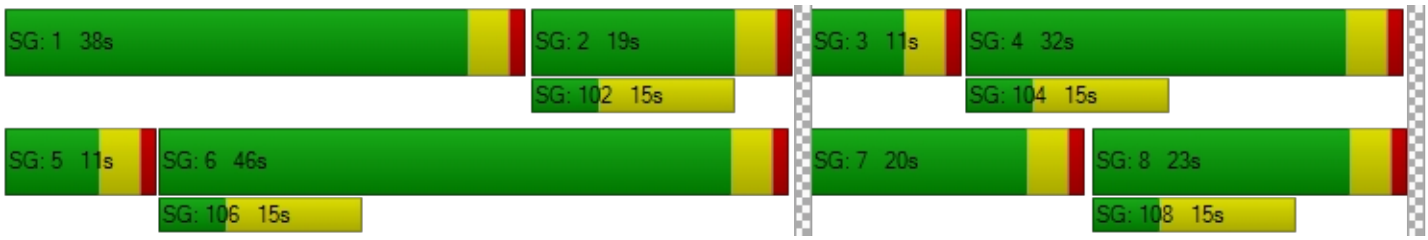
X, volume / capacity	0.54	0.31	0.31	0.78	0.43	0.43	0.36	0.41	0.46	0.77	0.48	0.79
d, Delay for Lane Group [s/veh]	50.71	9.97	10.00	53.58	10.07	10.08	51.51	46.24	47.05	55.52	43.38	50.85
Lane Group LOS	D	A	B	D	B	B	D	D	D	E	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	1.35	3.30	3.22	2.99	4.78	4.74	0.53	1.38	1.35	2.55	2.33	3.61
50th-Percentile Queue Length [ft]	33.85	82.61	80.52	74.86	119.52	118.59	13.23	34.44	33.78	63.74	58.23	90.20
95th-Percentile Queue Length [veh]	2.44	5.95	5.80	5.39	8.37	8.32	0.95	2.48	2.43	4.59	4.19	6.49
95th-Percentile Queue Length [ft]	60.93	148.70	144.94	134.75	209.17	207.89	23.81	61.99	60.81	114.73	104.82	162.36

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	50.71	9.99	10.00	53.58	10.07	10.08	51.51	46.39	47.05	55.52	43.38	50.85
Movement LOS	D	A	B	D	B	B	D	D	D	E	D	D
d_A, Approach Delay [s/veh]	12.82			14.40			47.37			49.93		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	20.78											
Intersection LOS	C											
Intersection V/C	0.486											

Sequence

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



Intersection Level Of Service Report
Intersection 9: Bradley Rd (NS)/Holland Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	57.3
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.947

Intersection Setup

Name												
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	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	130.00	100.00	100.00	150.00	100.00	100.00	145.00	100.00	100.00	140.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	69	368	178	213	267	172	216	327	69	166	378	288
Base Volume Adjustment Factor	1.0000	1.0000	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]	69	368	178	213	267	172	216	327	69	166	378	288
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	100	48	58	73	47	59	89	19	45	103	78
Total Analysis Volume [veh/h]	75	400	193	232	290	187	235	355	75	180	411	313
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 Coordinated
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]	43	46	0	21	24	0	21	36	0	17	32	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	R	L	C	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	7	42	17	53	53	17	32	13	28	28
g / C, Green / Cycle	0.05	0.35	0.14	0.44	0.44	0.14	0.27	0.11	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.04	0.34	0.13	0.16	0.12	0.13	0.24	0.10	0.22	0.20
s, saturation flow rate [veh/h]	1774	1762	1774	1863	1583	1774	1807	1774	1863	1583
c, Capacity [veh/h]	97	619	251	816	694	251	480	192	432	367
d1, Uniform Delay [s]	55.97	38.09	50.85	22.45	21.49	48.12	37.22	53.08	45.41	44.11
k, delay calibration	0.11	0.50	0.11	0.50	0.50	0.11	0.38	0.11	0.36	0.30
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	12.05	27.35	13.33	1.21	0.96	14.71	17.71	18.07	26.64	13.87
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

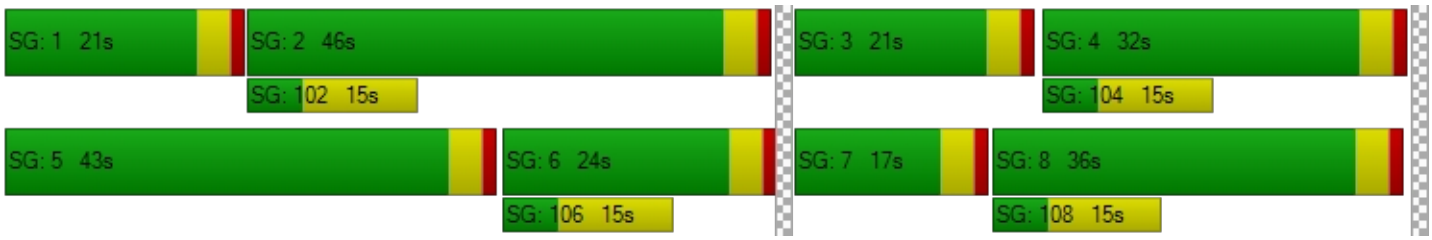
X, volume / capacity	0.77	0.96	0.92	0.36	0.27	0.93	0.90	0.94	0.95	0.85
d, Delay for Lane Group [s/veh]	68.02	65.44	64.18	23.66	22.44	62.83	54.93	71.15	72.05	57.97
Lane Group LOS	E	E	E	C	C	E	D	E	E	E
Critical Lane Group	No	Yes	Yes	No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh]	2.50	20.66	7.56	5.41	3.36	7.33	12.72	6.16	14.69	9.91
50th-Percentile Queue Length [ft]	62.40	516.49	188.88	135.29	83.88	183.20	318.09	154.00	367.23	247.87
95th-Percentile Queue Length [veh]	4.49	28.11	12.06	9.23	6.04	11.77	18.57	10.23	20.97	15.08
95th-Percentile Queue Length [ft]	112.33	702.84	301.57	230.66	150.99	294.18	464.34	255.76	524.36	376.97

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	68.02	65.44	65.44	64.18	23.66	22.44	62.83	54.93	54.93	71.15	72.05	57.97
Movement LOS	E	E	E	E	C	C	E	D	D	E	E	E
d_A, Approach Delay [s/veh]	65.73			36.60			57.72			67.00		
Approach LOS	E			D			E			E		
d_I, Intersection Delay [s/veh]	57.30											
Intersection LOS	E											
Intersection V/C	0.947											

Sequence

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



Intersection Level Of Service Report
Intersection 10: Town Center Dr-Sherman Rd (NS) / La Piedra Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	31.0
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.303

Intersection Setup

Name												
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	1	0	1	1	0	0	0	0	0	1	0	0
Pocket Length [ft]	210.00	100.00	500.00	150.00	100.00	100.00	100.00	100.00	100.00	800.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	32	89	144	32	90	7	13	59	37	143	89	34
Base Volume Adjustment Factor	1.0000	1.0000	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]	32	89	144	32	90	7	13	59	37	143	89	34
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]	8	23	38	8	23	2	3	15	10	37	23	9
Total Analysis Volume [veh/h]	33	93	150	33	94	7	14	61	39	149	93	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]	100
Coordination Type	Time of Day Pattern Coordinated
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]	11	19	0	11	19	0	15	19	0	51	55	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	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	L	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	4	62	62	4	62	2	7	10	16	16
g / C, Green / Cycle	0.04	0.62	0.62	0.04	0.62	0.02	0.07	0.10	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.02	0.05	0.09	0.02	0.05	0.01	0.06	0.08	0.04	0.04
s, saturation flow rate [veh/h]	1774	1863	1583	1774	1840	1774	1743	1774	1863	1695
c, Capacity [veh/h]	77	1151	978	77	1137	42	130	186	290	264
d1, Uniform Delay [s]	46.71	7.70	8.08	46.71	7.74	48.10	45.48	43.83	37.01	37.08
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.78	0.14	0.33	3.78	0.15	4.51	9.11	7.85	0.39	0.46
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

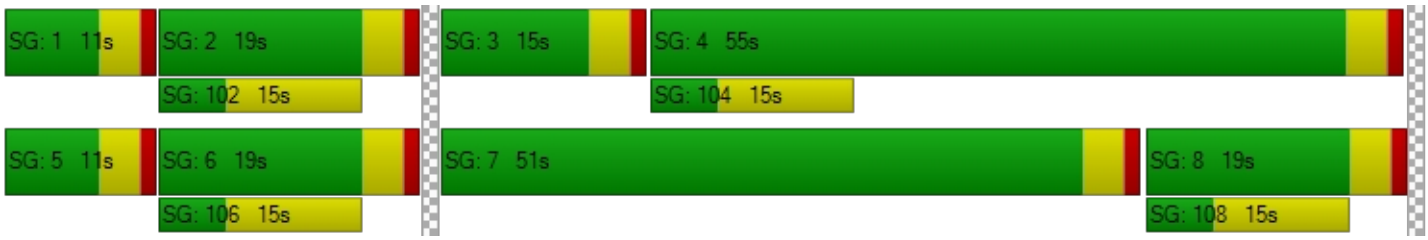
X, volume / capacity	0.43	0.08	0.15	0.43	0.09	0.33	0.77	0.80	0.23	0.24
d, Delay for Lane Group [s/veh]	50.49	7.84	8.41	50.49	7.90	52.61	54.59	51.68	37.40	37.53
Lane Group LOS	D	A	A	D	A	D	D	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	0.85	0.71	1.22	0.85	0.77	0.38	2.66	3.84	1.37	1.31
50th-Percentile Queue Length [ft]	21.20	17.72	30.40	21.20	19.37	9.56	66.43	95.96	34.21	32.78
95th-Percentile Queue Length [veh]	1.53	1.28	2.19	1.53	1.39	0.69	4.78	6.91	2.46	2.36
95th-Percentile Queue Length [ft]	38.15	31.90	54.73	38.15	34.86	17.21	119.57	172.73	61.58	59.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	50.49	7.84	8.41	50.49	7.90	7.90	52.61	54.59	54.59	51.68	37.44	37.53
Movement LOS	D	A	A	D	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	13.25			18.38			54.34			45.11		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	30.98											
Intersection LOS	C											
Intersection V/C	0.303											

Sequence

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



Intersection Level Of Service Report
Intersection 11: Sherman Rd (NS)/Holland Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	1,861.4
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	4.362

Intersection Setup

Name												
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	1	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	500.00	100.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	5	0	11	146	1	94	65	731	4	27	936	173
Base Volume Adjustment Factor	1.0000	1.0000	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]	5	0	11	146	1	94	65	731	4	27	936	173
Peak Hour Factor	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	3	39	0	25	17	195	1	7	249	46
Total Analysis Volume [veh/h]	5	0	12	155	1	100	69	778	4	29	997	184
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.24	0.00	0.03	4.36	0.02	0.34	0.12	0.01	0.00	0.03	0.01	0.00
d_M, Delay for Movement [s/veh]	198.17	127.83	34.14	1861.38	1839.23	1772.22	11.89	0.00	0.00	9.46	0.00	0.00
Movement LOS	F	F	D	F	F	F	B	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.95	0.95	0.95	28.58	28.58	28.58	39.92	39.92	0.00	34.82	34.82	0.00
95th-Percentile Queue Length [ft]	23.86	23.86	23.86	714.53	714.53	714.53	997.95	997.95	0.00	870.62	870.62	0.00
d_A, Approach Delay [s/veh]	82.38			1826.47			0.96			0.23		
Approach LOS	F			F			A			A		
d_I, Intersection Delay [s/veh]	201.40											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 12: Haun Rd (NS)/Village-Market Dr (EW)

Control Type:	Signalized	Delay (sec / veh):	32.9
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.975

Intersection Setup

Name	Haun Rd			Haun Rd								
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	1	0	0	2	0	0	0	0	0	0	0	1
Pocket Length [ft]	100.00	100.00	100.00	175.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	65.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Haun Rd			Haun Rd								
Base Volume Input [veh/h]	124	1333	104	519	1237	260	266	35	91	64	37	505
Base Volume Adjustment Factor	1.0000	1.0000	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]	124	1333	104	519	1237	260	266	35	91	64	37	505
Peak Hour Factor	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	33	350	27	136	325	68	70	9	24	17	10	132
Total Analysis Volume [veh/h]	130	1399	109	545	1298	273	279	37	95	67	39	530
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	1 - Coordination Group
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
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	Permiss	Permiss	Overlap
Signal group	5	2	0	1	6	0	3	8	0	0	4	4
Auxiliary Signal Groups												1,4
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	0	7	7
Maximum Green [s]	30	30	0	30	30	0	7	30	0	0	30	30
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	3.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	1.0
Split [s]	13	50	0	22	59	0	17	28	0	0	11	11
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	3.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	5
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	10
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	0.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0
Minimum Recall	No	No		No	No		Yes	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	C	L	C	C	L	C	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	0.00	0.00	2.00	0.00
g_i, Effective Green Time [s]	9	49	49	18	58	58	21	21	10	32
g / C, Green / Cycle	0.09	0.49	0.49	0.18	0.58	0.58	0.21	0.21	0.10	0.32
(v / s)_i Volume / Saturation Flow Rate	0.07	0.41	0.41	0.16	0.42	0.45	0.08	0.23	0.07	0.19
s, saturation flow rate [veh/h]	1774	1863	1816	3445	1863	1755	1540	1243	1473	2803
c, Capacity [veh/h]	161	920	897	613	1082	1019	340	304	204	887
d1, Uniform Delay [s]	44.64	21.65	21.82	40.18	15.20	15.92	33.87	39.68	43.71	28.84
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.12	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.10	8.36	9.06	4.65	4.26	5.62	0.71	41.52	2.05	0.65
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.81	0.83	0.84	0.89	0.73	0.77	0.35	0.96	0.52	0.60
d, Delay for Lane Group [s/veh]	53.74	30.00	30.88	44.83	19.46	21.54	34.58	81.20	45.76	29.49
Lane Group LOS	D	C	C	D	B	C	C	F	D	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	3.42	15.27	15.32	6.57	11.91	12.72	2.41	9.89	2.54	5.06
50th-Percentile Queue Length [ft]	85.56	381.72	382.98	164.19	297.66	317.89	60.35	247.33	63.59	126.46
95th-Percentile Queue Length [veh]	6.16	21.68	21.74	10.77	17.57	18.56	4.34	15.05	4.58	8.75
95th-Percentile Queue Length [ft]	154.02	541.93	543.45	269.27	439.13	464.09	108.62	376.29	114.46	218.67

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	53.74	30.40	30.88	44.83	20.28	21.54	56.23	81.20	81.20	45.76	45.76	29.49
Movement LOS	D	C	C	D	C	C	E	F	F	D	D	C
d_A, Approach Delay [s/veh]	32.29			26.77			67.58			32.20		
Approach LOS	C			C			E			C		
d_I, Intersection Delay [s/veh]	32.87											
Intersection LOS	C											
Intersection V/C	0.975											

Sequence

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

Intersection Level Of Service Report
Intersection 13: Haun Rd (NS)/Countryside Marketplace (EW)

Control Type:	Signalized	Delay (sec / veh):	31.6
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.809

Intersection Setup

Name	Haun Rd			Haun Rd								
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	1	0	0	2	0	0	0	0	1	1	0	0
Pocket Length [ft]	200.00	100.00	100.00	235.00	100.00	100.00	100.00	100.00	40.00	100.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Haun Rd			Haun Rd								
Base Volume Input [veh/h]	55	1198	109	356	1026	68	46	9	115	84	9	330
Base Volume Adjustment Factor	1.0000	1.0000	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]	55	1198	109	356	1026	68	46	9	115	84	9	330
Peak Hour Factor	0.9640	0.9640	0.9640	0.9640	0.9640	0.9640	0.9640	0.9640	0.9640	0.9640	0.9640	0.9640
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	311	28	92	266	18	12	2	30	22	2	86
Total Analysis Volume [veh/h]	57	1243	113	369	1064	71	48	9	119	87	9	342
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	1 - Coordination Group
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
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	Split	Split	Split	Split	Split	Split
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]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	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]	11	19	0	23	31	0	0	19	0	0	39	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
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]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	46	46	13	53	53	10	10	15	15
g / C, Green / Cycle	0.06	0.46	0.46	0.13	0.53	0.53	0.10	0.10	0.15	0.15
(v / s)_i Volume / Saturation Flow Rate	0.03	0.37	0.37	0.11	0.31	0.31	0.03	0.08	0.05	0.12
s, saturation flow rate [veh/h]	1774	1863	1809	3445	1863	1822	1774	1600	1782	2803
c, Capacity [veh/h]	101	851	827	452	990	969	181	164	267	419
d1, Uniform Delay [s]	46.03	23.36	23.44	42.32	15.85	15.90	41.48	43.86	38.27	41.24
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.93	8.02	8.46	3.65	2.45	2.54	0.77	7.91	0.82	3.92
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.57	0.81	0.81	0.82	0.58	0.58	0.26	0.78	0.36	0.82
d, Delay for Lane Group [s/veh]	50.96	31.39	31.91	45.97	18.30	18.44	42.25	51.77	39.09	45.16
Lane Group LOS	D	C	C	D	B	B	D	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	1.46	14.13	13.93	4.44	8.26	8.17	1.08	3.31	2.08	4.10
50th-Percentile Queue Length [ft]	36.48	353.25	348.37	110.95	206.49	204.37	27.09	82.64	51.88	102.39
95th-Percentile Queue Length [veh]	2.63	20.29	20.06	7.89	12.97	12.86	1.95	5.95	3.74	7.37
95th-Percentile Queue Length [ft]	65.67	507.37	501.42	197.32	324.32	321.59	48.76	148.75	93.39	184.30

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	50.96	31.62	31.91	45.97	18.37	18.44	42.25	51.77	51.77	39.09	39.09	45.16
Movement LOS	D	C	C	D	B	B	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	32.42			25.14			49.18			43.83		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	31.57											
Intersection LOS	C											
Intersection V/C	0.809											

Sequence

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

Intersection Level Of Service Report
Intersection 14: Haun Rd (N/S)/La Piedra Rd (E/W)

Control Type:	Signalized	Delay (sec / veh):	43.9
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.883

Intersection Setup

Name				Haun Rd								
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	1	0	1	1	0	1	0	0	0	0	0	0
Pocket Length [ft]	165.00	100.00	100.00	150.00	100.00	150.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			Yes		

Volumes

Name				Haun Rd								
Base Volume Input [veh/h]	54	1175	187	68	981	154	181	38	124	172	48	90
Base Volume Adjustment Factor	1.0000	1.0000	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]	54	1175	187	68	981	154	181	38	124	172	48	90
Peak Hour Factor	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170
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	320	51	19	267	42	49	10	34	47	13	25
Total Analysis Volume [veh/h]	59	1281	204	74	1070	168	197	41	135	188	52	98
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	1 - Coordination Group
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
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	Split	Split	Split	Split	Split	Split
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]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	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]	11	52	0	11	52	0	0	11	0	0	66	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
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]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	R	C	R	C
C, Cycle Length [s]	140	140	140	140	140	140	140	140	140
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
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
l2, Clearance Lost Time [s]	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	66	66	7	67	67	21	21	30
g / C, Green / Cycle	0.05	0.47	0.47	0.05	0.48	0.48	0.15	0.15	0.21
(v / s)_i Volume / Saturation Flow Rate	0.03	0.40	0.41	0.04	0.30	0.11	0.13	0.09	0.20
s, saturation flow rate [veh/h]	1774	1863	1775	1774	3547	1583	1789	1583	1726
c, Capacity [veh/h]	82	880	838	91	1693	756	269	238	365
d1, Uniform Delay [s]	65.85	32.75	33.12	65.73	27.38	21.39	58.27	55.22	54.08
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	11.12	10.56	12.04	15.72	1.81	0.68	9.39	2.11	10.09
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

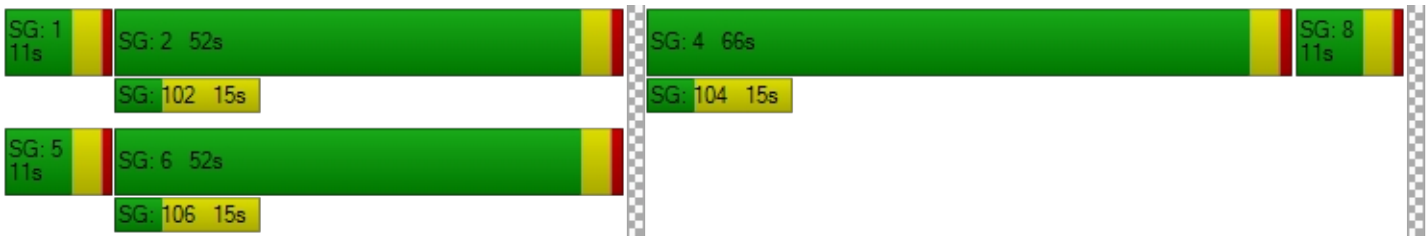
X, volume / capacity	0.72	0.86	0.87	0.81	0.63	0.22	0.88	0.57	0.92
d, Delay for Lane Group [s/veh]	76.97	43.31	45.16	81.45	29.19	22.07	67.66	57.34	64.16
Lane Group LOS	E	D	D	F	C	C	E	E	E
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	2.29	23.76	23.55	2.95	13.08	3.25	8.73	4.46	12.31
50th-Percentile Queue Length [ft]	57.18	594.01	588.87	73.87	326.91	81.16	218.22	111.38	307.76
95th-Percentile Queue Length [veh]	4.12	31.75	31.51	5.32	19.01	5.84	13.57	7.92	18.06
95th-Percentile Queue Length [ft]	102.92	793.87	787.85	132.97	475.17	146.08	339.36	197.92	451.62

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	76.97	44.07	45.16	81.45	29.19	22.07	67.66	67.66	57.34	64.16	64.16	64.16
Movement LOS	E	D	D	F	C	C	E	E	E	E	E	E
d_A, Approach Delay [s/veh]	45.47			31.22			63.92			64.16		
Approach LOS	D			C			E			E		
d_I, Intersection Delay [s/veh]	43.93											
Intersection LOS	D											
Intersection V/C	0.883											

Sequence

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



Intersection Level Of Service Report
Intersection 15: Haun Road (NS) / Holland Road (EW)

Control Type:	Signalized	Delay (sec / veh):	67.9
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.002

Intersection Setup

Name												
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	1	0	0	1	0	0	1	0	1	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	150.00	100.00	100.00	150.00	100.00	150.00	150.00	100.00	150.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	342	417	161	193	454	479	372	294	178	107	306	181
Base Volume Adjustment Factor	1.0000	1.0000	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]	342	417	161	193	454	479	372	294	178	107	306	181
Peak Hour Factor	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	93	113	44	52	123	130	101	80	48	29	83	49
Total Analysis Volume [veh/h]	371	452	174	209	492	519	403	319	193	116	332	196
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]	140
Coordination Type	Time of Day Pattern Coordinated
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]	33	61	0	22	50	0	36	28	0	29	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
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]	140	140	140	140	140	140	140	140	140	140	140	140
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]	29	57	57	18	46	46	32	38	38	11	17	17
g / C, Green / Cycle	0.21	0.41	0.41	0.13	0.33	0.33	0.23	0.27	0.27	0.08	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.21	0.24	0.11	0.12	0.26	0.33	0.23	0.17	0.12	0.07	0.09	0.12
s, saturation flow rate [veh/h]	1774	1863	1583	1774	1863	1583	1774	1863	1583	1774	3547	1583
c, Capacity [veh/h]	368	756	643	229	610	519	405	506	430	141	434	194
d1, Uniform Delay [s]	55.49	32.60	27.74	60.21	42.99	47.05	53.90	44.82	42.30	63.48	59.49	61.44
k, delay calibration	0.43	0.50	0.50	0.12	0.50	0.50	0.45	0.19	0.11	0.11	0.11	0.14
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	46.05	3.47	1.04	14.62	10.89	39.57	40.91	2.25	0.74	11.35	2.85	37.46
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	1.01	0.60	0.27	0.91	0.81	1.00	0.99	0.63	0.45	0.82	0.77	1.01
d, Delay for Lane Group [s/veh]	101.54	36.07	28.78	74.83	53.88	86.62	94.81	47.08	43.04	74.83	62.35	98.90
Lane Group LOS	F	D	C	E	D	F	F	D	D	E	E	F
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	17.24	12.24	3.95	8.06	16.78	22.94	18.27	9.76	5.48	4.42	5.73	8.71
50th-Percentile Queue Length [ft]	430.93	305.94	98.86	201.42	419.48	573.53	456.81	244.11	137.07	110.43	143.28	217.71
95th-Percentile Queue Length [veh]	24.17	17.97	7.12	12.71	23.50	30.80	25.28	14.89	9.32	7.86	9.66	13.62
95th-Percentile Queue Length [ft]	604.36	449.36	177.96	317.80	587.43	770.02	632.07	372.23	233.07	196.60	241.43	340.52

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	101.54	36.07	28.78	74.83	53.88	86.62	94.81	47.08	43.04	74.83	62.35	98.90
Movement LOS	F	D	C	E	D	F	F	D	D	E	E	F
d_A, Approach Delay [s/veh]	59.16			71.40			67.25			75.72		
Approach LOS	E			E			E			E		
d_I, Intersection Delay [s/veh]	67.90											
Intersection LOS	E											
Intersection V/C	1.002											

Sequence

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

Intersection Level Of Service Report
Intersection 16: Haun Rd-Zeiders Rd (NS)/Scott Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	87.4
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.934

Intersection Setup

Name												
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	1	0	0	1	0	0	1	0	0	1	0	1
Pocket Length [ft]	345.00	100.00	100.00	200.00	100.00	100.00	135.00	100.00	100.00	185.00	100.00	200.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	168	192	246	649	78	113	98	854	45	252	587	533
Base Volume Adjustment Factor	1.0000	1.0000	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]	168	192	246	649	78	113	98	854	45	252	587	533
Peak Hour Factor	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750
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	63	166	20	29	25	219	12	65	151	137
Total Analysis Volume [veh/h]	172	197	252	666	80	116	101	876	46	258	602	547
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	1 - Coordination Group
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]	16.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	19	0	0	26	0	14	64	0	11	61	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	C	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
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
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
g_i, Effective Green Time [s]	15	15	15	22	22	8	47	47	20	59	59
g / C, Green / Cycle	0.13	0.13	0.13	0.18	0.18	0.07	0.40	0.40	0.16	0.49	0.49
(v / s)_i Volume / Saturation Flow Rate	0.10	0.11	0.16	0.24	0.25	0.06	0.25	0.25	0.15	0.17	0.35
s, saturation flow rate [veh/h]	1774	1863	1583	1774	1733	1774	1863	1830	1774	3547	1583
c, Capacity [veh/h]	222	233	198	323	316	125	737	724	291	1734	774
d1, Uniform Delay [s]	50.86	51.36	52.50	49.08	49.08	54.97	29.21	29.21	49.10	18.88	23.95
k, delay calibration	0.11	0.11	0.18	0.43	0.44	0.11	0.50	0.50	0.11	0.50	0.50
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
d2, Incremental Delay [s]	5.71	8.16	136.51	170.51	178.97	11.46	4.08	4.15	8.98	0.55	5.38
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
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
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

Lane Group Results

X, volume / capacity	0.77	0.85	1.27	1.34	1.36	0.81	0.63	0.63	0.89	0.35	0.71
d, Delay for Lane Group [s/veh]	56.58	59.53	189.01	219.59	228.05	66.43	33.28	33.35	58.07	19.43	29.33
Lane Group LOS	E	E	F	F	F	E	C	C	E	B	C
Critical Lane Group	No	No	Yes	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	5.19	6.12	13.26	24.56	24.73	3.31	10.98	10.80	8.00	4.94	12.24
50th-Percentile Queue Length [ft]	129.63	152.96	331.40	614.03	618.35	82.77	274.49	270.07	199.89	123.49	305.95
95th-Percentile Queue Length [veh]	8.92	10.17	21.12	37.37	37.78	5.96	16.41	16.19	12.63	8.58	17.97
95th-Percentile Queue Length [ft]	222.99	254.37	528.01	934.23	944.43	148.98	410.35	404.83	315.82	214.61	449.37

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	56.58	59.53	189.01	222.56	228.05	228.05	66.43	33.32	33.35	58.07	19.43	29.33
Movement LOS	E	E	F	F	F	F	E	C	C	E	B	C
d_A, Approach Delay [s/veh]	111.25			223.80			36.59			30.36		
Approach LOS	F			F			D			C		
d_I, Intersection Delay [s/veh]	87.44											
Intersection LOS	F											
Intersection V/C	0.934											

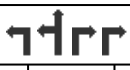
Sequence

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

Intersection Level Of Service Report
Intersection 17: I-215 SB Ramps (NS) / Scott Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	12.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.577

Intersection Setup

Name												
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	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	245.00	100.00	100.00
Speed [mph]		50.00			50.00			50.00			50.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		No			Yes			No			No	

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	608	0	353	0	881	530	413	881	487
Base Volume Adjustment Factor	1.0000	1.0000	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	608	0	353	0	881	530	413	881	487
Peak Hour Factor	1.0000	1.0000	1.0000	0.9470	0.9470	0.9470	1.0000	0.9470	0.9470	0.9470	0.9470	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	161	0	93	0	233	140	109	233	122
Total Analysis Volume [veh/h]	0	0	0	642	0	373	0	930	560	436	930	487
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 - Coordination Group
Cycle Length [s]	110
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	Split	Split	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	0	0	0	6	0	0	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	0	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	73	0	0	37	0	0	37	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	10	0	0	10	0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall					No			No			No	
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]		110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]		4.00	4.00	4.00	4.00	4.00	4.00	4.00
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]		2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]		24	24	24	78	78	78	78
g / C, Green / Cycle		0.21	0.21	0.21	0.71	0.71	0.71	0.71
(v / s)_i Volume / Saturation Flow Rate		0.18	0.18	0.13	0.26	0.35	0.26	0.31
s, saturation flow rate [veh/h]		1774	1774	2803	3547	1583	3547	1583
c, Capacity [veh/h]		380	380	600	2529	1129	2529	1129
d1, Uniform Delay [s]		41.40	41.40	39.11	0.83	0.87	0.83	0.85
k, delay calibration		0.11	0.11	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		5.18	5.18	1.06	0.41	1.56	0.41	1.20
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	1.33	1.33	1.33	1.33
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.84	0.84	0.62	0.37	0.50	0.37	0.43
d, Delay for Lane Group [s/veh]		46.58	46.58	40.17	1.25	2.43	1.25	2.05
Lane Group LOS		D	D	D	A	A	A	A
Critical Lane Group		Yes	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh]		8.46	8.46	4.43	0.57	1.01	0.57	0.82
50th-Percentile Queue Length [ft]		211.45	211.45	110.77	14.17	25.14	14.17	20.58
95th-Percentile Queue Length [veh]		13.23	13.23	7.88	1.02	1.81	1.02	1.48
95th-Percentile Queue Length [ft]		330.68	330.68	197.07	25.51	45.24	25.51	37.04

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	46.58	46.58	40.17	0.00	1.25	2.43	0.00	1.25	2.05
Movement LOS				D	D	D		A	A		A	A
d_A, Approach Delay [s/veh]	0.00			44.22			1.69			1.52		
Approach LOS	A			D			A			A		
d_I, Intersection Delay [s/veh]	12.64											
Intersection LOS	B											
Intersection V/C	0.577											

Sequence

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

Intersection Level Of Service Report
Intersection 18: I-215 NB Ramps (NS) / Scott Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	21.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.704

Intersection Setup

Name											
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	1	0	0	0	1	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	425.00	100.00	100.00	100.00	250.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		50.00			50.00			50.00			50.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		No			Yes			No			No	

Volumes

Name												
Base Volume Input [veh/h]	0	1	529	0	0	467	293	1208	0	0	872	427
Base Volume Adjustment Factor	1.0000	1.0000	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	1	529	0	0	467	293	1208	0	0	872	427
Peak Hour Factor	0.9600	0.9600	0.9600	1.0000	1.0000	1.0000	0.9600	0.9600	1.0000	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	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	138	0	0	117	76	315	0	0	227	111
Total Analysis Volume [veh/h]	0	1	551	0	0	467	305	1258	0	0	908	445
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	1 - Coordination Group
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
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	Split	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	0	6	3	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	0	7	7	7	0	0	7	0
Maximum Green [s]	0	30	0	0	0	30	30	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	3.0	3.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	1.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	71	0	0	0	71	11	39	0	0	28	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	3.0	3.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	5	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	10	0	10	0	0	10	0
Rest In Walk		No				No		No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	2.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	0.0	2.0	2.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No				No	No	No			No	
Maximum Recall		No				No	No	No			No	
Pedestrian Recall		No				No	No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	R	R	L	C	C	R
C, Cycle Length [s]	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00
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]	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	22	22	22	21	80	55	55
g / C, Green / Cycle	0.20	0.20	0.20	0.19	0.73	0.50	0.50
(v / s)_i Volume / Saturation Flow Rate	0.17	0.17	0.17	0.17	0.35	0.26	0.28
s, saturation flow rate [veh/h]	1584	1583	2803	1774	3547	3547	1583
c, Capacity [veh/h]	318	318	562	338	2577	1772	791
d1, Uniform Delay [s]	42.55	42.56	42.17	40.01	0.50	11.56	11.94
k, delay calibration	0.11	0.11	0.11	0.11	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.22	7.24	3.26	8.81	0.66	1.06	2.88
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	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.87	0.87	0.83	0.90	0.49	0.51	0.56
d, Delay for Lane Group [s/veh]	49.78	49.80	45.42	48.82	1.17	12.63	14.82
Lane Group LOS	D	D	D	D	A	B	B
Critical Lane Group	No	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh]	7.53	7.53	6.03	7.84	0.58	4.46	4.84
50th-Percentile Queue Length [ft]	188.31	188.34	150.85	196.05	14.47	111.56	120.90
95th-Percentile Queue Length [veh]	12.03	12.04	10.06	12.43	1.04	7.93	8.44
95th-Percentile Queue Length [ft]	300.83	300.88	251.56	310.86	26.05	198.17	211.06

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	49.78	49.79	0.00	0.00	45.42	48.82	1.17	0.00	0.00	12.63	14.82
Movement LOS		D	D			D	D	A			B	B
d_A, Approach Delay [s/veh]	49.79			45.42			10.47		13.35			
Approach LOS	D			D			B		B			
d_I, Intersection Delay [s/veh]	21.12											
Intersection LOS	C											
Intersection V/C	0.704											

Sequence

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

Intersection Level Of Service Report
Intersection 19: Antelope Rd (NS)/Scott Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	36.4
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.726

Intersection Setup

Name											
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	2	0	0	1	0	1	1	0	0	1	0	0
Pocket Length [ft]	215.00	100.00	100.00	200.00	100.00	200.00	375.00	100.00	100.00	200.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	423	310	377	64	180	273	241	1033	458	65	608	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]	423	310	377	64	180	273	241	1033	458	65	608	58
Peak Hour Factor	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760
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	79	97	16	46	70	62	265	117	17	156	15
Total Analysis Volume [veh/h]	433	318	386	66	184	280	247	1058	469	67	623	59
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
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 - Coordination Group
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
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]	28	24	0	23	19	0	17	43	0	20	46	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
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	C
C, Cycle Length [s]	110	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	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]	16	44	44	6	34	34	10	37	37	6	34	34
g / C, Green / Cycle	0.15	0.40	0.40	0.06	0.31	0.31	0.09	0.34	0.34	0.06	0.31	0.31
(v / s)_i Volume / Saturation Flow Rate	0.13	0.09	0.24	0.04	0.10	0.18	0.07	0.30	0.30	0.02	0.13	0.13
s, saturation flow rate [veh/h]	3445	3547	1583	1774	1863	1583	3445	3547	1583	3445	3547	1782
c, Capacity [veh/h]	514	1426	636	99	576	489	314	1207	539	194	1084	545
d1, Uniform Delay [s]	45.59	21.63	26.03	50.95	29.17	31.93	49.00	34.14	34.04	48.99	25.62	25.66
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.22	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.86	0.36	4.26	7.35	1.46	4.80	4.40	2.20	8.62	1.05	0.26	0.52
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	1.33	1.33	1.33
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

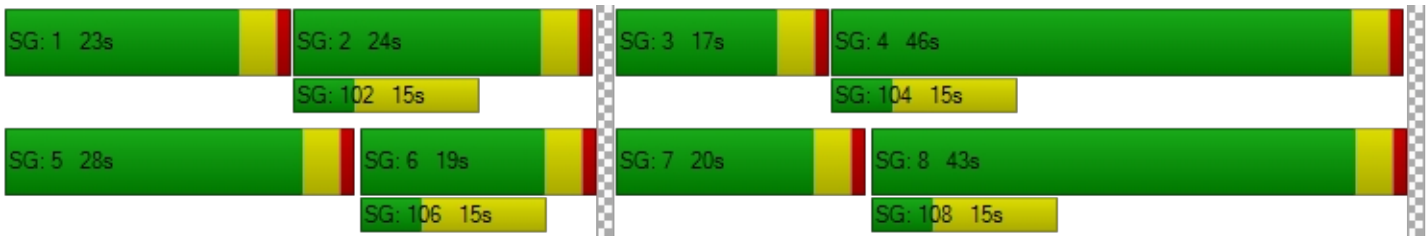
X, volume / capacity	0.84	0.22	0.61	0.66	0.32	0.57	0.79	0.88	0.87	0.35	0.42	0.42
d, Delay for Lane Group [s/veh]	49.45	21.99	30.29	58.30	30.63	36.74	53.39	36.35	42.66	50.04	25.88	26.18
Lane Group LOS	D	C	C	E	C	D	D	D	D	D	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh]	5.78	2.60	8.13	1.92	3.77	6.54	3.39	12.71	12.20	0.87	3.82	3.92
50th-Percentile Queue Length [ft]	144.50	64.94	203.36	48.05	94.19	163.51	84.63	317.85	305.05	21.69	95.40	97.96
95th-Percentile Queue Length [veh]	9.72	4.68	12.81	3.46	6.78	10.73	6.09	18.56	17.93	1.56	6.87	7.05
95th-Percentile Queue Length [ft]	243.07	116.90	320.30	86.50	169.55	268.37	152.33	464.05	448.27	39.04	171.71	176.33

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	49.45	21.99	30.29	58.30	30.63	36.74	53.39	36.35	42.66	50.04	25.96	26.18
Movement LOS	D	C	C	E	C	D	D	D	D	D	C	C
d_A, Approach Delay [s/veh]	35.27			37.30			40.39			28.13		
Approach LOS	D			D			D			C		
d_I, Intersection Delay [s/veh]	36.42											
Intersection LOS	D											
Intersection V/C	0.726											

Sequence

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



Intersection Level Of Service Report
Intersection 20: Haun Rd (NS)/Driveway 1 (EW)

Control Type:	Two-way stop	Delay (sec / veh):	17.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.287

Intersection Setup

Name						
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]	50.00		50.00		50.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	1163	31	0	1227	0	95
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]	72	24	0	92	0	24
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]	1235	55	0	1319	0	119
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]	309	14	0	330	0	30
Total Analysis Volume [veh/h]	1235	55	0	1319	0	119
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	0.01	0.00	0.00	0.01	0.00	0.29
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	17.13
Movement LOS	A	A		A		C
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.00	1.17
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	0.00	29.24
d_A, Approach Delay [s/veh]	0.00		0.00		17.13	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.75					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 21: Haun Rd (NS)/Driveway 2 (EW)

Control Type:	Signalized	Delay (sec / veh):	28.0
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.651

Intersection Setup

Name						
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	2	0	0	0
Pocket Length [ft]	100.00	100.00	300.00	100.00	100.00	100.00
Speed [mph]	50.00		50.00		50.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	858	112	305	922	203	337
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]	48	0	92	-92	92	48
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]	906	112	397	830	295	385
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]	227	28	99	208	74	96
Total Analysis Volume [veh/h]	906	112	397	830	295	385
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]	140
Coordination Type	Time of Day Pattern Coordinated
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	Overlap
Signal group	2	0	1	6	7	4
Auxiliary Signal Groups						1,4
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	7	0	7	7	7	7
Maximum Green [s]	30	0	30	30	30	30
Amber [s]	3.0	0.0	3.0	3.0	3.0	3.0
All red [s]	1.0	0.0	1.0	1.0	1.0	1.0
Split [s]	64	0	29	93	47	47
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	3.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	2.0
Minimum Recall	No		No	No	No	No
Maximum Recall	No		No	No	No	No
Pedestrian Recall	No		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]	140	140	140	140	140	140
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	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	0.00
g_i, Effective Green Time [s]	74	74	25	103	29	58
g / C, Green / Cycle	0.53	0.53	0.18	0.73	0.21	0.42
(v / s)_i Volume / Saturation Flow Rate	0.27	0.28	0.12	0.23	0.17	0.24
s, saturation flow rate [veh/h]	1863	1793	3445	3547	1774	1583
c, Capacity [veh/h]	983	946	616	2606	369	657
d1, Uniform Delay [s]	21.48	21.80	53.30	6.42	52.62	31.59
k, delay calibration	0.50	0.50	0.11	0.50	0.12	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.95	2.19	1.14	0.32	4.50	3.79
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	0.52	0.54	0.64	0.32	0.80	0.59
d, Delay for Lane Group [s/veh]	23.43	23.99	54.44	6.74	57.13	35.38
Lane Group LOS	C	C	D	A	E	D
Critical Lane Group	No	Yes	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	10.74	10.94	6.41	3.65	10.01	10.32
50th-Percentile Queue Length [ft/ln]	268.61	273.49	160.21	91.29	250.20	257.98
95th-Percentile Queue Length [veh/ln]	16.12	16.36	10.56	6.57	15.20	15.59
95th-Percentile Queue Length [ft/ln]	403.00	409.10	264.01	164.33	379.90	389.68

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	23.67	23.99	54.44	6.74	57.13	35.38
Movement LOS	C	C	D	A	E	D
d_A, Approach Delay [s/veh]	23.71		22.17		44.81	
Approach LOS	C		C		D	
d_I, Intersection Delay [s/veh]	27.97					
Intersection LOS	C					
Intersection V/C	0.651					

Sequence

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

Intersection Level Of Service Report
Intersection 22: Antelope Rd (NS)/Albion Ln (EW)

Control Type:	Two-way stop	Delay (sec / veh):	258.4
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.188

Intersection Setup

Name						
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	1	0	1	0
Pocket Length [ft]	100.00	100.00	200.00	100.00	175.00	100.00
Speed [mph]	50.00		50.00		50.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	585	75	152	746	87	99
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]	585	75	152	746	87	99
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]	154	20	40	196	23	26
Total Analysis Volume [veh/h]	615	79	160	784	91	104
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	0.01	0.00	0.18	0.01	1.19	0.22
d_M, Delay for Movement [s/veh]	0.00	0.00	9.85	0.00	258.42	14.92
Movement LOS	A	A	A	A	F	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.64	0.00	6.81	0.85
95th-Percentile Queue Length [ft/ln]	0.00	0.00	16.07	0.00	170.28	21.13
d_A, Approach Delay [s/veh]	0.00		1.67		128.55	
Approach LOS	A		A		F	
d_I, Intersection Delay [s/veh]	14.54					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 23: Hanover Lane (NS) / Holland Road (EW)

Control Type:	Signalized	Delay (sec / veh):	23.9
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.573

Intersection Setup

Name												
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	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	150.00	100.00	100.00	150.00	100.00	100.00
Speed [mph]		50.00			50.00			50.00			50.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			No			Yes	

Volumes

Name												
Base Volume Input [veh/h]	154	3	5	8	3	93	111	599	136	5	447	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
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	154	3	5	8	3	93	111	599	136	5	447	19
Peak Hour Factor	0.9330	0.9330	0.9330	0.9330	0.9330	0.9330	0.9330	0.9330	0.9330	0.9330	0.9330	0.9330
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	41	1	1	2	1	25	30	161	36	1	120	5
Total Analysis Volume [veh/h]	165	3	5	9	3	100	119	642	146	5	479	20
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
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]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	42	0	0	42	0	79	87	0	11	19	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	L	C	R	L	C
C, Cycle Length [s]	140	140	140	140	140	140	140
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	28	28	11	99	99	1	89
g / C, Green / Cycle	0.20	0.20	0.08	0.71	0.71	0.01	0.64
(v / s)_i Volume / Saturation Flow Rate	0.18	0.07	0.07	0.34	0.09	0.00	0.27
s, saturation flow rate [veh/h]	983	1710	1774	1863	1583	1774	1850
c, Capacity [veh/h]	244	365	144	1320	1122	16	1176
d1, Uniform Delay [s]	57.85	48.51	63.32	9.08	6.56	68.96	12.71
k, delay calibration	0.20	0.11	0.11	0.50	0.50	0.11	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.82	0.47	11.09	1.29	0.24	11.18	1.12
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

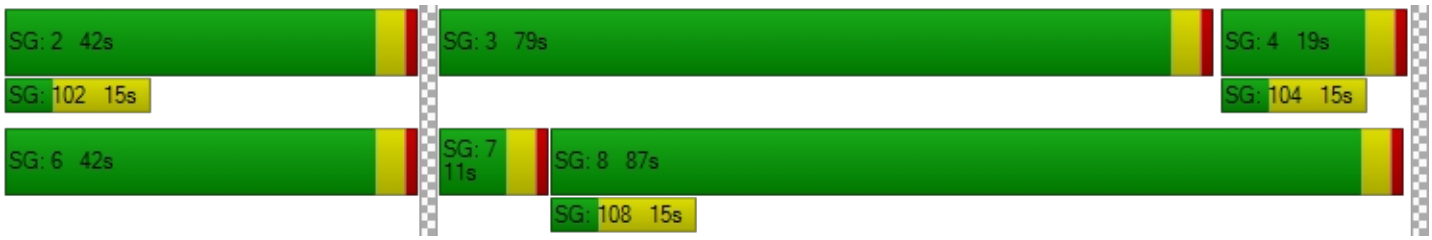
X, volume / capacity	0.71	0.31	0.82	0.49	0.13	0.32	0.42
d, Delay for Lane Group [s/veh]	64.66	48.98	74.40	10.37	6.80	80.14	13.83
Lane Group LOS	E	D	E	B	A	F	B
Critical Lane Group	Yes	No	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	6.31	3.35	4.52	7.84	1.29	0.22	7.44
50th-Percentile Queue Length [ft/ln]	157.84	83.82	112.94	196.07	32.13	5.57	185.92
95th-Percentile Queue Length [veh/ln]	10.43	6.04	8.00	12.44	2.31	0.40	11.91
95th-Percentile Queue Length [ft/ln]	260.86	150.88	200.08	310.90	57.83	10.03	297.73

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	64.66	64.66	64.66	48.98	48.98	48.98	74.40	10.37	6.80	80.14	13.83	13.83
Movement LOS	E	E	E	D	D	D	E	B	A	F	B	B
d_A, Approach Delay [s/veh]	64.66			48.98			18.19			14.49		
Approach LOS	E			D			B			B		
d_I, Intersection Delay [s/veh]	23.87											
Intersection LOS	C											
Intersection V/C	0.573											

Sequence

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



Intersection Level Of Service Report
Intersection 24: Palomar Rd (NS)/Holland Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	1,074.4
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	2.334

Intersection Setup

Name											
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]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	27	6	18	59	82	19	28	453	37	37	506	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]	27	6	18	59	82	19	28	453	37	37	506	1
Peak Hour Factor	0.7760	0.7760	0.7760	0.7760	0.7760	0.7760	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]	9	2	6	19	26	6	9	146	12	12	163	0
Total Analysis Volume [veh/h]	35	8	23	76	106	24	36	584	48	48	652	1
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	2.33	0.07	0.05	0.84	0.94	0.05	0.04	0.01	0.00	0.05	0.01	0.00
d_M, Delay for Movement [s/veh]	1074.40	865.22	841.62	477.06	469.30	445.13	9.01	0.00	0.00	8.99	0.00	0.00
Movement LOS	F	F	F	F	F	F	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	7.98	7.98	7.98	16.37	16.37	16.37	0.09	0.09	0.09	0.12	0.12	0.00
95th-Percentile Queue Length [ft/ln]	199.54	199.54	199.54	409.22	409.22	409.22	2.32	2.32	2.32	3.03	3.03	0.00
d_A, Approach Delay [s/veh]	967.92			469.35			0.49			0.62		
Approach LOS	F			F			A			A		
d_I, Intersection Delay [s/veh]	98.31											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 25: Menifee Rd (NS)/Holland Rd (EW)

Control Type:	All-way stop	Delay (sec / veh):	13.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.521

Intersection Setup

Name												
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	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	150.00	100.00	100.00	125.00	100.00	100.00	150.00	100.00	100.00	150.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	97	374	31	66	293	172	175	191	81	66	227	133
Base Volume Adjustment Factor	1.0000	1.0000	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]	97	374	31	66	293	172	175	191	81	66	227	133
Peak Hour Factor	0.7340	0.7340	0.7340	0.7340	0.7340	0.7340	0.7340	0.7340	0.7340	0.7340	0.7340	0.7340
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	33	127	11	22	100	59	60	65	28	22	77	45
Total Analysis Volume [veh/h]	132	510	42	90	399	234	238	260	110	90	309	181
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	543	576	584	573	608	649	542	574	604	572	606	645
Degree of Utilization, x	0.24	0.48	0.47	0.16	0.52	0.49	0.44	0.32	0.31	0.16	0.40	0.38

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.95	2.58	2.53	0.55	3.01	2.68	2.22	1.39	1.29	0.56	1.95	1.77
95th-Percentile Queue Length [ft]	23.64	64.57	63.18	13.85	75.26	67.09	55.50	34.68	32.33	13.88	48.80	44.31
Approach Delay [s/veh]	13.85			13.65			12.71			11.83		
Approach LOS	B			B			B			B		
Intersection Delay [s/veh]	13.08											
Intersection LOS	B											

EXISTING PLUS AMBIENT GROWTH PLUS CUMULATIVE PROJECTS PLUS PROJECT WITH OVERPASS CONDITIONS WITH IMPROVEMENTS LEVELS OF SERVICE WORKSHEETS

Intersection Level Of Service Report
Intersection 7: Menifee Rd (NS)/NewportRd (EW)

Control Type:	Signalized	Delay (sec / veh):	37.7
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.957

Intersection Setup

Name							Newport Rd			Newport Rd		
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	1	0	1	1	0	0	1	0	0	2	0	0
Pocket Length [ft]	250.00	100.00	200.00	100.00	100.00	100.00	400.00	100.00	100.00	295.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							Newport Rd			Newport Rd		
Base Volume Input [veh/h]	284	355	151	93	354	471	319	1084	205	225	1721	59
Base Volume Adjustment Factor	1.0000	1.0000	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]	284	355	151	93	354	471	319	1084	205	225	1721	59
Peak Hour Factor	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	76	95	41	25	95	126	86	291	55	60	462	16
Total Analysis Volume [veh/h]	305	381	162	100	380	506	343	1164	220	242	1849	63
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	1 - Coordination Group
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
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]	7	7	0	7	7	7	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	15	19	0	15	19	19	30	62	0	14	46	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	5	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	10	0	10	0	0	10	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]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	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	C	L	C	R
C, Cycle Length [s]	110	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	11	18	18	8	15	43	24	58	58	10	44	44
g / C, Green / Cycle	0.10	0.16	0.16	0.07	0.14	0.39	0.22	0.53	0.53	0.09	0.40	0.40
(v / s)_i Volume / Saturation Flow Rate	0.09	0.11	0.10	0.06	0.11	0.32	0.19	0.26	0.26	0.07	0.36	0.04
s, saturation flow rate [veh/h]	3445	3547	1583	1774	3547	1583	1774	3547	1715	3445	5074	1583
c, Capacity [veh/h]	345	582	260	126	478	612	382	1887	912	302	2051	640
d1, Uniform Delay [s]	48.87	43.06	42.81	50.34	46.12	30.41	41.97	16.35	16.36	49.25	30.73	20.34
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.24	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.51	1.25	2.44	10.82	3.05	12.12	14.77	0.93	1.92	4.92	6.96	0.31
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

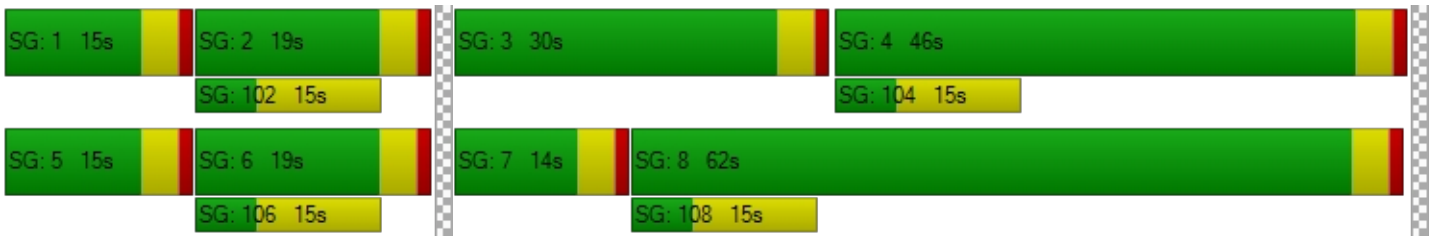
X, volume / capacity	0.88	0.65	0.62	0.80	0.79	0.83	0.90	0.49	0.50	0.80	0.90	0.10
d, Delay for Lane Group [s/veh]	56.38	44.31	45.25	61.16	49.17	42.54	56.75	17.28	18.28	54.17	37.69	20.65
Lane Group LOS	E	D	D	E	D	D	E	B	B	D	D	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	4.33	4.74	4.10	2.99	5.02	13.17	10.15	6.90	6.95	3.34	15.32	1.00
50th-Percentile Queue Length [ft]	108.16	118.47	102.43	74.63	125.43	329.17	253.80	172.43	173.66	83.54	382.89	25.04
95th-Percentile Queue Length [veh]	7.74	8.31	7.37	5.37	8.69	19.12	15.38	11.20	11.27	6.01	21.73	1.80
95th-Percentile Queue Length [ft]	193.44	207.72	184.37	134.33	217.26	477.94	384.43	280.10	281.72	150.37	543.34	45.07

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	56.38	44.31	45.25	61.16	49.17	42.54	56.75	17.48	18.28	54.17	37.69	20.65
Movement LOS	E	D	D	E	D	D	E	B	B	D	D	C
d_A, Approach Delay [s/veh]	48.83			46.98			25.38			39.04		
Approach LOS	D			D			C			D		
d_I, Intersection Delay [s/veh]	37.74											
Intersection LOS	D											
Intersection V/C	0.957											

Sequence

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



Intersection Level Of Service Report
Intersection 9: Bradley Rd (NS)/Holland Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	51.1
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.955

Intersection Setup

Name												
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	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	130.00	100.00	100.00	150.00	100.00	100.00	145.00	100.00	100.00	140.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	57	390	233	159	517	251	130	340	224	235	290	194
Base Volume Adjustment Factor	1.0000	1.0000	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	390	233	159	517	251	130	340	224	235	290	194
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	106	63	43	140	68	35	92	61	64	79	53
Total Analysis Volume [veh/h]	62	424	253	173	562	273	141	370	243	255	315	211
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 Coordinated
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]	11	52	0	17	58	0	26	29	0	22	25	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
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
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
g_i, Effective Green Time [s]	6	48	13	55	55	11	25	25	18	31	31
g / C, Green / Cycle	0.05	0.40	0.11	0.46	0.46	0.10	0.21	0.21	0.15	0.26	0.26
(v / s)_i Volume / Saturation Flow Rate	0.03	0.39	0.10	0.30	0.17	0.08	0.20	0.15	0.14	0.17	0.13
s, saturation flow rate [veh/h]	1774	1748	1774	1863	1583	1774	1863	1583	1774	1863	1583
c, Capacity [veh/h]	91	701	193	854	726	170	385	327	266	486	413
d1, Uniform Delay [s]	55.97	35.10	52.84	25.19	21.25	53.31	47.15	44.63	50.62	39.45	37.82
k, delay calibration	0.11	0.50	0.11	0.50	0.50	0.11	0.30	0.17	0.14	0.19	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.58	26.44	13.70	3.95	1.49	9.92	27.29	5.10	20.39	2.57	0.98
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
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
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

Lane Group Results

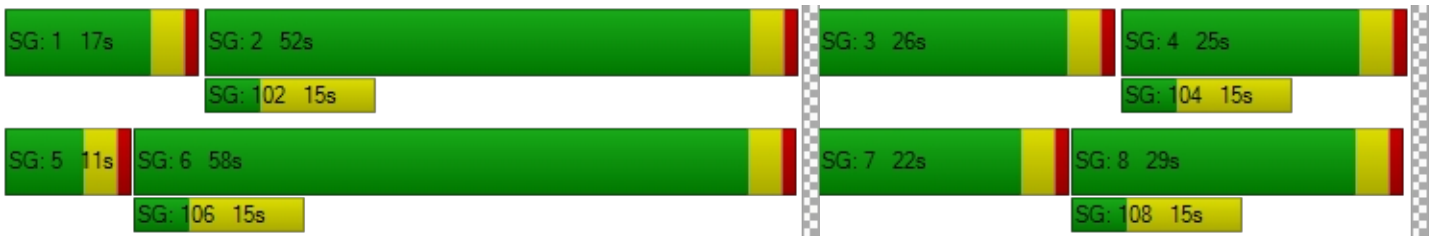
X, volume / capacity	0.68	0.97	0.90	0.66	0.38	0.83	0.96	0.74	0.96	0.65	0.51
d, Delay for Lane Group [s/veh]	64.55	61.55	66.54	29.14	22.74	63.23	74.44	49.74	71.01	42.01	38.79
Lane Group LOS	E	E	E	C	C	E	E	D	E	D	D
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh]	2.01	23.04	5.70	12.42	5.01	4.51	13.37	6.96	8.82	8.24	5.18
50th-Percentile Queue Length [ft]	50.14	575.93	142.59	310.60	125.20	112.63	334.15	174.01	220.43	205.95	129.49
95th-Percentile Queue Length [veh]	3.61	30.91	9.62	18.20	8.68	7.99	19.36	11.29	13.69	12.95	8.91
95th-Percentile Queue Length [ft]	90.26	772.72	240.51	455.12	216.95	199.66	484.05	282.17	342.17	323.63	222.80

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	64.55	61.55	61.55	66.54	29.14	22.74	63.23	74.44	49.74	71.01	42.01	38.79
Movement LOS	E	E	E	E	C	C	E	E	D	E	D	D
d_A, Approach Delay [s/veh]	61.80			33.82			64.38			50.61		
Approach LOS	E			C			E			D		
d_I, Intersection Delay [s/veh]	51.14											
Intersection LOS	D											
Intersection V/C	0.955											

Sequence

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



Intersection Level Of Service Report
Intersection 11: Sherman Rd (NS)/Holland Rd (EW)

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):	0.834

Intersection Setup

Name												
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	1	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	500.00	100.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	4	1	28	128	0	53	164	820	5	6	760	230
Base Volume Adjustment Factor	1.0000	1.0000	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]	4	1	28	128	0	53	164	820	5	6	760	230
Peak Hour Factor	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	8	39	0	16	49	247	2	2	229	69
Total Analysis Volume [veh/h]	5	1	34	154	0	64	198	989	6	7	917	277
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 Coordinated
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]	11	19	0	16	24	0	27	64	0	11	48	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	L	C	R	L	C	R
C, Cycle Length [s]	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	1	5	11	15	14	77	77	1	64	64
g / C, Green / Cycle	0.01	0.04	0.10	0.14	0.13	0.70	0.70	0.01	0.58	0.58
(v / s)_i Volume / Saturation Flow Rate	0.00	0.02	0.09	0.04	0.11	0.53	0.00	0.00	0.49	0.17
s, saturation flow rate [veh/h]	1774	1590	1774	1583	1774	1863	1583	1774	1863	1583
c, Capacity [veh/h]	18	68	183	215	232	1295	1101	23	1076	915
d1, Uniform Delay [s]	54.10	51.59	48.46	42.83	46.79	10.89	5.13	53.82	19.35	11.90
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.21	5.96	9.75	0.76	8.54	4.31	0.01	6.96	8.55	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
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

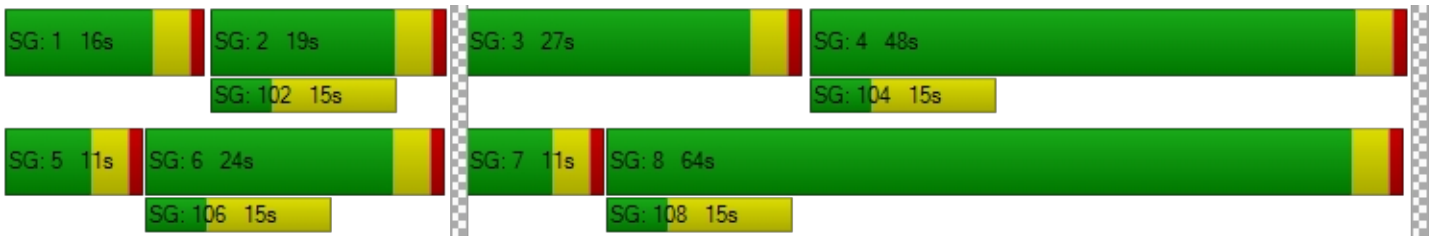
X, volume / capacity	0.28	0.52	0.84	0.30	0.85	0.76	0.01	0.30	0.85	0.30
d, Delay for Lane Group [s/veh]	62.31	57.55	58.21	43.59	55.33	15.20	5.13	60.78	27.90	12.76
Lane Group LOS	E	E	E	D	E	B	A	E	C	B
Critical Lane Group	No	Yes	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.17	1.02	4.48	1.55	5.63	13.11	0.04	0.23	18.98	3.27
50th-Percentile Queue Length [ft]	4.34	25.61	112.04	38.87	140.69	327.77	0.89	5.77	474.51	81.74
95th-Percentile Queue Length [veh]	0.31	1.84	7.95	2.80	9.52	19.05	0.06	0.42	26.13	5.89
95th-Percentile Queue Length [ft]	7.81	46.09	198.83	69.96	237.95	476.22	1.61	10.38	653.13	147.14

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	62.31	57.55	57.55	58.21	43.59	43.59	55.33	15.20	5.13	60.78	27.90	12.76
Movement LOS	E	E	E	E	D	D	E	B	A	E	C	B
d_A, Approach Delay [s/veh]	58.14			53.92			21.81			24.60		
Approach LOS	E			D			C			C		
d_I, Intersection Delay [s/veh]	26.26											
Intersection LOS	C											
Intersection V/C	0.834											

Sequence

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



Intersection Level Of Service Report
Intersection 15: Haun Road (NS) / Holland Road (EW)

Control Type:	Signalized	Delay (sec / veh):	37.9
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.892

Intersection Setup

Name												
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	1	0	0	1	0	0	1	0	1	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	150.00	100.00	100.00	150.00	100.00	150.00	150.00	100.00	150.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	337	356	80	137	338	415	426	241	280	186	226	118
Base Volume Adjustment Factor	1.0000	1.0000	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 Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	337	356	80	137	338	415	426	241	280	186	226	118
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]	89	94	21	36	89	109	112	63	74	49	59	31
Total Analysis Volume [veh/h]	355	375	84	144	356	437	448	254	295	196	238	124
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 Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Overla	Protect	Permis	Permis	Protect	Permis	Permis
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]	7	7	0	7	7	7	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	30	14	0	27	11	11	40	40	0	19	19	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	5	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	10	0	10	0	0	10	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]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	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	C	L	C	R	L	C	R	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	22	33	33	10	21	53	28	28	28	13	13	13
g / C, Green / Cycle	0.22	0.33	0.33	0.10	0.21	0.53	0.28	0.28	0.28	0.13	0.13	0.13
(v / s)_i Volume / Saturation Flow Rate	0.20	0.13	0.13	0.08	0.10	0.28	0.25	0.14	0.19	0.11	0.10	0.10
s, saturation flow rate [veh/h]	1774	1863	1746	1774	3547	1583	1774	1863	1583	1774	1863	1653
c, Capacity [veh/h]	390	612	573	179	741	842	501	525	446	230	239	212
d1, Uniform Delay [s]	38.08	25.88	25.89	44.06	34.82	15.18	34.48	29.92	31.76	42.65	42.35	42.45
k, delay calibration	0.21	0.50	0.50	0.11	0.50	0.29	0.24	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	14.19	1.85	1.97	8.22	2.22	1.31	11.55	0.69	1.69	8.69	5.87	7.20
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	0.91	0.39	0.39	0.81	0.48	0.52	0.89	0.48	0.66	0.85	0.79	0.81
d, Delay for Lane Group [s/veh]	52.27	27.73	27.86	52.28	37.04	16.49	46.03	30.61	33.44	51.34	48.21	49.65
Lane Group LOS	D	C	C	D	D	B	D	C	C	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	9.48	4.34	4.10	3.73	3.82	5.86	11.29	4.86	6.08	5.05	4.71	4.35
50th-Percentile Queue Length [ft/ln]	237.07	108.49	102.40	93.33	95.56	146.62	282.36	121.54	151.93	126.33	117.86	108.77
95th-Percentile Queue Length [veh/ln]	14.53	7.76	7.37	6.72	6.88	9.84	16.81	8.48	10.12	8.74	8.28	7.77
95th-Percentile Queue Length [ft/ln]	363.33	193.90	184.32	168.00	172.01	245.92	420.15	211.94	253.01	218.49	206.88	194.29

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	52.27	27.78	27.86	52.28	37.04	16.49	46.03	30.61	33.44	51.34	48.50	49.65
Movement LOS	D	C	C	D	D	B	D	C	C	D	D	D
d_A, Approach Delay [s/veh]	38.47			29.80			38.38			49.75		
Approach LOS	D			C			D			D		
d_I, Intersection Delay [s/veh]	37.89											
Intersection LOS	D											
Intersection V/C	0.892											

Sequence

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

Intersection Level Of Service Report
Intersection 22: Antelope Rd (NS)/Albion Ln (EW)

Control Type:	Signalized	Delay (sec / veh):	15.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.485

Intersection Setup

Name						
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	1	0	1	0
Pocket Length [ft]	100.00	100.00	200.00	100.00	175.00	100.00
Speed [mph]	50.00		50.00		50.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	754	49	136	415	42	127
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 Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	754	49	136	415	42	127
Peak Hour Factor	0.8840	0.8840	0.8840	0.8840	0.8840	0.8840
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	213	14	38	117	12	36
Total Analysis Volume [veh/h]	853	55	154	469	48	144
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 Coordinated
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]	7	0	7	7	7	0
Maximum Green [s]	30	0	30	30	30	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	19	0	53	72	28	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	10	0	0	10	10	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]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
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]	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
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]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	66	66	11	81	11	11
g / C, Green / Cycle	0.66	0.66	0.11	0.81	0.11	0.11
(v / s)_i Volume / Saturation Flow Rate	0.24	0.25	0.09	0.25	0.03	0.09
s, saturation flow rate [veh/h]	1863	1824	1774	1863	1774	1583
c, Capacity [veh/h]	1231	1205	190	1505	199	178
d1, Uniform Delay [s]	7.61	7.66	43.66	2.47	40.51	43.35
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.85	0.90	8.02	0.54	0.62	8.51
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	0.37	0.38	0.81	0.31	0.24	0.81
d, Delay for Lane Group [s/veh]	8.46	8.56	51.68	3.01	41.13	51.87
Lane Group LOS	A	A	D	A	D	D
Critical Lane Group	No	Yes	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	3.67	3.70	3.97	1.19	1.06	3.73
50th-Percentile Queue Length [ft/ln]	91.64	92.48	99.19	29.80	26.60	93.17
95th-Percentile Queue Length [veh/ln]	6.60	6.66	7.14	2.15	1.92	6.71
95th-Percentile Queue Length [ft/ln]	164.96	166.46	178.54	53.64	47.88	167.71

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	8.51	8.56	51.68	3.01	41.13	51.87
Movement LOS	A	A	D	A	D	D
d_A, Approach Delay [s/veh]	8.51		15.04		49.18	
Approach LOS	A		B		D	
d_I, Intersection Delay [s/veh]	15.41					
Intersection LOS	B					
Intersection V/C	0.485					

Sequence

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

Intersection Level Of Service Report
Intersection 24: Palomar Rd (NS)/Holland Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	13.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.537

Intersection Setup

Name												
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]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	66	4	54	0	2	38	6	483	13	32	575	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 Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	66	4	54	0	2	38	6	483	13	32	575	1
Peak Hour Factor	0.8130	0.8130	0.8130	0.8130	0.8130	0.8130	0.8130	0.8130	0.8130	0.8130	0.8130	0.8130
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	1	17	0	1	12	2	149	4	10	177	0
Total Analysis Volume [veh/h]	81	5	66	0	2	47	7	594	16	39	707	1
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
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 Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis
Signal Group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	30	0	0	30	0	7	30	0	7	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	58	0	0	58	0	11	41	0	11	41	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		Yes	No		Yes	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	L	C	L	C
C, Cycle Length [s]	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	12	12	1	81	5	84
g / C, Green / Cycle	0.11	0.11	0.01	0.74	0.04	0.77
(v / s)_i Volume / Saturation Flow Rate	0.09	0.04	0.00	0.33	0.02	0.38
s, saturation flow rate [veh/h]	1614	1382	1774	1854	1774	1862
c, Capacity [veh/h]	229	186	22	1364	79	1430
d1, Uniform Delay [s]	47.59	44.84	53.84	5.72	51.34	4.79
k, delay calibration	0.11	0.11	0.11	0.50	0.11	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.27	0.75	8.18	1.06	4.78	1.23
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

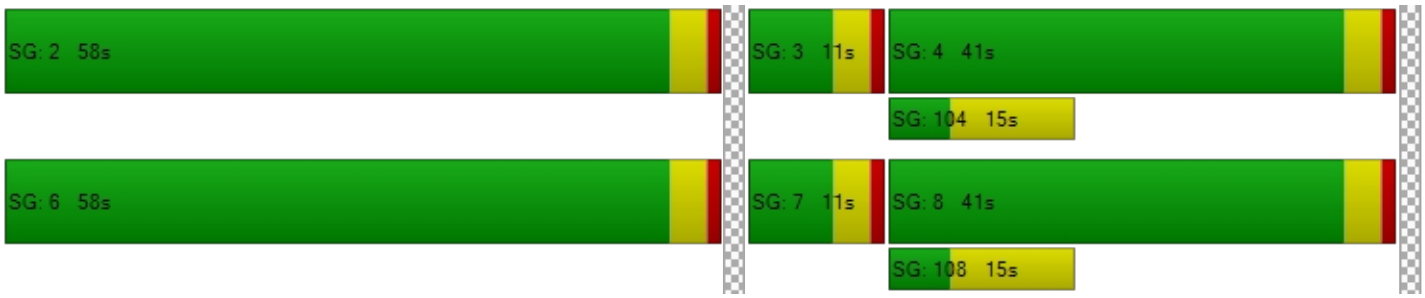
X, volume / capacity	0.66	0.26	0.32	0.45	0.50	0.50
d, Delay for Lane Group [s/veh]	50.87	45.58	62.01	6.78	56.12	6.02
Lane Group LOS	D	D	E	A	E	A
Critical Lane Group	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	4.11	1.22	0.24	4.28	1.12	4.25
50th-Percentile Queue Length [ft/ln]	102.85	30.51	5.88	107.06	27.93	106.15
95th-Percentile Queue Length [veh/ln]	7.41	2.20	0.42	7.68	2.01	7.63
95th-Percentile Queue Length [ft/ln]	185.14	54.92	10.58	191.90	50.28	190.64

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	50.87	50.87	50.87	45.58	45.58	45.58	62.01	6.78	6.78	56.12	6.02	6.02
Movement LOS	D	D	D	D	D	D	E	A	A	E	A	A
d_A, Approach Delay [s/veh]	50.87			45.58			7.41			8.63		
Approach LOS	D			D			A			A		
d_I, Intersection Delay [s/veh]	13.41											
Intersection LOS	B											
Intersection V/C	0.537											

Sequence

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



Intersection Level Of Service Report
Intersection 16: Haun Rd-Zeiders Rd (N/S)/Scott Rd (E/W)

Control Type:	Signalized	Delay (sec / veh):	59.9
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.910

Intersection Setup

Name												
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	1	0	0	1	0	0	1	0	0	1	0	1
Pocket Length [ft]	345.00	100.00	100.00	200.00	100.00	100.00	135.00	100.00	100.00	185.00	100.00	200.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	62	136	103	885	148	71	126	797	39	203	650	698
Base Volume Adjustment Factor	1.0000	1.0000	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]	62	136	103	885	148	71	126	797	39	203	650	698
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	37	28	240	40	19	34	217	11	55	177	190
Total Analysis Volume [veh/h]	67	148	112	962	161	77	137	866	42	221	707	759
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	1 - Coordination Group
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]	16.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal group	0	2	0	0	6	0	3	8	0	7	4	4
Auxiliary Signal Groups												4,6
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	7
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	30
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	1.0
Split [s]	0	19	0	0	37	0	11	47	0	17	53	53
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	5
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	10
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
Minimum Recall		No			No		No	No		No	No	No
Maximum Recall		No			No		No	No		No	No	No
Pedestrian Recall		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	L	C	C	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	2.00	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	0.00
g_i, Effective Green Time [s]	12	12	12	36	36	7	39	39	17	49	100
g / C, Green / Cycle	0.10	0.10	0.10	0.30	0.30	0.06	0.32	0.32	0.14	0.41	0.84
(v / s)_i Volume / Saturation Flow Rate	0.04	0.08	0.07	0.34	0.34	0.10	0.25	0.25	0.12	0.20	0.48
s, saturation flow rate [veh/h]	1774	1863	1583	1774	1769	1412	1863	1833	1774	3547	1583
c, Capacity [veh/h]	172	181	154	537	536	124	604	594	253	1443	1324
d1, Uniform Delay [s]	50.84	53.15	52.65	41.84	41.84	58.59	36.32	36.32	50.37	26.37	3.09
k, delay calibration	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.50	0.50
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
d2, Incremental Delay [s]	1.43	8.79	6.47	75.20	76.33	68.51	8.64	8.77	9.10	1.19	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
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
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

Lane Group Results

X, volume / capacity	0.39	0.82	0.73	1.12	1.12	1.10	0.76	0.76	0.87	0.49	0.57
d, Delay for Lane Group [s/veh]	52.28	61.94	59.12	117.04	118.17	127.10	44.96	45.10	59.47	27.56	4.90
Lane Group LOS	D	E	E	F	F	F	D	D	E	C	A
Critical Lane Group	No	Yes	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	1.90	4.67	3.45	26.19	26.29	6.19	12.82	12.63	6.90	7.29	3.09
50th-Percentile Queue Length [ft]	47.51	116.77	86.17	654.83	657.29	154.74	320.46	315.86	172.42	182.13	77.23
95th-Percentile Queue Length [veh]	3.42	8.22	6.20	37.08	37.26	10.57	18.69	18.46	11.20	11.71	5.56
95th-Percentile Queue Length [ft]	85.51	205.38	155.11	927.04	931.55	264.34	467.25	461.59	280.09	292.79	139.01

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	52.28	61.94	59.12	117.46	118.17	118.17	127.10	45.03	45.10	59.47	27.56	4.90
Movement LOS	D	E	E	F	F	F	F	D	D	E	C	A
d_A, Approach Delay [s/veh]	59.00			117.60			55.79			21.54		
Approach LOS	E			F			E			C		
d_I, Intersection Delay [s/veh]	59.89											
Intersection LOS	E											
Intersection V/C	0.910											

Sequence

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

Intersection Level Of Service Report
Intersection 22: Antelope Rd (NS)/Albion Ln (EW)

Control Type:	Signalized	Delay (sec / veh):	15.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.485

Intersection Setup

Name						
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	1	0	1	0
Pocket Length [ft]	100.00	100.00	200.00	100.00	175.00	100.00
Speed [mph]	50.00		50.00		50.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	754	49	136	415	42	127
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]	754	49	136	415	42	127
Peak Hour Factor	0.8840	0.8840	0.8840	0.8840	0.8840	0.8840
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	213	14	38	117	12	36
Total Analysis Volume [veh/h]	853	55	154	469	48	144
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 Coordinated
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]	7	0	7	7	7	0
Maximum Green [s]	30	0	30	30	30	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	19	0	53	72	28	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	10	0	0	10	10	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]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
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]	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
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]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	66	66	11	81	11	11
g / C, Green / Cycle	0.66	0.66	0.11	0.81	0.11	0.11
(v / s)_i Volume / Saturation Flow Rate	0.24	0.25	0.09	0.25	0.03	0.09
s, saturation flow rate [veh/h]	1863	1824	1774	1863	1774	1583
c, Capacity [veh/h]	1231	1205	190	1505	199	178
d1, Uniform Delay [s]	7.61	7.66	43.66	2.47	40.51	43.35
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.85	0.90	8.02	0.54	0.62	8.51
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

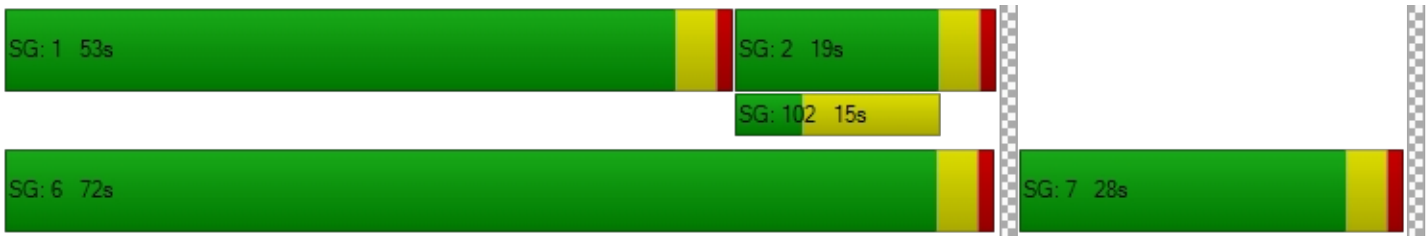
X, volume / capacity	0.37	0.38	0.81	0.31	0.24	0.81
d, Delay for Lane Group [s/veh]	8.46	8.56	51.68	3.01	41.13	51.87
Lane Group LOS	A	A	D	A	D	D
Critical Lane Group	No	Yes	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	3.67	3.70	3.97	1.19	1.06	3.73
50th-Percentile Queue Length [ft/ln]	91.64	92.48	99.19	29.80	26.60	93.17
95th-Percentile Queue Length [veh/ln]	6.60	6.66	7.14	2.15	1.92	6.71
95th-Percentile Queue Length [ft/ln]	164.96	166.46	178.54	53.64	47.88	167.71

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	8.51	8.56	51.68	3.01	41.13	51.87
Movement LOS	A	A	D	A	D	D
d_A, Approach Delay [s/veh]	8.51		15.04		49.18	
Approach LOS	A		B		D	
d_I, Intersection Delay [s/veh]	15.41					
Intersection LOS	B					
Intersection V/C	0.485					

Sequence

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



Intersection Level Of Service Report
Intersection 24: Palomar Rd (NS)/Holland Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	13.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.537

Intersection Setup

Name											
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]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	66	4	54	0	2	38	6	483	13	32	575	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
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	66	4	54	0	2	38	6	483	13	32	575	1
Peak Hour Factor	0.8130	0.8130	0.8130	0.8130	0.8130	0.8130	0.8130	0.8130	0.8130	0.8130	0.8130	0.8130
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	1	17	0	1	12	2	149	4	10	177	0
Total Analysis Volume [veh/h]	81	5	66	0	2	47	7	594	16	39	707	1
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
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 Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	30	0	0	30	0	7	30	0	7	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	58	0	0	58	0	11	41	0	11	41	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		Yes	No		Yes	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	L	C	L	C
C, Cycle Length [s]	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	12	12	1	81	5	84
g / C, Green / Cycle	0.11	0.11	0.01	0.74	0.04	0.77
(v / s)_i Volume / Saturation Flow Rate	0.09	0.04	0.00	0.33	0.02	0.38
s, saturation flow rate [veh/h]	1614	1382	1774	1854	1774	1862
c, Capacity [veh/h]	229	186	22	1364	79	1430
d1, Uniform Delay [s]	47.59	44.84	53.84	5.72	51.34	4.79
k, delay calibration	0.11	0.11	0.11	0.50	0.11	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.27	0.75	8.18	1.06	4.78	1.23
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	0.66	0.26	0.32	0.45	0.50	0.50
d, Delay for Lane Group [s/veh]	50.87	45.58	62.01	6.78	56.12	6.02
Lane Group LOS	D	D	E	A	E	A
Critical Lane Group	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	4.11	1.22	0.24	4.28	1.12	4.25
50th-Percentile Queue Length [ft/ln]	102.85	30.51	5.88	107.06	27.93	106.15
95th-Percentile Queue Length [veh/ln]	7.41	2.20	0.42	7.68	2.01	7.63
95th-Percentile Queue Length [ft/ln]	185.14	54.92	10.58	191.90	50.28	190.64

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	50.87	50.87	50.87	45.58	45.58	45.58	62.01	6.78	6.78	56.12	6.02	6.02
Movement LOS	D	D	D	D	D	D	E	A	A	E	A	A
d_A, Approach Delay [s/veh]	50.87			45.58			7.41			8.63		
Approach LOS	D			D			A			A		
d_I, Intersection Delay [s/veh]	13.41											
Intersection LOS	B											
Intersection V/C	0.537											

Sequence

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

Intersection Level Of Service Report
Intersection 7: Menifee Rd (NS)/NewportRd (EW)

Control Type:	Signalized	Delay (sec / veh):	34.9
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.905

Intersection Setup

Name							Newport Rd			Newport Rd		
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	1	0	1	1	0	0	1	0	0	2	0	0
Pocket Length [ft]	250.00	100.00	200.00	100.00	100.00	100.00	400.00	100.00	100.00	295.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							Newport Rd			Newport Rd		
Base Volume Input [veh/h]	150	331	115	92	330	263	401	1469	253	170	1310	57
Base Volume Adjustment Factor	1.0000	1.0000	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]	150	331	115	92	330	263	401	1469	253	170	1310	57
Peak Hour Factor	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290
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]	45	100	35	28	100	79	121	443	76	51	395	17
Total Analysis Volume [veh/h]	181	399	139	111	398	317	484	1772	305	205	1580	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	1 - Coordination Group
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
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]	7	7	0	7	7	7	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	19	0	12	20	20	60	68	0	11	19	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	5	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	10	0	10	0	0	10	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]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	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	C	L	C	R
C, Cycle Length [s]	110	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	7	14	14	8	15	52	33	64	64	8	39	39
g / C, Green / Cycle	0.06	0.13	0.13	0.07	0.14	0.48	0.30	0.58	0.58	0.07	0.35	0.35
(v / s)_i Volume / Saturation Flow Rate	0.05	0.11	0.09	0.06	0.11	0.20	0.27	0.39	0.40	0.06	0.31	0.04
s, saturation flow rate [veh/h]	3445	3547	1583	1774	3547	1583	1774	3547	1730	3445	5074	1583
c, Capacity [veh/h]	220	460	205	129	492	752	532	2059	1004	246	1787	558
d1, Uniform Delay [s]	50.89	46.96	45.68	50.44	45.97	18.96	37.07	15.81	16.25	50.42	33.52	24.14
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.12	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.59	5.13	3.88	14.88	3.23	0.38	6.79	1.74	4.01	7.14	6.80	0.46
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

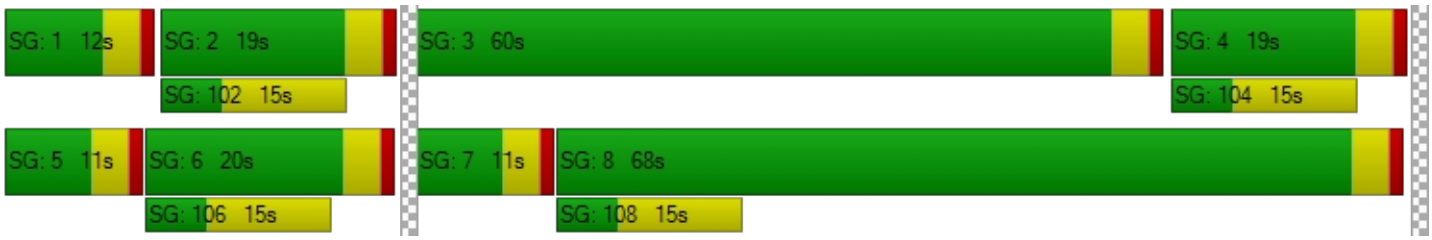
X, volume / capacity	0.82	0.87	0.68	0.86	0.81	0.42	0.91	0.67	0.70	0.83	0.88	0.12
d, Delay for Lane Group [s/veh]	58.48	52.08	49.56	65.33	49.20	19.33	43.86	17.56	20.26	57.56	40.32	24.59
Lane Group LOS	E	D	D	E	D	B	D	B	C	E	D	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	2.60	5.45	3.70	3.44	5.27	4.93	12.72	10.64	11.71	2.93	13.37	1.23
50th-Percentile Queue Length [ft]	65.05	136.31	92.38	86.00	131.73	123.30	317.93	265.88	292.73	73.13	334.17	30.63
95th-Percentile Queue Length [veh]	4.68	9.28	6.65	6.19	9.03	8.57	18.57	15.98	17.32	5.27	19.36	2.21
95th-Percentile Queue Length [ft]	117.09	232.05	166.28	154.80	225.84	214.36	464.14	399.59	433.02	131.63	484.07	55.14

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	58.48	52.08	49.56	65.33	49.20	19.33	43.86	18.16	20.26	57.56	40.32	24.59
Movement LOS	E	D	D	E	D	B	D	B	C	E	D	C
d_A, Approach Delay [s/veh]	53.20			39.90			23.27			41.64		
Approach LOS	D			D			C			D		
d_I, Intersection Delay [s/veh]	34.90											
Intersection LOS	C											
Intersection V/C	0.905											

Sequence

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



Intersection Level Of Service Report
Intersection 9: Bradley Rd (NS)/Holland Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	54.5
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.947

Intersection Setup

Name											
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	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	130.00	100.00	100.00	150.00	100.00	100.00	145.00	100.00	100.00	140.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	69	368	178	213	267	172	216	327	69	166	378	288
Base Volume Adjustment Factor	1.0000	1.0000	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]	69	368	178	213	267	172	216	327	69	166	378	288
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	100	48	58	73	47	59	89	19	45	103	78
Total Analysis Volume [veh/h]	75	400	193	232	290	187	235	355	75	180	411	313
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 Coordinated
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]	17	46	0	21	50	0	21	28	0	25	32	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
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
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
g_i, Effective Green Time [s]	6	42	17	53	53	17	31	31	14	28	28
g / C, Green / Cycle	0.05	0.35	0.14	0.44	0.44	0.14	0.26	0.26	0.12	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.04	0.34	0.13	0.16	0.12	0.13	0.19	0.05	0.10	0.22	0.20
s, saturation flow rate [veh/h]	1774	1762	1774	1863	1583	1774	1863	1583	1774	1863	1583
c, Capacity [veh/h]	96	619	251	817	695	251	477	405	209	432	367
d1, Uniform Delay [s]	56.05	38.09	50.85	22.39	21.44	48.12	36.06	30.72	51.97	45.41	44.11
k, delay calibration	0.11	0.50	0.11	0.50	0.50	0.11	0.26	0.11	0.11	0.36	0.30
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
d2, Incremental Delay [s]	12.73	27.35	13.33	1.21	0.95	14.71	5.50	0.22	9.96	26.64	13.87
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	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

Lane Group Results

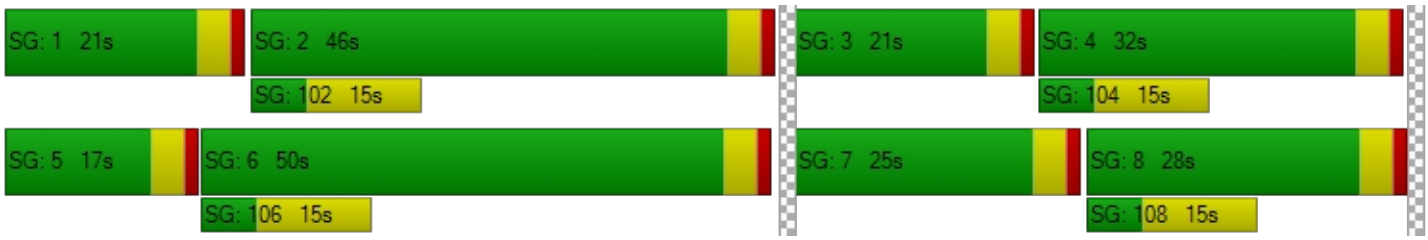
X, volume / capacity	0.78	0.96	0.92	0.35	0.27	0.93	0.74	0.19	0.86	0.95	0.85
d, Delay for Lane Group [s/veh]	68.78	65.44	64.18	23.60	22.39	62.83	41.56	30.94	61.93	72.05	57.97
Lane Group LOS	E	E	E	C	C	E	D	C	E	E	E
Critical Lane Group	No	Yes	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	2.51	20.66	7.56	5.40	3.35	7.33	8.76	1.48	5.71	14.69	9.91
50th-Percentile Queue Length [ft]	62.80	516.49	188.88	135.08	83.76	183.20	218.98	36.96	142.75	367.23	247.87
95th-Percentile Queue Length [veh]	4.52	28.11	12.06	9.22	6.03	11.77	13.61	2.66	9.63	20.97	15.08
95th-Percentile Queue Length [ft]	113.05	702.84	301.57	230.39	150.77	294.18	340.32	66.53	240.72	524.36	376.97

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	68.78	65.44	65.44	64.18	23.60	22.39	62.83	41.56	30.94	61.93	72.05	57.97
Movement LOS	E	E	E	E	C	C	E	D	C	E	E	E
d_A, Approach Delay [s/veh]	65.81			36.56			47.88			65.16		
Approach LOS	E			D			D			E		
d_I, Intersection Delay [s/veh]	54.52											
Intersection LOS	D											
Intersection V/C	0.947											

Sequence

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



Intersection Level Of Service Report
Intersection 11: Sherman Rd (NS)/Holland Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	20.8
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.783

Intersection Setup

Name												
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	1	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	500.00	100.00	100.00	100.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	5	0	11	146	1	94	65	731	4	27	936	173
Base Volume Adjustment Factor	1.0000	1.0000	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]	5	0	11	146	1	94	65	731	4	27	936	173
Peak Hour Factor	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	3	39	0	25	17	195	1	7	249	46
Total Analysis Volume [veh/h]	5	0	12	155	1	100	69	778	4	29	997	184
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 Coordinated
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]	11	19	0	22	30	0	11	58	0	11	58	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	L	C	R	L	C	R
C, Cycle Length [s]	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	1	2	12	13	6	76	76	4	74	74
g / C, Green / Cycle	0.01	0.02	0.10	0.12	0.06	0.69	0.69	0.04	0.67	0.67
(v / s)_i Volume / Saturation Flow Rate	0.00	0.01	0.09	0.06	0.04	0.42	0.00	0.02	0.54	0.12
s, saturation flow rate [veh/h]	1774	1583	1774	1586	1774	1863	1583	1774	1863	1583
c, Capacity [veh/h]	18	33	186	183	100	1287	1094	68	1253	1065
d1, Uniform Delay [s]	54.10	53.21	48.31	45.98	51.00	9.04	5.28	51.77	12.70	6.68
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.21	6.77	9.16	2.57	8.17	2.11	0.01	4.22	5.29	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
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.28	0.37	0.83	0.55	0.69	0.60	0.00	0.43	0.80	0.17
d, Delay for Lane Group [s/veh]	62.31	59.98	57.47	48.55	59.17	11.16	5.29	55.99	17.99	7.03
Lane Group LOS	E	E	E	D	E	B	A	E	B	A
Critical Lane Group	No	Yes	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.17	0.38	4.48	2.64	2.03	8.27	0.02	0.83	15.11	1.39
50th-Percentile Queue Length [ft]	4.34	9.44	111.96	65.98	50.65	206.76	0.61	20.87	377.76	34.80
95th-Percentile Queue Length [veh]	0.31	0.68	7.95	4.75	3.65	12.99	0.04	1.50	21.49	2.51
95th-Percentile Queue Length [ft]	7.81	17.00	198.72	118.76	91.17	324.67	1.10	37.56	537.14	62.64

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	62.31	59.98	59.98	57.47	48.55	48.55	59.17	11.16	5.29	55.99	17.99	7.03
Movement LOS	E	E	E	E	D	D	E	B	A	E	B	A
d_A, Approach Delay [s/veh]	60.67			53.95			15.02			17.24		
Approach LOS	E			D			B			B		
d_I, Intersection Delay [s/veh]	20.77											
Intersection LOS	C											
Intersection V/C	0.783											

Sequence

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

Intersection Level Of Service Report
Intersection 15: Haun Road (NS) / Holland Road (EW)

Control Type:	Signalized	Delay (sec / veh):	38.6
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.979

Intersection Setup

Name												
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	1	0	0	1	0	0	1	0	1	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	150.00	100.00	100.00	150.00	100.00	150.00	150.00	100.00	150.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	342	417	161	193	454	479	372	294	178	107	306	181
Base Volume Adjustment Factor	1.0000	1.0000	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 Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	342	417	161	193	454	479	372	294	178	107	306	181
Peak Hour Factor	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	93	113	44	52	123	130	101	80	48	29	83	49
Total Analysis Volume [veh/h]	371	452	174	209	492	519	403	319	193	116	332	196
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 Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Overla	Protect	Permis	Permis	Protect	Permis	Permis
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]	7	7	0	7	7	7	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	25	27	0	16	18	18	27	21	0	26	20	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	5	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	10	0	10	0	0	10	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]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	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	C	L	C	R	L	C	R	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	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	0.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	21	24	24	12	16	42	22	30	30	8	16	16
g / C, Green / Cycle	0.23	0.27	0.27	0.13	0.17	0.47	0.25	0.34	0.34	0.08	0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.21	0.18	0.18	0.12	0.14	0.33	0.23	0.17	0.12	0.07	0.15	0.15
s, saturation flow rate [veh/h]	1774	1863	1689	1774	3547	1583	1774	1863	1583	1774	1863	1635
c, Capacity [veh/h]	405	497	451	237	612	737	441	628	533	150	322	283
d1, Uniform Delay [s]	33.94	29.40	29.41	38.34	35.85	19.15	32.92	23.92	22.58	40.42	36.29	36.38
k, delay calibration	0.18	0.50	0.50	0.11	0.50	0.44	0.22	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	12.82	6.73	7.39	10.13	10.77	4.93	13.79	0.64	0.41	8.11	7.07	8.68
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	0.92	0.66	0.66	0.88	0.80	0.70	0.91	0.51	0.36	0.77	0.87	0.88
d, Delay for Lane Group [s/veh]	46.76	36.13	36.80	48.47	46.62	24.08	46.71	24.56	22.99	48.53	43.36	45.06
Lane Group LOS	D	D	D	D	D	C	D	C	C	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	8.73	6.73	6.18	4.91	5.74	8.40	9.52	5.03	2.87	2.71	6.19	5.64
50th-Percentile Queue Length [ft/ln]	218.19	168.14	154.50	122.65	143.56	210.03	238.04	125.87	71.81	67.82	154.66	140.97
95th-Percentile Queue Length [veh/ln]	13.57	10.98	10.26	8.54	9.67	13.15	14.58	8.71	5.17	4.88	10.27	9.53
95th-Percentile Queue Length [ft/ln]	339.31	274.46	256.43	213.47	241.80	328.87	364.56	217.87	129.26	122.08	256.64	238.32

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	46.76	36.31	36.80	48.47	46.62	24.08	46.71	24.56	22.99	48.53	43.63	45.06
Movement LOS	D	D	D	D	D	C	D	C	C	D	D	D
d_A, Approach Delay [s/veh]	40.29			37.35			33.99			44.95		
Approach LOS	D			D			C			D		
d_I, Intersection Delay [s/veh]	38.61											
Intersection LOS	D											
Intersection V/C	0.979											

Sequence

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

Intersection Level Of Service Report
Intersection 16: Haun Rd-Zeiders Rd (NS)/Scott Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	51.8
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.925

Intersection Setup

Name												
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	1	0	0	1	0	0	1	0	0	1	0	1
Pocket Length [ft]	345.00	100.00	100.00	200.00	100.00	100.00	135.00	100.00	100.00	185.00	100.00	200.00
Speed [mph]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	168	192	246	649	78	113	98	854	45	252	587	533
Base Volume Adjustment Factor	1.0000	1.0000	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]	168	192	246	649	78	113	98	854	45	252	587	533
Peak Hour Factor	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750
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	63	166	20	29	25	219	12	65	151	137
Total Analysis Volume [veh/h]	172	197	252	666	80	116	101	876	46	258	602	547
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	1 - Coordination Group
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]	16.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal group	0	2	0	0	6	0	3	8	0	7	4	4
Auxiliary Signal Groups												4,6
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	7
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	30
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	1.0
Split [s]	0	25	0	0	36	0	26	36	0	23	33	33
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	5
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	10
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
Minimum Recall		No			No		No	No		No	No	No
Maximum Recall		No			No		No	No		No	No	No
Pedestrian Recall		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	L	C	C	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	2.00	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	0.00
g_i, Effective Green Time [s]	21	21	21	32	32	12	32	32	20	39	91
g / C, Green / Cycle	0.17	0.17	0.17	0.26	0.26	0.10	0.27	0.27	0.16	0.33	0.76
(v / s)_i Volume / Saturation Flow Rate	0.10	0.11	0.16	0.24	0.25	0.07	0.25	0.25	0.15	0.17	0.35
s, saturation flow rate [veh/h]	1774	1863	1583	1774	1733	1412	1863	1830	1774	3547	1583
c, Capacity [veh/h]	308	323	275	468	457	177	495	486	291	1165	1203
d1, Uniform Delay [s]	45.38	45.83	48.74	43.03	43.22	54.34	43.14	43.14	49.09	32.60	5.29
k, delay calibration	0.11	0.11	0.18	0.39	0.40	0.11	0.50	0.50	0.11	0.50	0.50
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
d2, Incremental Delay [s]	1.59	1.86	17.97	22.30	25.03	2.87	28.06	28.40	8.97	1.64	1.24
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
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
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

Lane Group Results

X, volume / capacity	0.56	0.61	0.92	0.93	0.94	0.57	0.94	0.94	0.89	0.52	0.45
d, Delay for Lane Group [s/veh]	46.97	47.68	66.71	65.33	68.25	57.21	71.20	71.54	58.06	34.24	6.53
Lane Group LOS	D	D	E	E	E	E	E	E	E	C	A
Critical Lane Group	No	No	Yes	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	4.66	5.40	8.49	14.79	15.00	3.05	16.68	16.43	7.99	7.02	3.94
50th-Percentile Queue Length [ft]	116.51	135.00	212.28	369.69	375.08	76.27	416.98	410.85	199.86	175.40	98.43
95th-Percentile Queue Length [veh]	8.20	9.21	13.27	21.09	21.36	5.49	23.38	23.08	12.63	11.36	7.09
95th-Percentile Queue Length [ft]	205.02	230.28	331.76	527.36	533.89	137.29	584.42	577.06	315.78	284.00	177.18

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	46.97	47.68	66.71	66.36	68.25	68.25	57.21	71.36	71.54	58.06	34.24	6.53
Movement LOS	D	D	E	E	E	E	E	E	E	E	C	A
d_A, Approach Delay [s/veh]	55.20			66.79			69.97			27.83		
Approach LOS	E			E			E			C		
d_I, Intersection Delay [s/veh]	51.77											
Intersection LOS	D											
Intersection V/C	0.925											

Sequence

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

Intersection Level Of Service Report
Intersection 22: Antelope Rd (NS)/Albion Ln (EW)

Control Type:	Signalized	Delay (sec / veh):	14.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.553

Intersection Setup

Name						
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	1	0	1	0
Pocket Length [ft]	100.00	100.00	200.00	100.00	175.00	100.00
Speed [mph]	50.00		50.00		50.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	585	75	152	746	87	99
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]	585	75	152	746	87	99
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]	154	20	40	196	23	26
Total Analysis Volume [veh/h]	615	79	160	784	91	104
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 Coordinated
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]	7	0	7	7	7	0
Maximum Green [s]	30	0	30	30	30	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	28	0	59	87	13	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	10	0	0	10	10	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]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
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]	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
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]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	69	69	11	84	8	8
g / C, Green / Cycle	0.68	0.68	0.11	0.84	0.08	0.08
(v / s)_i Volume / Saturation Flow Rate	0.19	0.19	0.09	0.42	0.05	0.07
s, saturation flow rate [veh/h]	1863	1791	1774	1863	1774	1583
c, Capacity [veh/h]	1275	1226	196	1556	150	134
d1, Uniform Delay [s]	6.12	6.17	43.47	2.35	44.15	44.83
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.53	0.58	7.96	1.17	3.87	9.13
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	0.27	0.28	0.81	0.50	0.60	0.77
d, Delay for Lane Group [s/veh]	6.64	6.75	51.43	3.51	48.02	53.95
Lane Group LOS	A	A	D	A	D	D
Critical Lane Group	No	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	2.30	2.33	4.11	1.56	2.24	2.75
50th-Percentile Queue Length [ft/ln]	57.52	58.28	102.81	38.94	55.93	68.72
95th-Percentile Queue Length [veh/ln]	4.14	4.20	7.40	2.80	4.03	4.95
95th-Percentile Queue Length [ft/ln]	103.54	104.90	185.06	70.09	100.68	123.70

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	6.69	6.75	51.43	3.51	48.02	53.95
Movement LOS	A	A	D	A	D	D
d_A, Approach Delay [s/veh]	6.70		11.64		51.18	
Approach LOS	A		B		D	
d_I, Intersection Delay [s/veh]	13.97					
Intersection LOS	B					
Intersection V/C	0.553					

Sequence

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

Intersection Level Of Service Report
Intersection 24: Palomar Rd (NS)/Holland Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	17.9
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.561

Intersection Setup

Name											
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]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	27	6	18	59	82	19	28	453	37	37	506	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
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	27	6	18	59	82	19	28	453	37	37	506	1
Peak Hour Factor	0.7760	0.7760	0.7760	0.7760	0.7760	0.7760	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]	9	2	6	19	26	6	9	146	12	12	163	0
Total Analysis Volume [veh/h]	35	8	23	76	106	24	36	584	48	48	652	1
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
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 Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	67	0	0	67	0	11	32	0	11	32	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	L	C	L	C
C, Cycle Length [s]	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	16	16	5	76	5	77
g / C, Green / Cycle	0.15	0.15	0.04	0.69	0.05	0.70
(v / s)_i Volume / Saturation Flow Rate	0.06	0.13	0.02	0.34	0.03	0.35
s, saturation flow rate [veh/h]	1102	1603	1774	1838	1774	1862
c, Capacity [veh/h]	212	280	77	1277	88	1305
d1, Uniform Delay [s]	41.94	45.93	51.37	7.82	51.02	7.57
k, delay calibration	0.11	0.11	0.11	0.50	0.11	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.83	3.76	4.38	1.37	5.11	1.37
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

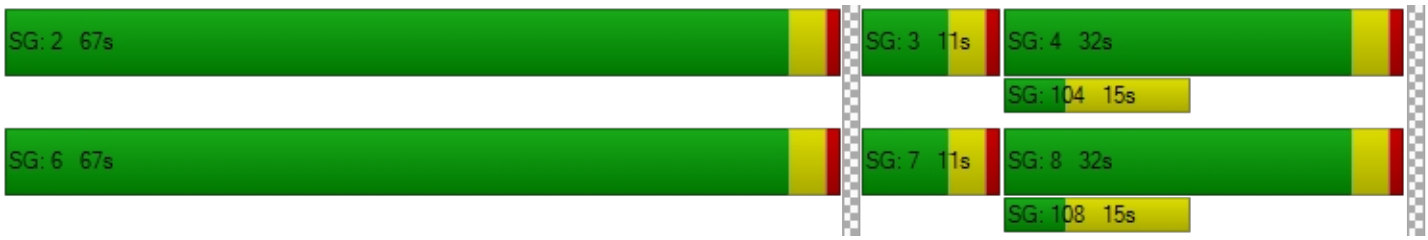
X, volume / capacity	0.31	0.74	0.47	0.50	0.54	0.50
d, Delay for Lane Group [s/veh]	42.77	49.69	55.75	9.20	56.13	8.94
Lane Group LOS	D	D	E	A	E	A
Critical Lane Group	No	Yes	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.60	5.56	1.03	5.83	1.37	5.87
50th-Percentile Queue Length [ft/ln]	39.89	138.93	25.72	145.68	34.28	146.83
95th-Percentile Queue Length [veh/ln]	2.87	9.42	1.85	9.79	2.47	9.85
95th-Percentile Queue Length [ft/ln]	71.80	235.58	46.29	244.65	61.70	246.20

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	42.77	42.77	42.77	49.69	49.69	49.69	55.75	9.20	9.20	56.13	8.94	8.94
Movement LOS	D	D	D	D	D	D	E	A	A	E	A	A
d_A, Approach Delay [s/veh]	42.77			49.69			11.71			12.18		
Approach LOS	D			D			B			B		
d_I, Intersection Delay [s/veh]	17.92											
Intersection LOS	B											
Intersection V/C	0.561											

Sequence

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



Signal Timing Sheets
Appendix F

ALBERT A.
WEBB
ASSOCIATES

SIGNAL TIMING SHEET

B.3 System Information

System Id	7D0
Name	Newport @ Antelope
Location	

1.2 Unit Setup

Auto Ped Clear	Enabled
Red Revert	2.0
Min Yellow Time	3.0
Texas Dmd Mode	Disabled
Texas Dmd Type	4-Phase

1.3 Startup

Flash	0
All Red	0
Start Veh Call	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16
Start Ped Call	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16

1.4 Channel Setup (1-16)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Type	V	V	P	V	V	P	V	V	P	V	V	P	O	O	O	O
Source	1	2	2	3	4	4	5	6	6	7	8	8	1	2	3	4
Alt 1/2 Hz																
Flash Red	X	X		X	X		X	X		X	X		X	X	X	X
Flash Yel																

1.4 Channel Setup (17-32)

	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
Type	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V
Source																
Alt 1/2 Hz																
Flsh Red																
Flsh Yel																

Start Next Phases	2,6

Program Type	McCain Omni eX
Firmware	1.8
Street 1	
Street 2	
Last Modified	10/25/2017 7:44 AM

5.1 Coordination Constants

Correction Mode	Shortway
Max Cycles Trans	3
Coord Max Mode	Maximum 1
Coord Force Mode	Floating
Perm Strategy	Minimum
Omit Strategy	Minimum
Sync Point	End Green
No Early Return	Disable
Sync Ref Time	0
Operational Mode	0

2.5 Phase Concurrency

	1	2	3	4	5	6	7	8
Phase 1					X	X		
Phase 2					X	X		
Phase 3							X	X
Phase 4							X	X
Phase 5	X	X						
Phase 6	X	X						
Phase 7			X	X				
Phase 8			X	X				
Phase 9								
Phase 10								
Phase 11								
Phase 12								
Phase 13								
Phase 14								
Phase 15								
Phase 16								

2.4 Phase Enable and Rings

	1	2	3	4	5	6	7	8
Startup	2	2	2	5	2	2	2	5
Enabled	X	X	X	X	X	X	X	X
Ring1	X	X	X	X				
Ring2					X	X	X	X
Ring3								
Ring4								

2.3 Phase Sequence 1

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

2.3 Phase Sequence 2

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

2.3 Phase Sequence 3

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

2.3 Phase Sequence 4

Ring 1	
Ring 2	
Ring 3	
Ring 4	

2.3 Phase Sequence 5

Ring 1	
Ring 2	
Ring 3	
Ring 4	

2.3 Phase Sequence 6

Ring 1	
Ring 2	
Ring 3	
Ring 4	

2.3 Phase Sequence 7

Ring 1	
Ring 2	
Ring 3	
Ring 4	

2.3 Phase Sequence 8

Ring 1	
Ring 2	
Ring 3	
Ring 4	

2.3 Phase Sequence 9

Ring 1	
Ring 2	
Ring 3	
Ring 4	

2.3 Phase Sequence 10

Ring 1	
Ring 2	
Ring 3	
Ring 4	

2.3 Phase Sequence 11

Ring 1	
Ring 2	
Ring 3	
Ring 4	

2.3 Phase Sequence 12

Ring 1	
Ring 2	
Ring 3	
Ring 4	

2.3 Phase Sequence 13

Ring 1	
Ring 2	
Ring 3	
Ring 4	

2.3 Phase Sequence 14

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

2.3 Phase Sequence 15

Ring 1	
Ring 2	
Ring 3	
Ring 4	

2.3 Phase Sequence 16

Ring 1	
Ring 2	
Ring 3	
Ring 4	

2.1 Phase Parameters Set 1	1	2	3	4	5	6	7	8
Min. Green	4	6	4	6	4	6	4	6
Pass/10	2.0	4.0	2.0	3.0	2.0	4.0	2.0	3.0
Max. 1	25	45	30	15	25	45	12	30
Max. 2	0	0	0	0	0	0	0	0
Yel/10	3.6	5.5	3.6	4.8	3.6	5.5	3.6	4.8
Red/10	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Walk	0	5	0	0	0	5	0	5
Pedestrian Clear	0	22	0	0	0	26	0	28
Add In/10	0.0	1.5	0.0	0.0	0.0	1.5	0.0	0.0
Max. Initial	0	0	0	0	0	0	0	0
TBR	0	0	0	0	0	0	0	0
CBR	0	0	0	0	0	0	0	0
TTR	0	0	0	0	0	0	0	0
Reduce/10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Min Gp/10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DM Limit	0	0	0	0	0	0	0	0
DM Stp/10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Rv/10	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Cond Svc Min	0	0	0	0	0	0	0	0
Alt Min Green	0	0	0	0	0	0	0	0
Alt Ps/10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Alternate Walk	0	0	0	0	0	0	0	0
Alt Ped Clear	0	0	0	0	0	0	0	0
Advanced Walk	0	0	0	0	0	0	0	0
Delay Walk	0	0	0	0	0	0	0	0
St Dly/10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Green Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

2.1 Phase Options Set 1	1	2	3	4	5	6	7	8
Phase Omit								
Ped Omit								
Min Recall		X				X		
Max Recall								
Soft Recall								
Ped Recall								
Pedestrian Recycle		X				X		X
Cond Srv								
Detector Lock					X			
Dual Entry								
Simul Gap	X	X	X	X	X	X	X	X
Guar Pass								
Add Init Calc								
Walk Rest								
Red Rest								
Flash Entry								
Flash Exit								
CNA-1								
CNA-2								
No Backup								
Max Walk								
Max Extension								
Sequential Timing								
No Min Yellow								

2.1 Phase Parameters Set 2	1	2	3	4	5	6	7	8

Min. Green	4	15	4	15	4	15	4	15
Pass/10	2.0	5.0	2.0	5.0	2.0	5.0	2.0	5.0
Max. 1	15	45	15	45	15	45	15	45
Max. 2	15	45	15	45	15	45	15	45
Yel/10	3.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0
Red/10	1.0	2.0	1.0	2.0	1.0	2.0	1.0	2.0
Walk	0	7	0	7	0	7	0	7
Pedestrian Clear	0	15	0	15	0	15	0	15
Add In/10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max. Initial	0	0	0	0	0	0	0	0
TBR	0	0	0	0	0	0	0	0
CBR	0	0	0	0	0	0	0	0
TTR	0	0	0	0	0	0	0	0
Reduce/10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Min Gp/10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DM Limit	0	0	0	0	0	0	0	0
DM Stp/10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Rv/10	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Cond Svc Min	0	0	0	0	0	0	0	0
Alt Min Green	0	0	0	0	0	0	0	0
Alt Ps/10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Alternate Walk	0	0	0	0	0	0	0	0
Alt Ped Clear	0	0	0	0	0	0	0	0
Advanced Walk	0	0	0	0	0	0	0	0
Delay Walk	0	0	0	0	0	0	0	0
St Dly/10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Green Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

2.1 Phase Options Set 2	1	2	3	4	5	6	7	8
Phase Omit								
Ped Omit								
Min Recall		X				X		
Max Recall								
Soft Recall								
Ped Recall								
Pedestrian Recycle								
Cond Srv								
Detector Lock	X	X	X	X	X	X	X	X
Dual Entry								
Simul Gap	X	X	X	X	X	X	X	X
Guar Pass								
Add Init Calc								
Walk Rest								
Red Rest								
Flash Entry								
Flash Exit								
CNA-1								
CNA-2								
No Backup								
Max Walk								
Max Extension								
Sequential Timing								
No Min Yellow								

2.1 Phase Parameters Set 3	1	2	3	4	5	6	7	8
Min. Green	4	15	4	15	4	15	4	15
Pass/10	2.0	5.0	2.0	5.0	2.0	5.0	2.0	5.0

Max. 1	15	45	15	45	15	45	15	45
Max. 2	15	45	15	45	15	45	15	45
Yel/10	3.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0
Red/10	1.0	2.0	1.0	2.0	1.0	2.0	1.0	2.0
Walk	0	7	0	7	0	7	0	7
Pedestrian Clear	0	15	0	15	0	15	0	15
Add In/10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max. Initial	0	0	0	0	0	0	0	0
TBR	0	0	0	0	0	0	0	0
CBR	0	0	0	0	0	0	0	0
TTR	0	0	0	0	0	0	0	0
Reduce/10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Min Gp/10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DM Limit	0	0	0	0	0	0	0	0
DM Stp/10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Rv/10	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Cond Svc Min	0	0	0	0	0	0	0	0
Alt Min Green	0	0	0	0	0	0	0	0
Alt Ps/10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Alternate Walk	0	0	0	0	0	0	0	0
Alt Ped Clear	0	0	0	0	0	0	0	0
Advanced Walk	0	0	0	0	0	0	0	0
Delay Walk	0	0	0	0	0	0	0	0
St Dly/10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Green Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

2.1 Phase Options Set 3	1	2	3	4	5	6	7	8
Phase Omit								
Ped Omit								
Min Recall		X				X		
Max Recall								
Soft Recall								
Ped Recall								
Pedestrian Recycle								
Cond Srv								
Detector Lock	X	X	X	X	X	X	X	X
Dual Entry								
Simul Gap	X	X	X	X	X	X	X	X
Guar Pass								
Add Init Calc								
Walk Rest								
Red Rest								
Flash Entry								
Flash Exit								
CNA-1								
CNA-2								
No Backup								
Max Walk								
Max Extension								
Sequential Timing								
No Min Yellow								

2.1 Phase Parameters Set 4	1	2	3	4	5	6	7	8
Min. Green	4	15	4	15	4	15	4	15
Pass/10	2.0	5.0	2.0	5.0	2.0	5.0	2.0	5.0
Max. 1	15	45	15	45	15	45	15	45
Max. 2	15	45	15	45	15	45	15	45

Yel/10	3.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0
Red/10	1.0	2.0	1.0	2.0	1.0	2.0	1.0	2.0
Walk	0	7	0	7	0	7	0	7
Pedestrian Clear	0	15	0	15	0	15	0	15
Add In/10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max. Initial	0	0	0	0	0	0	0	0
TBR	0	0	0	0	0	0	0	0
CBR	0	0	0	0	0	0	0	0
TTR	0	0	0	0	0	0	0	0
Reduce/10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Min Gp/10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DM Limit	0	0	0	0	0	0	0	0
DM Stp/10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Rv/10	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Cond Svc Min	0	0	0	0	0	0	0	0
Alt Min Green	0	0	0	0	0	0	0	0
Alt Ps/10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Alternate Walk	0	0	0	0	0	0	0	0
Alt Ped Clear	0	0	0	0	0	0	0	0
Advanced Walk	0	0	0	0	0	0	0	0
Delay Walk	0	0	0	0	0	0	0	0
St Dly/10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Green Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

2.1 Phase Options Set 4	1	2	3	4	5	6	7	8
Phase Omit								
Ped Omit								
Min Recall		X				X		
Max Recall								
Soft Recall								
Ped Recall								
Pedestrian Recycle								
Cond Srv								
Detector Lock	X	X	X	X	X	X	X	X
Dual Entry								
Simul Gap	X	X	X	X	X	X	X	X
Guar Pass								
Add Init Calc								
Walk Rest								
Red Rest								
Flash Entry								
Flash Exit								
CNA-1								
CNA-2								
No Backup								
Max Walk								
Max Extension								
Sequential Timing								
No Min Yellow								

3.1 Vehicle Overlap Set 1	1	2	3	4
Type	Normal	Normal	Normal	Normal
Included Phases				
Modifier Phases				
Excluded Phases				
Excluded Peds				
Excluded Walks				
Trail Grn	0	0	0	0
Trailing Yel	0.0	0.0	0.0	0.0
Trailing Red	0.0	0.0	0.0	0.0
Start Delay	0.0	0.0	0.0	0.0
No Trail Grn Phs				
Call Phases				
Actuated Only	False	False	False	False
Detector Lock	False	False	False	False
No Min Yellow	False	False	False	False

3.1 Vehicle Overlap Set 1	5	6	7	8
Type	Normal	Normal	Normal	Normal
Included Phases				
Modifier Phases				
Excluded Phases				
Excluded Peds				
Excluded Walks				
Trail Grn	0	0	0	0
Trailing Yel	0.0	0.0	0.0	0.0
Trailing Red	0.0	0.0	0.0	0.0
Start Delay	0.0	0.0	0.0	0.0
No Trail Grn Phs				
Call Phases				
Actuated Only	False	False	False	False
Detector Lock	False	False	False	False
No Min Yellow	False	False	False	False

3.2 Pedestrian Overlap Set 1	1
Included Phases	
Excluded Phases	
Intervals	None
Call Phases	
Actuated Only	False

3.2 Pedestrian Overlap Set 1	2
Included Phases	
Excluded Phases	
Intervals	None
Call Phases	
Actuated Only	False

3.2 Pedestrian Overlap Set 1	3
Included Phases	
Excluded Phases	
Intervals	None
Call Phases	
Actuated Only	False

3.2 Pedestrian Overlap Set 1	4
Included Phases	
Excluded Phases	
Intervals	None
Call Phases	
Actuated Only	False

3.2 Pedestrian Overlap Set 1	5
Included Phases	
Excluded Phases	
Intervals	None
Call Phases	
Actuated Only	False

3.2 Pedestrian Overlap Set 1	6
Included Phases	
Excluded Phases	
Intervals	None
Call Phases	
Actuated Only	False

3.2 Pedestrian Overlap Set 1	7
Included Phases	
Excluded Phases	
Intervals	None
Call Phases	
Actuated Only	False

3.2 Pedestrian Overlap Set 1	8
Included Phases	
Excluded Phases	
Intervals	None
Call Phases	
Actuated Only	False

4.1 Vehicle Detector Set 1

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
Call	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
Queue																																
Add Init	X	X	X	X	X		X	X	X	X	X		X	X	X	X	X	X	X		X	X	X	X	X		X	X				
Passage	X	X	X	X	X		X	X	X	X	X		X	X	X	X	X	X	X		X	X	X	X	X		X	X				
Red Lock																																
Yellow Lock																																
Volume																																
Occupancy																																
Call Phase	1	2	2	2	2	2	3	4	4	4	4	4	1	3	5	6	6	6	6	6	7	8	8	8	8	8	5	7	0	0	0	0
Switch Phase	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	0	0	0	0	0	0
Delay	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	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	0.0	0.0	0.0	0.0	0.0	0.0
Extend	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	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	0.0	0.0	0.0	0.0	0.0	0.0
Queue Limit	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	0	0	0	0	0	0
VOS Length	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	0	0	0	0	0	0
Alt Passage																																
Alt Min Green																																
Extra Call Phases																																
Call Overlaps																																

4.3 Vehicle Detector Diag Set 1

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
No Act	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	0	0	0	0	0	0
Max Pr	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	0	0	0	0	0	0
Err Cnts	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	0	0	0	0	0	0
Fail Time	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	0	0	0	0	0	0

4.2 Ped Detector Set 1

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Phase	2	4	6	8	0	0	0	0	0	0	0	0	0	0	0	0
Alternate Walk																
Extra Call Phases																
Call Overlaps																

4.4 Ped Detector Diag Set 1

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
No Activity	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max. Presence	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Erratic Counts	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

9.3.3.2 Speed Trap

Speed Trap	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Detector 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Detector 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Distance	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

9.3.3.3 Speed Trap Bin Ranges

Bin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Range	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

5.2 Patterns	1	2	3	4	5	6	7	8
Cycle Time	140	140	140	0	0	0	0	0
Offset Time	112	113	123	0	0	0	0	0
Split	1	2	3	1	1	1	1	1
Sequence	1	1	1	1	1	1	1	1
Correction Mode								
Maximum Mode								
Force Mode								
Perm Strategy								
Omit Strategy								
Early Return	Default	Default	Default	Default	Default	Default	Default	Default
Texas Diamond								
Max2 Phases	0	0	0	0	0	0	0	0
Phase Timing Set	1	1	1	1	1	1	1	1
Phase Option Set	1	1	1	1	1	1	1	1
Overlap Set	1	1	1	1	1	1	1	1
Veh. Det. Set	1	1	1	1	1	1	1	1
Veh. Det. Diag Set	1	1	1	1	1	1	1	1
Ped. Det. Diag Set	1	1	1	1	1	1	1	1
Priority Set	1	1	1	1	1	1	1	1
Ped Ovlp Set	1	1	1	1	1	1	1	1
Det. Reset								

5.2 Patterns	9	10	11	12	13	14	15	16
Cycle Time	0	0	0	0	0	0	0	0
Offset Time	0	0	0	0	0	0	0	0
Split	1	1	1	1	1	1	1	1
Sequence	1	1	1	1	1	14	1	1
Correction Mode								
Maximum Mode								
Force Mode								
Perm Strategy								
Omit Strategy								
Early Return	Default	Default	Default	Default	Default	Default	Default	Default
Texas Diamond								
Max2 Phases	0	0	0	0	0	0	0	0
Phase Timing Set	1	1	1	1	1	1	1	1
Phase Option Set	1	1	1	1	1	1	1	1
Overlap Set	1	1	1	1	1	1	1	1
Veh. Det. Set	1	1	1	1	1	1	1	1
Veh. Det. Diag Set	1	1	1	1	1	1	1	1
Ped. Det. Diag Set	1	1	1	1	1	1	1	1
Priority Set	1	1	1	1	1	1	1	1
Ped Ovlp Set	1	1	1	1	1	1	1	1
Det. Reset								

5.3 Split Table 1

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time (sec)	22	58	40	20	22	58	20	40	0	0	0	0	0	0	0	0
Mode	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Coord. Phase		X				X										
Manual Permit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manual Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

5.3 Split Table 2

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time (sec)	24	59	40	17	24	59	17	40	0	0	0	0	0	0	0	0
Mode	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Coord. Phase		X				X										
Manual Permit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manual Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

5.3 Split Table 3

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time (sec)	22	58	40	20	22	58	20	40	0	0	0	0	0	0	0	0
Mode	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Coord. Phase		X				X										
Manual Permit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manual Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

5.3 Split Table 4

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time (sec)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mode	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Coord. Phase																
Manual Permit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manual Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

5.3 Split Table 5

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time (sec)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mode	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Coord. Phase																
Manual Permit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manual Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

5.3 Split Table 6

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time (sec)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mode	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Coord. Phase																
Manual Permit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manual Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

5.3 Split Table 7

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time (sec)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mode	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Coord. Phase																
Manual Permit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manual Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

5.3 Split Table 8

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time (sec)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mode	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Coord. Phase																
Manual Permit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manual Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

5.3 Split Table 9

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time (sec)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mode	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Coord. Phase																
Manual Permit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manual Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

5.3 Split Table 10

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time (sec)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mode	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Coord. Phase																
Manual Permit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manual Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

5.3 Split Table 11

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time (sec)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mode	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Coord. Phase																
Manual Permit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manual Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

5.3 Split Table 12

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time (sec)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mode	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Coord. Phase																
Manual Permit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manual Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

5.3 Split Table 13

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time (sec)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mode	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Coord. Phase																
Manual Permit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manual Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

5.3 Split Table 14

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time (sec)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mode	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Coord. Phase																
Manual Permit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manual Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

5.3 Split Table 15

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time (sec)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mode	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Coord. Phase																
Manual Permit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manual Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

5.3 Split Table 16

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time (sec)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mode	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Coord. Phase																
Manual Permit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manual Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

6.4 Schedules

| | Month | | | | | | | | | | | | Days Of Week | | | | | | | Date | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Day |
|---|---|---

6.5 Day Plan 1

Event#	1	2	3	4	5	6	7	8
Hour	0	6	9	14	20	0	0	0
Minute	1	15	15	0	0	0	0	0
Action	14	1	2	3	14	0	0	0

6.5 Day Plan 1

Event#	9	10	11	12	13	14	15	16
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 1

Event#	17	18	19	20	21	22	23	24
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 1

Event#	25	26	27	28	29	30	31	32
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 2

Event#	1	2	3	4	5	6	7	8
Hour	0	9	18	0	0	0	0	0
Minute	1	0	30	0	0	0	0	0
Action	14	2	2	0	0	0	0	0

6.5 Day Plan 2

Event#	9	10	11	12	13	14	15	16
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 2

Event#	17	18	19	20	21	22	23	24
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 2

Event#	25	26	27	28	29	30	31	32
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 3

Event#	1	2	3	4	5	6	7	8
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 3

Event#	9	10	11	12	13	14	15	16
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 3

Event#	17	18	19	20	21	22	23	24
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 3

Event#	25	26	27	28	29	30	31	32
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 4

Event#	1	2	3	4	5	6	7	8
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 4

Event#	9	10	11	12	13	14	15	16
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 4

Event#	17	18	19	20	21	22	23	24
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 4

Event#	25	26	27	28	29	30	31	32
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 5

Event#	1	2	3	4	5	6	7	8
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 5

Event#	9	10	11	12	13	14	15	16
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 5

Event#	17	18	19	20	21	22	23	24
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 5

Event#	25	26	27	28	29	30	31	32
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 6

Event#	1	2	3	4	5	6	7	8
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 6

Event#	9	10	11	12	13	14	15	16
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 6

Event#	17	18	19	20	21	22	23	24
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 6

Event#	25	26	27	28	29	30	31	32
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 7

Event#	1	2	3	4	5	6	7	8
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 7

Event#	9	10	11	12	13	14	15	16
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 7

Event#	17	18	19	20	21	22	23	24
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 7

Event#	25	26	27	28	29	30	31	32
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 8

Event#	1	2	3	4	5	6	7	8
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 8

Event#	9	10	11	12	13	14	15	16
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 8

Event#	17	18	19	20	21	22	23	24
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 8

Event#	25	26	27	28	29	30	31	32
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 9

Event#	1	2	3	4	5	6	7	8
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 9

Event#	9	10	11	12	13	14	15	16
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 9

Event#	17	18	19	20	21	22	23	24
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 9

Event#	25	26	27	28	29	30	31	32
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 10

Event#	1	2	3	4	5	6	7	8
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 10

Event#	9	10	11	12	13	14	15	16
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 10

Event#	17	18	19	20	21	22	23	24
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 10

Event#	25	26	27	28	29	30	31	32
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 11

Event#	1	2	3	4	5	6	7	8
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 11

Event#	9	10	11	12	13	14	15	16
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 11

Event#	17	18	19	20	21	22	23	24
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 11

Event#	25	26	27	28	29	30	31	32
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 12

Event#	1	2	3	4	5	6	7	8
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 12

Event#	9	10	11	12	13	14	15	16
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 12

Event#	17	18	19	20	21	22	23	24
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 12

Event#	25	26	27	28	29	30	31	32
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 13

Event#	1	2	3	4	5	6	7	8
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 13

Event#	9	10	11	12	13	14	15	16
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 13

Event#	17	18	19	20	21	22	23	24
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 13

Event#	25	26	27	28	29	30	31	32
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 14

Event#	1	2	3	4	5	6	7	8
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 14

Event#	9	10	11	12	13	14	15	16
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 14

Event#	17	18	19	20	21	22	23	24
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 14

Event#	25	26	27	28	29	30	31	32
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 15

Event#	1	2	3	4	5	6	7	8
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 15

Event#	9	10	11	12	13	14	15	16
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 15

Event#	17	18	19	20	21	22	23	24
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 15

Event#	25	26	27	28	29	30	31	32
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 16

Event#	1	2	3	4	5	6	7	8
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 16

Event#	9	10	11	12	13	14	15	16
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 16

Event#	17	18	19	20	21	22	23	24
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 16

Event#	25	26	27	28	29	30	31	32
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.6 Action Parameters	1	2	3	4	5	6	7	8
Pattern	1	2	3	0	0	0	0	0
Auxiliary Function								
Special Function								
Special Function								
Detector Reset								
Detector VOS Log	Start Logging	Start Logging	Start Logging	No Action	No Action	No Action	No Action	No Action
Speed Trap Log	Start Logging	Start Logging	Start Logging	No Action	No Action	No Action	No Action	No Action
Cycle MOE Log	Start Logging	Start Logging	Start Logging	No Action	No Action	No Action	No Action	No Action
High Res Log	Start	Start	Start	No Action	No Action	No Action	No Action	No Action

6.6 Action Parameters	9	10	11	12	13	14	15	16
Pattern	0	0	0	0	0	14	15	0
Auxiliary Function								
Special Function								
Special Function								
Detector Reset								
Detector VOS Log	No Action	No Action	No Action	No Action	No Action	Start Logging	No Action	No Action
Speed Trap Log	No Action	No Action	No Action	No Action	No Action	Start Logging	No Action	No Action
Cycle MOE Log	No Action	No Action	No Action	No Action	No Action	Start Logging	No Action	No Action
High Res Log	No Action	No Action	No Action	No Action	No Action	Start	No Action	No Action

6.6 Action Parameters	17	18	19	20	21	22	23	24
Pattern	0	0	0	0	0	0	0	0
Auxiliary Function								
Special Function								
Special Function								
Detector Reset								
Detector VOS Log	No Action	No Action	No Action	No Action	No Action	No Action	No Action	No Action
Speed Trap Log	No Action	No Action	No Action	No Action	No Action	No Action	No Action	No Action
Cycle MOE Log	No Action	No Action	No Action	No Action	No Action	No Action	No Action	No Action
High Res Log	No Action	No Action	No Action	No Action	No Action	No Action	No Action	No Action

6.6 Action Parameters	25	26	27	28	29	30	31	32
Pattern	0	0	0	0	0	0	0	0
Auxiliary Function								
Special Function								
Special Function								
Detector Reset								
Detector VOS Log	No Action	No Action	No Action	No Action	No Action	No Action	No Action	No Action
Speed Trap Log	No Action	No Action	No Action	No Action	No Action	No Action	No Action	No Action
Cycle MOE Log	No Action	No Action	No Action	No Action	No Action	No Action	No Action	No Action
High Res Log	No Action	No Action	No Action	No Action	No Action	No Action	No Action	No Action

7 Preempts	Preempt 1	Preempt 2	Preempt 3	Preempt 4	Preempt 5	Preempt 6	Preempt 7	Preempt 8
Track Phases								
Track Overlaps								
Dwell Phases			2,5	4,7	1,6	3,8		
Dwell Overlaps								
Dwell Peds								
Cycling Phases								
Cycling Overlaps								
Cycling Ped								
Exit Phase								
Locking	X	X	X	X	X	X	X	X
Override Flash								
Override Preempt+1	X	X					X	X
Flash Dwell	X							
Track Green	0	0	0	0	0	0	0	0
Delay	0	0	0	0	0	0	0	0
Maximum Presence	0	0	0	0	0	0	0	0
Minimum Duration	0	0	0	0	0	0	0	0
Minimum Dwell	10	10	10	10	10	10	10	10
Linked Preempt	0	0	0	0	0	0	0	0
Enter Min Green	255	255	255	255	255	255	255	255
Enter Min Walk	255	255	255	255	255	255	255	255
Enter Min Ped Clear	255	255	255	255	255	255	255	255
Enter Min Yellow	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5
Enter Min Red Clear	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5
Track Min Yellow	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5
Track Min Red Clear	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5
Track Ped Overlap								
Dwell Ped Overlap								
All Red Entry								
Track Ped								
Cycling Ped Overlap								
Exit Ped Clear	0	0	0	0	0	0	0	0
Exit Yellow Change	0	0	0	0	0	0	0	0
Exit Red Clear	0	0	0	0	0	0	0	0

8.1 TSP Global Options

Enable	
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
Headway	0
Lockout	0
Node	1
Name	Default

8.2 TSP Strategy Options — Strategy 1 | Set 1

Enable	
Override + 1	
Service Phases	
Call Phases	
Omit Phases	
Omit Peds	
Queue Jump Ph	
ETA	0
Input Function	None
Input Index	0
Input Type	Steady
Request Mode	Presence
Checkout Mode	Checkout (Leading Edge)
Checkout Time	180
Max Presence	180
Max Presence Clr	0
Min ON Time	0.0
Min OFF Time	0.0
Delay Time	0.0
Extend Time	0.0
Headway Time	0
Preempt Lockout	0
Arrival Window	0

8.2 TSP Strategy Options — Strategy 2 | Set 1

Enable	
Override + 1	
Service Phases	
Call Phases	
Omit Phases	
Omit Peds	
Queue Jump Ph	
ETA	0
Input Function	None
Input Index	0
Input Type	Steady
Request Mode	Presence
Checkout Mode	Checkout (Leading Edge)
Checkout Time	180
Max Presence	180
Max Presence Clr	0
Min ON Time	0.0
Min OFF Time	0.0
Delay Time	0.0
Extend Time	0.0
Headway Time	0
Preempt Lockout	0
Arrival Window	0

8.2 TSP Strategy Options — Strategy 3 | Set 1

Enable	
Override + 1	
Service Phases	
Call Phases	
Omit Phases	
Omit Peds	
Queue Jump Ph	
ETA	0
Input Function	None
Input Index	0
Input Type	Steady
Request Mode	Presence
Checkout Mode	Checkout (Leading Edge)
Checkout Time	180
Max Presence	180
Max Presence Clr	0
Min ON Time	0.0
Min OFF Time	0.0
Delay Time	0.0
Extend Time	0.0
Headway Time	0
Preempt Lockout	0
Arrival Window	0

8.2 TSP Strategy Options — Strategy 4 | Set 1

Enable	
Override + 1	
Service Phases	
Call Phases	
Omit Phases	
Omit Peds	
Queue Jump Ph	
ETA	0
Input Function	None
Input Index	0
Input Type	Steady
Request Mode	Presence
Checkout Mode	Checkout (Leading Edge)
Checkout Time	180
Max Presence	180
Max Presence Clr	0
Min ON Time	0.0
Min OFF Time	0.0
Delay Time	0.0
Extend Time	0.0
Headway Time	0
Preempt Lockout	0
Arrival Window	0

8.2 TSP Strategy Options — Strategy 5 | Set 1

Enable	
Override + 1	
Service Phases	
Call Phases	
Omit Phases	
Omit Peds	
Queue Jump Ph	
ETA	0
Input Function	None
Input Index	0
Input Type	Steady
Request Mode	Presence
Checkout Mode	Checkout (Leading Edge)
Checkout Time	180
Max Presence	180
Max Presence Clr	0
Min ON Time	0.0
Min OFF Time	0.0
Delay Time	0.0
Extend Time	0.0
Headway Time	0
Preempt Lockout	0
Arrival Window	0

8.2 TSP Strategy Options — Strategy 6 | Set 1

Enable	
Override + 1	
Service Phases	
Call Phases	
Omit Phases	
Omit Peds	
Queue Jump Ph	
ETA	0
Input Function	None
Input Index	0
Input Type	Steady
Request Mode	Presence
Checkout Mode	Checkout (Leading Edge)
Checkout Time	180
Max Presence	180
Max Presence Clr	0
Min ON Time	0.0
Min OFF Time	0.0
Delay Time	0.0
Extend Time	0.0
Headway Time	0
Preempt Lockout	0
Arrival Window	0

8.2 TSP Strategy Options — Strategy 7 | Set 1

Enable	
Override + 1	
Service Phases	
Call Phases	

8.2 TSP Strategy Options — Strategy 8 | Set 1

Enable	
Override + 1	
Service Phases	
Call Phases	

8.2 TSP Strategy Options — Strategy 9 | Set 1

Enable	
Override + 1	
Service Phases	
Call Phases	

Omit Phases	
Omit Peds	
Queue Jump Ph	
ETA	0
Input Function	None
Input Index	0
Input Type	Steady
Request Mode	Presence
Checkout Mode	Checkout (Leading Edge)
Checkout Time	180
Max Presence	180
Max Presence Clr	0
Min ON Time	0.0
Min OFF Time	0.0
Delay Time	0.0
Extend Time	0.0
Headway Time	0
Preempt Lockout	0
Arrival Window	0

Omit Phases	
Omit Peds	
Queue Jump Ph	
ETA	0
Input Function	None
Input Index	0
Input Type	Steady
Request Mode	Presence
Checkout Mode	Checkout (Leading Edge)
Checkout Time	180
Max Presence	180
Max Presence Clr	0
Min ON Time	0.0
Min OFF Time	0.0
Delay Time	0.0
Extend Time	0.0
Headway Time	0
Preempt Lockout	0
Arrival Window	0

Omit Phases	
Omit Peds	
Queue Jump Ph	
ETA	0
Input Function	None
Input Index	0
Input Type	Steady
Request Mode	Presence
Checkout Mode	Checkout (Leading Edge)
Checkout Time	180
Max Presence	180
Max Presence Clr	0
Min ON Time	0.0
Min OFF Time	0.0
Delay Time	0.0
Extend Time	0.0
Headway Time	0
Preempt Lockout	0
Arrival Window	0

8.2 TSP Strategy Options	Strategy 10 | Set 1
Enable	
Override + 1	
Service Phases	
Call Phases	
Omit Phases	
Omit Peds	
Queue Jump Ph	
ETA	0
Input Function	None
Input Index	0
Input Type	Steady
Request Mode	Presence
Checkout Mode	Checkout (Leading Edge)
Checkout Time	180
Max Presence	180
Max Presence Clr	0
Min ON Time	0.0
Min OFF Time	0.0
Delay Time	0.0
Extend Time	0.0
Headway Time	0
Preempt Lockout	0
Arrival Window	0

8.2 TSP Strategy Options	Strategy 11 | Set 1
Enable	
Override + 1	
Service Phases	
Call Phases	
Omit Phases	
Omit Peds	
Queue Jump Ph	
ETA	0
Input Function	None
Input Index	0
Input Type	Steady
Request Mode	Presence
Checkout Mode	Checkout (Leading Edge)
Checkout Time	180
Max Presence	180
Max Presence Clr	0
Min ON Time	0.0
Min OFF Time	0.0
Delay Time	0.0
Extend Time	0.0
Headway Time	0
Preempt Lockout	0
Arrival Window	0

8.2 TSP Strategy Options	Strategy 12 | Set 1
Enable	
Override + 1	
Service Phases	
Call Phases	
Omit Phases	
Omit Peds	
Queue Jump Ph	
ETA	0
Input Function	None
Input Index	0
Input Type	Steady
Request Mode	Presence
Checkout Mode	Checkout (Leading Edge)
Checkout Time	180
Max Presence	180
Max Presence Clr	0
Min ON Time	0.0
Min OFF Time	0.0
Delay Time	0.0
Extend Time	0.0
Headway Time	0
Preempt Lockout	0
Arrival Window	0

8.2 TSP Strategy Options	Strategy 13 | Set 1
Enable	
Override + 1	
Service Phases	
Call Phases	
Omit Phases	
Omit Peds	
Queue Jump Ph	
ETA	0
Input Function	None

8.2 TSP Strategy Options	Strategy 14 | Set 1
Enable	
Override + 1	
Service Phases	
Call Phases	
Omit Phases	
Omit Peds	
Queue Jump Ph	
ETA	0
Input Function	None

8.2 TSP Strategy Options	Strategy 15 | Set 1
Enable	
Override + 1	
Service Phases	
Call Phases	
Omit Phases	
Omit Peds	
Queue Jump Ph	
ETA	0
Input Function	None

Input Index	0
Input Type	Steady
Request Mode	Presence
Checkout Mode	Checkout (Leading Edge)
Checkout Time	180
Max Presence	180
Max Presence Clr	0
Min ON Time	0.0
Min OFF Time	0.0
Delay Time	0.0
Extend Time	0.0
Headway Time	0
Preempt Lockout	0
Arrival Window	0

Input Index	0
Input Type	Steady
Request Mode	Presence
Checkout Mode	Checkout (Leading Edge)
Checkout Time	180
Max Presence	180
Max Presence Clr	0
Min ON Time	0.0
Min OFF Time	0.0
Delay Time	0.0
Extend Time	0.0
Headway Time	0
Preempt Lockout	0
Arrival Window	0

Input Index	0
Input Type	Steady
Request Mode	Presence
Checkout Mode	Checkout (Leading Edge)
Checkout Time	180
Max Presence	180
Max Presence Clr	0
Min ON Time	0.0
Min OFF Time	0.0
Delay Time	0.0
Extend Time	0.0
Headway Time	0
Preempt Lockout	0
Arrival Window	0

8.2 TSP Strategy Options	Strategy 16	Set 1
Enable		
Override + 1		
Service Phases		
Call Phases		
Omit Phases		
Omit Peds		
Queue Jump Ph		
ETA	0	
Input Function	None	
Input Index	0	
Input Type	Steady	
Request Mode	Presence	
Checkout Mode	Checkout (Leading Edge)	
Checkout Time	180	
Max Presence	180	
Max Presence Clr	0	
Min ON Time	0.0	
Min OFF Time	0.0	
Delay Time	0.0	
Extend Time	0.0	
Headway Time	0	
Preempt Lockout	0	
Arrival Window	0	

8.3 TSP Phase Adjustment Times — Strategy 1 — Set 1

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Extend	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QJump	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

8.3 TSP Phase Adjustment Times — Strategy 2 — Set 1

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Extend	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QJump	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

8.3 TSP Phase Adjustment Times — Strategy 3 — Set 1

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Extend	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QJump	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

8.3 TSP Phase Adjustment Times — Strategy 4 — Set 1

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Extend	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QJump	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

8.3 TSP Phase Adjustment Times Strategy 5 | Set 1

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Extend	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QJump	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

8.3 TSP Phase Adjustment Times Strategy 6 | Set 1

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Extend	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QJump	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

8.3 TSP Phase Adjustment Times Strategy 7 | Set 1

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Extend	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QJump	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

8.3 TSP Phase Adjustment Times Strategy 8 | Set 1

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Extend	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QJump	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

8.3 TSP Phase Adjustment Times Strategy 9 | Set 1

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Extend	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QJump	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

8.3 TSP Phase Adjustment Times Strategy 10 | Set 1

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Extend	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QJump	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

8.3 TSP Phase Adjustment Times Strategy 11 | Set 1

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Extend	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QJump	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

8.3 TSP Phase Adjustment Times Strategy 12 | Set 1

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Extend	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QJump	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

8.3 TSP Phase Adjustment Times Strategy 13 | Set 1

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Extend	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QJump	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

8.3 TSP Phase Adjustment Times Strategy 14 | Set 1

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Extend	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QJump	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

8.3 TSP Phase Adjustment Times Strategy 15 | Set 1

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Extend	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QJump	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

8.3 TSP Phase Adjustment Times Strategy 16 | Set 1

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Extend	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QJump	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

1.6 Logic Gate 1

	Functions	IDX	!	DLY	EXT
Type	Unused				
Out Mode	Normal				
IN1	Unused	1		0	0
IN2	Unused	1		0	0
IN3	Unused	1		0	0
IN4	Unused	1		0	0
OUT	Unused	1		0	0

1.6 Logic Gate 2

	Functions	IDX	!	DLY	EXT
Type	Unused				
Out Mode	Normal				
IN1	Unused	1		0	0
IN2	Unused	1		0	0
IN3	Unused	1		0	0
IN4	Unused	1		0	0
OUT	Unused	1		0	0

1.6 Logic Gate 3

	Functions	IDX	!	DLY	EXT
Type	Unused				
Out Mode	Normal				
IN1	Unused	1		0	0
IN2	Unused	1		0	0
IN3	Unused	1		0	0
IN4	Unused	1		0	0
OUT	Unused	1		0	0

1.6 Logic Gate 4

	Functions	IDX	!	DLY	EXT
Type	Unused				
Out Mode	Normal				
IN1	Unused	1		0	0
IN2	Unused	1		0	0
IN3	Unused	1		0	0
IN4	Unused	1		0	0
OUT	Unused	1		0	0

1.6 Logic Gate 5

	Functions	IDX	!	DLY	EXT
Type	Unused				
Out Mode	Normal				
IN1	Unused	1		0	0
IN2	Unused	1		0	0
IN3	Unused	1		0	0
IN4	Unused	1		0	0
OUT	Unused	1		0	0

1.6 Logic Gate 6

	Functions	IDX	!	DLY	EXT
Type	Unused				
Out Mode	Normal				
IN1	Unused	1		0	0
IN2	Unused	1		0	0
IN3	Unused	1		0	0
IN4	Unused	1		0	0
OUT	Unused	1		0	0

1.6 Logic Gate 7

	Functions	IDX	!	DLY	EXT
Type	Unused				
Out Mode	Normal				
IN1	Unused	1		0	0
IN2	Unused	1		0	0
IN3	Unused	1		0	0
IN4	Unused	1		0	0
OUT	Unused	1		0	0

1.6 Logic Gate 8

	Functions	IDX	!	DLY	EXT
Type	Unused				
Out Mode	Normal				
IN1	Unused	1		0	0
IN2	Unused	1		0	0
IN3	Unused	1		0	0
IN4	Unused	1		0	0
OUT	Unused	1		0	0

1.6 Logic Gate 9

	Functions	IDX	!	DLY	EXT
Type	Unused				
Out Mode	Normal				
IN1	Unused	1		0	0
IN2	Unused	1		0	0
IN3	Unused	1		0	0
IN4	Unused	1		0	0
OUT	Unused	1		0	0

1.6 Logic Gate 10

	Functions	IDX	!	DLY	EXT
Type	Unused				
Out Mode	Normal				
IN1	Unused	1		0	0
IN2	Unused	1		0	0
IN3	Unused	1		0	0
IN4	Unused	1		0	0
OUT	Unused	1		0	0

1.6 Logic Gate 11

	Functions	IDX	!	DLY	EXT
Type	Unused				
Out Mode	Normal				
IN1	Unused	1		0	0
IN2	Unused	1		0	0
IN3	Unused	1		0	0
IN4	Unused	1		0	0
OUT	Unused	1		0	0

1.6 Logic Gate 12

	Functions	IDX	!	DLY	EXT
Type	Unused				
Out Mode	Normal				
IN1	Unused	1		0	0
IN2	Unused	1		0	0
IN3	Unused	1		0	0
IN4	Unused	1		0	0
OUT	Unused	1		0	0

1.6 Logic Gate 13

	Functions	IDX	!	DLY	EXT
Type	Unused				
Out Mode	Normal				
IN1	Unused	1		0	0
IN2	Unused	1		0	0
IN3	Unused	1		0	0
IN4	Unused	1		0	0
OUT	Unused	1		0	0

1.6 Logic Gate 14

	Functions	IDX	!	DLY	EXT
Type	Unused				
Out Mode	Normal				
IN1	Unused	1		0	0
IN2	Unused	1		0	0
IN3	Unused	1		0	0
IN4	Unused	1		0	0
OUT	Unused	1		0	0

1.6 Logic Gate 15

	Functions	IDX	!	DLY	EXT
Type	Unused				
Out Mode	Normal				
IN1	Unused	1		0	0
IN2	Unused	1		0	0
IN3	Unused	1		0	0
IN4	Unused	1		0	0
OUT	Unused	1		0	0

1.6 Logic Gate 16

	Functions	IDX	!	DLY	EXT
Type	Unused				
Out Mode	Normal				
IN1	Unused	1		0	0
IN2	Unused	1		0	0
IN3	Unused	1		0	0
IN4	Unused	1		0	0
OUT	Unused	1		0	0

1.6 Logic Gate 17

	Functions	IDX	!	DLY	EXT
Type	Unused				
Out Mode	Normal				
IN1	Unused	1		0	0
IN2	Unused	1		0	0
IN3	Unused	1		0	0
IN4	Unused	1		0	0
OUT	Unused	1		0	0

1.6 Logic Gate 18

	Functions	IDX	!	DLY	EXT
Type	Unused				
Out Mode	Normal				
IN1	Unused	1		0	0
IN2	Unused	1		0	0
IN3	Unused	1		0	0
IN4	Unused	1		0	0
OUT	Unused	1		0	0

1.6 Logic Gate 19

	Functions	IDX	!	DLY	EXT
Type	Unused				
Out Mode	Normal				
IN1	Unused	1		0	0
IN2	Unused	1		0	0
IN3	Unused	1		0	0
IN4	Unused	1		0	0
OUT	Unused	1		0	0

1.6 Logic Gate 20

	Functions	IDX	!	DLY	EXT
Type	Unused				
Out Mode	Normal				
IN1	Unused	1		0	0
IN2	Unused	1		0	0
IN3	Unused	1		0	0
IN4	Unused	1		0	0
OUT	Unused	1		0	0

1.6 Logic Gate 21

	Functions	IDX	!	DLY	EXT
Type	Unused				
Out Mode	Normal				
IN1	Unused	1		0	0
IN2	Unused	1		0	0
IN3	Unused	1		0	0
IN4	Unused	1		0	0
OUT	Unused	1		0	0

1.6 Logic Gate 22

	Functions	IDX	!	DLY	EXT
Type	Unused				
Out Mode	Normal				
IN1	Unused	1		0	0
IN2	Unused	1		0	0
IN3	Unused	1		0	0
IN4	Unused	1		0	0
OUT	Unused	1		0	0

1.6 Logic Gate 23

	Functions	IDX	!	DLY	EXT
Type	Unused				
Out Mode	Normal				
IN1	Unused	1		0	0
IN2	Unused	1		0	0
IN3	Unused	1		0	0
IN4	Unused	1		0	0
OUT	Unused	1		0	0

1.6 Logic Gate 24

	Functions	IDX	!	DLY	EXT
Type	Unused				
Out Mode	Normal				
IN1	Unused	1		0	0
IN2	Unused	1		0	0
IN3	Unused	1		0	0
IN4	Unused	1		0	0
OUT	Unused	1		0	0

1.6 Logic Gate 25

	Functions	IDX	!	DLY	EXT
Type	Unused				
Out Mode	Normal				
IN1	Unused	1		0	0
IN2	Unused	1		0	0
IN3	Unused	1		0	0
IN4	Unused	1		0	0
OUT	Unused	1		0	0

1.6 Logic Gate 26

	Functions	IDX	!	DLY	EXT
Type	Unused				
Out Mode	Normal				
IN1	Unused	1		0	0
IN2	Unused	1		0	0
IN3	Unused	1		0	0
IN4	Unused	1		0	0
OUT	Unused	1		0	0

1.6 Logic Gate 27

	Functions	IDX	!	DLY	EXT
Type	Unused				
Out Mode	Normal				
IN1	Unused	1		0	0
IN2	Unused	1		0	0
IN3	Unused	1		0	0
IN4	Unused	1		0	0
OUT	Unused	1		0	0

1.6 Logic Gate 28

	Functions	IDX	!	DLY	EXT
Type	Unused				
Out Mode	Normal				
IN1	Unused	1		0	0
IN2	Unused	1		0	0
IN3	Unused	1		0	0
IN4	Unused	1		0	0
OUT	Unused	1		0	0

1.6 Logic Gate 29

	Functions	IDX	!	DLY	EXT
Type	Unused				
Out Mode	Normal				
IN1	Unused	1		0	0
IN2	Unused	1		0	0
IN3	Unused	1		0	0
IN4	Unused	1		0	0
OUT	Unused	1		0	0

1.6 Logic Gate 30

	Functions	IDX	!	DLY	EXT
Type	Unused				
Out Mode	Normal				
IN1	Unused	1		0	0
IN2	Unused	1		0	0
IN3	Unused	1		0	0
IN4	Unused	1		0	0
OUT	Unused	1		0	0

1.6 Logic Gate 31

	Functions	IDX	!	DLY	EXT
Type	Unused				
Out Mode	Normal				
IN1	Unused	1		0	0
IN2	Unused	1		0	0
IN3	Unused	1		0	0
IN4	Unused	1		0	0
OUT	Unused	1		0	0

1.6 Logic Gate 32

	Functions	IDX	!	DLY	EXT
Type	Unused				
Out Mode	Normal				
IN1	Unused	1		0	0
IN2	Unused	1		0	0
IN3	Unused	1		0	0
IN4	Unused	1		0	0
OUT	Unused	1		0	0

1.5.3.1 2070 FIO Input Mapping

Pins	Function	IDX
C1-39	Vehicle Detector	2
C1-40	Vehicle Detector	16
C1-41	Vehicle Detector	8
C1-42	Vehicle Detector	22
C1-43	Vehicle Detector	3
C1-44	Vehicle Detector	17
C1-45	Vehicle Detector	9
C1-46	Vehicle Detector	23
C1-47	Vehicle Detector	6
C1-48	Vehicle Detector	20
C1-49	Vehicle Detector	12
C1-50	Vehicle Detector	26
C1-51	Preempt Detector	1
C1-52	Preempt Detector	2
C1-53	Man Control Enable	1
C1-54	Unused Input	1
C1-55	Vehicle Detector	15
C1-56	Vehicle Detector	1
C1-57	Vehicle Detector	21
C1-58	Vehicle Detector	7
C1-59	Vehicle Detector	27
C1-60	Vehicle Detector	13
C1-61	Vehicle Detector	28
C1-62	Vehicle Detector	14
C11-10	Unused Input	1
C11-11	Unused Input	1
C11-12	Unused Input	1
C11-13	Unused Input	1
C1-63	Vehicle Detector	4
C1-64	Vehicle Detector	18
C1-65	Vehicle Detector	10
C1-66	Vehicle Detector	24

Pins	Function	IDX
C1-67	Pedestrian Detector	1
C1-68	Pedestrian Detector	3
C1-69	Pedestrian Detector	2
C1-70	Pedestrian Detector	4
C1-71	Preempt Detector	3
C1-72	Preempt Detector	4
C1-73	Preempt Detector	5
C1-74	Preempt Detector	6
C1-75	Unused Input	1
C1-76	Vehicle Detector	5
C1-77	Vehicle Detector	19
C1-78	Vehicle Detector	11
C1-79	Vehicle Detector	25
C1-80	Interval Advance	1
C1-81	MMU Flash	1
C1-82	Stop Time All Rings	1
C11-15	Unused Input	1
C11-16	Unused Input	1
C11-17	Unused Input	1
C11-18	Unused Input	1
C11-19	Unused Input	1
C11-20	Unused Input	1
C11-21	Unused Input	1
C11-22	Unused Input	1
C11-23	Unused Input	1
C11-24	Unused Input	1
C11-25	Unused Input	1
C11-26	Unused Input	1
C11-27	Unused Input	1
C11-28	Unused Input	1
C11-29	Unused Input	1
C11-30	Unused Input	1

1.5.3.2 2070 FIO Output Mapping

Pins	Function	IDX
C1-02	Channel Red	6
C1-03	Channel Green	6
C1-04	Channel Red	5
C1-05	Channel Yellow	5
C1-06	Channel Green	5
C1-07	Channel Red	4
C1-08	Channel Yellow	4
C1-09	Channel Green	4
C1-10	Channel Red	3
C1-11	Channel Green	3
C1-12	Channel Red	2
C1-13	Channel Yellow	2
C1-15	Channel Green	2
C1-16	Channel Red	1
C1-17	Channel Yellow	1
C1-18	Channel Green	1
C1-19	Channel Red	12
C1-20	Channel Green	12
C1-21	Channel Red	11
C1-22	Channel Yellow	11
C1-23	Channel Green	11
C1-24	Channel Red	10
C1-25	Channel Yellow	10
C1-26	Channel Green	10
C1-27	Channel Red	9
C1-28	Channel Green	9
C1-29	Channel Red	8
C1-30	Channel Yellow	8
C1-31	Channel Green	8
C1-32	Channel Red	7
C1-33	Channel Yellow	7
C1-34	Channel Green	7

Pins	Function	IDX
C1-35	Channel Green	13
C1-36	Unused Output	1
C1-37	Channel Yellow	13
C1-38	Unused Output	1
C1-100	Unused Output	1
C1-101	Auto Flash Status	1
C1-102	Detector Reset	1
C1-103	Wdt Reset	1
C1-83	Unused Output	1
C1-84	Unused Output	1
C1-85	Channel Red	16
C1-86	Channel Yellow	16
C1-87	Channel Green	16
C1-88	Channel Red	15
C1-89	Channel Yellow	15
C1-90	Channel Green	15
C1-91	Unused Output	1
C1-93	Unused Output	1
C1-94	Channel Red	14
C1-95	Channel Yellow	14
C1-96	Channel Green	14
C1-97	Unused Output	13
C1-98	Unused Output	13
C1-99	Unused Output	13
C11-1	Unused Output	1
C11-2	Unused Output	1
C11-3	Unused Output	1
C11-4	Unused Output	1
C11-5	Unused Output	1
C11-6	Unused Output	1
C11-7	Unused Output	1
C11-8	Unused Output	1

9.3-4 Log Configuration

Volume Occupancy Period	60
VOS Log Combined Periods	0
Speed Trap Log Period	0
Display Metric	
Speed Trap Log Mode	Disabled
VOS Log Mode	Disabled
Cycle MOE Log Mode	Enabled
High Res Log Mode	Enabled
Power On/Off	X
Low Battery	X
Cycle Fault	X
Coord Fault	X
Coord Fail	X
Cycle Fail	X
MMU Flash	X
Local Flash	X
Local Free	X
Preempt Status Change	X
Response Fault	X
Alarm Status Change	X
Door Status Change	X
Pattern Change	X
Detector Status Change	X
Comm Status Change	X
Command Change	X
Data Change Keyboard	X
Controller Download	X
Access Code	X
Priority	X

6.2 Time Zone

Global DST	Enable DST
Standard Time Zone (+/- hr)	0

A.3 Unit Comms

Unit Backup Time	0

1.5.5 Aux Switch

Function	Stop Time All Rings
Index	1

A.5-6 Time Sync

NTP Server Address	0.0.0.0
NTP Start Hour	0
NTP Start Minute	0
NTP Interval Hour	0
NTP Interval Minute	0
GPS Start Hour	1
GPS Start Minute	0
GPS Interval Hour	1
GPS Interval Minute	0
Enable NTP Svr	

1.7 Port 1

BIU 1 (T&F BIU 1)	An error has occurred while processing TextBox 'txtDevicePresent': An error has occurred while executing function IIf(). Check InnerException for further information. ---------- InnerException ---------- Exception has been thrown by the target of an invocation. ---------- InnerException ---------- Index (zero based) must be greater than or equal to zero and less than the size of the argument list.
BIU 2 (T&F BIU 2)	An error has occurred while processing TextBox 'txtDevicePresent': An error has occurred while executing function IIf(). Check InnerException for further information. ---------- InnerException ---------- Exception has been thrown by the target of an invocation. ---------- InnerException ---------- Index (zero based) must be greater than or equal to zero and less than the size of the argument list.
BIU 3 (T&F BIU 3)	An error has occurred while processing TextBox 'txtDevicePresent': An error has occurred while executing function IIf(). Check InnerException for further information. ---------- InnerException ---------- Exception has been thrown by the target of an invocation. ---------- InnerException ---------- Index (zero based) must be greater than or equal to zero and less than the size of the argument list.
BIU 4 (T&F BIU 4)	An error has occurred while processing TextBox 'txtDevicePresent': An error has occurred while executing function IIf(). Check InnerException for further information. ---------- InnerException ---------- Exception has been thrown by the target of an invocation. ---------- InnerException ---------- Index (zero based) must be greater than or equal to zero and less than the size of the argument list.
BIU 9 (Detector BIU 1)	
BIU 10 (Detector BIU 2)	
BIU 11 (Detector BIU 3)	
BIU 12 (Detector BIU 4)	
MMU	
Comm Port	

9.3-4 Hi Res Log Setup

Phase Events	
Ped Events	
Barrier/Ring Events	
Phase Control Events	
Overlap Events	
Detector Events	
Preemption Events	
Coordination Events	
Cabinet/System Events	

An error has occurred while processing TextBox 'txtDevicePresent':
An error has occurred while executing function IIf(). Check InnerException for further information.
---------- InnerException ----------
Exception has been thrown by the target of an invocation.
---------- InnerException ----------
Index (zero based) must be greater than or equal to zero and less than the size of the argument list.

An error has occurred while processing TextBox 'txtDevicePresent':
An error has occurred while executing function IIf(). Check InnerException for further information.
---------- InnerException ----------
Exception has been thrown by the target of an invocation.
---------- InnerException ----------
Index (zero based) must be greater than or equal to zero and less than the size of the argument list.

An error has occurred while processing TextBox 'txtDevicePresent':
An error has occurred while executing function IIf(). Check InnerException for further information.
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Exception has been thrown by the target of an invocation.
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Index (zero based) must be greater than or equal to zero and less than the size of the argument list.

An error has occurred while processing TextBox 'txtDevicePresent':
An error has occurred while executing function IIf(). Check InnerException for further information.
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An error has occurred while processing TextBox 'txtDevicePresent':
An error has occurred while executing function IIf(). Check InnerException for further information.
---------- InnerException ----------
Exception has been thrown by the target of an invocation.
---------- InnerException ----------
Index (zero based) must be greater than or equal to zero and less than the size of the argument list.

B.1.1 Menu Security Options

Enable:		Allow Read-Only:		Timeout (min):	60

B.1.2 Menu Security Users

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
User Id	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pin	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Operation																
Unit																
I/O Map																
Phase																
Overlap																
Detector																
Coord																
Time Base																
Preempt																
Transit																
Logs																
Comm																
Security																
Database																
SW Update																

	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
User Id	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pin	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Operation																
Unit																
I/O Map																
Phase																
Overlap																
Detector																
Coord																
Time Base																
Preempt																
Transit																
Logs																
Comm																
Security																
Database																
SW Update																

	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
User Id	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pin	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Operation																
Unit																
I/O Map																
Phase																
Overlap																
Detector																
Coord																
Time Base																
Preempt																
Transit																
Logs																
Comm																
Security																
Database																
SW Update																

	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64
User Id	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pin	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Operation																
Unit																
I/O Map																
Phase																
Overlap																
Detector																
Coord																
Time Base																
Preempt																
Transit																
Logs																
Comm																
Security																
Database																
SW Update																

A.1 Serial Comms

Port	1	2	3	4	5	8
Protocol	WWV	None	None	None	None	None
Speed	1200	9600	9600	115200	9600	9600
Parity	None	None	None	None	None	None
Flow Control	None	None	None	None	None	None
Address	0	0	0	0	0	0
Group Address	0	0	0	0	0	0
Data Bits	8 data bits	8 data bits	8 data bits	8 data bits	8 data bits	8 data bits
Stop Bits	1 stop bit	1 stop bit	1 stop bit	1 stop bit	1 stop bit	1 stop bit
CTS Delay	0	0	0	0	0	0
RTS Extend	0	0	0	0	0	0

A.2 Ethernet Comms

Port	1	2
IP Address	10.241.12.2	0.0.0.0
Net Mask	255.255.255.0	0.0.0.0
Gateway	0.0.0.0	0.0.0.0
NTCIP Port	161	161
NTCIP Mode	UDP	UDP
AB3418 Port	8001	8001
AB3418 Mode	UDP	UDP
AB3418 Address	1	1
AB3418 Group Address	0	0
Peer to Peer Port	49255	49255

1.9.1 Peer Device	1	2	3	4	5	6	7	8
System Id	0	0	0	0	0	0	0	0
IP Address	0.0.0.0	0.0.0.0	0.0.0.0	0.0.0.0	0.0.0.0	0.0.0.0	0.0.0.0	0.0.0.0
Port	49255	49255	49255	49255	49255	49255	49255	49255
Message Timeout	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Max Retries	3	3	3	3	3	3	3	3
Heartbeat Time	30	30	30	30	30	30	30	30

1.9.2 Peer Function	1	2	3	4	5	6	7	8
Peer Device Num	0	0	0	0	0	0	0	0
Remote Function	Unused	Unused	Unused	Unused	Unused	Unused	Unused	Unused
Remote Function Idx	1	1	1	1	1	1	1	1
Local Function	Unused	Unused	Unused	Unused	Unused	Unused	Unused	Unused
Local Function Idx	1	1	1	1	1	1	1	1
Default State	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF

1.9.2 Peer Function	9	10	11	12	13	14	15	16
Peer Device Num	0	0	0	0	0	0	0	0
Remote Function	Unused	Unused	Unused	Unused	Unused	Unused	Unused	Unused
Remote Function Idx	1	1	1	1	1	1	1	1
Local Function	Unused	Unused	Unused	Unused	Unused	Unused	Unused	Unused
Local Function Idx	1	1	1	1	1	1	1	1
Default State	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF

1.9.2 Peer Function	17	18	19	20	21	22	23	24
Peer Device Num	0	0	0	0	0	0	0	0
Remote Function	Unused	Unused	Unused	Unused	Unused	Unused	Unused	Unused
Remote Function Idx	1	1	1	1	1	1	1	1
Local Function	Unused	Unused	Unused	Unused	Unused	Unused	Unused	Unused
Local Function Idx	1	1	1	1	1	1	1	1
Default State	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF

1.9.2 Peer Function	25	26	27	28	29	30	31	32
Peer Device Num	0	0	0	0	0	0	0	0
Remote Function	Unused	Unused	Unused	Unused	Unused	Unused	Unused	Unused
Remote Function Idx	1	1	1	1	1	1	1	1
Local Function	Unused	Unused	Unused	Unused	Unused	Unused	Unused	Unused
Local Function Idx	1	1	1	1	1	1	1	1
Default State	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF

B.3 System Information

System Id	7CF
Name	Newport and Haun
Location	

1.2 Unit Setup

Auto Ped Clear	Enabled
Red Revert	2.0
Min Yellow Time	3.0
Texas Dmd Mode	Disabled
Texas Dmd Type	4-Phase

1.3 Startup

Flash	0
All Red	0
Start Veh Call	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16
Start Ped Call	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16

1.4 Channel Setup (1-16)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Type	V	V	P	V	V	P	V	V	P	V	V	P	O	O	O	O
Source	1	2	2	3	4	4	5	6	6	7	8	8	1	2	3	4
Alt 1/2 Hz																
Flash Red	X	X		X	X		X	X		X	X		X	X	X	X
Flash Yel																

1.4 Channel Setup (17-32)

	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
Type	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V
Source																
Alt 1/2 Hz																
Flsh Red																
Flsh Yel																

Start Next Phases	2,6

Program Type	McCain Omni eX
Firmware	1.8
Street 1	
Street 2	
Last Modified	10/25/2017 7:50 AM

5.1 Coordination Constants

Correction Mode	Shortway
Max Cycles Trans	3
Coord Max Mode	Maximum 1
Coord Force Mode	Floating
Perm Strategy	Minimum
Omit Strategy	Minimum
Sync Point	End Green
No Early Return	Disable
Sync Ref Time	0
Operational Mode	0

2.5 Phase Concurrency

	1	2	3	4	5	6	7	8
Phase 1					X	X		
Phase 2					X	X		
Phase 3								X
Phase 4							X	X
Phase 5	X	X						
Phase 6	X	X						
Phase 7				X				
Phase 8			X	X				
Phase 9								
Phase 10								
Phase 11								
Phase 12								
Phase 13								
Phase 14								
Phase 15								
Phase 16								

2.4 Phase Enable and Rings

	1	2	3	4	5	6	7	8
Startup	5	2	2	2	5	2	2	2
Enabled	X	X	X	X	X	X	X	X
Ring1	X	X	X	X				
Ring2					X	X	X	X
Ring3								
Ring4								

2.3 Phase Sequence 1

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

2.3 Phase Sequence 2

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

2.3 Phase Sequence 3

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

2.3 Phase Sequence 4

Ring 1	
Ring 2	
Ring 3	
Ring 4	

2.3 Phase Sequence 5

Ring 1	
Ring 2	
Ring 3	
Ring 4	

2.3 Phase Sequence 6

Ring 1	
Ring 2	
Ring 3	
Ring 4	

2.3 Phase Sequence 7

Ring 1	
Ring 2	
Ring 3	
Ring 4	

2.3 Phase Sequence 8

Ring 1	
Ring 2	
Ring 3	
Ring 4	

2.3 Phase Sequence 9

Ring 1	
Ring 2	
Ring 3	
Ring 4	

2.3 Phase Sequence 10

Ring 1	
Ring 2	
Ring 3	
Ring 4	

2.3 Phase Sequence 11

Ring 1	
Ring 2	
Ring 3	
Ring 4	

2.3 Phase Sequence 12

Ring 1	
Ring 2	
Ring 3	
Ring 4	

2.3 Phase Sequence 13

Ring 1	
Ring 2	
Ring 3	
Ring 4	

2.3 Phase Sequence 14

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

2.3 Phase Sequence 15

Ring 1	
Ring 2	
Ring 3	
Ring 4	

2.3 Phase Sequence 16

Ring 1	
Ring 2	
Ring 3	
Ring 4	

2.1 Phase Parameters Set 1	1	2	3	4	5	6	7	8
Min. Green	4	6	4	6	4	6	4	6
Pass/10	2.0	4.0	2.0	2.5	2.0	4.0	2.0	2.5
Max. 1	40	45	25	30	20	35	20	30
Max. 2	0	0	0	0	0	0	0	0
Yel/10	3.6	5.5	3.6	4.8	3.6	5.5	3.6	4.8
Red/10	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Walk	0	5	0	5	0	5	0	0
Pedestrian Clear	0	28	0	37	0	22	0	0
Add In/10	0.0	1.5	0.0	0.0	0.0	1.5	0.0	0.0
Max. Initial	0	20	0	0	0	20	0	0
TBR	0	0	0	0	0	0	0	0
CBR	0	0	0	0	0	0	0	0
TTR	0	0	0	0	0	0	0	0
Reduce/10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Min Gp/10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DM Limit	0	0	0	0	0	0	0	0
DM Stp/10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Rv/10	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Cond Svc Min	0	0	0	0	0	0	0	0
Alt Min Green	0	0	0	0	0	0	0	0
Alt Ps/10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Alternate Walk	0	0	0	0	0	0	0	0
Alt Ped Clear	0	0	0	0	0	0	0	0
Advanced Walk	0	0	0	0	0	0	0	0
Delay Walk	0	0	0	0	0	0	0	0
St Dly/10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Green Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

2.1 Phase Options Set 1	1	2	3	4	5	6	7	8
Phase Omit								
Ped Omit								
Min Recall		X				X		
Max Recall								
Soft Recall								
Ped Recall								
Pedestrian Recycle		X		X		X		
Cond Srv								
Detector Lock								
Dual Entry								
Simul Gap	X	X	X	X	X	X	X	X
Guar Pass								
Add Init Calc								
Walk Rest								
Red Rest								
Flash Entry								
Flash Exit								
CNA-1								
CNA-2								
No Backup								
Max Walk								
Max Extension								
Sequential Timing								
No Min Yellow								

2.1 Phase Parameters Set 2	1	2	3	4	5	6	7	8

Min. Green	4	15	4	15	4	15	4	15
Pass/10	2.0	5.0	2.0	5.0	2.0	5.0	2.0	5.0
Max. 1	15	45	15	45	15	45	15	45
Max. 2	15	45	15	45	15	45	15	45
Yel/10	3.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0
Red/10	1.0	2.0	1.0	2.0	1.0	2.0	1.0	2.0
Walk	0	7	0	7	0	7	0	7
Pedestrian Clear	0	15	0	15	0	15	0	15
Add In/10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max. Initial	0	0	0	0	0	0	0	0
TBR	0	0	0	0	0	0	0	0
CBR	0	0	0	0	0	0	0	0
TTR	0	0	0	0	0	0	0	0
Reduce/10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Min Gp/10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DM Limit	0	0	0	0	0	0	0	0
DM Stp/10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Rv/10	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Cond Svc Min	0	0	0	0	0	0	0	0
Alt Min Green	0	0	0	0	0	0	0	0
Alt Ps/10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Alternate Walk	0	0	0	0	0	0	0	0
Alt Ped Clear	0	0	0	0	0	0	0	0
Advanced Walk	0	0	0	0	0	0	0	0
Delay Walk	0	0	0	0	0	0	0	0
St Dly/10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Green Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

2.1 Phase Options Set 2	1	2	3	4	5	6	7	8
Phase Omit								
Ped Omit								
Min Recall		X			X	X		
Max Recall								
Soft Recall								
Ped Recall								
Pedestrian Recycle		X		X		X		
Cond Srv								
Detector Lock								
Dual Entry								
Simul Gap	X	X	X	X	X	X	X	X
Guar Pass								
Add Init Calc								
Walk Rest								
Red Rest								
Flash Entry								
Flash Exit								
CNA-1								
CNA-2								
No Backup								
Max Walk								
Max Extension								
Sequential Timing								
No Min Yellow								

2.1 Phase Parameters Set 3	1	2	3	4	5	6	7	8
Min. Green	4	15	4	15	4	15	4	15
Pass/10	2.0	5.0	2.0	5.0	2.0	5.0	2.0	5.0

Max. 1	15	45	15	45	15	45	15	45
Max. 2	15	45	15	45	15	45	15	45
Yel/10	3.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0
Red/10	1.0	2.0	1.0	2.0	1.0	2.0	1.0	2.0
Walk	0	7	0	7	0	7	0	7
Pedestrian Clear	0	15	0	15	0	15	0	15
Add In/10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max. Initial	0	0	0	0	0	0	0	0
TBR	0	0	0	0	0	0	0	0
CBR	0	0	0	0	0	0	0	0
TTR	0	0	0	0	0	0	0	0
Reduce/10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Min Gp/10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DM Limit	0	0	0	0	0	0	0	0
DM Stp/10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Rv/10	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Cond Svc Min	0	0	0	0	0	0	0	0
Alt Min Green	0	0	0	0	0	0	0	0
Alt Ps/10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Alternate Walk	0	0	0	0	0	0	0	0
Alt Ped Clear	0	0	0	0	0	0	0	0
Advanced Walk	0	0	0	0	0	0	0	0
Delay Walk	0	0	0	0	0	0	0	0
St Dly/10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Green Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

2.1 Phase Options Set 3	1	2	3	4	5	6	7	8
Phase Omit								
Ped Omit								
Min Recall		X			X	X		
Max Recall								
Soft Recall								
Ped Recall		X				X		
Pedestrian Recycle		X		X		X		
Cond Srv								
Detector Lock								
Dual Entry								
Simul Gap	X	X	X	X	X	X	X	X
Guar Pass								
Add Init Calc								
Walk Rest								
Red Rest								
Flash Entry								
Flash Exit								
CNA-1								
CNA-2								
No Backup								
Max Walk								
Max Extension								
Sequential Timing								
No Min Yellow								

2.1 Phase Parameters Set 4	1	2	3	4	5	6	7	8
Min. Green	4	15	4	15	4	15	4	15
Pass/10	2.0	5.0	2.0	5.0	2.0	5.0	2.0	5.0
Max. 1	15	45	15	45	15	45	15	45
Max. 2	15	45	15	45	15	45	15	45

Yel/10	3.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0
Red/10	1.0	2.0	1.0	2.0	1.0	2.0	1.0	2.0
Walk	0	7	0	7	0	7	0	7
Pedestrian Clear	0	15	0	15	0	15	0	15
Add In/10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max. Initial	0	0	0	0	0	0	0	0
TBR	0	0	0	0	0	0	0	0
CBR	0	0	0	0	0	0	0	0
TTR	0	0	0	0	0	0	0	0
Reduce/10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Min Gp/10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DM Limit	0	0	0	0	0	0	0	0
DM Stp/10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Rv/10	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Cond Svc Min	0	0	0	0	0	0	0	0
Alt Min Green	0	0	0	0	0	0	0	0
Alt Ps/10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Alternate Walk	0	0	0	0	0	0	0	0
Alt Ped Clear	0	0	0	0	0	0	0	0
Advanced Walk	0	0	0	0	0	0	0	0
Delay Walk	0	0	0	0	0	0	0	0
St Dly/10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Green Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

2.1 Phase Options Set 4	1	2	3	4	5	6	7	8
Phase Omit								
Ped Omit								
Min Recall		X				X		
Max Recall								
Soft Recall								
Ped Recall								
Pedestrian Recycle								
Cond Srv								
Detector Lock	X	X	X	X	X	X	X	X
Dual Entry								
Simul Gap	X	X	X	X	X	X	X	X
Guar Pass								
Add Init Calc								
Walk Rest								
Red Rest								
Flash Entry								
Flash Exit								
CNA-1								
CNA-2								
No Backup								
Max Walk								
Max Extension								
Sequential Timing								
No Min Yellow								

3.1 Vehicle Overlap Set 1	1	2	3	4
Type	Minus Green Yellow	Normal	Normal	Normal
Included Phases	1,8			
Modifier Phases	8			
Excluded Phases	2,7			
Excluded Peds	2			
Excluded Walks				
Trail Grn	0	0	0	0
Trailing Yel	0.0	0.0	0.0	0.0
Trailing Red	0.0	0.0	0.0	0.0
Start Delay	0.0	0.0	0.0	0.0
No Trail Grn Phs				
Call Phases				
Actuated Only	False	False	False	False
Detector Lock	False	False	False	False
No Min Yellow	False	False	False	False

3.1 Vehicle Overlap Set 1	5	6	7	8
Type	Normal	Normal	Normal	Normal
Included Phases				
Modifier Phases				
Excluded Phases				
Excluded Peds				
Excluded Walks				
Trail Grn	0	0	0	0
Trailing Yel	0.0	0.0	0.0	0.0
Trailing Red	0.0	0.0	0.0	0.0
Start Delay	0.0	0.0	0.0	0.0
No Trail Grn Phs				
Call Phases				
Actuated Only	False	False	False	False
Detector Lock	False	False	False	False
No Min Yellow	False	False	False	False

3.2 Pedestrian Overlap Set 1	1
Included Phases	
Excluded Phases	
Intervals	None
Call Phases	
Actuated Only	False

3.2 Pedestrian Overlap Set 1	2
Included Phases	
Excluded Phases	
Intervals	None
Call Phases	
Actuated Only	False

3.2 Pedestrian Overlap Set 1	3
Included Phases	
Excluded Phases	
Intervals	None
Call Phases	
Actuated Only	False

3.2 Pedestrian Overlap Set 1	4
Included Phases	
Excluded Phases	
Intervals	None
Call Phases	
Actuated Only	False

3.2 Pedestrian Overlap Set 1	5
Included Phases	
Excluded Phases	
Intervals	None
Call Phases	
Actuated Only	False

3.2 Pedestrian Overlap Set 1	6
Included Phases	
Excluded Phases	
Intervals	None
Call Phases	
Actuated Only	False

3.2 Pedestrian Overlap Set 1	7
Included Phases	
Excluded Phases	
Intervals	None
Call Phases	
Actuated Only	False

3.2 Pedestrian Overlap Set 1	8
Included Phases	
Excluded Phases	
Intervals	None
Call Phases	
Actuated Only	False

4.1 Vehicle Detector Set 1

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
Call	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
Queue																																
Add Init	X	X	X	X	X		X	X	X	X	X		X	X	X	X	X	X	X		X	X	X	X	X		X	X				
Passage	X	X	X	X	X		X	X	X	X	X		X	X	X	X	X	X	X		X	X	X	X	X		X	X				
Red Lock																																
Yellow Lock																																
Volume																																
Occupancy																																
Call Phase	1	2	2	2	2	2	3	4	4	4	4	4	1	3	5	6	6	6	6	6	7	8	8	8	8	8	5	7	0	0	0	0
Switch Phase	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	0	0	0	0	0	0
Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Extend	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	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	0.0	0.0	0.0	0.0	0.0	0.0
Queue Limit	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	0	0	0	0	0	0
VOS Length	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	0	0	0	0	0	0
Alt Passage																																
Alt Min Green																																
Extra Call Phases																																
Call Overlaps																																

4.3 Vehicle Detector Diag Set 1

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
No Act	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	0	0	0	0	0	0
Max Pr	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	0	0	0	0	0	0
Err Cnts	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	0	0	0	0	0	0
Fail Time	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	0	0	0	0	0	0

4.2 Ped Detector Set 1

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Phase	2	4	6	8	0	0	0	0	0	0	0	0	0	0	0	0
Alternate Walk																
Extra Call Phases																
Call Overlaps																

4.4 Ped Detector Diag Set 1

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
No Activity	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max. Presence	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Erratic Counts	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

9.3.3.2 Speed Trap

Speed Trap	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Detector 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Detector 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Distance	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

9.3.3.3 Speed Trap Bin Ranges

Bin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Range	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

5.2 Patterns	1	2	3	4	5	6	7	8
Cycle Time	140	140	140	0	0	0	0	0
Offset Time	75	40	40	0	0	0	0	0
Split	1	2	3	4	5	6	7	8
Sequence	1	1	1	1	1	1	1	1
Correction Mode								
Maximum Mode								
Force Mode								
Perm Strategy								
Omit Strategy								
Early Return	Default	Default	Default	Default	Default	Default	Default	Default
Texas Diamond								
Max2 Phases	0	0	0	0	0	0	0	0
Phase Timing Set	1	1	1	1	1	1	1	1
Phase Option Set	2	2	2	1	1	1	1	1
Overlap Set	1	1	1	1	1	1	1	1
Veh. Det. Set	1	1	1	1	1	1	1	1
Veh. Det. Diag Set	1	1	1	1	1	1	1	1
Ped. Det. Diag Set	1	1	1	1	1	1	1	1
Priority Set	1	1	1	1	1	1	1	1
Ped Ovlp Set	1	1	1	1	1	1	1	1
Det. Reset								

5.2 Patterns	9	10	11	12	13	14	15	16
Cycle Time	0	0	0	0	0	0	0	0
Offset Time	0	0	0	0	0	0	0	0
Split	9	10	11	12	13	14	15	16
Sequence	1	1	1	1	1	14	1	1
Correction Mode								
Maximum Mode								
Force Mode								
Perm Strategy								
Omit Strategy								
Early Return	Default	Default	Default	Default	Default	Default	Default	Default
Texas Diamond								
Max2 Phases	0	0	0	0	0	0	0	0
Phase Timing Set	1	1	1	1	1	1	1	1
Phase Option Set	1	1	1	1	1	1	1	1
Overlap Set	1	1	1	1	1	1	1	1
Veh. Det. Set	1	1	1	1	1	1	1	1
Veh. Det. Diag Set	1	1	1	1	1	1	1	1
Ped. Det. Diag Set	1	1	1	1	1	1	1	1
Priority Set	1	1	1	1	1	1	1	1
Ped Ovlp Set	1	1	1	1	1	1	1	1
Det. Reset								

5.3 Split Table 1

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time (sec)	39	40	13	48	21	58	20	41	0	0	0	0	0	0	0	0
Mode	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Coord. Phase		X				X										
Manual Permit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manual Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

5.3 Split Table 2

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time (sec)	40	32	20	48	21	51	25	43	0	0	0	0	0	0	0	0
Mode	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Coord. Phase		X				X										
Manual Permit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manual Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

5.3 Split Table 3

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time (sec)	40	40	20	40	25	55	29	31	0	0	0	0	0	0	0	0
Mode	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Coord. Phase		X				X										
Manual Permit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manual Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

5.3 Split Table 4

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time (sec)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mode	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Coord. Phase																
Manual Permit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manual Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

5.3 Split Table 5

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time (sec)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mode	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Coord. Phase																
Manual Permit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manual Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

5.3 Split Table 6

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time (sec)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mode	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Coord. Phase																
Manual Permit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manual Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

5.3 Split Table 7

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time (sec)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mode	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Coord. Phase																
Manual Permit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manual Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

5.3 Split Table 8

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time (sec)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mode	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Coord. Phase																
Manual Permit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manual Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

5.3 Split Table 9

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time (sec)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mode	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Coord. Phase																
Manual Permit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manual Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

5.3 Split Table 10

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time (sec)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mode	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Coord. Phase																
Manual Permit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manual Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

5.3 Split Table 11

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time (sec)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mode	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Coord. Phase																
Manual Permit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manual Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

5.3 Split Table 12

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time (sec)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mode	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Coord. Phase																
Manual Permit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manual Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

5.3 Split Table 13

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time (sec)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mode	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Coord. Phase																
Manual Permit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manual Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

5.3 Split Table 14

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time (sec)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mode	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Coord. Phase																
Manual Permit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manual Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

5.3 Split Table 15

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time (sec)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mode	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Coord. Phase																
Manual Permit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manual Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

5.3 Split Table 16

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time (sec)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mode	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Coord. Phase																
Manual Permit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manual Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

6.4 Schedules

	Month												Days Of Week							Date																																					Day
	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Plan
1	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	1
2	X	X	X	X	X	X	X	X	X	X	X	X	X						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	2
3																																																					0
4																																																					0
5																																																					0
6																																																					0
7																																																					0
8																																																					0

	Month												Days Of Week							Date																																					Day
	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Plan
9																																																				0
10																																																					0
11																																																					0
12																																																					0
13																																																					0
14																																																					0
15																																																					0
16																																																					0

6.5 Day Plan 1

Event#	1	2	3	4	5	6	7	8
Hour	6	9	14	20	0	0	0	0
Minute	15	0	0	0	1	0	0	0
Action	1	2	3	14	14	0	0	0

6.5 Day Plan 1

Event#	9	10	11	12	13	14	15	16
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 1

Event#	17	18	19	20	21	22	23	24
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 1

Event#	25	26	27	28	29	30	31	32
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 2

Event#	1	2	3	4	5	6	7	8
Hour	0	9	6	0	0	0	0	0
Minute	1	0	30	0	0	0	0	0
Action	14	2	14	0	0	0	0	0

6.5 Day Plan 2

Event#	9	10	11	12	13	14	15	16
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 2

Event#	17	18	19	20	21	22	23	24
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 2

Event#	25	26	27	28	29	30	31	32
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 3

Event#	1	2	3	4	5	6	7	8
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 3

Event#	9	10	11	12	13	14	15	16
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 3

Event#	17	18	19	20	21	22	23	24
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 3

Event#	25	26	27	28	29	30	31	32
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 4

Event#	1	2	3	4	5	6	7	8
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 4

Event#	9	10	11	12	13	14	15	16
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 4

Event#	17	18	19	20	21	22	23	24
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 4

Event#	25	26	27	28	29	30	31	32
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 5

Event#	1	2	3	4	5	6	7	8
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 5

Event#	9	10	11	12	13	14	15	16
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 5

Event#	17	18	19	20	21	22	23	24
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 5

Event#	25	26	27	28	29	30	31	32
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 6

Event#	1	2	3	4	5	6	7	8
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 6

Event#	9	10	11	12	13	14	15	16
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 6

Event#	17	18	19	20	21	22	23	24
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 6

Event#	25	26	27	28	29	30	31	32
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 7

Event#	1	2	3	4	5	6	7	8
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 7

Event#	9	10	11	12	13	14	15	16
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 7

Event#	17	18	19	20	21	22	23	24
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 7

Event#	25	26	27	28	29	30	31	32
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 8

Event#	1	2	3	4	5	6	7	8
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 8

Event#	9	10	11	12	13	14	15	16
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 8

Event#	17	18	19	20	21	22	23	24
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 8

Event#	25	26	27	28	29	30	31	32
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 9

Event#	1	2	3	4	5	6	7	8
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 9

Event#	9	10	11	12	13	14	15	16
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 9

Event#	17	18	19	20	21	22	23	24
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 9

Event#	25	26	27	28	29	30	31	32
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 10

Event#	1	2	3	4	5	6	7	8
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 10

Event#	9	10	11	12	13	14	15	16
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 10

Event#	17	18	19	20	21	22	23	24
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 10

Event#	25	26	27	28	29	30	31	32
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 11

Event#	1	2	3	4	5	6	7	8
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 11

Event#	9	10	11	12	13	14	15	16
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 11

Event#	17	18	19	20	21	22	23	24
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 11

Event#	25	26	27	28	29	30	31	32
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 12

Event#	1	2	3	4	5	6	7	8
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 12

Event#	9	10	11	12	13	14	15	16
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 12

Event#	17	18	19	20	21	22	23	24
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 12

Event#	25	26	27	28	29	30	31	32
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 13

Event#	1	2	3	4	5	6	7	8
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 13

Event#	9	10	11	12	13	14	15	16
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 13

Event#	17	18	19	20	21	22	23	24
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 13

Event#	25	26	27	28	29	30	31	32
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 14

Event#	1	2	3	4	5	6	7	8
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 14

Event#	9	10	11	12	13	14	15	16
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 14

Event#	17	18	19	20	21	22	23	24
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 14

Event#	25	26	27	28	29	30	31	32
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 15

Event#	1	2	3	4	5	6	7	8
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 15

Event#	9	10	11	12	13	14	15	16
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 15

Event#	17	18	19	20	21	22	23	24
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 15

Event#	25	26	27	28	29	30	31	32
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 16

Event#	1	2	3	4	5	6	7	8
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 16

Event#	9	10	11	12	13	14	15	16
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 16

Event#	17	18	19	20	21	22	23	24
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.5 Day Plan 16

Event#	25	26	27	28	29	30	31	32
Hour	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0

6.6 Action Parameters	1	2	3	4	5	6	7	8
Pattern	1	2	3	0	0	0	0	0
Auxiliary Function								
Special Function								
Special Function								
Detector Reset								
Detector VOS Log	Start Logging	Start Logging	Start Logging	No Action	No Action	No Action	No Action	No Action
Speed Trap Log	Start Logging	Start Logging	Start Logging	No Action	No Action	No Action	No Action	No Action
Cycle MOE Log	Start Logging	Start Logging	Start Logging	No Action	No Action	No Action	No Action	No Action
High Res Log	Start	Start	Start	No Action	No Action	No Action	No Action	No Action

6.6 Action Parameters	9	10	11	12	13	14	15	16
Pattern	0	0	0	0	0	14	0	0
Auxiliary Function								
Special Function								
Special Function								
Detector Reset								
Detector VOS Log	No Action	No Action	No Action	No Action	No Action	Start Logging	No Action	No Action
Speed Trap Log	No Action	No Action	No Action	No Action	No Action	Start Logging	No Action	No Action
Cycle MOE Log	No Action	No Action	No Action	No Action	No Action	Start Logging	No Action	No Action
High Res Log	No Action	No Action	No Action	No Action	No Action	Start	No Action	No Action

6.6 Action Parameters	17	18	19	20	21	22	23	24
Pattern	0	0	0	0	0	0	0	0
Auxiliary Function								
Special Function								
Special Function								
Detector Reset								
Detector VOS Log	No Action	No Action	No Action	No Action	No Action	No Action	No Action	No Action
Speed Trap Log	No Action	No Action	No Action	No Action	No Action	No Action	No Action	No Action
Cycle MOE Log	No Action	No Action	No Action	No Action	No Action	No Action	No Action	No Action
High Res Log	No Action	No Action	No Action	No Action	No Action	No Action	No Action	No Action

7 Preempts	Preempt 1	Preempt 2	Preempt 3	Preempt 4	Preempt 5	Preempt 6	Preempt 7	Preempt 8
Track Phases								
Track Overlaps								
Dwell Phases			2,5	4,7	1,6	3,8		
Dwell Overlaps								
Dwell Peds								
Cycling Phases								
Cycling Overlaps								
Cycling Ped								
Exit Phase								
Locking	X	X	X	X	X	X	X	X
Override Flash								
Override Preempt+1	X	X					X	X
Flash Dwell	X							
Track Green	0	0	0	0	0	0	0	0
Delay	0	0	0	0	0	0	0	0
Maximum Presence	0	0	0	0	0	0	0	0
Minimum Duration	0	0	0	0	0	0	0	0
Minimum Dwell	10	10	10	10	10	10	10	10
Linked Preempt	0	0	0	0	0	0	0	0
Enter Min Green	255	255	255	255	255	255	255	255
Enter Min Walk	255	255	255	255	255	255	255	255
Enter Min Ped Clear	255	255	255	255	255	255	255	255
Enter Min Yellow	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5
Enter Min Red Clear	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5
Track Min Yellow	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5
Track Min Red Clear	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5
Track Ped Overlap								
Dwell Ped Overlap								
All Red Entry								
Track Ped								
Cycling Ped Overlap								
Exit Ped Clear	0	0	0	0	0	0	0	0
Exit Yellow Change	0	0	0	0	0	0	0	0
Exit Red Clear	0	0	0	0	0	0	0	0

8.1 TSP Global Options

Enable	
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
Headway	0
Lockout	0
Node	1
Name	Default

8.2 TSP Strategy Options	Strategy 1 Set 1
Enable	
Override + 1	
Service Phases	
Call Phases	
Omit Phases	
Omit Peds	
Queue Jump Ph	
ETA	0
Input Function	None
Input Index	0
Input Type	Steady
Request Mode	Presence
Checkout Mode	Checkout (Leading Edge)
Checkout Time	180
Max Presence	180
Max Presence Clr	0
Min ON Time	0.0
Min OFF Time	0.0
Delay Time	0.0
Extend Time	0.0
Headway Time	0
Preempt Lockout	0
Arrival Window	0

8.2 TSP Strategy Options	Strategy 2 Set 1
Enable	
Override + 1	
Service Phases	
Call Phases	
Omit Phases	
Omit Peds	
Queue Jump Ph	
ETA	0
Input Function	None
Input Index	0
Input Type	Steady
Request Mode	Presence
Checkout Mode	Checkout (Leading Edge)
Checkout Time	180
Max Presence	180
Max Presence Clr	0
Min ON Time	0.0
Min OFF Time	0.0
Delay Time	0.0
Extend Time	0.0
Headway Time	0
Preempt Lockout	0
Arrival Window	0

8.2 TSP Strategy Options	Strategy 3 Set 1
Enable	
Override + 1	
Service Phases	
Call Phases	
Omit Phases	
Omit Peds	
Queue Jump Ph	
ETA	0
Input Function	None
Input Index	0
Input Type	Steady
Request Mode	Presence
Checkout Mode	Checkout (Leading Edge)
Checkout Time	180
Max Presence	180
Max Presence Clr	0
Min ON Time	0.0
Min OFF Time	0.0
Delay Time	0.0
Extend Time	0.0
Headway Time	0
Preempt Lockout	0
Arrival Window	0

8.2 TSP Strategy Options	Strategy 4 Set 1
Enable	
Override + 1	
Service Phases	
Call Phases	
Omit Phases	
Omit Peds	
Queue Jump Ph	
ETA	0
Input Function	None
Input Index	0
Input Type	Steady
Request Mode	Presence
Checkout Mode	Checkout (Leading Edge)
Checkout Time	180
Max Presence	180
Max Presence Clr	0
Min ON Time	0.0
Min OFF Time	0.0
Delay Time	0.0
Extend Time	0.0
Headway Time	0
Preempt Lockout	0
Arrival Window	0

8.2 TSP Strategy Options	Strategy 5 Set 1
Enable	
Override + 1	
Service Phases	
Call Phases	
Omit Phases	
Omit Peds	
Queue Jump Ph	
ETA	0
Input Function	None
Input Index	0
Input Type	Steady
Request Mode	Presence
Checkout Mode	Checkout (Leading Edge)
Checkout Time	180
Max Presence	180
Max Presence Clr	0
Min ON Time	0.0
Min OFF Time	0.0
Delay Time	0.0
Extend Time	0.0
Headway Time	0
Preempt Lockout	0
Arrival Window	0

8.2 TSP Strategy Options	Strategy 6 Set 1
Enable	
Override + 1	
Service Phases	
Call Phases	
Omit Phases	
Omit Peds	
Queue Jump Ph	
ETA	0
Input Function	None
Input Index	0
Input Type	Steady
Request Mode	Presence
Checkout Mode	Checkout (Leading Edge)
Checkout Time	180
Max Presence	180
Max Presence Clr	0
Min ON Time	0.0
Min OFF Time	0.0
Delay Time	0.0
Extend Time	0.0
Headway Time	0
Preempt Lockout	0
Arrival Window	0

8.2 TSP Strategy Options	Strategy 7 Set 1
Enable	
Override + 1	
Service Phases	
Call Phases	

8.2 TSP Strategy Options	Strategy 8 Set 1
Enable	
Override + 1	
Service Phases	
Call Phases	

8.2 TSP Strategy Options	Strategy 9 Set 1
Enable	
Override + 1	
Service Phases	
Call Phases	

Input Index	0
Input Type	Steady
Request Mode	Presence
Checkout Mode	Checkout (Leading Edge)
Checkout Time	180
Max Presence	180
Max Presence Clr	0
Min ON Time	0.0
Min OFF Time	0.0
Delay Time	0.0
Extend Time	0.0
Headway Time	0
Preempt Lockout	0
Arrival Window	0

Input Index	0
Input Type	Steady
Request Mode	Presence
Checkout Mode	Checkout (Leading Edge)
Checkout Time	180
Max Presence	180
Max Presence Clr	0
Min ON Time	0.0
Min OFF Time	0.0
Delay Time	0.0
Extend Time	0.0
Headway Time	0
Preempt Lockout	0
Arrival Window	0

Input Index	0
Input Type	Steady
Request Mode	Presence
Checkout Mode	Checkout (Leading Edge)
Checkout Time	180
Max Presence	180
Max Presence Clr	0
Min ON Time	0.0
Min OFF Time	0.0
Delay Time	0.0
Extend Time	0.0
Headway Time	0
Preempt Lockout	0
Arrival Window	0

8.2 TSP Strategy Options	Strategy 16	Set 1
Enable		
Override + 1		
Service Phases		
Call Phases		
Omit Phases		
Omit Peds		
Queue Jump Ph		
ETA	0	
Input Function	None	
Input Index	0	
Input Type	Steady	
Request Mode	Presence	
Checkout Mode	Checkout (Leading Edge)	
Checkout Time	180	
Max Presence	180	
Max Presence Clr	0	
Min ON Time	0.0	
Min OFF Time	0.0	
Delay Time	0.0	
Extend Time	0.0	
Headway Time	0	
Preempt Lockout	0	
Arrival Window	0	

8.3 TSP Phase Adjustment Times — Strategy 1 — Set 1

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Extend	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QJump	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

8.3 TSP Phase Adjustment Times — Strategy 2 — Set 1

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Extend	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QJump	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

8.3 TSP Phase Adjustment Times — Strategy 3 — Set 1

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Extend	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QJump	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

8.3 TSP Phase Adjustment Times — Strategy 4 — Set 1

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Extend	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QJump	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

8.3 TSP Phase Adjustment Times Strategy 5 Set 1

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Extend	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QJump	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

8.3 TSP Phase Adjustment Times Strategy 6 Set 1

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Extend	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QJump	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

8.3 TSP Phase Adjustment Times Strategy 7 Set 1

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Extend	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QJump	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

8.3 TSP Phase Adjustment Times Strategy 8 Set 1

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Extend	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QJump	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

8.3 TSP Phase Adjustment Times Strategy 9 Set 1

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Extend	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QJump	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

8.3 TSP Phase Adjustment Times Strategy 10 Set 1

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Extend	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QJump	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

8.3 TSP Phase Adjustment Times Strategy 11 Set 1

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Extend	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QJump	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

8.3 TSP Phase Adjustment Times Strategy 12 Set 1

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Extend	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QJump	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

8.3 TSP Phase Adjustment Times Strategy 13 Set 1

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Extend	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QJump	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

8.3 TSP Phase Adjustment Times Strategy 14 Set 1

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Extend	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QJump	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

8.3 TSP Phase Adjustment Times Strategy 15 Set 1

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Extend	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QJump	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

8.3 TSP Phase Adjustment Times Strategy 16 Set 1

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Extend	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QJump	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

1.6 Logic Gate 1

	Functions	IDX	!	DLY	EXT
Type	Unused				
Out Mode	Normal				
IN1	Unused	1		0	0
IN2	Unused	1		0	0
IN3	Unused	1		0	0
IN4	Unused	1		0	0
OUT	Unused	1		0	0

1.6 Logic Gate 2

	Functions	IDX	!	DLY	EXT
Type	Unused				
Out Mode	Normal				
IN1	Unused	1		0	0
IN2	Unused	1		0	0
IN3	Unused	1		0	0
IN4	Unused	1		0	0
OUT	Unused	1		0	0

1.6 Logic Gate 3

	Functions	IDX	!	DLY	EXT
Type	Unused				
Out Mode	Normal				
IN1	Unused	1		0	0
IN2	Unused	1		0	0
IN3	Unused	1		0	0
IN4	Unused	1		0	0
OUT	Unused	1		0	0

1.6 Logic Gate 4

	Functions	IDX	!	DLY	EXT
Type	Unused				
Out Mode	Normal				
IN1	Unused	1		0	0
IN2	Unused	1		0	0
IN3	Unused	1		0	0
IN4	Unused	1		0	0
OUT	Unused	1		0	0

1.6 Logic Gate 5

	Functions	IDX	!	DLY	EXT
Type	Unused				
Out Mode	Normal				
IN1	Unused	1		0	0
IN2	Unused	1		0	0
IN3	Unused	1		0	0
IN4	Unused	1		0	0
OUT	Unused	1		0	0

1.6 Logic Gate 6

	Functions	IDX	!	DLY	EXT
Type	Unused				
Out Mode	Normal				
IN1	Unused	1		0	0
IN2	Unused	1		0	0
IN3	Unused	1		0	0
IN4	Unused	1		0	0
OUT	Unused	1		0	0

1.6 Logic Gate 7

	Functions	IDX	!	DLY	EXT
Type	Unused				
Out Mode	Normal				
IN1	Unused	1		0	0
IN2	Unused	1		0	0
IN3	Unused	1		0	0
IN4	Unused	1		0	0
OUT	Unused	1		0	0

1.6 Logic Gate 8

	Functions	IDX	!	DLY	EXT
Type	Unused				
Out Mode	Normal				
IN1	Unused	1		0	0
IN2	Unused	1		0	0
IN3	Unused	1		0	0
IN4	Unused	1		0	0
OUT	Unused	1		0	0

1.6 Logic Gate 9

	Functions	IDX	!	DLY	EXT
Type	Unused				
Out Mode	Normal				
IN1	Unused	1		0	0
IN2	Unused	1		0	0
IN3	Unused	1		0	0
IN4	Unused	1		0	0
OUT	Unused	1		0	0

1.6 Logic Gate 10

	Functions	IDX	!	DLY	EXT
Type	Unused				
Out Mode	Normal				
IN1	Unused	1		0	0
IN2	Unused	1		0	0
IN3	Unused	1		0	0
IN4	Unused	1		0	0
OUT	Unused	1		0	0

1.6 Logic Gate 11

	Functions	IDX	!	DLY	EXT
Type	Unused				
Out Mode	Normal				
IN1	Unused	1		0	0
IN2	Unused	1		0	0
IN3	Unused	1		0	0
IN4	Unused	1		0	0
OUT	Unused	1		0	0

1.6 Logic Gate 12

	Functions	IDX	!	DLY	EXT
Type	Unused				
Out Mode	Normal				
IN1	Unused	1		0	0
IN2	Unused	1		0	0
IN3	Unused	1		0	0
IN4	Unused	1		0	0
OUT	Unused	1		0	0

1.6 Logic Gate 13

	Functions	IDX	!	DLY	EXT
Type	Unused				
Out Mode	Normal				
IN1	Unused	1		0	0
IN2	Unused	1		0	0
IN3	Unused	1		0	0
IN4	Unused	1		0	0
OUT	Unused	1		0	0

1.6 Logic Gate 14

	Functions	IDX	!	DLY	EXT
Type	Unused				
Out Mode	Normal				
IN1	Unused	1		0	0
IN2	Unused	1		0	0
IN3	Unused	1		0	0
IN4	Unused	1		0	0
OUT	Unused	1		0	0

1.6 Logic Gate 15

	Functions	IDX	!	DLY	EXT
Type	Unused				
Out Mode	Normal				
IN1	Unused	1		0	0
IN2	Unused	1		0	0
IN3	Unused	1		0	0
IN4	Unused	1		0	0
OUT	Unused	1		0	0

1.6 Logic Gate 16

	Functions	IDX	!	DLY	EXT
Type	Unused				
Out Mode	Normal				
IN1	Unused	1		0	0
IN2	Unused	1		0	0
IN3	Unused	1		0	0
IN4	Unused	1		0	0
OUT	Unused	1		0	0

1.6 Logic Gate 17

	Functions	IDX	!	DLY	EXT
Type	Unused				
Out Mode	Normal				
IN1	Unused	1		0	0
IN2	Unused	1		0	0
IN3	Unused	1		0	0
IN4	Unused	1		0	0
OUT	Unused	1		0	0

1.6 Logic Gate 18

	Functions	IDX	!	DLY	EXT
Type	Unused				
Out Mode	Normal				
IN1	Unused	1		0	0
IN2	Unused	1		0	0
IN3	Unused	1		0	0
IN4	Unused	1		0	0
OUT	Unused	1		0	0

1.6 Logic Gate 19

	Functions	IDX	!	DLY	EXT
Type	Unused				
Out Mode	Normal				
IN1	Unused	1		0	0
IN2	Unused	1		0	0
IN3	Unused	1		0	0
IN4	Unused	1		0	0
OUT	Unused	1		0	0

1.6 Logic Gate 20

	Functions	IDX	!	DLY	EXT
Type	Unused				
Out Mode	Normal				
IN1	Unused	1		0	0
IN2	Unused	1		0	0
IN3	Unused	1		0	0
IN4	Unused	1		0	0
OUT	Unused	1		0	0

1.6 Logic Gate 21

	Functions	IDX	!	DLY	EXT
Type	Unused				
Out Mode	Normal				
IN1	Unused	1		0	0
IN2	Unused	1		0	0
IN3	Unused	1		0	0
IN4	Unused	1		0	0
OUT	Unused	1		0	0

1.6 Logic Gate 22

	Functions	IDX	!	DLY	EXT
Type	Unused				
Out Mode	Normal				
IN1	Unused	1		0	0
IN2	Unused	1		0	0
IN3	Unused	1		0	0
IN4	Unused	1		0	0
OUT	Unused	1		0	0

1.6 Logic Gate 23

	Functions	IDX	!	DLY	EXT
Type	Unused				
Out Mode	Normal				
IN1	Unused	1		0	0
IN2	Unused	1		0	0
IN3	Unused	1		0	0
IN4	Unused	1		0	0
OUT	Unused	1		0	0

1.6 Logic Gate 24

	Functions	IDX	!	DLY	EXT
Type	Unused				
Out Mode	Normal				
IN1	Unused	1		0	0
IN2	Unused	1		0	0
IN3	Unused	1		0	0
IN4	Unused	1		0	0
OUT	Unused	1		0	0

1.6 Logic Gate 25

	Functions	IDX	!	DLY	EXT
Type	Unused				
Out Mode	Normal				
IN1	Unused	1		0	0
IN2	Unused	1		0	0
IN3	Unused	1		0	0
IN4	Unused	1		0	0
OUT	Unused	1		0	0

1.6 Logic Gate 26

	Functions	IDX	!	DLY	EXT
Type	Unused				
Out Mode	Normal				
IN1	Unused	1		0	0
IN2	Unused	1		0	0
IN3	Unused	1		0	0
IN4	Unused	1		0	0
OUT	Unused	1		0	0

1.6 Logic Gate 27

	Functions	IDX	!	DLY	EXT
Type	Unused				
Out Mode	Normal				
IN1	Unused	1		0	0
IN2	Unused	1		0	0
IN3	Unused	1		0	0
IN4	Unused	1		0	0
OUT	Unused	1		0	0

1.6 Logic Gate 28

	Functions	IDX	!	DLY	EXT
Type	Unused				
Out Mode	Normal				
IN1	Unused	1		0	0
IN2	Unused	1		0	0
IN3	Unused	1		0	0
IN4	Unused	1		0	0
OUT	Unused	1		0	0

1.6 Logic Gate 29

	Functions	IDX	!	DLY	EXT
Type	Unused				
Out Mode	Normal				
IN1	Unused	1		0	0
IN2	Unused	1		0	0
IN3	Unused	1		0	0
IN4	Unused	1		0	0
OUT	Unused	1		0	0

1.6 Logic Gate 30

	Functions	IDX	!	DLY	EXT
Type	Unused				
Out Mode	Normal				
IN1	Unused	1		0	0
IN2	Unused	1		0	0
IN3	Unused	1		0	0
IN4	Unused	1		0	0
OUT	Unused	1		0	0

1.6 Logic Gate 31

	Functions	IDX	!	DLY	EXT
Type	Unused				
Out Mode	Normal				
IN1	Unused	1		0	0
IN2	Unused	1		0	0
IN3	Unused	1		0	0
IN4	Unused	1		0	0
OUT	Unused	1		0	0

1.6 Logic Gate 32

	Functions	IDX	!	DLY	EXT
Type	Unused				
Out Mode	Normal				
IN1	Unused	1		0	0
IN2	Unused	1		0	0
IN3	Unused	1		0	0
IN4	Unused	1		0	0
OUT	Unused	1		0	0

1.5.3.1 2070 FIO Input Mapping

Pins	Function	IDX
C1-39	Vehicle Detector	2
C1-40	Vehicle Detector	16
C1-41	Vehicle Detector	8
C1-42	Vehicle Detector	22
C1-43	Vehicle Detector	3
C1-44	Vehicle Detector	17
C1-45	Vehicle Detector	9
C1-46	Vehicle Detector	23
C1-47	Vehicle Detector	6
C1-48	Vehicle Detector	20
C1-49	Vehicle Detector	12
C1-50	Vehicle Detector	26
C1-51	Preempt Detector	1
C1-52	Preempt Detector	2
C1-53	Man Control Enable	1
C1-54	Unused Input	1
C1-55	Vehicle Detector	15
C1-56	Vehicle Detector	1
C1-57	Vehicle Detector	21
C1-58	Vehicle Detector	7
C1-59	Vehicle Detector	27
C1-60	Vehicle Detector	13
C1-61	Vehicle Detector	28
C1-62	Vehicle Detector	14
C11-10	Unused Input	1
C11-11	Unused Input	1
C11-12	Unused Input	1
C11-13	Unused Input	1
C1-63	Vehicle Detector	4
C1-64	Vehicle Detector	18
C1-65	Vehicle Detector	10
C1-66	Vehicle Detector	24

Pins	Function	IDX
C1-67	Pedestrian Detector	1
C1-68	Pedestrian Detector	3
C1-69	Pedestrian Detector	2
C1-70	Pedestrian Detector	4
C1-71	Preempt Detector	3
C1-72	Preempt Detector	4
C1-73	Preempt Detector	5
C1-74	Preempt Detector	6
C1-75	Unused Input	1
C1-76	Vehicle Detector	5
C1-77	Vehicle Detector	19
C1-78	Vehicle Detector	11
C1-79	Vehicle Detector	25
C1-80	Interval Advance	1
C1-81	MMU Flash	1
C1-82	Stop Time All Rings	1
C11-15	Unused Input	1
C11-16	Unused Input	1
C11-17	Unused Input	1
C11-18	Unused Input	1
C11-19	Unused Input	1
C11-20	Unused Input	1
C11-21	Unused Input	1
C11-22	Unused Input	1
C11-23	Unused Input	1
C11-24	Unused Input	1
C11-25	Unused Input	1
C11-26	Unused Input	1
C11-27	Unused Input	1
C11-28	Unused Input	1
C11-29	Unused Input	1
C11-30	Unused Input	1

1.5.3.2 2070 FIO Output Mapping

Pins	Function	IDX
C1-02	Channel Red	6
C1-03	Channel Green	6
C1-04	Channel Red	5
C1-05	Channel Yellow	5
C1-06	Channel Green	5
C1-07	Channel Red	4
C1-08	Channel Yellow	4
C1-09	Channel Green	4
C1-10	Channel Red	3
C1-11	Channel Green	3
C1-12	Channel Red	2
C1-13	Channel Yellow	2
C1-15	Channel Green	2
C1-16	Channel Red	1
C1-17	Channel Yellow	1
C1-18	Channel Green	1
C1-19	Channel Red	12
C1-20	Channel Green	12
C1-21	Channel Red	11
C1-22	Channel Yellow	11
C1-23	Channel Green	11
C1-24	Channel Red	10
C1-25	Channel Yellow	10
C1-26	Channel Green	10
C1-27	Channel Red	9
C1-28	Channel Green	9
C1-29	Channel Red	8
C1-30	Channel Yellow	8
C1-31	Channel Green	8
C1-32	Channel Red	7
C1-33	Channel Yellow	7
C1-34	Channel Green	7

Pins	Function	IDX
C1-35	Channel Green	13
C1-36	Unused Output	1
C1-37	Channel Yellow	13
C1-38	Unused Output	1
C1-100	Unused Output	1
C1-101	Auto Flash Status	1
C1-102	Detector Reset	1
C1-103	Wdt Reset	1
C1-83	Unused Output	1
C1-84	Unused Output	1
C1-85	Channel Red	16
C1-86	Channel Yellow	16
C1-87	Channel Green	16
C1-88	Channel Red	15
C1-89	Channel Yellow	15
C1-90	Channel Green	15
C1-91	Unused Output	1
C1-93	Unused Output	1
C1-94	Channel Red	14
C1-95	Channel Yellow	14
C1-96	Channel Green	14
C1-97	Unused Output	13
C1-98	Unused Output	13
C1-99	Unused Output	13
C11-1	Unused Output	1
C11-2	Unused Output	1
C11-3	Unused Output	1
C11-4	Unused Output	1
C11-5	Unused Output	1
C11-6	Unused Output	1
C11-7	Unused Output	1
C11-8	Unused Output	1

9.3-4 Log Configuration

Volume Occupancy Period	60
VOS Log Combined Periods	0
Speed Trap Log Period	0
Display Metric	
Speed Trap Log Mode	Disabled
VOS Log Mode	Disabled
Cycle MOE Log Mode	Disabled
High Res Log Mode	Disabled
Power On/Off	X
Low Battery	X
Cycle Fault	X
Coord Fault	X
Coord Fail	X
Cycle Fail	X
MMU Flash	X
Local Flash	X
Local Free	X
Preempt Status Change	X
Response Fault	X
Alarm Status Change	X
Door Status Change	X
Pattern Change	X
Detector Status Change	X
Comm Status Change	X
Command Change	X
Data Change Keyboard	X
Controller Download	X
Access Code	X
Priority	X

6.2 Time Zone

Global DST	Enable DST
Standard Time Zone (+/- hr)	0

A.3 Unit Comms

Unit Backup Time	0

1.5.5 Aux Switch

Function	Stop Time All Rings
Index	1

A.5-6 Time Sync

NTP Server Address	0.0.0.0
NTP Start Hour	0
NTP Start Minute	0
NTP Interval Hour	0
NTP Interval Minute	0
GPS Start Hour	1
GPS Start Minute	0
GPS Interval Hour	1
GPS Interval Minute	0
Enable NTP Svr	

1.7 Port 1

BIU 1 (T&F BIU 1)	An error has occurred while processing TextBox 'txtDevicePresent': An error has occurred while executing function IIf(). Check InnerException for further information. ---------- InnerException ---------- Exception has been thrown by the target of an invocation. ---------- InnerException ---------- Index (zero based) must be greater than or equal to zero and less than the size of the argument list.
BIU 2 (T&F BIU 2)	An error has occurred while processing TextBox 'txtDevicePresent': An error has occurred while executing function IIf(). Check InnerException for further information. ---------- InnerException ---------- Exception has been thrown by the target of an invocation. ---------- InnerException ---------- Index (zero based) must be greater than or equal to zero and less than the size of the argument list.
BIU 3 (T&F BIU 3)	An error has occurred while processing TextBox 'txtDevicePresent': An error has occurred while executing function IIf(). Check InnerException for further information. ---------- InnerException ---------- Exception has been thrown by the target of an invocation. ---------- InnerException ---------- Index (zero based) must be greater than or equal to zero and less than the size of the argument list.
BIU 4 (T&F BIU 4)	An error has occurred while processing TextBox 'txtDevicePresent': An error has occurred while executing function IIf(). Check InnerException for further information. ---------- InnerException ---------- Exception has been thrown by the target of an invocation. ---------- InnerException ---------- Index (zero based) must be greater than or equal to zero and less than the size of the argument list.
BIU 9 (Detector BIU 1)	
BIU 10 (Detector BIU 2)	
BIU 11 (Detector BIU 3)	
BIU 12 (Detector BIU 4)	
MMU	
Comm Port	

9.3-4 Hi Res Log Setup

Phase Events	
Ped Events	
Barrier/Ring Events	
Phase Control Events	
Overlap Events	
Detector Events	
Preemption Events	
Coordination Events	
Cabinet/System Events	

An error has occurred while processing TextBox 'txtDevicePresent':
An error has occurred while executing function IIf(). Check InnerException for further information.
---------- InnerException ----------
Exception has been thrown by the target of an invocation.
---------- InnerException ----------
Index (zero based) must be greater than or equal to zero and less than the size of the argument list.

An error has occurred while processing TextBox 'txtDevicePresent':
An error has occurred while executing function IIf(). Check InnerException for further information.
---------- InnerException ----------
Exception has been thrown by the target of an invocation.
---------- InnerException ----------
Index (zero based) must be greater than or equal to zero and less than the size of the argument list.

An error has occurred while processing TextBox 'txtDevicePresent':
An error has occurred while executing function IIf(). Check InnerException for further information.
---------- InnerException ----------
Exception has been thrown by the target of an invocation.
---------- InnerException ----------
Index (zero based) must be greater than or equal to zero and less than the size of the argument list.

An error has occurred while processing TextBox 'txtDevicePresent':
An error has occurred while executing function IIf(). Check InnerException for further information.
---------- InnerException ----------
Exception has been thrown by the target of an invocation.
---------- InnerException ----------
Index (zero based) must be greater than or equal to zero and less than the size of the argument list.

An error has occurred while processing TextBox 'txtDevicePresent':
An error has occurred while executing function IIf(). Check InnerException for further information.
---------- InnerException ----------
Exception has been thrown by the target of an invocation.
---------- InnerException ----------
Index (zero based) must be greater than or equal to zero and less than the size of the argument list.

B.1.1 Menu Security Options

Enable:		Allow Read-Only:		Timeout (min):	60

B.1.2 Menu Security Users

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
User Id	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pin	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Operation																
Unit																
I/O Map																
Phase																
Overlap																
Detector																
Coord																
Time Base																
Preempt																
Transit																
Logs																
Comm																
Security																
Database																
SW Update																

	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
User Id	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pin	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Operation																
Unit																
I/O Map																
Phase																
Overlap																
Detector																
Coord																
Time Base																
Preempt																
Transit																
Logs																
Comm																
Security																
Database																
SW Update																

	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
User Id	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pin	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Operation																
Unit																
I/O Map																
Phase																
Overlap																
Detector																
Coord																
Time Base																
Preempt																
Transit																
Logs																
Comm																
Security																
Database																
SW Update																

	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64
User Id	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pin	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Operation																
Unit																
I/O Map																
Phase																
Overlap																
Detector																
Coord																
Time Base																
Preempt																
Transit																
Logs																
Comm																
Security																
Database																
SW Update																

A.1 Serial Comms

Port	1	2	3	4	5	8
Protocol	WWV	None	None	None	None	None
Speed	1200	9600	9600	115200	9600	9600
Parity	None	None	None	None	None	None
Flow Control	None	None	None	None	None	None
Address	0	0	0	0	0	0
Group Address	0	0	0	0	0	0
Data Bits	8 data bits	8 data bits	8 data bits	8 data bits	8 data bits	8 data bits
Stop Bits	1 stop bit	1 stop bit	1 stop bit	1 stop bit	1 stop bit	1 stop bit
CTS Delay	0	0	0	0	0	0
RTS Extend	0	0	0	0	0	0

A.2 Ethernet Comms

Port	1	2
IP Address	10.241.12.1	0.0.0.0
Net Mask	255.255.255.0	0.0.0.0
Gateway	0.0.0.0	0.0.0.0
NTCIP Port	161	161
NTCIP Mode	UDP	UDP
AB3418 Port	8007	8001
AB3418 Mode	UDP	UDP
AB3418 Address	1	1
AB3418 Group Address	0	0
Peer to Peer Port	49255	49255

1.9.1 Peer Device	1	2	3	4	5	6	7	8
System Id	0	0	0	0	0	0	0	0
IP Address	0.0.0.0	0.0.0.0	0.0.0.0	0.0.0.0	0.0.0.0	0.0.0.0	0.0.0.0	0.0.0.0
Port	49255	49255	49255	49255	49255	49255	49255	49255
Message Timeout	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Max Retries	3	3	3	3	3	3	3	3
Heartbeat Time	30	30	30	30	30	30	30	30

1.9.2 Peer Function	1	2	3	4	5	6	7	8
Peer Device Num	0	0	0	0	0	0	0	0
Remote Function	Unused	Unused	Unused	Unused	Unused	Unused	Unused	Unused
Remote Function Idx	1	1	1	1	1	1	1	1
Local Function	Unused	Unused	Unused	Unused	Unused	Unused	Unused	Unused
Local Function Idx	1	1	1	1	1	1	1	1
Default State	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF

1.9.2 Peer Function	9	10	11	12	13	14	15	16
Peer Device Num	0	0	0	0	0	0	0	0
Remote Function	Unused	Unused	Unused	Unused	Unused	Unused	Unused	Unused
Remote Function Idx	1	1	1	1	1	1	1	1
Local Function	Unused	Unused	Unused	Unused	Unused	Unused	Unused	Unused
Local Function Idx	1	1	1	1	1	1	1	1
Default State	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF

1.9.2 Peer Function	17	18	19	20	21	22	23	24
Peer Device Num	0	0	0	0	0	0	0	0
Remote Function	Unused	Unused	Unused	Unused	Unused	Unused	Unused	Unused
Remote Function Idx	1	1	1	1	1	1	1	1
Local Function	Unused	Unused	Unused	Unused	Unused	Unused	Unused	Unused
Local Function Idx	1	1	1	1	1	1	1	1
Default State	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF

1.9.2 Peer Function	25	26	27	28	29	30	31	32
Peer Device Num	0	0	0	0	0	0	0	0
Remote Function	Unused	Unused	Unused	Unused	Unused	Unused	Unused	Unused
Remote Function Idx	1	1	1	1	1	1	1	1
Local Function	Unused	Unused	Unused	Unused	Unused	Unused	Unused	Unused
Local Function Idx	1	1	1	1	1	1	1	1
Default State	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF

6.6 Action Parameters	25	26	27	28	29	30	31	32
Pattern	0	0	0	0	0	0	0	0
Auxiliary Function								
Special Function								
Special Function								
Detector Reset								
Detector VOS Log	No Action	No Action	No Action	No Action	No Action	No Action	No Action	No Action
Speed Trap Log	No Action	No Action	No Action	No Action	No Action	No Action	No Action	No Action
Cycle MOE Log	No Action	No Action	No Action	No Action	No Action	No Action	No Action	No Action
High Res Log	No Action	No Action	No Action	No Action	No Action	No Action	No Action	No Action

System: 2070 TSCP Rev. 2.14
Master At: THIS LOCATION

District: 08-SAN BERNARDINO
I/C:

Designed By:
Installed By:
Service Info:

Timing Change:	Date Start:	Date End:	Designed:	Installed:
7/15/2010	7/15/2010			12/7/2006

		FLASH
PHASE	1) WESTBOUND SCOTT RD --LEFT TURN	[ ]
	2) EASTBOUND SCOTT ROAD	[ ]
	3)	[ ]
	4) I-215 SOUTHBOUND OFF RAMP	[ ]
	5)	[ ]
	6) WESTBOUND SCOTT ROAD	[ ]
	7)	[ ]
	8)	[ ]

Ø6P

OVERLAP	A)	[ ]
	B)	[ ]
	C)	[ ]
	D)	[ ]
	E)	[ ]
	F)	[ ]

Intersection Layout

Comments and Notes:

RAM Checksum

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2146

Printed: 7/14/2010

Post Mile: 08-RIV-215-15.707

CONFIGURATION PHASE FLAGS

Phases (2-1-1-1)	*
Permitted	1 2 . 4 . 6 . .
Restricted	. . . . .

Phase Recalls (2-1-1-2)	
Vehicle Min	. 2 . . . 6 . .
Vehicle Max	. . . . .
Pedestrian	. . . . .
Bicycle	. . . . .

Phase Locks (2-1-1-3)	*
Red	. . . . .
Yellow	. . . . .
Force/Max	. . . . .

Phase Features (2-1-1-4)	
Double Entry	. . . . .
Rest In Walk	. . . . .
Rest In Red	. . . . .
Walk 2	. . . . .
Max Green 2	. . . . .
Max Green 3	. . . . .

Startup (2-1-1-5)	*
First Green Phases	. . . 4 . . . .
Yellow Start Phases	. 2 . . . 6 . .
Yellow Start Overlaps	. . . . .
Startup All-Red	5.0
Vehicle Recalls	1 2 . 4 . 6 . .
Pedestrian Recalls	. 2 . . . 6 . .

Call To Phase (2-1-2-1)		Omit On Green	
1	. . . . .	1	. . . . .
2	. . . . .	2	. . . . .
3	. . . . .	3	. . . . .
4	. . . . .	4	. . . . .
5	. . . . .	5	. . . . .
6	. . . . .	6	. . . . .
7	. . . . .	7	. . . . .
8	. . . . .	8	. . . . .

Flashing Colors (2-1-2-2)	
Yellow Flash Phases	. . . . .
Yellow Flash Overlap	. . . . .
Flash In Red Phases	. . . . .
Flash In Red Overlap	. . . . .

Special Operation (2-1-2-3)	
Single Exit Phase	. . . . .
Driveway Signal Phases	. . . . .
Driveway Signal Overlaps	. . . . .
Leading Ped Phases	. . . . .

Protected Permissive (2-1-2-4)	
Protected Permissive	. . . . .

Pedestrian (2-1-3)	*
P1	. . . . .
P2	. 2 . . . . .
P3	. . . . .
P4	. . . . .
P5	. . . . .
P6	. . . . . 6 . .
P7	. . . . .
P8	. . . . .

Overlap (2-1-4)				
Overlap	Parent	Omit	No Start	Not
A	. . . . .	. . . . .	. . . . .	. . . . .
B	. . . . .	. . . . .	. . . . .	. . . . .
C	. . . . .	. . . . .	. . . . .	. . . . .
D	. . . . .	. . . . .	. . . . .	. . . . .
E	. . . . .	. . . . .	. . . . .	. . . . .
F	. . . . .	. . . . .	. . . . .	. . . . .

PHASE TIMING

Phase (2-2)	-1- *	-2- *	-3- *	-4- *	-5- *	-6- *	-7- *	-8- *
--- Walk 1 ---		7		0		7		0
Flash Don't Walk		14		0		14		0
Minimum Green	5	5	0	5	0	5	0	0
Det Limit	0	0	0	0	0	0	0	0
Max Initial	10	10	0	10	0	10	0	0
Max Green 1	30	45	0	30	0	45	0	0
Max Green 2	0	0	0	0	0	0	0	0
Max Green 3	0	0	0	0	0	0	0	0
Extension	2.0	2.0	0.0	2.0	0.0	2.0	0.0	0.0
Maximum Gap	2.0	2.0	0.0	2.0	0.0	2.0	0.0	0.0
Minimum Gap	2.0	2.0	0.0	2.0	0.0	2.0	0.0	0.0
Add Per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Reduce Gap By								
Reduce Every	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	3.6	4.3	3.0	4.3	3.0	4.3	3.0	3.0
All-Red	1.0	1.0	0.0	1.0	0.0	1.0	0.0	0.0

Ped/Bike (2-3)	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
--- Walk 2 ---								
Delay/Early Walk								
Solid Don't Walk								
Bike Green								
Bike All-Red								

OVERLAP TIMING

Overlap (2-4)	A	B	C	D	E	F
Green						
Yellow	5.0	5.0	5.0	5.0	5.0	5.0
Red						

Red Revert

Red Revert (2-5)	
Time	5.0
Red To Sec (2-6)	
Red To Sec	OFF

Local Plan (7-1...9) TIMING DATA [Offsets]

COORDINATION

Green Factors or Press [F] to Select Force-Off

	*	Cycle	Multi	Perm	A	B	C	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
Plan 1	Green Factor	110						35	34 28		24 30		74 68		
Plan 2	Green Factor	100						37	24		22		66		
Plan 3	Green Factor	110						36	32		25		73		
Plan 4	Green Factor														
Plan 5	Green Factor														
Plan 6	Green Factor														
Plan 7	Green Factor														
Plan 8	Green Factor														
Plan 9	Green Factor														

Local Plan (7-1...9) PHASE FLAGS

	Lag	Sync	Hold	Omit	Veh Min	Veh Max	Ped	Bike
Plan 1	.2.4.6.8	.2...6..	.....	.....	.....	.....	.....	.....
Plan 2	.2.4.6.8	.2...6..	.....	.....	.....	.....	.....	.....
Plan 3	.2.4.6.8	.2...6..	.....	.....	.....	.....	.....	.....
Plan 4	.....	.....	.....	.....	.....	.....	.....	.....
Plan 5	.....	.....	.....	.....	.....	.....	.....	.....
Plan 6	.....	.....	.....	.....	.....	.....	.....	.....
Plan 7	.....	.....	.....	.....	.....	.....	.....	.....
Plan 8	.....	.....	.....	.....	.....	.....	.....	.....
Plan 9	.....	.....	.....	.....	.....	.....	.....	.....

Master Timer Sync (7-A)
Enable in Plans
.....

Master Sub Master	
Input	
Output	

FREE PLAN PHASE FLAGS

(7-E) Free	
Lag	Omit
.2.4.6.8	.....
Veh Min	Veh Max
.2...6..	.....
Ped	Bike
.....	.....
Cond	Cond Grn
.....	10

MANUAL COMMANDS

Manual Plan (4-1)	
Plan	OffSet
	A

Plan: 1-9
15 or 254 = Flash
14 or 255 = Free
Offset A, B, or C

Special Function Override (4-2)			
#	Control	#	Control
1	NORMAL	3	NORMAL
2	NORMAL	4	NORMAL

Detector Reset	(4-3)
Local Manual (4-4)	OFF

Detectors

Detector Attributes (5-1)

Det	Type	Phases	Lock
1	COUNT+CALL+EXTEND	.2.....	NO
2	COUNT+CALL+EXTEND	.....6..	NO
3	COUNT+CALL+EXTEND	...4....	NO
4	COUNT+CALL+EXTEND	8	NO
5	COUNT+CALL+EXTEND	.2.....	NO
6	COUNT+CALL+EXTEND	.....6..	NO
7	COUNT+CALL+EXTEND	...4....	NO
8	COUNT+CALL+EXTEND	8	NO
9	CALL+EXTEND	.2.....	NO
10	CALL+EXTEND	.....6..	NO
11	CALL+EXTEND	...4....	NO
12	CALL+EXTEND	8	NO
13	COUNT+CALL+EXTEND	....5...	NO
14	COUNT+CALL+EXTEND	1.....	NO
15	COUNT+CALL+EXTEND	.....7.	NO
16	COUNT+CALL+EXTEND	..3....	NO
17	COUNT+CALL+EXTEND	....5...	NO
18	COUNT+CALL+EXTEND	1.....	NO
19	COUNT+CALL+EXTEND	.....7.	NO
20	COUNT+CALL+EXTEND	..3....	NO
21	CALL+EXTEND	.2.....	NO
22	CALL+EXTEND	.....6..	NO
23	CALL+EXTEND	...4....	NO
24	CALL+EXTEND	8	NO
25	COUNT+CALL+EXTEND	.2.....	NO
26	COUNT+CALL+EXTEND	.....6..	NO
27	COUNT+CALL+EXTEND	...4....	NO
28	COUNT+CALL+EXTEND	8	NO
29	PEDESTRIAN	.2.....	NO
30	PEDESTRIAN	.....6..	NO
31	PEDESTRIAN	...4....	NO
32	PEDESTRIAN	8	NO

Slot
I2U
J2U
I6U
J6U
I2L
J2L
I6L
J6L
I4
J4
I8
J8
J1
I1
J5
I5
J9U
I9U
J9L
I9L
I3L
J3L
I7L
J7L
I3U
J3U
I7U
J7U
I 12U
I 13U
I 12L
I 13L

Detector Configuration (5-2)

Det	Delay	Extend	Recall	Port
1			10	1.1
2			10	1.2
3			10	1.3
4			10	1.4
5			10	1.5
6			10	1.6
7			10	1.7
8			10	1.8
9			10	2.1
10			10	2.2
11			10	2.3
12			10	2.4
13			10	3.1
14			10	3.2
15			10	3.3
16			10	3.4
17			10	3.5
18			10	3.6
19			10	3.7
20			10	3.8
21			10	6.2
22			10	6.3
23			10	6.4
24			10	6.5
25			10	4.5
26			10	4.6
27			10	4.7
28			10	4.8
29			10	5.1
30			10	5.2
31			10	5.3
32			10	5.4

Failure Times(5-3)	Minutes
Maximum On Time	
Fail Reset Time	

Failure Override (5-4)	
Detectors 1-8	.....
Detectors 9-16	.....
Detectors 17-24	.....
Detectors 25-32	.....

System Detector Assignment (5-5)

Sys Det	1	2	3	4	5	6	7	8
Det Num								
Sys Det	9	10	11	12	13	14	15	16
Det Num								

CIC Operation (5-6-1)	
Enable in Plans	.....

CIC Values (5-6-2)	Volume	Occupancy	Demand
Smoothing	0.66	0.66	0.66
Multiplier	4.0	0.33	
Exponent	0.50	1.00	

Detector-to-Phase Assignment (5-6-3)

Sys Det	1	2	3	4	5	6	7	8
Phase								
Sys Det	9	10	11	12	13	14	15	16
Phase								

Input File Port-Bit Assignments

332 Cabinet - For Reference Only

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
I-	3.2	1.1	4.5	2.1	3.4	1.3	4.7	2.3	3.6		6.6	5.1	5.2	6.7
		1.5	6.2			1.7	6.4		3.8		2.7	5.3	5.4	6.8
J-	3.1	1.2	4.6	2.2	3.3	1.4	4.8	2.4	3.5		2.8	5.5	5.6	2.5
		1.6	6.3			1.8	6.5		3.7		6.1	5.7	5.8	2.6

TOD SCHEDULE

Table 1 (8-2-1) *		
Time	Plan	OS
0600	1	A
0900	2	A
1400	3	A
1800	2	A
2000	255	A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A

Table 2 (8-2-2)		
Time	Plan	OS
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A

Table 3 (8-2-3)		
Time	Plan	OS
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A

Table 4 (8-2-4)		
Time	Plan	OS
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A

Table 5 (8-2-5)		
Time	Plan	OS
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A

Table 6 (8-2-6)		
Time	Plan	OS
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A

WEEKDAY ASSIGNMENT

Weekday Table Assignments (8-2-7)						
Mon	Tue	Wed	Thu	Fri	Sat	Sun
1	1	1	1	1	2	2

HOLIDAY TABLES

Floating Holiday Table (8-2-8)

#	Mnth	Week	DOW	Table
1			.....	
2			.....	
3			.....	
4			.....	
5			.....	
6			.....	
7			.....	
8			.....	
9			.....	
10			.....	
11			.....	
12			.....	
13			.....	
14			.....	
15			.....	
16			.....	

Fixed Holiday Table (8-2-9)

#	Mnth	Day	DOW	Table
1			.....	
2			.....	
3			.....	
4			.....	
5			.....	
6			.....	
7			.....	
8			.....	
9			.....	
10			.....	
11			.....	
12			.....	
13			.....	
14			.....	
15			.....	
16			.....	

Solar Clock Data (8-4)

North Latitude	34
West Longitude	118
Local Time Zone	8

Sabbatical Clock (8-5)

Hebrew	Ped Recall
Sabbath	.....
Holiday	.....

Daylight Saving (8-6)

Enabled	YES

TOD FUNCTIONS

TOD Functions (8-3)

#	Start	End	DOW	Action	Phases
1			.....		.....
2			.....		.....
3			.....		.....
4			.....		.....
5			.....		.....
6			.....		.....
7			.....		.....
8			.....		.....
9			.....		.....
10			.....		.....
11			.....		.....
12			.....		.....
13			.....		.....
14			.....		.....
15			.....		.....
16			.....		.....

Action Codes:

0. None
1. Permitted
2. Restricted
4. Veh Min Recall
5. Veh Max Recall
6. Ped Recall
7. Bike Recall
8. Red Lock
9. Yellow Lock
10. Force/Max Lock
11. Double Entry
12. Y-Coord C
13. Y-Coord D
14. Free
15. Flashing
16. Walk 2
17. Max Green 2
18. Max Green 3
19. Rest in Walk
20. Rest in Red
21. Free Lag Phases
22. Special Functions
23. Truck Preempt
24. Conditional Service
25. Conditional Service
26. Leading Ped
41. Protected Permissive
42. Protected Permissive

Action Code = Phases added to normal setting

100+Action Code = Phases removed

200+Action Code = Phases replaced

COMMUNICATIONS

C2 (6-1-1)	*
Address	2
Protocol	AB3418
Limit Access	
Baud	1200
Parity	NONE
Data Bits	8
Stop Bits	1
RTS On Time	20
RTS Off Time	20
Handshaking	NORMAL

C20 (6-1-2)	
Address	
Protocol	AB3418
Limit Access	
Baud	1200
Parity	NONE
Data Bits	8
Stop Bits	1
RTS On Time	20
RTS Off Time	20
Handshaking	NORMAL

C21 (6-1-3)	
Address	
Protocol	AB3418
Limit Access	
Baud	1200
Parity	NONE
Data Bits	8
Stop Bits	1
RTS On Time	20
RTS Off Time	20
Handshaking	NORMAL

Limit Access:

0-None
1-Status Only
2-Status, Set Pattern, Time
3-Status, Set Pattern, Time, Manual Plan

SOFT LOGIC

Soft Logic (6-2)							
#	Data	OP	Data	OP	Data	OP	Data
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							

*Refer to User's Manual for Data and OP Codes

CALLBACK NUMBERS

Callback Numbers (6-3...3)	
Line Out	
Local Toll	
Long Distance	
Delay	10
Area Code	
Phone Number	

Line Out	
Local Toll	
Long Distance	
Delay	10
Area Code	
Phone Number	

Line Out	
Local Toll	
Long Distance	
Delay	10
Area Code	
Phone Number	

RAILROAD PREEMPTION

RR 1	(3-1-1)	Timing
	Delay	
	Clear1	10
	Clear 2	
	Clear 3	
	Hold	
	Exit	5
	Min Grn	
	Ped Clr	

Phase Flags (3-1-2)			Pedestrian Flags (3-1-3)			Overlap Flags (3-1-4)		
Grn Hold	Yel Flash	Red Flash	Walk	Flash DW	Solid DW	Grn Hold	Yel Flash	Red Flash
.2..5...	.....	.....	.....	.....	.2.4.6.8	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	12345678	.....	.....	.....	.....	.....	ABCDEF

Exit Parameters (3-1-5)			
Phase Green	Overlap Green	Vehicle Recall	Ped Call
.....	.....	12345678	.2.4.6.8

Configuration (3-1-6)		
Port	Latching	Power-Up
2.5	YES	FLASHING

RR 2	(3-2-1)	Timing
	Delay	
	Clear1	10
	Clear 2	
	Clear 3	
	Hold	
	Exit	
	Min Grn	
	Ped Clr	

Phase Flags (3-2-2)			Pedestrian Flags (3-2-3)			Overlap Flags (3-2-4)		
Grn Hold	Yel Flash	Red Flash	Walk	Flash DW	Solid DW	Grn Hold	Yel Flash	Red Flash
...4..7.	.....	.....	.....	.....	.2.4.6.8	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....
123..6..	.....	.....	.2...6..	.....	...4...8	.....	.....	.....

Exit Parameters (3-2-5)			
Phase Green	Overlap Green	Vehicle Recall	Ped Recall
.....	.....	...4..7.	.....

Configuration (3-2-6)		
Port	Latching	Power-up
2.6	YES	DARK

EMERGENCY VEHICLE PREEMPTION

EVA (3-A)	Preempt Timers			Phase Green	Overlap Green
	Delay	Clear	Max		
*		45	45	.2..5...	.....

Port	Latching	Phase Termination
5.5	NO	ADVANCE

EVB (3-B)	Preempt Timers			Phase Green	Overlap Green
	Delay	Clear	Max		
*		45	45	...4..7.	.....

Port	Latching	Phase Termination
5.6	NO	ADVANCE

EVC (3-C)	Preempt Timers			Phase Green	Overlap Green
	Delay	Clear	Max		
*		45	45	1....6..	.....

Port	Latching	Phase Termination
5.7	NO	ADVANCE

EVD (3-D)	Preempt Timers			Phase Green	Overlap Green
	Delay	Clear	Max		
*		45	45	..3....8	.....

Port	Latching	Phase Termination
5.8	NO	ADVANCE

INPUTS

		7 Wire I/C (2-1-5-1)			
		Input	Port	Input	Port
Enable	NO	R1	3.8	Free	3.6
Max ON		R2	3.5	D2	2.8
Max OFF		R3	3.7	D3	6.1

Manual Control (2-1-5-2)	
Input	Port
Manual Advance	6.6
Advance Enable	6.6

Cabinet Status (2-1-5-3)	
Input	Port
Flash Bus	
Door Ajar	
Flash Sense	6.7
Stop Time	6.8

Special Function (2-1-5-4)	
Input	Port
1	
2	
3	
4	

Battery Backup (2-1-5-5) *	
Port	Operation
2.7	NORMAL

Y-Coordination (2-1-5-6)	
Port C	Port D
6.1	2.8

OUTPUTS

Loadswitch Assignments (2-1-6) +							
A	1	2	22	3	4	24	9
B	5	6	26	7	8	28	10
X	13	14	0	11	12	0	0

Loadswitch Codes:

0 Unused (no output)
1-8 Vehicle 1-8
9-14 Overlap A-F
21-28 Ped 1-8
41-47 Special Functions
41 Protected Permissive Flashing Phase 1
43 Protected Permissive Flashing Phase 3
45 Protected Permissive Flashing Phase 5
47 Protected Permissive Flashing Phase 7
51-57 Special Functions
71-72 Seven Wire I/C

+ middle output of loadswitches 3 and 6
Channel 9 and 10

YELLOW YIELD COOORDINATION

Y-Coord Plans (7-C,D)	Long Grn	No Grn	Offset	Perm	Force-Offs -1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	Coord	Lag	Min Recall	Restricted
Plan C													.2...6..	.2.4.6.8	.....	.....
Plan D													.2...6..	.2.4.6.8	.....	.....

TRANSIT PRIORITY

Local Plans (3-E1...9)		Early Green	Green Extend	Inhibit Cycles	Phase 1 Minimum	Phase 2 Minimum	Phase 3 Minimum	Phase 4 Minimum	Phase 5 Minimum	Phase 6 Minimum	Phase 7 Minimum	Phase 8 Minimum
Plan 1	Green Factor											
Plan 2	Green Factor											
Plan 3	Green Factor											
Plan 4	Green Factor											
Plan 5	Green Factor											
Plan 6	Green Factor											
Plan 7	Green Factor											
Plan 8	Green Factor											
Plan 9	Green Factor											

Enable Priority (3-E-A)	
Enable in Plan	.....

Free Plans (3-E-E)	
Max Green Hold	Hold Phase
	.....

Access Utilities (9-5)	
Password	***
Timeout	

TRUCK PREEMPTION

Truck Preemption (3-F)	Passage	CarryOver	Clearance	Next Preempt	Phase Green	Det 2 Port	Det 3 Port	Det 4 Port	Sign Output	Slave Input	Slave Output

SIGNAL LOG - DISTRICT 8

		E NUMBER: E1054	RIV 215 15.515 CO RT PM:	NAME: S/B SCOTT RD
		INFORMAL CABINET NOTES. OFFICIAL RECORDS ARE KEPT IN IMMS.		
DATE	PERSON	REPAIRS OR WORK COMPLETED		
7/24/15	Safeen	Check Signal Timing. Normal operation		
09.09.15	RL Brace	Annual 210 Monitor Replacement..		
10/2/15	PR	SIGNAL PM ✓		
10/22/15	Safeen	Restore Communication between Master and Local Controllers		

INTERSECTION: Men-Newport/Bradley 7208

Group Assignment: **NONE**
Field Master Assignment: **NONE**
System Reference Number: **2026**

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

Last Database Change: **12/1/2017 8:57**

Change Record					
Change	By	Date	Change	By	Date

Notes:

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

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

Drop Number	**25**	<C/0+0+0>
Zone Number	**0**	<C/0+0+1>
Area Number	**3**	<C/0+0+2>
Area Address	**43**	<C/0+0+3>
QuicNet Channel	**Serial:COM1:**	(QuicNet)

Communication Addresses

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

Manual Selection

Flash Start	**0**	<F/1+0+E>
Red Revert	**2.0**	<F/1+0+F>
All Red Start	**6.0**	<F/1+C+0>

Start / Revert Times

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

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

Row	Column Numbers ----> / Phase Names ---->	Phase 1	2	3	4	5	6	7	8	Row
0	Ped Walk	0	8	0	0	0	8	0	8	0
1	Ped FDW	0	25	0	0	0	22	0	36	1
2	Min Green	5	8	5	6	5	8	5	6	2
3	Type 3 Disconnect	0	0	0	0	0	0	0	0	3
4	Added per Vehicle	0.0	1.5	0.0	0.0	0.0	1.5	0.0	0.0	4
5	Veh Extension	1.5	5.0	1.5	3.0	1.5	5.0	3.0	3.0	5
6	Max Gap	1.5	4.0	1.5	4.0	1.5	4.0	3.0	4.0	6
7	Min Gap	1.5	2.0	1.5	2.0	1.5	2.0	3.0	2.0	7
8	Max Limit	35	45	25	45	35	45	35	45	8
9	Max Limit 2	0	0	0	0	0	0	0	0	9
A	Adv. / Delay Walk	0	0	0	0	0	0	0	0	A
B	PE Min Ped FDW	0	25	0	0	0	22	0	36	B
C	Cond Serv Check	0	0	0	0	0	0	0	0	C
D	Reduce Every	0.0	0.5	0.0	0.5	0.0	0.5	0.0	0.5	D
E	Yellow Change	3.6	5.2	3.6	4.8	3.6	5.2	3.6	4.8	E
F	Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	F

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

	9	A	B	C	D
	- - -	- - -	- - -	- - -	- - -
Phase 1	0	0	0	0	0.0
Phase 2	20	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	20	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	20	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	20	0	0	0	0.0
Max Initial					
Alternate Walk					
Alternate FDW					
Alternate Initial					
Alternate Extension					

Alternate Timing <C+0+F=1>

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

Preempt Timing

	F	Row
Permit	**12345678**	0
Red Lock	_____	1
Yellow Lock	_____	2
Min Recall	**_2___6__**	3
Ped Recall	_____	4
View Set Peds	- - - - -	5
Rest In Walk	_____	6
Red Rest	_____	7
Dual Entry	_____	8
Max Recall	_____	9
Soft Recall	_____	A
Max 2	_____	B
Cond. Service	_____	C
Man Cntrl Calls	_____	D
Yellow Start	**1___5___**	E
First Phases	**_2___6__**	F

Phase Functions <C+0+F=1>

Overlap Assignments <C+0+E=29>

Row	Column Numbers ---->	Overlap 1	2	3	4	5	6	7	8	Row
	Overlap Name ---->									
0	Load Switch Number	0	0	0	0	0	0	0	0	0
1	Veh Set 1 - Phases									1
2	Veh Set 2 - Phases									2
3	Veh Set 3 - Phases									3
4	Neg Veh Phases									4
5	Neg Ped Phases									5
6	Green Omit Phases									6
7	Green Clear Omit Phs.									7
8										8
9										9
A										A
B										B
C										C
D	Green Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	D
E	Yellow Change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	E
F	Red Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	F

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = Solid FDW on EV
5 = Extended Status
6 = International Ped
7 = Flash - Clear Outputs
8 = Split Ring

Extra 2 Flags
1 = AWB During Initial
2 = LMU Installed
3 = Disable Min Walk
4 = QuicNet/4 System
5 = Ignore P/P on EV
6 =
7 = Allow QuicNet PE
8 =

Row		C	Row
0	EV-A	0	0
1	EV-B	0	1
2	EV-C	0	2
3	EV-D	0	3
4	RR-1 *	- - -	4
5	RR-2 *	- - -	5
6	SE-1	0	6
7	SE-2	0	7

Preempt Priority
<C+0+E=125>
(* RR-1 is always Highest, and RR-2 is always Second Highest)

Configuration <C+0+E=125>

Row	Column Numbers ---->	E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Flash to PE Circuits	
6	Flash Entry Phases	
7	Disable Yellow Range	
8	Disable Ovp Yel Range	
9	Overlap Yellow Flash	
A	EV-A Phases	2 5
B	EV-B Phases	4 7
C	EV-C Phases	1 6
D	EV-D Phases	3 8
E	Extra 1 Config. Bits	1
F	IC Select (Interconnect)	

Configuration <C+0+E=125>

	F
Ext. Permit 1 Phases	
Ext. Permit 2 Phases	
Exclusive Ped Assign	
Preempt Non-Lock	12345678
Ped for 2P Output	2
Ped for 6P Output	6
Ped for 4P Output	
Ped for 8P Output	8
Yellow Flash Phases	
Low Priority A Phases	
Low Priority B Phases	
Low Priority C Phases	
Low Priority D Phases	
Restricted Phases	
Extra 2 Config. Bits	

Specials <C+0+F=2>

	F
Fast Green Flash Phase	
Green Flash Phases	
Flashing Walk Phases	
Guaranteed Passage	
Simultaneous Gap Term	12345678
Sequential Timing	
Advance Walk Phases	
Delay Walk Phases	
External Recall	
Start-up Overlap Green	
Max Extension	
Inhibit Ped Reservice	
Semi-Actuated	
Start-up Overlap Yellow	
Start-up Vehicle Calls	12345678
Start-up Ped Calls	12345678

Flash to PE & PE Non-Lock
1 = EV A 5 = RR 1
2 = EV B 6 = RR 2
3 = EV C 7 = SE 1
4 = EV D 8 = SE 2

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 =
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

Row		2	Row
0			0
1	Phase 1	10	1
2	Phase 2	10	2
3	Phase 3	10	3
4	Phase 4	10	4
5	Phase 5	10	5
6	Phase 6	10	6
7	Phase 7	10	7
8	Phase 8	10	8
9			9
A			A
B			B
C			C
D			D
E			E
F			F

Coordination Transition Minimums
<C+0+C=5>

Coord Extra
1 = Programmed WALK Time for Sync Phases
2 = Always Terminate Sync Phase Peds

Row	Column Numbers ---->	Plan 1	2	3	4	5	6	7	8	9	Row
	Plan Name ----->										
0	Cycle Length	100	100	100	100	100	100	100	100	100	0
1	Phase 1 - ForceOff	55	55	55	55	55	55	55	55	55	1
2	Phase 2 - ForceOff	0	0	0	0	0	0	0	0	0	2
3	Phase 3 - ForceOff	20	20	20	20	20	20	20	20	20	3
4	Phase 4 - ForceOff	40	40	40	40	40	40	40	40	40	4
5	Phase 5 - ForceOff	55	55	55	55	55	55	55	55	55	5
6	Phase 6 - ForceOff	0	0	0	0	0	0	0	0	0	6
7	Phase 7 - ForceOff	20	20	20	20	20	20	20	20	20	7
8	Phase 8 - ForceOff	40	40	40	40	40	40	40	40	40	8
9	Ring Offset	0	0	0	0	0	0	0	0	0	9
A	Offset 1	0	0	0	0	0	0	0	0	0	A
B	Offset 2	0	0	0	0	0	0	0	0	0	B
C	Offset 3	0	0	0	0	0	0	0	0	0	C
D	Perm 1 - End	15	15	15	15	15	15	15	15	15	D
E	Hold Release	255	255	255	255	255	255	255	255	255	E
F	Zone Offset	0	0	0	0	0	0	0	0	0	F

Coordination - Bank 1 <C+0+C=1>

Row		E	Row
1	Plan 1 - Sync	_2___6__	1
2	Plan 2 - Sync	_2___6__	2
3	Plan 3 - Sync	_2___6__	3
4	Plan 4 - Sync	_2___6__	4
5	Plan 5 - Sync	_2___6__	5
6	Plan 6 - Sync	_2___6__	6
7	Plan 7 - Sync	_2___6__	7
8	Plan 8 - Sync	_2___6__	8
9	Plan 9 - Sync	_2___6__	9
A	NEMA Sync	_____	A
B	NEMA Hold	_____	B
C			C
D			D
E	Coord Extra	_____	E
F			F

Sync Phases <C+0+C=1>

Row		Plan 1	2	3	4	5	6	7	8	9	Row
0	Ped Adjustment	0	0	0	0	0	0	0	0	0	0
1	Perm 2 - Start	0	0	0	0	0	0	0	0	0	1
2	Perm 2 - End	0	0	0	0	0	0	0	0	0	2
3	Perm 3 - Start	0	0	0	0	0	0	0	0	0	3
4	Perm 3 - End	0	0	0	0	0	0	0	0	0	4
5	Reservice Time	0	0	0	0	0	0	0	0	0	5
6	Reservice Phases	_____	_____	_____	_____	_____	_____	_____	_____	_____	6
7											7
8	Pretimed Phases	_____	_____	_____	_____	_____	_____	_____	_____	_____	8
9	Max Recall	_____	_____	_____	_____	_____	_____	_____	_____	_____	9
A	Perm 1 Veh Phase	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	A
B	Perm 1 Ped Phase	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	B
C	Perm 2 Veh Phase	_____	_____	_____	_____	_____	_____	_____	_____	_____	C
D	Perm 2 Ped Phase	_____	_____	_____	_____	_____	_____	_____	_____	_____	D
E	Perm 3 Veh Phase	_____	_____	_____	_____	_____	_____	_____	_____	_____	E
F	Perm 3 Ped Phase	_____	_____	_____	_____	_____	_____	_____	_____	_____	F

Coordination - Bank 2 <C+0+C=2>

Row		F	Row
0	Free Lag	_2_4_6_8	0
1	Plan 1 - Lag	_2_4_6_8	1
2	Plan 2 - Lag	_2_4_6_8	2
3	Plan 3 - Lag	_2_4_6_8	3
4	Plan 4 - Lag	_2_4_6_8	4
5	Plan 5 - Lag	_2_4_6_8	5
6	Plan 6 - Lag	_2_4_6_8	6
7	Plan 7 - Lag	_2_4_6_8	7
8	Plan 8 - Lag	_2_4_6_8	8
9	Plan 9 - Lag	_2_4_6_8	9
A	External Lag	_____	A
B			B
C			C
D			D
E			E
F			F

Lag Phases <C+0+C=1>

Row	Column 9		Column A		Column B		Column C		Column D		Column E		Column F		Row
0	Spec. Funct. 1	0	NOT-3	0	Max 2	0	Pretimed	0	Set Monday	0	Dial 2 (7-Wire)	0	Sim Term	0	0
1	Spec. Funct. 2	0	NOT-4	0	System Det 1	0	Plan 1	0	Ext. Perm 1	0	Dial 3 (7-Wire)	0	EV-A	71	1
2	Spec. Funct. 3	0	OR-4 (a)	0	System Det 2	0	Plan 2	0	Ext. Perm 2	0	Offset 1 (7-Wire)	0	EV-B	72	2
3	Spec. Funct. 4	0	OR-4 (b)	0	System Det 3	0	Plan 3	0	Reserved	0	Offset 2 (7-Wire)	0	EV-C	73	3
4	NAND-3 (a)	0	OR-5 (a)	0	System Det 4	0	Plan 4	0	Set Clock	0	Offset 3 (7-Wire)	0	EV-D	74	4
5	NAND-3 (b)	0	OR-5 (b)	0	System Det 5	0	Plan 5	0	Stop Time	82	Free (7-Wire)	0	RR-1	51	5
6	NAND-4 (a)	0	OR-6 (a)	0	System Det 6	0	Plan 6	0	Flash Sense	81	Flash (7-Wire)	0	RR-2	52	6
7	NAND-4 (b)	0	OR-6 (b)	0	System Det 7	0	Plan 7	0	Manual Enable	0	Excl. Ped Omit	0	Spec. Event 1	0	7
8	OR-7 (a)	0	Fig 3 Diamond	0	System Det 8	0	Plan 8	0	Man. Advance	0	NOT-1	0	Spec. Event 2	0	8
9	OR-7 (b)	0	Fig 4 Diamond	0	Max Inhibit (nema)	0	Plan 9	0	External Alarm	0	NOT-2	0	External Lag	0	9
A	OR-7 (c)	0	AND-4 (a)	0	Force A (nema)	0	DELAY-A	0	Phase Bank 2	0	OR-1 (a)	0	AND-1 (a)	0	A
B	OR-7 (d)	0	AND-4 (b)	0	Force B (nema)	0	DELAY-B	0	Phase Bank 3	0	OR-1 (b)	0	AND-1 (b)	0	B
C	OR-8 (a)	0	NAND-1 (a)	0	C.N.A. (nema)	0	DELAY-C	0	Overlap Set 2	0	OR-2 (a)	0	AND-2 (a)	0	C
D	OR-8 (b)	0	NAND-1 (b)	0	Hold (nema)	0	DELAY-D	0	Overlap Set 3	0	OR-2 (b)	0	AND-2 (b)	0	D
E	OR-8 (c)	0	NAND-2 (a)	0	Max Recall	0	DELAY-E	0	Detector Set 2	0	OR-3 (a)	0	AND-3 (a)	0	E
F	OR-8 (d)	0	NAND-2 (b)	0	Min Recall	0	DELAY-F	0	Detector Set 3	0	OR-3 (b)	0	AND-3 (b)	0	F

Assignable Inputs <C+0+E=126>

Row	Column 9		Column A		Column B		Column C		Column D		Column E		Column F		Row
0	Phase ON - 1	0	Preempt Fail	0	Flasher 0	0	Free	0	NOT-1	0	TOD Out 1	0	Dial 2 (7-Wire)	0	0
1	Phase ON - 2	0	Sp Evnt Out 1	0	Flasher 1	0	Plan 1	0	OR-1	0	TOD Out 2	0	Dial 3 (7-Wire)	0	1
2	Phase ON - 3	0	Sp Evnt Out 2	0	Fast Flasher	0	Plan 2	0	OR-2	0	TOD Out 3	0	Offset 1 (7-Wire)	0	2
3	Phase ON - 4	0	Sp Evnt Out 3	0	Fig 3 Diamond	0	Plan 3	0	OR-3	0	TOD Out 4	0	Offset 2 (7-Wire)	0	3
4	Phase ON - 5	0	Sp Evnt Out 4	0	Fig 4 Diamond	0	Plan 4	0	AND-1	0	TOD Out 5	0	Offset 3 (7-Wire)	0	4
5	Phase ON - 6	0	Sp Evnt Out 5	0			Plan 5	0	AND-2	0	TOD Out 6	0	Free (7-Wire)	0	5
6	Phase ON - 7	0	Sp Evnt Out 6	0			Plan 6	0	AND-3	0	TOD Out 7	0	Flash (7-Wire)	0	6
7	Phase ON - 8	0	Sp Evnt Out 7	0			Plan 7	0	NOT-2	0	TOD Out 8	0	Preempt	0	7
8	Ph. Check - 1	0	Sp Evnt Out 8	0	NOT-3	0	Plan 8	0	EV-A	0	Adv. Warn - 1	0	Low Priority A	0	8
9	Ph. Check - 2	0			NOT-4	0	Plan 9	0	EV-B	0	Adv. Warn - 2	0	Low Priority B	0	9
A	Ph. Check - 3	0	Detector Fail	0	OR-4	0	Spec. Funct. 3	0	EV-C	0	DELAY-A	0	Low Priority C	0	A
B	Ph. Check - 4	0	Spec. Funct. 1	0	OR-5	0	Spec. Funct. 4	0	EV-D	0	DELAY-B	0	Low Priority D	0	B
C	Ph. Check - 5	0	Spec. Funct. 2	0	OR-6	0	NAND-3	0	RR-1	0	DELAY-C	0			C
D	Ph. Check - 6	0	Central Control	0	AND-4	0	NAND-4	0	RR-2	0	DELAY-D	0			D
E	Ph. Check - 7	0	Excl. Ped DW	0	NAND-1	0	OR-7	0	Spec. Event 1	0	DELAY-E	0			E
F	Ph. Check - 8	0	Excl. Ped WK	0	NAND-2	0	OR-8	0	Spec. Event 2	0	DELAY-F	0			F

Assignable Outputs <C+0+E=127>

Row	Phase Names ---->	Phase 1	2	3	4	5	6	7	8
	Column Numbers ---->	1	2	3	4	5	6	7	8
0	Ped Walk	0	7	0	7	0	7	0	7
1	Ped FDW	0	15	0	15	0	15	0	15
2	Min Green	4	7	4	4	4	7	4	4
3	Type 3 Disconnect	0	20	0	20	0	20	0	20
4	Added per Vehicle	0.0	2.0	0.0	2.0	0.0	2.0	0.0	2.0
5	Veh Extension	2.0	4.0	2.0	2.5	2.0	4.0	2.0	2.5
6	Max Gap	3.0	6.0	3.0	3.0	3.0	6.0	3.0	3.0
7	Min Gap	0.5	2.0	0.5	1.5	0.5	2.0	0.5	1.5
8	Max Limit	20	30	20	25	20	30	20	25
9	Max Limit 2	30	50	30	40	30	50	30	40
A	Adv. / Delay Walk	0	0	0	0	0	0	0	0
B	PE Min Ped FDW	7	7	7	7	7	7	7	7
C	Cond Serv Check	10	10	10	10	10	10	10	10
D	Reduce Every	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
E	Yellow Change	3.0	4.0	3.0	3.0	3.0	4.0	3.0	3.0
F	Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

Phase Timing - Bank 2 <C+0+F=2>

	9	A	B	C	D
	- - -	- - -	- - -	- - -	- - -
Phase 1	0	0	0	0	0.0
Phase 2	20	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	20	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	20	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	20	0	0	0	0.0
Max Initial					
Alternate Walk					
Alternate FDW					
Alternate Initial					
Alternate Extension					

Alternate Timing

Transition Type
0.X = Shortway
1.X = Lengthen
X.1 thru X.4 = Number of cycles when lengthing

Transition Type	0.3	<C/5+1+9>

TBC Transition

Lag Hold Phases	_____	<C/5+1+A>

Coordinated Lag Hold Phases

Sync Output Time	0.0	<C/5+1+C>

7-Wire Master

Daylight Savings Date
If set to all zeros, standard dates will be used.

Begin Month	3	<C/5+2+A>
Begin Week	2	<C/5+2+B>
End Month	11	<C/5+2+C>
End Week	1	<C/5+2+D>

Daylight Savings Time

Time B4 Yellow	0.0	<F/1+C+E>
Phase Number	0	<F/1+C+F>

Advance Warning Beacon - Sign 1

Time B4 Yellow	0.0	<F/1+D+E>
Phase Number	0	<F/1+D+F>

Advance Warning Beacon - Sign 2

Long Failure	0.0	<F/1+0+6>
Short Failure	0.0	<F/1+0+7>

Power Cycle Correction (Default = 0.7)

Row		1	2	3	4	5	6	7	8
0	Ped Walk	0	7	0	7	0	7	0	7
1	Ped FDW	0	15	0	15	0	15	0	15
2	Min Green	4	7	4	4	4	7	4	4
3	Type 3 Disconnect	0	20	0	20	0	20	0	20
4	Added per Vehicle	0.0	2.0	0.0	2.0	0.0	2.0	0.0	2.0
5	Veh Extension	2.0	4.0	2.0	2.5	2.0	4.0	2.0	2.5
6	Max Gap	3.0	6.0	3.0	3.0	3.0	6.0	3.0	3.0
7	Min Gap	0.5	2.0	0.5	1.5	0.5	2.0	0.5	1.5
8	Max Limit	20	30	20	25	20	30	20	25
9	Max Limit 2	30	50	30	40	30	50	30	40
A	Adv. / Delay Walk	0	0	0	0	0	0	0	0
B	PE Min Ped FDW	7	7	7	7	7	7	7	7
C	Cond Serv Check	10	10	10	10	10	10	10	10
D	Reduce Every	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
E	Yellow Change	3.0	4.0	3.0	3.0	3.0	4.0	3.0	3.0
F	Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

Phase Timing - Bank 3 <C+0+F=3>

	9	A	B	C	D
	- - -	- - -	- - -	- - -	- - -
Phase 1	0	0	0	0	0.0
Phase 2	20	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	20	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	20	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	20	0	0	0	0.0
Max Initial					
Alternate Walk					
Alternate FDW					
Alternate Initial					
Alternate Extension					

Alternate Timing

Column Numbers ---->		0	1	2	3	1	3
Row	Detector Name	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
0		39	___45_7_	_2_____	123____8	0.0	0.0
1		40	___45_7_	_____6__	123____8	0.0	0.0
2		41	___45_7_	___4____	123____8	0.0	0.0
3		42	___45_7_	_______8	123____8	0.0	0.0
4		43	___45_7_	_2_____	123____8	0.0	0.0
5		44	___45_7_	_____6__	123____8	0.0	0.0
6		45	___45_7_	___4____	123____8	0.0	0.0
7		46	___45_7_	_______8	123____8	0.0	0.0
8		47	_____67_	_2_____	123____8	0.0	0.0
9		48	_____67_	_____6__	123____8	0.0	0.0
A		49	_____67_	___4____	123____8	0.0	0.0
B		50	_____67_	_______8	123____8	0.0	0.0
C		55	___45_7_	____5___	123____8	0.0	0.0
D		56	___45_7_	1_______	123____8	0.0	0.0
E		57	___45_7_	_____7_	123____8	0.0	0.0
F		58	___45_7_	__3_____	123____8	0.0	0.0

		4	5	6	7	2	4
Row	Detector Name	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
0		59	___45_7_	____5___	123____8	0.0	0.0
1		60	___45_7_	1_______	123____8	0.0	0.0
2		61	___45_7_	_____7_	123____8	0.0	0.0
3		62	___45_7_	__3_____	123____8	0.0	0.0
4		63	___45_7_	_2_____	123____8	0.0	0.0
5		64	___45_7_	_____6__	123____8	0.0	0.0
6		65	___45_7_	___4____	123____8	2.0	0.0
7		66	___45_7_	_______8	123____8	0.0	0.0
8		67	_2_____	_2_____	123____8	0.0	0.0
9		68	_2_____	_____6__	123____8	0.0	0.0
A		69	_2_____	___4____	123____8	0.0	0.0
B		70	_2_____	_______8	123____8	0.0	0.0
C		76	___45_7_	_2_____	123____8	0.0	0.0
D		77	___45_7_	_____6__	123____8	0.0	0.0
E		78	___45_7_	___4____	123____8	0.0	0.0
F		79	___45_7_	_______8	123____8	0.0	0.0

Detector Assignments <C+0+E=126> <C+0+D=0>

Detector Attributes
1 = Full Time Delay
2 = Ped Call
3 =
4 = Count
5 = Extension
6 = Type 3
7 = Calling
8 = Alternate

Det. Assignments
1 = Det. Set 1
2 = Det. Set 2
3 = Det. Set 3
4 =
5 =
6 = Failure - Min Recall
7 = Failure - Max Recall
8 = Report on Failure

	Ped / Phase / Overlap								
Column Numbers ---->	1	2	3	4	5	6	7	8	Row
Walk	0	0	0	0	0	0	0	0	0
Don't Walk	0	0	0	0	0	0	0	0	1
Phase Green	0	0	0	0	0	0	0	0	2
Phase Yellow	0	0	0	0	0	0	0	0	3
Phase Red	0	0	0	0	0	0	0	0	4
Overlap Green	0	0	0	0	0	0	0	0	5
Overlap Yellow	0	0	0	0	0	0	0	0	6
Overlap Red	0	0	0	0	0	0	0	0	7

Redirect Phase Outputs <C+0+E=127>

Cabinet Type	0	<E/125+D+0>

Enable Redirection
(Enable Redirection = 30)

Max OFF (minutes)	60	<D/0+0+1>
Max ON (minutes)	5	<D/0+0+2>

Detector Failure Monitor

	D	Row
		0
Output Port 1	_____	1
Output Port 2	_____	2
Output Port 3	_____	3
Output Port 4	_____	4
Output Port 5	_____	5
Output Port 6	_____	6
Output Port 7	_____	7

Dimming <C+0+E=125>

	D
Number of Digits	0
1 st Digit	0
2 ed Digit	0
3 ed Digit	0
4 th Digit	0
5 th Digit	0
6 th Digit	0
7 th Digit	0
8 th Digit	0
9 th Digit	0
10 th Digit	0
11 th Digit	0
12 th Digit	0
13 th Digit	0
14 th Digit	0
15 th Digit	0

<C+0+C=5>

Dial-Back Telephone Number

Disable Alarms
1 = Stop Time
2 = Flash Sense
3 = Keyboard Entry
4 = Manual Plan
5 = Police Control
6 = External Alarm
7 = Detector Failure
8 =

	B	Row
DELAY-A	0	A
DELAY-B	0	B
DELAY-C	0	C
DELAY-D	0	D
DELAY-E	0	E
DELAY-F	0	F

Delay Logic Times
<C+0+D=0> (seconds)

Omit Alarm	_____	<C/5+F+0>

Disable Alarm Reporting

Time	0	<C/5+C+0>

Redial Time (minutes)
(View Redial Timer at E/2+D+6)

Row	Time	Plan	Offset	Day of Week
0	00 : 00	0	0	
1	00 : 00	0	0	
2	00 : 00	0	0	
3	00 : 00	0	0	
4	00 : 00	0	0	
5	00 : 00	0	0	
6	00 : 00	0	0	
7	00 : 00	0	0	
8	00 : 00	0	0	
9	00 : 00	0	0	
A	00 : 00	0	0	
B	00 : 00	0	0	
C	00 : 00	0	0	
D	00 : 00	0	0	
E	00 : 00	0	0	
F	00 : 00	0	0	

TOD Coordination <C+0+9=0.1>
(Bank 1)

Time	Funct.	Day of Week	Column 4 Phases/Bits
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		

TOD Function <C+0+7=0.1> <C+0+E=27>

Day	Year	Month	Holiday Type
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	

Holiday Dates <C+0+8=1.1>
(Bank 1)

Time	Plan	Offset	Holiday Type
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	

Holiday Events <C+0+9=1.1>
(Bank 1)

T.O.D. Functions
0 =
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 4 - Disable Detector OFF Monitor
Bit 5 - Disable Low Priority Preempt
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 8

Row	Time	Plan	Offset	Day of Week
0	00 : 00	0	0	
1	00 : 00	0	0	
2	00 : 00	0	0	
3	00 : 00	0	0	
4	00 : 00	0	0	
5	00 : 00	0	0	
6	00 : 00	0	0	
7	00 : 00	0	0	
8	00 : 00	0	0	
9	00 : 00	0	0	
A	00 : 00	0	0	
B	00 : 00	0	0	
C	00 : 00	0	0	
D	00 : 00	0	0	
E	00 : 00	0	0	
F	00 : 00	0	0	

TOD Coordination <C+0+9=0.2>
(Bank 2)

Time	Funct.	Holiday Type	Column 4 Phases/Bits
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		

Holiday TOD Function <C+0+7=0.2> <C+0+E=28>

Day	Year	Month	Holiday Type
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	

Holiday Dates <C+0+8=1.2>
(Bank 2)

Time	Plan	Offset	Holiday Type
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	

Holiday Events <C+0+9=1.2>
(Bank 2)

Plan Select
1 thru 9 = Coordination Plan 1 thru 9
14 or E = Free
15 or F = Flash

Offset Select
A = Offset A
B = Offset B
C = Offset C

Month Select
1 = January
2 = February
3 = March
4 = April
5 = May
6 = June
7 = July
8 = August
9 = September
A = October
B = November
C = December

Row	6 Clear	7 Time	8 Ped Call	9 Hold	A Advance	B Force Off	C Vehicle Call	D Permit Phases	E Ped Omit	F Output
0		0								
1		0								
2		0								
3		0								
4		0								
5		0								
6		0								
7		0								
8		0								
9		0								
A		0								
B		0								
C		0								
D		0								
E		0								
F		0								

Special Event Schedule -- Table 1 <C+0+E=27>

Notes:

0 <E/27+5+F>
Limited Service Interval

Row	6 Clear	7 Time	8 Ped Call	9 Hold	A Advance	B Force Off	C Vehicle Call	D Permit Phases	E Ped Omit	F Output
0		0								
1		0								
2		0								
3		0								
4		0								
5		0								
6		0								
7		0								
8		0								
9		0								
A		0								
B		0								
C		0								
D		0								
E		0								
F		0								

Special Event Schedule -- Table 2 <C+0+E=28>

Notes:

0 <E/28+5+F>
Limited Service Interval

Min Time (seconds)	0	<F/1+0+8>

Min Green Before PE Force Off

Max Time (minutes)	2	<F/1+0+9>

Max Preempt Time Before Failure

Min Time (seconds)	0	<F/1+0+A>

Min Time Between Same Preempts
(Does Not Apply To Railroad Preempt)

Low Pri. Channel	1234	<E/125+C+8>

Disable Low Priority Channel

Low Priority
1 = Channel A
2 = Channel B
3 = Channel C
4 = Channel D

Delay Time (seconds)	0	<F/1+A+D>

Bus Delay

Max Time (seconds)	0	<F/1+A+E>

Max Early Green

Max Time (seconds)	0	<F/1+A+F>

Max Green Extension

Row	Time	Headway	Direction	Day of Week
0	00 : 00	0	0	_____
1	00 : 00	0	0	_____
2	00 : 00	0	0	_____
3	00 : 00	0	0	_____
4	00 : 00	0	0	_____
5	00 : 00	0	0	_____
6	00 : 00	0	0	_____
7	00 : 00	0	0	_____
8	00 : 00	0	0	_____
9	00 : 00	0	0	_____
A	00 : 00	0	0	_____
B	00 : 00	0	0	_____
C	00 : 00	0	0	_____
D	00 : 00	0	0	_____
E	00 : 00	0	0	_____
F	00 : 00	0	0	_____

Headway <C+0+9=2.1>

Headway Time
(minutes)
1 thru 9 = 1 thru 9
A = 10
B = 11
C = 12
D = 13
E = 14
F = 15

Low Priority Preemption (Bus Priority)

Only available with *Program 233RV2.B* (and above)
Note: Also see "Time of Day Functions", Function E, Bit 5 (Disable Low Priority)

INTERSECTION: Men-Newport/Menifee 7243

Group Assignment: **NONE**
Field Master Assignment: **NONE**
System Reference Number: **4**

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

Last Database Change: **10/13/2017 14:16**

Change Record					
Change	By	Date	Change	By	Date

Notes:

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

Drop Number	**1**	<C/0+0+0>
Zone Number	**0**	<C/0+0+1>
Area Number	**1**	<C/0+0+2>
Area Address	**13**	<C/0+0+3>
QuicNet Channel	**COM1:**	(QuicNet)

Communication Addresses

Manual Offset

Manual Plan	**14**	<C/0+A+1>
Manual Offset		<C/0+B+1>

Manual Selection

Flash Start	**0**	<F/1+0+E>
Red Revert	**5.0**	<F/1+0+F>
All Red Start	**5.0**	<F/1+C+0>

Start / Revert Times

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

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

Row	Column Numbers ----> / Phase Names ---->	Phase 1	2	3	4	5	6	7	8	Row
0	Ped Walk	0	10	0	10	0	10	0	10	0
1	Ped FDW	0	31	0	31	0	29	0	36	1
2	Min Green	5	8	5	6	5	8	5	6	2
3	Type 3 Disconnect	0	0	0	0	0	0	0	0	3
4	Added per Vehicle	0.0	1.5	0.0	0.0	0.0	1.5	0.0	0.0	4
5	Veh Extension	1.5	4.0	1.5	3.0	1.5	4.0	1.5	3.0	5
6	Max Gap	1.5	5.0	1.5	4.0	1.5	5.0	1.5	4.0	6
7	Min Gap	1.5	2.0	1.5	2.0	1.5	2.0	1.5	2.0	7
8	Max Limit	25	50	25	40	25	50	25	40	8
9	Max Limit 2	0	0	0	0	0	0	0	0	9
A	Adv. / Delay Walk	0	0	0	0	0	0	0	0	A
B	PE Min Ped FDW	0	31	0	31	0	29	0	36	B
C	Cond Serv Check	0	0	0	0	0	0	0	0	C
D	Reduce Every	0.0	1.0	0.0	1.0	0.0	1.0	0.0	1.0	D
E	Yellow Change	3.6	5.5	3.6	4.8	3.6	5.0	3.6	4.8	E
F	Red Clear	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	F

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

	9	A	B	C	D
	- - -	- - -	- - -	- - -	- - -
Phase 1	0	0	0	0	0.0
Phase 2	20	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	20	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	20	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	20	0	0	0	0.0
Max Initial					
Alternate Walk					
Alternate FDW					
Alternate Initial					
Alternate Extension					

Alternate Timing <C+0+F=1>

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

Preempt Timing

	F	Row
Permit	**12345678**	0
Red Lock	_____	1
Yellow Lock	_____	2
Min Recall	**_2___6__**	3
Ped Recall	_____	4
View Set Peds	**- - - - -**	5
Rest In Walk	_____	6
Red Rest	_____	7
Dual Entry	_____	8
Max Recall	_____	9
Soft Recall	_____	A
Max 2	_____	B
Cond. Service	_____	C
Man Cntrl Calls	_____	D
Yellow Start	**1___5___**	E
First Phases	**_2___6__**	F

Phase Functions <C+0+F=1>

Row	Column Numbers ---->	Overlap 1	2	3	4	5	6	7	8
	Overlap Name ---->								
0	Load Switch Number	0	0	0	0	0	0	0	0
1	Veh Set 1 - Phases								
2	Veh Set 2 - Phases								
3	Veh Set 3 - Phases								
4	Neg Veh Phases								
5	Neg Ped Phases								
6	Green Omit Phases								
7	Green Clear Omit Phs.								
8									
9									
A									
B									
C									
D	Green Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	Yellow Change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
F	Red Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Overlap Assignments <C+0+E=29>

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = Solid FDW on EV
5 = Extended Status
6 = International Ped
7 = Flash - Clear Outputs
8 = Split Ring

Extra 2 Flags
1 = AWB During Initial
2 = LMU Installed
3 = Disable Min Walk
4 = QuicNet/4 System
5 = Ignore P/P on EV
6 =
7 = Reserved
8 =

Row		C
0	EV-A	0
1	EV-B	0
2	EV-C	0
3	EV-D	0
4	RR-1 *	- - -
5	RR-2 *	- - -
6	SE-1	0
7	SE-2	0

Preempt Priority <C+0+E=125>

(* RR-1 is always Highest, and RR-2 is always Second Highest)

Row	Column Numbers ---->	E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Flash to PE Circuits	
6	Flash Entry Phases	
7	Disable Yellow Range	
8	Disable Ovp Yel Range	
9	Overlap Yellow Flash	
A	EV-A Phases	2 5
B	EV-B Phases	4 7
C	EV-C Phases	1 6
D	EV-D Phases	3 8
E	Extra 1 Config. Bits	1 5
F	IC Select (Interconnect)	2

Configuration <C+0+E=125>

	F
Ext. Permit 1 Phases	
Ext. Permit 2 Phases	
Exclusive Ped Assign	
Preempt Non-Lock	
Ped for 2P Output	2
Ped for 6P Output	6
Ped for 4P Output	4
Ped for 8P Output	8
Yellow Flash Phases	
Low Priority A Phases	
Low Priority B Phases	
Low Priority C Phases	
Low Priority D Phases	
Restricted Phases	
Extra 2 Config. Bits	

Configuration <C+0+E=125>

	F
Fast Green Flash Phase	
Green Flash Phases	
Flashing Walk Phases	
Guaranteed Passage	
Simultaneous Gap Term	12345678
Sequential Timing	
Advance Walk Phases	
Delay Walk Phases	
External Recall	
Start-up Overlap Green	
Max Extension	
Inhibit Ped Reservice	
Semi-Actuated	
Start-up Overlap Yellow	
Start-up Vehicle Calls	12345678
Start-up Ped Calls	12345678

Specials <C+0+F=2>

Flash to PE & PE Non-Lock
1 = EV A 5 = RR 1
2 = EV B 6 = RR 2
3 = EV C 7 = SE 1
4 = EV D 8 = SE 2

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 =
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

Row		2
0		
1	Phase 1	10
2	Phase 2	10
3	Phase 3	10
4	Phase 4	10
5	Phase 5	10
6	Phase 6	10
7	Phase 7	10
8	Phase 8	10

Coordination Transition Minimums <C+0+C=5>

Coord Extra
1 = Programmed WALK Time for Sync Phases
2 = Always Terminate Sync Phase Peds

Row	Column Numbers ---->	Plan 1	2	3	4	5	6	7	8	9	Row
	Plan Name ----->										
0	Cycle Length	100	100	100	100	100	100	100	100	100	0
1	Phase 1 - ForceOff	55	55	55	55	55	55	55	55	55	1
2	Phase 2 - ForceOff	0	0	0	0	0	0	0	0	0	2
3	Phase 3 - ForceOff	20	20	20	20	20	20	20	20	20	3
4	Phase 4 - ForceOff	40	40	40	40	40	40	40	40	40	4
5	Phase 5 - ForceOff	55	55	55	55	55	55	55	55	55	5
6	Phase 6 - ForceOff	0	0	0	0	0	0	0	0	0	6
7	Phase 7 - ForceOff	20	20	20	20	20	20	20	20	20	7
8	Phase 8 - ForceOff	40	40	40	40	40	40	40	40	40	8
9	Ring Offset	0	0	0	0	0	0	0	0	0	9
A	Offset 1	0	0	0	0	0	0	0	0	0	A
B	Offset 2	0	0	0	0	0	0	0	0	0	B
C	Offset 3	0	0	0	0	0	0	0	0	0	C
D	Perm 1 - End	15	15	15	15	15	15	15	15	15	D
E	Hold Release	255	255	255	255	255	255	255	255	255	E
F	Zone Offset	0	0	0	0	0	0	0	0	0	F

Coordination - Bank 1 <C+0+C=1>

Row		E	Row
0			0
1	Plan 1 - Sync	_2___6__	1
2	Plan 2 - Sync	_2___6__	2
3	Plan 3 - Sync	_2___6__	3
4	Plan 4 - Sync	_2___6__	4
5	Plan 5 - Sync	_2___6__	5
6	Plan 6 - Sync	_2___6__	6
7	Plan 7 - Sync	_2___6__	7
8	Plan 8 - Sync	_2___6__	8
9	Plan 9 - Sync	_2___6__	9
A	NEMA Sync	_____	A
B	NEMA Hold	_____	B
C			C
D			D
E	Coord Extra	_____	E
F			F

Sync Phases <C+0+C=1>

Row		1	2	3	4	5	6	7	8	9	Row
0	Ped Adjustment	0	0	0	0	0	0	0	0	0	0
1	Perm 2 - Start	0	0	0	0	0	0	0	0	0	1
2	Perm 2 - End	0	0	0	0	0	0	0	0	0	2
3	Perm 3 - Start	0	0	0	0	0	0	0	0	0	3
4	Perm 3 - End	0	0	0	0	0	0	0	0	0	4
5	Reservice Time	0	0	0	0	0	0	0	0	0	5
6	Reservice Phases										6
7											7
8	Pretimed Phases										8
9	Max Recall										9
A	Perm 1 Veh Phase	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	A
B	Perm 1 Ped Phase	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	B
C	Perm 2 Veh Phase										C
D	Perm 2 Ped Phase										D
E	Perm 3 Veh Phase										E
F	Perm 3 Ped Phase										F

Coordination - Bank 2 <C+0+C=2>

Row		F	Row
0	Free Lag	_2_4_6_8	0
1	Plan 1 - Lag	_2_4_6_8	1
2	Plan 2 - Lag	_2_4_6_8	2
3	Plan 3 - Lag	_2_4_6_8	3
4	Plan 4 - Lag	_2_4_6_8	4
5	Plan 5 - Lag	_2_4_6_8	5
6	Plan 6 - Lag	_2_4_6_8	6
7	Plan 7 - Lag	_2_4_6_8	7
8	Plan 8 - Lag	_2_4_6_8	8
9	Plan 9 - Lag	_2_4_6_8	9
A	External Lag	_____	A
B			B
C			C
D			D
E			E
F			F

Lag Phases <C+0+C=1>

Row	Column 9		Column A		Column B		Column C		Column D		Column E		Column F		Row
0	Spec. Funct. 1	0	NOT-3	0	Max 2	0	Pretimed	0	Set Monday	0	Dial 2 (7-Wire)	0	Sim Term	0	0
1	Spec. Funct. 2	0	NOT-4	0	System Det 1	0	Plan 1	0	Ext. Perm 1	0	Dial 3 (7-Wire)	0	EV-A	71	1
2	Spec. Funct. 3	0	OR-4 (a)	0	System Det 2	0	Plan 2	0	Ext. Perm 2	0	Offset 1 (7-Wire)	0	EV-B	72	2
3	Spec. Funct. 4	0	OR-4 (b)	0	System Det 3	0	Plan 3	0	Reserved	0	Offset 2 (7-Wire)	0	EV-C	73	3
4	NAND-3 (a)	0	OR-5 (a)	0	System Det 4	0	Plan 4	0	Set Clock	0	Offset 3 (7-Wire)	0	EV-D	74	4
5	NAND-3 (b)	0	OR-5 (b)	0	System Det 5	0	Plan 5	0	Stop Time	82	Free (7-Wire)	0	RR-1	51	5
6	NAND-4 (a)	0	OR-6 (a)	0	System Det 6	0	Plan 6	0	Flash Sense	81	Flash (7-Wire)	0	RR-2	52	6
7	NAND-4 (b)	0	OR-6 (b)	0	System Det 7	0	Plan 7	0	Manual Enable	0	Excl. Ped Omit	0	Spec. Event 1	0	7
8	OR-7 (a)	0	Fig 3 Diamond	0	System Det 8	0	Plan 8	0	Man. Advance	0	NOT-1	0	Spec. Event 2	0	8
9	OR-7 (b)	0	Fig 4 Diamond	0	Max Inhibit (nema)	0	Plan 9	0	External Alarm	0	NOT-2	0	External Lag	0	9
A	OR-7 (c)	0	AND-4 (a)	0	Force A (nema)	0	DELAY-A	0	Phase Bank 2	0	OR-1 (a)	0	AND-1 (a)	0	A
B	OR-7 (d)	0	AND-4 (b)	0	Force B (nema)	0	DELAY-B	0	Phase Bank 3	0	OR-1 (b)	0	AND-1 (b)	0	B
C	OR-8 (a)	0	NAND-1 (a)	0	C.N.A. (nema)	0	DELAY-C	0	Overlap Set 2	0	OR-2 (a)	0	AND-2 (a)	0	C
D	OR-8 (b)	0	NAND-1 (b)	0	Hold (nema)	0	DELAY-D	0	Overlap Set 3	0	OR-2 (b)	0	AND-2 (b)	0	D
E	OR-8 (c)	0	NAND-2 (a)	0	Max Recall	0	DELAY-E	0	Detector Set 2	0	OR-3 (a)	0	AND-3 (a)	0	E
F	OR-8 (d)	0	NAND-2 (b)	0	Min Recall	0	DELAY-F	0	Detector Set 3	0	OR-3 (b)	0	AND-3 (b)	0	F

Assignable Inputs <C+0+E=126>

Row	Column 9		Column A		Column B		Column C		Column D		Column E		Column F		Row
0	Phase ON - 1	0	Preempt Fail	0	Flasher 0	0	Free	0	NOT-1	0	TOD Out 1	0	Dial 2 (7-Wire)	0	0
1	Phase ON - 2	0	Sp Evnt Out 1	0	Flasher 1	0	Plan 1	0	OR-1	0	TOD Out 2	0	Dial 3 (7-Wire)	0	1
2	Phase ON - 3	0	Sp Evnt Out 2	0	Fast Flasher	0	Plan 2	0	OR-2	0	TOD Out 3	0	Offset 1 (7-Wire)	0	2
3	Phase ON - 4	0	Sp Evnt Out 3	0	Fig 3 Diamond	0	Plan 3	0	OR-3	0	TOD Out 4	0	Offset 2 (7-Wire)	0	3
4	Phase ON - 5	0	Sp Evnt Out 4	0	Fig 4 Diamond	0	Plan 4	0	AND-1	0	TOD Out 5	0	Offset 3 (7-Wire)	0	4
5	Phase ON - 6	0	Sp Evnt Out 5	0			Plan 5	0	AND-2	0	TOD Out 6	0	Free (7-Wire)	0	5
6	Phase ON - 7	0	Sp Evnt Out 6	0			Plan 6	0	AND-3	0	TOD Out 7	0	Flash (7-Wire)	0	6
7	Phase ON - 8	0	Sp Evnt Out 7	0			Plan 7	0	NOT-2	0	TOD Out 8	0	Preempt	0	7
8	Ph. Check - 1	0	Sp Evnt Out 8	0	NOT-3	0	Plan 8	0	EV-A	0	Adv. Warn - 1	0	Low Priority A	0	8
9	Ph. Check - 2	0			NOT-4	0	Plan 9	0	EV-B	0	Adv. Warn - 2	0	Low Priority B	0	9
A	Ph. Check - 3	0	Detector Fail	0	OR-4	0	Spec. Funct. 3	0	EV-C	0	DELAY-A	0	Low Priority C	0	A
B	Ph. Check - 4	0	Spec. Funct. 1	0	OR-5	0	Spec. Funct. 4	0	EV-D	0	DELAY-B	0	Low Priority D	0	B
C	Ph. Check - 5	0	Spec. Funct. 2	0	OR-6	0	NAND-3	0	RR-1	0	DELAY-C	0			C
D	Ph. Check - 6	0	Central Control	0	AND-4	0	NAND-4	0	RR-2	0	DELAY-D	0			D
E	Ph. Check - 7	0	Excl. Ped DW	0	NAND-1	0	OR-7	0	Spec. Event 1	0	DELAY-E	0			E
F	Ph. Check - 8	0	Excl. Ped WK	0	NAND-2	0	OR-8	0	Spec. Event 2	0	DELAY-F	0			F

Assignable Outputs <C+0+E=127>

Row	Column Numbers ----> / Phase Names ---->	Phase 1	2	3	4	5	6	7	8
0	Ped Walk	0	10	0	10	0	10	0	10
1	Ped FDW	0	31	0	31	0	29	0	36
2	Min Green	5	8	5	6	5	8	5	6
3	Type 3 Disconnect	0	0	0	0	0	0	0	0
4	Added per Vehicle	0.0	1.5	0.0	0.0	0.0	1.5	0.0	0.0
5	Veh Extension	1.5	4.0	1.5	3.0	1.5	4.0	1.5	3.0
6	Max Gap	1.5	5.0	1.5	4.0	1.5	5.0	1.5	4.0
7	Min Gap	1.5	2.0	1.5	2.0	1.5	2.0	1.5	2.0
8	Max Limit	25	50	25	40	25	50	25	40
9	Max Limit 2	0	0	0	0	0	0	0	0
A	Adv. / Delay Walk	0	0	0	0	0	0	0	0
B	PE Min Ped FDW	0	31	0	31	0	29	0	36
C	Cond Serv Check	0	0	0	0	0	0	0	0
D	Reduce Every	0.0	1.0	0.0	1.0	0.0	1.0	0.0	1.0
E	Yellow Change	3.6	5.5	3.6	4.8	3.6	5.0	3.6	4.8
F	Red Clear	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0

Phase Timing - Bank 2 <C+0+F=2>

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

Max Initial
Alternate Walk
Alternate FDW
Alternate Initial
Alternate Extension

Alternate Timing

Transition Type
0.X = Shortway
1.X = Lengthen
X.1 thru X.4 = Number of cycles when lengthing

Transition Type	0.3	<C/5+1+9>

TBC Transition

Lag Hold Phases	_____	<C/5+1+A>

Coordinated Lag Hold Phases

Sync Output Time	0.0	<C/5+1+C>

7-Wire Master

Daylight Savings Date
If set to all zeros, standard dates will be used.

Begin Month	0	<C/5+2+A>
Begin Week	0	<C/5+2+B>
End Month	0	<C/5+2+C>
End Week	0	<C/5+2+D>

Daylight Savings Time

Row		1	2	3	4	5	6	7	8
0	Ped Walk	0	10	0	10	0	10	0	10
1	Ped FDW	0	31	0	31	0	29	0	36
2	Min Green	5	8	5	6	5	8	5	6
3	Type 3 Disconnect	0	0	0	0	0	0	0	0
4	Added per Vehicle	0.0	1.5	0.0	0.0	0.0	1.5	0.0	0.0
5	Veh Extension	1.5	4.0	1.5	3.0	1.5	4.0	1.5	3.0
6	Max Gap	1.5	5.0	1.5	4.0	1.5	5.0	1.5	4.0
7	Min Gap	1.5	2.0	1.5	2.0	1.5	2.0	1.5	2.0
8	Max Limit	25	50	25	40	25	50	25	40
9	Max Limit 2	0	0	0	0	0	0	0	0
A	Adv. / Delay Walk	0	0	0	0	0	0	0	0
B	PE Min Ped FDW	0	31	0	31	0	29	0	36
C	Cond Serv Check	0	0	0	0	0	0	0	0
D	Reduce Every	0.0	1.0	0.0	1.0	0.0	1.0	0.0	1.0
E	Yellow Change	3.6	5.5	3.6	4.8	3.6	5.0	3.6	4.8
F	Red Clear	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0

Phase Timing - Bank 3 <C+0+F=3>

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

Max Initial
Alternate Walk
Alternate FDW
Alternate Initial
Alternate Extension

Alternate Timing

Time B4 Yellow	0.0	<F/1+C+E>
Phase Number	0	<F/1+C+F>

Advance Warning Beacon - Sign 1

Time B4 Yellow	0.0	<F/1+D+E>
Phase Number	0	<F/1+D+F>

Advance Warning Beacon - Sign 2

Long Failure	0.7	<F/1+0+6>
Short Failure	0.7	<F/1+0+7>

Power Cycle Correction (Default = 0.7)

Column Numbers ---->		0	1	2	3	1	3
Row	*Detector Name*	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
0		39	___45_7_	_2_____	123____8	0.0	0.0
1		40	___45_7_	_____6__	123____8	0.0	0.0
2		41	___45_7_	___4____	123____8	0.0	0.0
3		42	___45_7_	_______8	123____8	6.0	0.0
4		43	___45_7_	_2_____	123____8	0.0	0.0
5		44	___45_7_	_____6__	123____8	0.0	0.0
6		45	___45_7_	___4____	123____8	6.0	0.0
7		46	___45_7_	_______8	123____8	0.0	0.0
8		47	_____67_	_2_____	123____8	0.0	0.0
9		48	_____67_	_____6__	123____8	0.0	0.0
A		49	_____67_	___4____	123____8	0.0	0.0
B		50	_____67_	_______8	123____8	0.0	0.0
C		55	___45_7_	____5___	123____8	0.0	0.0
D		56	___45_7_	1_______	123____8	0.0	0.0
E		57	___45_7_	_____7_	123____8	0.0	0.0
F		58	___45_7_	__3_____	123____8	0.0	0.0

		4	5	6	7	2	4
Row	*Detector Name*	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
0		59	___45_7_	____5___	123____8	0.0	0.0
1		60	___45_7_	1_______	123____8	0.0	0.0
2		61	___45_7_	_____7_	123____8	0.0	0.0
3		62	___45_7_	__3_____	123____8	0.0	0.0
4		63	___45_7_	_2_____	123____8	0.0	0.0
5		64	___45_7_	_____6__	123____8	0.0	0.0
6		65	___45_7_	___4____	123____8	2.0	0.0
7		66	___45_7_	_______8	123____8	0.0	0.0
8		67	_2_____	_2_____	123____8	0.0	0.0
9		68	_2_____	_____6__	123____8	0.0	0.0
A		69	_2_____	___4____	123____8	0.0	0.0
B		70	_2_____	_______8	123____8	0.0	0.0
C		76	___45_7_	_2_____	123____8	0.0	0.0
D		77	___45_7_	_____6__	123____8	0.0	0.0
E		78	___45_7_	___4____	123____8	0.0	0.0
F		79	___45_7_	_______8	123____8	0.0	0.0

Detector Assignments <C+0+E=126> <C+0+D=0>

Detector Attributes
1 = Full Time Delay
2 = Ped Call
3 =
4 = Count
5 = Extension
6 = Type 3
7 = Calling
8 = Alternate

Det. Assignments
1 = Det. Set 1
2 = Det. Set 2
3 = Det. Set 3
4 =
5 =
6 = Failure - Min Recall
7 = Failure - Max Recall
8 = Report on Failure

Column Numbers ---->	Ped / Phase / Overlap 1	2	3	4	5	6	7	8	Row
Walk	0	0	0	0	0	0	0	0	0
Don't Walk	0	0	0	0	0	0	0	0	1
Phase Green	0	0	0	0	0	0	0	0	2
Phase Yellow	0	0	0	0	0	0	0	0	3
Phase Red	0	0	0	0	0	0	0	0	4
Overlap Green	0	0	0	0	0	0	0	0	5
Overlap Yellow	0	0	0	0	0	0	0	0	6
Overlap Red	0	0	0	0	0	0	0	0	7

Redirect Phase Outputs <C+0+E=127>

Cabinet Type	0	<E/125+D+0>

Enable Redirection
(Enable Redirection = 30)

Max OFF (minutes)	60	<D/0+0+1>
Max ON (minutes)	5	<D/0+0+2>

Detector Failure Monitor

	D	Row
		0
Output Port 1		1
Output Port 2		2
Output Port 3		3
Output Port 4		4
Output Port 5		5
Output Port 6		6
Output Port 7		7

Dimming <C+0+E=125>

	D
Number of Digits	0
1 st Digit	0
2 ed Digit	0
3 ed Digit	0
4 th Digit	0
5 th Digit	0
6 th Digit	0
7 th Digit	0
8 th Digit	0
9 th Digit	0
10 th Digit	0
11 th Digit	0
12 th Digit	0
13 th Digit	0
14 th Digit	0
15 th Digit	0

<C+0+C=5>

Dial-Back Telephone Number

Disable Alarms
1 = Stop Time
2 = Flash Sense
3 = Keyboard Entry
4 = Manual Plan
5 = Police Control
6 = External Alarm
7 = Detector Failure
8 =

	B	Row
DELAY-A	0	A
DELAY-B	0	B
DELAY-C	0	C
DELAY-D	0	D
DELAY-E	0	E
DELAY-F	0	F

Delay Logic Times
<C+0+D=0> (seconds)

Omit Alarm		<C/5+F+0>

Disable Alarm Reporting

Time	0	<C/5+C+0>

Redial Time (minutes)
(View Redial Timer at E/2+D+6)

Row	Time	Plan	Offset	Day of Week
0	00 : 00	0	0	
1	00 : 00	0	0	
2	00 : 00	0	0	
3	00 : 00	0	0	
4	00 : 00	0	0	
5	00 : 00	0	0	
6	00 : 00	0	0	
7	00 : 00	0	0	
8	00 : 00	0	0	
9	00 : 00	0	0	
A	00 : 00	0	0	
B	00 : 00	0	0	
C	00 : 00	0	0	
D	00 : 00	0	0	
E	00 : 00	0	0	
F	00 : 00	0	0	

TOD Coordination <C+0+9=0.1>
(Bank 1)

Time	Funct.	Day of Week	Column 4 Phases/Bits
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		

TOD Function <C+0+7=0.1> <C+0+E=27>

Day	Year	Month	Holiday Type
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	

Holiday Dates <C+0+8=1.1>
(Bank 1)

Time	Plan	Offset	Holiday Type
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	

Holiday Events <C+0+9=1.1>
(Bank 1)

T.O.D. Functions
0 =
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 4 - Disable Detector OFF Monitor
Bit 5 - Disable Low Priority Preempt
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 8

Row	Time	Plan	Offset	Day of Week
0	00 : 00	0	0	
1	00 : 00	0	0	
2	00 : 00	0	0	
3	00 : 00	0	0	
4	00 : 00	0	0	
5	00 : 00	0	0	
6	00 : 00	0	0	
7	00 : 00	0	0	
8	00 : 00	0	0	
9	00 : 00	0	0	
A	00 : 00	0	0	
B	00 : 00	0	0	
C	00 : 00	0	0	
D	00 : 00	0	0	
E	00 : 00	0	0	
F	00 : 00	0	0	

TOD Coordination <C+0+9=0.2>
(Bank 2)

Time	Funct.	Holiday Type	Column 4 Phases/Bits
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		

Holiday TOD Function <C+0+7=0.2> <C+0+E=28>

Day	Year	Month	Holiday Type
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	

Holiday Dates <C+0+8=1.2>
(Bank 2)

Time	Plan	Offset	Holiday Type
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	

Holiday Events <C+0+9=1.2>
(Bank 2)

Plan Select
1 thru 9 = Coordination Plan 1 thru 9
14 or E = Free
15 or F = Flash

Offset Select
A = Offset A
B = Offset B
C = Offset C

Month Select
1 = January
2 = February
3 = March
4 = April
5 = May
6 = June
7 = July
8 = August
9 = September
A = October
B = November
C = December

Row	6 Clear	7 Time	8 Ped Call	9 Hold	A Advance	B Force Off	C Vehicle Call	D Permit Phases	E Ped Omit	F Output
0		0								
1		0								
2		0								
3		0								
4		0								
5		0								
6		0								
7		0								
8		0								
9		0								
A		0								
B		0								
C		0								
D		0								
E		0								
F		0								

Notes:

0 <E/27+5+F>
Limited Service Interval

Special Event Schedule -- Table 1 <C+0+E=27>

Row	6 Clear	7 Time	8 Ped Call	9 Hold	A Advance	B Force Off	C Vehicle Call	D Permit Phases	E Ped Omit	F Output
0		0								
1		0								
2		0								
3		0								
4		0								
5		0								
6		0								
7		0								
8		0								
9		0								
A		0								
B		0								
C		0								
D		0								
E		0								
F		0								

Notes:

0 <E/28+5+F>
Limited Service Interval

Special Event Schedule -- Table 2 <C+0+E=28>

Min Time (seconds) **0** <F/1+0+8>

Min Green Before PE Force Off

Max Time (minutes) **4** <F/1+0+9>

Max Preempt Time Before Failure

Min Time (seconds) **0** <F/1+0+A>

Min Time Between Same Preempts

(Does Not Apply To Railroad Preempt)

Low Pri. Channel **1234**____ <E/125+C+8>

Disable Low Priority Channel

Low Priority
1 = Channel A
2 = Channel B
3 = Channel C
4 = Channel D

Delay Time (seconds) **0** <F/1+A+D>

Bus Delay

Max Time (seconds) **0** <F/1+A+E>

Max Early Green

Max Time (seconds) **0** <F/1+A+F>

Max Green Extension

Row	Time	Headway	Direction	Day of Week
0	00 : 00	0	0	_____
1	00 : 00	0	0	_____
2	00 : 00	0	0	_____
3	00 : 00	0	0	_____
4	00 : 00	0	0	_____
5	00 : 00	0	0	_____
6	00 : 00	0	0	_____
7	00 : 00	0	0	_____
8	00 : 00	0	0	_____
9	00 : 00	0	0	_____
A	00 : 00	0	0	_____
B	00 : 00	0	0	_____
C	00 : 00	0	0	_____
D	00 : 00	0	0	_____
E	00 : 00	0	0	_____
F	00 : 00	0	0	_____

Headway <C+0+9=2.1>

Headway Time
(minutes)
1 thru 9 = 1 thru 9
A = 10
B = 11
C = 12
D = 13
E = 14
F = 15

Low Priority Preemption (Bus Priority)

Only available with *Program 233RV2.B* (and above)

Note: Also see "Time of Day Functions", Function E, Bit 5 (Disable Low Priority)

Department of Transportation, California Caltrans 2070 Controller Timing Chart TSCP 2.14 PAGE 1

Location: SCOTTS ROAD @ I-215 NORTHBOUND RAMP
System: 2070 TSCP Rev. 2.14
Master At: I-215 S/B RAMP
District: 08 - SAN BERNARDINO
I/C:
Designed By:
Installed By:
Service Info:

Timing Change:	Date Start:	Date End:	Designed:	Installed:
7/15/2010	7/15/2010			12/7/2006

		FLASH
PHASE	1)	[ ]
	2) EASTBOUND SCOTT ROAD	[ ]
	3)	[ ]
	~~4) I-215 NORTHBOUND OFF RAMP~~	[ ]
	5) EASTBOUND SCOTT RD. LEFT TURN	[ ]
	6) WESTBOUND SCOTT ROAD	[ ]
	7)	[ ]
	8) I-215 N/B OFF RAMP?	[ ]

Ø6 P ONLY (* NO Ø2P)

OVERLAP	A)	[ ]
	B)	[ ]
	C)	[ ]
	D)	[ ]
	E)	[ ]
	F)	[ ]

Intersection Layout

Comments and Notes:

RAM Checksum

Page 2: 55B0	Page 7: D2FD
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Page 5: 522D	Page 10: 1611
Page 6: 17E3	Page 11: C381

Printed: 7/14/2010

Post Mile: 08-RIV-215-15.314

CONFIGURATION PHASE FLAGS

Phases (2-1-1-1)	*
Permitted	.2..56.8
Restricted	.....

Phase Locks (2-1-1-3)	*
Red	.....
Yellow	.....
Force/Max	.....

Phase Features (2-1-1-4)	
Double Entry	.....
Rest In Walk	.....
Rest In Red	.....
Walk 2	.....
Max Green 2	.....
Max Green 3	.....

Startup (2-1-1-5)	*
First Green Phases	8
Yellow Start Phases	.2...6..
Yellow Start Overlaps	.....
Startup All-Red	5.0
Vehicle Recalls	.2..56.8
Pedestrian Recalls	.2...6..

Phase Recalls (2-1-1-2)	
Vehicle Min	.2...6..
Vehicle Max	.....
Pedestrian	.....
Bicycle	.....

Call To Phase (2-1-2-1)		Omit On Green	
1	.....	1	.....
2	.....	2	.....
3	.....	3	.....
4	.....	4	.....
5	.....	5	.....
6	.....	6	.....
7	.....	7	.....
8	.....	8	.....

Flashing Colors (2-1-2-2)	
Yellow Flash Phases	.....
Yellow Flash Overlap	.....
Flash In Red Phases	.....
Flash In Red Overlap	.....

Special Operation (2-1-2-3)	
Single Exit Phase	.....
Driveway Signal Phases	.....
Driveway Signal Overlaps	.....
Leading Ped Phases	.....

Protected Permissive (2-1-2-4)	
Protected Permissive	.....

Pedestrian (2-1-3)	*
P1	.....
P2	.2.....
P3	.....
P4	.....
P5	.....
P6	.....6..
P7	.....
P8	.....

Overlap (2-1-4)				
Overlap	Parent	Omit	No Start	Not
A	.....	.....	.....	.....
B	.....	.....	.....	.....
C	.....	.....	.....	.....
D	.....	.....	.....	.....
E	.....	.....	.....	.....
F	.....	.....	.....	.....

Department of Transportation, California Caltrans Location: S_OTTS ROAD @ I-215 NORTHBOUND RAMP TSC 2.14

PHASE TIMING

Phase (2-2)	-1- *	-2- *	-3- *	-4- *	-5- *	-6- *	-7- *	-8- *
--- Walk 1 ---		7		0		7		0
Flash Don't Walk		14		0		14		0
Minimum Green	0	5	0	0	5	5	0	5
Det Limit	0	1	0	0	0	0	0	0
Max Initial	0	10	0	0	10	10	0	10
Max Green 1	0	45	0	0	30	45	0	25
Max Green 2	0	0	0	0	0	0	0	0
Max Green 3	0	0	0	0	0	0	0	0
Extension	0.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0
Maximum Gap	0.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0
Minimum Gap	0.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0
Add Per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Reduce Gap By								
Reduce Every	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	3.0	4.3	3.0	3.0	3.6	4.3	3.0	4.3
All-Red	0.0	1.0	0.0	0.0	1.0	1.0	0.0	1.0

Ped/Bike (2-3)	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
--- Walk 2 ---								
Delay/Early Walk								
Solid Don't Walk								
Bike Green								
Bike All-Red								

OVERLAP TIMING

Overlap (2-4)	A	B	C	D	E	F
Green						
Yellow	5.0	5.0	5.0	5.0	5.0	5.0
Red						

Red Revert

Red Revert (2-5)	
Time	5.0
Red To Sec (2-6)	
Red To Sec	OFF

...Transportation, California Caltrans Location: ...115 ROAD @ I-215 NORTHBOUND RAMP TSCP 2.14

COORDINATION

Local Plan (7-1...9) TIMING DATA [Offsets]

Green Factors or Press [F] to Select Force-Off

	*	Cycle	Multi	Perm	A	B	C	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
Plan 1	Green Factor	110			62				74			12	57		24
Plan 2	Green Factor	100			65				66			11	50		22
Plan 3	Green Factor	110			52				73			16	52		25
Plan 4	Green Factor														
Plan 5	Green Factor														
Plan 6	Green Factor														
Plan 7	Green Factor														
Plan 8	Green Factor														
Plan 9	Green Factor														

Master Timer Sync (7-A)

Enable in Plans
.....

Master Sub Master	
Input	
Output	

FREE PLAN PHASE FLAGS

(7-E) Free

Lag	Omit
.2.4.6.8	.....
Veh Min	**Veh Max**
.2...6..	.....
Ped	**Bike**
.....	.....
Cond	**Cond Grn**
.....	10

Local Plan (7-1...9) PHASE FLAGS

	Lag	Sync	Hold	Omit	Veh Min	Veh Max	Ped	Bike
Plan 1	.2.4.6.8	.2...6..	.....	.....	.....	.....	.....	.....
Plan 2	.2.4.6.8	.2...6..	.....	.....	.....	.....	.....	.....
Plan 3	.2.4.6.8	.2...6..	.....	.....	.....	.....	.....	.....
Plan 4	.....	.....	.....	.....	.....	.....	.....	.....
Plan 5	.....	.....	.....	.....	.....	.....	.....	.....
Plan 6	.....	.....	.....	.....	.....	.....	.....	.....
Plan 7	.....	.....	.....	.....	.....	.....	.....	.....
Plan 8	.....	.....	.....	.....	.....	.....	.....	.....
Plan 9	.....	.....	.....	.....	.....	.....	.....	.....

MANUAL COMMANDS

Manual Plan (4-1)		Plan: 1-9
Plan	OffSet	15 or 254 = Flash
	A	14 or 255 = Free
		Offset A, B, or C

Special Function Override (4-2)

#	Control	#	Control
1	NORMAL	3	NORMAL
2	NORMAL	4	NORMAL

Detector Reset	(4-3)
Local Manual (4-4)	OFF

DETECTORS

Detector Attributes (5-1)

Det	Type	Phases	Lock	Slot
1	COUNT+CALL+EXTEND	.2.....	NO	I2U
2	COUNT+CALL+EXTEND	.....6..	NO	J2U
3	COUNT+CALL+EXTEND	...4....	NO	I6U
4	COUNT+CALL+EXTEND	8	NO	J6U
5	COUNT+CALL+EXTEND	.2.....	NO	I2L
6	COUNT+CALL+EXTEND	.....6..	NO	J2L
7	COUNT+CALL+EXTEND	...4....	NO	I6L
8	COUNT+CALL+EXTEND	8	NO	J6L
9	CALL+EXTEND	.2.....	NO	I4
10	CALL+EXTEND	.....6..	NO	J4
11	CALL+EXTEND	...4....	NO	I8
12	CALL+EXTEND	8	NO	J8
13	COUNT+CALL+EXTEND	....5...	NO	J1
14	COUNT+CALL+EXTEND	1.....	NO	I1
15	COUNT+CALL+EXTEND	.....7.	NO	J5
16	COUNT+CALL+EXTEND	..3.....	NO	I5
17	COUNT+CALL+EXTEND	....5...	NO	J9U
18	COUNT+CALL+EXTEND	1.....	NO	I9U
19	COUNT+CALL+EXTEND	.....7.	NO	J9L
20	COUNT+CALL+EXTEND	..3.....	NO	I9L
21	CALL+EXTEND	.2.....	NO	I3L
22	CALL+EXTEND	.....6..	NO	J3L
23	CALL+EXTEND	...4....	NO	I7L
24	CALL+EXTEND	8	NO	J7L
25	COUNT+CALL+EXTEND	.2.....	NO	I3U
26	COUNT+CALL+EXTEND	.....6..	NO	J3U
27	COUNT+CALL+EXTEND	...4....	NO	I7U
28	COUNT+CALL+EXTEND	8	NO	J7U
29	PEDESTRIAN	.2.....	NO	I 12U
30	PEDESTRIAN	.....6..	NO	I 13U
31	PEDESTRIAN	...4....	NO	I 12L
32	PEDESTRIAN	8	NO	I 13L

Detector Configuration (5-2)

Det	Delay	Extend	Recall	Port
1			10	1.1
2			10	1.2
3			10	1.3
4			10	1.4
5			10	1.5
6			10	1.6
7			10	1.7
8			10	1.8
9			10	2.1
10			10	2.2
11			10	2.3
12			10	2.4
13			10	3.1
14			10	3.2
15			10	3.3
16			10	3.4
17			10	3.5
18			10	3.6
19			10	3.7
20			10	3.8
21			10	6.2
22			10	6.3
23			10	6.4
24			10	6.5
25			10	4.5
26			10	4.6
27			10	4.7
28			10	4.8
29			10	5.1
30			10	5.2
31			10	5.3
32			10	5.4

Failure Times(5-3)	Minutes
Maximum On Time	
Fail Reset Time	

Failure Override (5-4)	
Detectors 1-8	.....
Detectors 9-16	.....
Detectors 17-24	.....
Detectors 25-32	.....

System Detector Assignment (5-5)

Sys Det	1	2	3	4	5	6	7	8
Det Num								
Sys Det	9	10	11	12	13	14	15	16
Det Num								

CIC Operation (5-6-1)	
Enable in Plans	.....

CIC Values (5-6-2)	Volume	Occupancy	Demand
Smoothing	0.66	0.66	0.66
Multiplier	4.0	0.33	
Exponent	0.50	1.00	

Detector-to-Phase Assignment (5-6-3)

Sys Det	1	2	3	4	5	6	7	8
Phase								
Sys Det	9	10	11	12	13	14	15	16
Phase								

Input File Port-Bit Assignments

332 Cabinet - For Reference Only

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
I-	3.2	1.1	4.5	2.1	3.4	1.3	4.7	2.3	3.6		6.6	5.1	5.2	6.7
		1.5	6.2			1.7	6.4		3.8		2.7	5.3	5.4	6.8
J-	3.1	1.2	4.6	2.2	3.3	1.4	4.8	2.4	3.5		2.8	5.5	5.6	2.5
		1.6	6.3			1.8	6.5		3.7		6.1	5.7	5.8	2.6

TOD SCHEDULE

Table 1 (8-2-1) *		
Time	Plan	OS
0600	1	A
0900	2	A
1400	3	A
1800	2	A
2000	255	A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A

Table 2 (8-2-2)		
Time	Plan	OS
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A

Table 3 (8-2-3)		
Time	Plan	OS
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A

Table 4 (8-2-4)		
Time	Plan	OS
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A

Table 5 (8-2-5)		
Time	Plan	OS
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A

Table 6 (8-2-6)		
Time	Plan	OS
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A

WEEKDAY ASSIGNMENT

Weekday Table Assignments (8-2-7)						
Mon	Tue	Wed	Thu	Fri	Sat	Sun
1	1	1	1	1	2	2

HOLIDAY TABLES

Floating Holiday Table (8-2-8)

#	Mnth	Week	DOW	Table
1			.....	
2			.....	
3			.....	
4			.....	
5			.....	
6			.....	
7			.....	
8			.....	
9			.....	
10			.....	
11			.....	
12			.....	
13			.....	
14			.....	
15			.....	
16			.....	

Fixed Holiday Table (8-2-9)

#	Mnth	Day	DOW	Table
1			.....	
2			.....	
3			.....	
4			.....	
5			.....	
6			.....	
7			.....	
8			.....	
9			.....	
10			.....	
11			.....	
12			.....	
13			.....	
14			.....	
15			.....	
16			.....	

Solar Clock Data (8-4)

North Latitude	34
West Longitude	118
Local Time Zone	8

Sabbatical Clock (8-5)

Hebrew	Ped Recall
Sabbath	.....
Holiday	.....

Daylight Saving (8-6)

Enabled	YES

TOD FUNCTIONS

TOD Functions (8-3)

#	Start	End	DOW	Action	Phases
1			.....		.....
2			.....		.....
3			.....		.....
4			.....		.....
5			.....		.....
6			.....		.....
7			.....		.....
8			.....		.....
9			.....		.....
10			.....		.....
11			.....		.....
12			.....		.....
13			.....		.....
14			.....		.....
15			.....		.....
16			.....		.....

Action Codes:

0. None
1. Permitted
2. Restricted
4. Veh Min Recall
5. Veh Max Recall
6. Ped Recall
7. Bike Recall
8. Red Lock
9. Yellow Lock
10. Force/Max Lock
11. Double Entry
12. Y-Coord C
13. Y-Coord D
14. Free
15. Flashing
16. Walk 2
17. Max Green 2
18. Max Green 3
19. Rest in Walk
20. Rest in Red
21. Free Lag Phases
22. Special Functions
23. Truck Preempt
24. Conditional Service
25. Conditional Service
26. Leading Ped
41. Protected Permissive
42. Protected Permissive

Action Code = Phases added to normal setting
100+Action Code = Phases removed
200+Action Code = Phases replaced

COMMUNICATIONS

C2 (6-1-1)	*
Address	3
Protocol	AB3418
Limit Access	
Baud	1200
Parity	NONE
Data Bits	8
Stop Bits	1
RTS On Time	20
RTS Off Time	20
Handshaking	NORMAL

C20 (6-1-2)	
Address	
Protocol	AB3418
Limit Access	
Baud	1200
Parity	NONE
Data Bits	8
Stop Bits	1
RTS On Time	20
RTS Off Time	20
Handshaking	NORMAL

C21 (6-1-3)	
Address	
Protocol	AB3418
Limit Access	
Baud	1200
Parity	NONE
Data Bits	8
Stop Bits	1
RTS On Time	20
RTS Off Time	20
Handshaking	NORMAL

Limit Access:
0-None
1-Status Only
2-Status, Set Pattern, Time
3-Status, Set Pattern, Time, Manual Plan

CALLBACK NUMBERS

Callback Numbers (6-3...3)	
Line Out	
Local Toll	
Long Distance	
Delay	10
Area Code	
Phone Number	

Line Out	
Local Toll	
Long Distance	
Delay	10
Area Code	
Phone Number	

Line Out	
Local Toll	
Long Distance	
Delay	10
Area Code	
Phone Number	

SOFT LOGIC

Soft Logic (6-2)

#	Data	OP	Data	OP	Data	OP	Data
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							

*Refer to User's Manual for Data and OP Codes

RAILROAD PREEMPTION

RR 1

(3-1-1)	Timing
Delay	
Clear1	10
Clear 2	
Clear 3	
Hold	
Exit	5
Min Grn	
Ped Clr	

Phase Flags (3-1-2)		
Grn Hold	Yel Flash	Red Flash
.2..5...	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	12345678

Pedestrian Flags (3-1-3)		
Walk	Flash DW	Solid DW
.....	.....	.2.4.6.8
.....	.....	.....
.....	.....	.....
.....	.....	.....

Overlap Flags (3-1-4)		
Grn Hold	Yel Flash	Red Flash
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	A B C D E F

Exit Parameters (3-1-5)			
Phase Green	Overlap Green	Vehicle Recall	Ped Call
.....	.....	12345678	.2.4.6.8

Configuration (3-1-6)		
Port	Latching	Power-Up
2.5	YES	FLASHING

RR 2

(3-2-1)	Timing
Delay	
Clear1	10
Clear 2	
Clear 3	
Hold	
Exit	
Min Grn	
Ped Clr	

Phase Flags (3-2-2)		
Grn Hold	Yel Flash	Red Flash
...4..7.	.....	.....
.....	.....	.....
.....	.....	.....
123..6..	.....	.....

Pedestrian Flags (3-2-3)		
Walk	Flash DW	Solid DW
.....	.....	.2.4.6.8
.....	.....	.....
.....	.....	.....
.2...6..	.....	...4...8

Overlap Flags (3-2-4)		
Grn Hold	Yel Flash	Red Flash
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....

Exit Parameters (3-2-5)			
Phase Green	Overlap Green	Vehicle Recall	Ped Recall
.....	.....	...4..7.	.....

Configuration (3-2-6)		
Port	Latching	Power-up
2.6	YES	DARK

EMERGENCY VEHICLE PREEMPTION

EVA (3-A)

	Preempt Timers			Phase Green	Overlap Green
	Delay	Clear	Max		
*		45	45	.2..5...	.....

Port	Latching	Phase Termination
5.5	NO	ADVANCE

EVB (3-B)

	Preempt Timers			Phase Green	Overlap Green
	Delay	Clear	Max		
*		45	45	...4..7.	.....

Port	Latching	Phase Termination
5.6	NO	ADVANCE

EVC (3-C)

	Preempt Timers			Phase Green	Overlap Green
	Delay	Clear	Max		
*		45	45	1....6..	.....

Port	Latching	Phase Termination
5.7	NO	ADVANCE

EVD (3-D)

	Preempt Timers			Phase Green	Overlap Green
	Delay	Clear	Max		
*		45	45	..3....8	.....

Port	Latching	Phase Termination
5.8	NO	ADVANCE

INPUTS

		7 Wire I/C (2-1-5-1)			
		Input	Port	Input	Port
Enable	NO	R1	3.8	Free	3.6
Max ON		R2	3.5	D2	2.8
Max OFF		R3	3.7	D3	6.1

Manual Control (2-1-5-2)	
Input	Port
Manual Advance	6.6
Advance Enable	6.6

Cabinet Status (2-1-5-3)	
Input	Port
Flash Bus	
Door Ajar	
Flash Sense	6.7
Stop Time	6.8

Special Function (2-1-5-4)	
Input	Port
1	
2	
3	
4	

Battery Backup (2-1-5-5) *	
Port	Operation
2.7	NORMAL

Y-Coordination (2-1-5-6)	
Port C	Port D
6.1	2.8

OUTPUTS

Loadswitch Assignments (2-1-6)							+
A	1	2	22	3	4	24	9
B	5	6	26	7	8	28	10
X	13	14	0	11	12	0	0

Loadswitch Codes:

0 Unused (no output)
1-8 Vehicle 1-8
9-14 Overlap A-F
21-28 Ped 1-8
41-47 Special Functions
41 Protected Permissive Flashing Phase 1
43 Protected Permissive Flashing Phase 3
45 Protected Permissive Flashing Phase 5
47 Protected Permissive Flashing Phase 7
51-57 Special Functions
71-72 Seven Wire I/C

+ middle output of loadswitches 3 and 6
Channel 9 and 10

YELLOW YIELD COOORDINATION

Y-Coord Plans (7-C,D)	Long Grn	No Grn	Offset	Perm	Force-Offs -1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	Coord	Lag	Min Recall	Restricted
Plan C													.2...6..	.2.4.6.8	.....	.....
Plan D													.2...6..	.2.4.6.8	.....	.....

TRANSIT PRIORITY

Local Plans (3-E1...9)		Early Green	Green Extend	Inhibit Cycles	Phase 1 Minimum	Phase 2 Minimum	Phase 3 Minimum	Phase 4 Minimum	Phase 5 Minimum	Phase 6 Minimum	Phase 7 Minimum	Phase 8 Minimum
Plan 1	Green Factor											
Plan 2	Green Factor											
Plan 3	Green Factor											
Plan 4	Green Factor											
Plan 5	Green Factor											
Plan 6	Green Factor											
Plan 7	Green Factor											
Plan 8	Green Factor											
Plan 9	Green Factor											

Enable Priority (3-E-A)	
Enable in Plan	.....

Free Plans (3-E-E)	
Max Green Hold	Hold Phase
	.....

Access Utilities (9-5)	
Password	***
Timeout	

TRUCK PREEMPTION

Truck Preemption (3-F)	Passage	CarryOver	Clearance	Next Preempt	Phase Green	Det 2 Port	Det 3 Port	Det 4 Port	Sign Output	Slave Input	Slave Output

SIGNAL LOG - DISTRICT 8

		E NUMBER: E1053	RIV 215 15.514 CO RT PM:	NAME: N/B SCOTT RD
		INFORMAL CABINET NOTES. OFFICIAL RECORDS ARE KEPT IN IMMS.		
DATE	PERSON	REPAIRS OR WORK COMPLETED		
1-2014	JM	Sig✓		
4-2014	JM	Sig✓		
7/7/14	G.C.	SIGNAL PM + BBS CHECK		
10/8/14	RS	PM SIGNAL ✓ + 210 PM ✓		
1-2015	JM	Sig✓		
7/24/15	Salmon	check signal timing, Normal operation		
9-9-15	RL GRACE	ANNUAL 210 MONITOR REPLACEMENT..		
10/22/15	Salmon	check the signal Timing. Normal operation.		

4/22/11

INTERSECTION: Men-Scott/Antelope 7204

Group Assignment: **NONE**
Field Master Assignment: **NONE**
System Reference Number: **30**

N/S Street Name: **Antelope**
E/W Street Name: **Scott**

Last Database Change: **2/25/2016 9:43**

Change Record					
Change	By	Date	Change	By	Date

Notes:

Drop Number	1	<C+0+0>
Zone Number		<C+0+1>
Area Number	2	<C+0+2>
Area Address	30	<C+0+3>
QuicNet Channel	COM1:	(QuicNet)

Communication Addresses

Manual Plan	14	<C+A+1>
Manual Offset		<C+B+1>

Manual Selection

Max Initial	20	<F+0+E>
Red Revert	5.0	<F+0+F>
All Red Start	5.0	<F+C+0>

Start / Revert Times

	Phase							
Column Numbers ---->	1	2	3	4	5	6	7	8
Row *Phase Names ---->*								
0 Ped Walk	0	7	0	7	0	7	0	7
1 Ped FDW	0	~~19~~ 24	0	~~13~~ 28	0	~~19~~ 21	0	~~13~~ 21
2 Min Green	4	6	4	5	4	6	4	5
3 Type 3 Limit	0	0	0	0	0	0	0	0
4 Added Initial	0.0	1.2	0.0	0.0	0.0	1.2	0.0	0.0
5 Veh Extension	1.0	3.0	2.0	2.0	1.0	3.0	1.0	2.0
6 Max Gap	1.0	5.0	2.0	2.0	1.0	5.0	1.0	2.0
7 Min Gap	1.0	2.0	2.0	2.0	1.0	2.0	1.0	2.0
8 Max Limit	16	35	16	25	16	35	16	25
9 Max Limit 2	0	0	0	0	0	0	0	0
A - - - - - -	0	0	0	0	0	0	0	0
B Call To Phase	0	0	0	0	0	0	0	0
C Reduce By	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0
D Reduce Every	0.0	0.5	0.0	0.0	0.0	0.5	0.0	0.0
E Yellow Change	~~3.5~~ 3.6	~~4.0~~ 5.2	~~4.0~~ 3.6	~~4.0~~ 5.2	~~3.5~~ 3.6	~~4.0~~ 5.5	~~3.5~~ 3.6	~~4.0~~ 5.5
F Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

Phase Timing - Bank 1 <F Page>

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

Preempt Timing

Row		F
0	Permit	12345678
1	Red Lock	_____
2	Yellow Lock	_____
3	Min Recall	_2___6__
4	Ped Recall	_____
5	*View Set Peds*	- - - - -
6	Rest In Walk	_____
7	Red Rest	_____
8	Dual Entry	_____
9	Max Recall	_____
A	Soft Recall	_____
B	Max 2	_____
C	Cond. Service	_____
D	Man Cntrl Calls	_____
E	Yellow Start	1___5___
F	First Phases	_2___6__

Phase Functions <F Page>

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

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

INTERSECTION: Men-Scott/Antelope 7204

Coordination <C Page>

Row	Column Numbers ---->	Plan 1	2	3	4	5	6	7	8	9	Row
	Plan Name ---->										
0	Cycle Length	110	100	110	100	100	100	100	100	100	0
1	Phase 1 - ForceOff	15	15	15	65	65	65	65	65	65	1
2	Phase 2 - ForceOff	0	0	0	0	0	0	0	0	0	2
3	Phase 3 - ForceOff	69	56	56	25	25	25	25	25	25	3
4	Phase 4 - ForceOff	47	41	41	40	40	40	40	40	40	4
5	Phase 5 - ForceOff	97	75	79	65	65	65	65	65	65	5
6	Phase 6 - ForceOff	0	0	0	0	0	0	0	0	0	6
7	Phase 7 - ForceOff	29	30	29	25	25	25	25	25	25	7
8	Phase 8 - ForceOff	69	55	69	40	40	40	40	40	40	8
9	Ring Offset	0	0	0	0	0	0	0	0	0	9
A	Offset 1	33	33	17	0	0	0	0	0	0	A
B	Offset 2	0	0	0	0	0	0	0	0	0	B
C	Offset 3	0	0	0	0	0	0	0	0	0	C
D	Permissive	5	5	5	12	12	12	12	12	0	D
E	Hold Release	255	255	255	255	255	255	255	255	0	E
F	Zone Offset	0	0	0	0	0	0	0	0	0	F

(* = Coordination Recall)

Sync Phases <C Page>

Row		E	Row
0			0
1	Plan 1 - Sync	_2___6__	1
2	Plan 2 - Sync	_2___6__	2
3	Plan 3 - Sync	_2___6__	3
4	Plan 4 - Sync	_2___6__	4
5	Plan 5 - Sync	_2___6__	5
6	Plan 6 - Sync	_2___6__	6
7	Plan 7 - Sync	_2___6__	7
8	Plan 8 - Sync	_2___6__	8
9	Plan 9 - Sync	_2___6__	9
A	Coord Ped *	_____	A
B	NEMA Hold	_____	B
C			C
D			D
E			E
F			F

Configuration <E Page>

Row	Column Numbers ---->	E
0	Exclusive Phases	_____
1	RR-1 Clear Phases	_____
2	RR-2 Clear Phases	_____
3	RR-2 Limited Service	_____
4	Prot / Perm Phases	_____
5	Overlap A - Green Omit	_____
6	Overlap B - Green Omit	_____
7	Overlap C - Green Omit	_____
8	Overlap D - Green Omit	_____
9	Overlap Yellow Flash	_____
A	EV-A Phases	_2__5___
B	EV-B Phases	___4__7_
C	EV-C Phases	1____6__
D	EV-D Phases	__3____8
E	Extra 1 Config. Bits	1_____
F	IC Select (Interconnect)	_2_____

Configuration <E Page>

	F
RR Overlap A - Phases	_____
RR Overlap B - Phases	_____
RR Overlap C - Phases	_____
RR Overlap D - Phases	_____
Ped 2P	_2_____
Ped 6P	_____6__
Ped 4P	___4____
Ped 8P	_____8
Yellow Flash Phases	_____
Overlap A - Phases	_____
Overlap B - Phases	_____
Overlap C - Phases	_____
Overlap D - Phases	_____
Restricted Phases	_____
Assign 5 Outputs	_____

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = EV Advance
5 =
6 = Special Event
7 = Pretimed Operation
8 = Split Ring Operation

Assign 5 Outputs
(Ped Loadswitch Yellows)
1 = Right Turn Overlap
2 = TOD Outputs
3 = EV Beacon - Steady
4 = EV Beacon - Flashing
5 = Special Event Outputs
6 = Phase 3 & 7 Ped
7 = Advanced Warning Sign
8 =

Force-Off Adjust	0

Coord Force-Off Adjust for Ped Service <C+D+F>

Transition Type	0

TBC Transition <C+D+D>

Transition Type
0 = Shortway
Non-zero = Lengthen

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 =
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

Lag Phases <C Page>

Row		F	Row
0	Free Lag	_2_4_6_8	0
1	Plan 1 - Lag	1_3__6_8	1
2	Plan 2 - Lag	1_3__6_8	2
3	Plan 3 - Lag	1_3__6_8	3
4	Plan 4 - Lag	_2_4_6_8	4
5	Plan 5 - Lag	_2_4_6_8	5
6	Plan 6 - Lag	_2_4_6_8	6
7	Plan 7 - Lag	_2_4_6_8	7
8	Plan 8 - Lag	_2_4_6_8	8
9	Plan 9 - Lag	_2_4_6_8	9
A	Coord Max *	1_____	A
B	Coord Lag *	1_____	B
C			C
D			D
E			E
F			F

Row	Time	Plan	Offset	Day of Week
0	06 : 00	1	A	_23456_
1	09 : 00	2	A	_23456_
2	14 : 00	3	A	_23456_
3	18 : 00	2	A	_23456_
4	20 : 00	E	A	_23456_
5	00 : 00	0	0	_____
6	00 : 00	0	0	_____
7	00 : 00	0	0	_____
8	00 : 00	0	0	_____
9	00 : 00	0	0	_____
A	00 : 00	0	0	_____
B	00 : 00	0	0	_____
C	00 : 00	0	0	_____
D	00 : 00	0	0	_____
E	00 : 00	0	0	_____
F	00 : 00	0	0	_____

TOD Coordination
<9 Key with C+D+9=0>

Time	Funct.	Day of Week	Column F Phases/Bits
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____

TOD Function
<7 Key>

<D Page>

Time	Plan	Offset	Day of Week
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____

Holiday # 1
TOD Coordination
<9 Key with C+D+9=1>

Time	Plan	Offset	Day of Week
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____

Holiday # 2
TOD Coordination
<9 Key with C+D+9=2>

Time	Plan	Offset	Day of Week	Row
00 : 00	0	0	_____	0
00 : 00	0	0	_____	1
00 : 00	0	0	_____	2
00 : 00	0	0	_____	3
00 : 00	0	0	_____	4
00 : 00	0	0	_____	5
00 : 00	0	0	_____	6
00 : 00	0	0	_____	7
00 : 00	0	0	_____	8
00 : 00	0	0	_____	9
00 : 00	0	0	_____	A
00 : 00	0	0	_____	B
00 : 00	0	0	_____	C
00 : 00	0	0	_____	D
00 : 00	0	0	_____	E
00 : 00	0	0	_____	F

Holiday # 3
TOD Coordination
<9 Key with C+D+9=3>

Plan Select
1 thru 9 = Coordination Plan 1 thru 9
14 or E = Free
15 or F = Flash

Offset Select
A = Offset A
B = Offset B
C = Offset C

T.O.D. Functions
0 = Permitted Phases
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 2 - Phase Bank 2
Bit 3 - Phase Bank 3
Bit 4 - Disable Detector OFF Monitor
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 4

Month Select
1 = January
2 = February
3 = March
4 = April
5 = May
6 = June
7 = July
8 = August
9 = September
A = October
B = November
C = December

Row		Day	Year	Month	Day of Week
A	Holiday # 1 Date	0	0	0	_____
B	Holiday # 2 Date	0	0	0	_____
C	Holiday # 3 Date	0	0	0	_____

Holiday Dates
<8 Key>

Row	1 Delay	3 Carry-over	Detector Name	332 Input File	Detector Number
0	0.0	0.0		I-1	14
1	0.0	0.0		I-2U	1
2	0.0	0.0		I-2L	5
3	0.0	0.0		I-3U	21
4	0.0	0.0		I-3L	25
5	0.0	0.0		I-4	9
6	0.0	0.0		I-5	16
7	0.0	0.0		I-6U	3
8	0.0	0.0		I-6L	7
9	0.0	0.0		I-7U	23
A	0.0	0.0		I-7L	27
B	0.0	0.0		I-8	11
C	0.0	0.0		I-9U	18
D	0.0	0.0		I-9L	20
E	- - -	- - -	- - -	- - -	- - -
F	- - -	- - -	- - -	- - -	- - -

Row	2 Delay	4 Carry-over	Detector Name	332 Input File	Detector Number
0	0.0	0.0		J-1	13
1	0.0	0.0		J-2U	2
2	0.0	0.0		J-2L	6
3	0.0	0.0		J-3U	22
4	0.0	0.0		J-3L	26
5	0.0	0.0		J-4	10
6	0.0	0.0		J-5	15
7	0.0	0.0		J-6U	4
8	0.0	0.0		J-6L	8
9	0.0	0.0		J-7U	24
A	0.0	0.0		J-7L	28
B	0.0	0.0		J-8	12
C	0.0	0.0		J-9U	17
D	0.0	0.0		J-9L	19
E	- - -	- - -	- - -	- - -	- - -
F	- - -	- - -	- - -	- - -	- - -

Detector Delay & Carryover <D Page>

Row		9 Green Clear	C Yellow Change	D Red Clear	0 Load-Switch #
A	Overlap A	0.0	0.0	0.0	0
B	Overlap B	0.0	0.0	0.0	0
C	Overlap C	0.0	0.0	0.0	0
D	Overlap D	0.0	0.0	0.0	0

Overlap Timing <F Page> <D Page>

Row	Detector Numbers	E
A	1 2 3 4 5 6 7 8	12345678
B	9 10 11 12 -- -- -- --	1234____
C	13 14 15 16 17 18 19 20	12345678
D	-- -- -- -- 21 22 23 24	____5678
E	-- -- -- -- -- -- -- --	1234____
F	-- 25 26 27 28 -- -- --	_2345___

Active Detectors <D Page>

Note: Initialized data is for all detectors to be active (ie, all flag bits set). A Detector which is "not flagged", will not be active as a Phase Detector, and WILL NOT call or extend its associated phase. It will still function as a System Detector.

Row		0 Detector Number
0		
1	System Det. # 1	0
2	System Det. # 2	0
3	System Det. # 3	0
4	System Det. # 4	0
5	System Det. # 5	0
6	System Det. # 6	0
7	System Det. # 7	0
8	System Det. # 8	0

System Detectors <D Page>

Max ON (minutes)	5	<D+A+E>
Max OFF (minutes)	60	<D+A+F>

Detector Failure Monitor

Phase Number	0	<F+C+1>
Time Before Yellow	0.0	<F+C+3>

Advance Warning Beacon - Sign 1

Phase Number	0	<F+D+1>
Time Before Yellow	0.0	<F+D+3>

Advance Warning Beacon - Sign 2

Long Failure	0.0	<F+0+6>
Short Failure	0.0	<F+0+7>

Power Cycle Correction (Default = 0.5)

Disable Parity	0	<D+B+0>

Dial-Up Telephone Communications
(If set to a non-zero value, parity will be disabled)

Row	Column Numbers ---->	Phase 1	2	3	4	5	6	7	8	Row
	Phase Names ----->									
0	Ped Walk	0	7	0	7	0	7	0	7	0
1	Ped FDW	0	10	0	10	0	10	0	10	1
2	Min Green	3	7	3	7	3	7	3	7	2
3	Type 3 Limit	0	0	0	0	0	0	0	0	3
4	Added Initial	0.0	1.2	0.0	1.2	0.0	1.2	0.0	1.2	4
5	Veh Extension	0.5	3.5	0.5	3.5	0.5	3.5	0.5	3.5	5
6	Max Gap	0.5	5.0	0.5	5.0	0.5	5.0	0.5	5.0	6
7	Min Gap	0.5	2.0	0.5	2.0	0.5	2.0	0.5	2.0	7
8	Max Limit	17	40	17	40	17	40	17	40	8
9	Max Limit 2	30	70	30	70	30	70	30	70	9
A	- - - - - -	0	0	0	0	0	0	0	0	A
B	Call To Phase	0	0	0	0	0	0	0	0	B
C	Reduce By	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	C
D	Reduce Every	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	D
E	Yellow Change	3.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0	E
F	Red Clear	0.0	0.5	0.0	1.0	0.0	0.5	0.0	1.0	F

Phase Timing - Bank 2 <F Page>

Row	Column Numbers ---->	Phase 1	2	3	4	5	6	7	8	Row
	Phase Names ----->									
0	Ped Walk	0	7	0	7	0	7	0	7	0
1	Ped FDW	0	10	0	10	0	10	0	10	1
2	Min Green	3	7	3	7	3	7	3	7	2
3	Type 3 Limit	0	0	0	0	0	0	0	0	3
4	Added Initial	0.0	1.2	0.0	1.2	0.0	1.2	0.0	1.2	4
5	Veh Extension	0.5	3.5	0.5	3.5	0.5	3.5	0.5	3.5	5
6	Max Gap	0.5	5.0	0.5	5.0	0.5	5.0	0.5	5.0	6
7	Min Gap	0.5	2.0	0.5	2.0	0.5	2.0	0.5	2.0	7
8	Max Limit	17	40	17	40	17	40	17	40	8
9	Max Limit 2	30	70	30	70	30	70	30	70	9
A	- - - - - -	0	0	0	0	0	0	0	0	A
B	Call To Phase	0	0	0	0	0	0	0	0	B
C	Reduce By	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	C
D	Reduce Every	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	D
E	Yellow Change	3.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0	E
F	Red Clear	0.0	0.5	0.0	1.0	0.0	0.5	0.0	1.0	F

Phase Timing - Bank 3 <F Page>

Row		7 Time	8 Dwell	9 Hold	A Advance	B Force Off	C Vehicle Call	D Permit Phases	E Ped Omit	F Output	Row
0	Delay Only --->	0	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	0
1		0	0								1
2		0	0								2
3		0	0								3
4		0	0								4
5		0	0								5
6		0	0								6
7		0	0								7
8		0	0								8
9	Limited Service	0	0								9
A	Int. --->	- - -	0								A
B		0	0								B
C		0	0								C
D		0	0								D
E		0	0								E
F		0	0								F

<--- Limited Service Interval
(Set Dwell = 255)

Special Event Schedule <C Page with F+9+F=22>

INTERSECTION: Men-Scott/Haun Zeiders 7230

Group Assignment: **NONE**
Field Master Assignment: **NONE**
System Reference Number: **31**

N/S Street Name: **(N) Haun (S) Zeiders**
E/W Street Name: **Scott**

Last Database Change: **2/25/2016 9:43**

Change Record					
Change	By	Date	Change	By	Date

Notes:

Drop Number	1	<C+0+0>
Zone Number		<C+0+1>
Area Number	3	<C+0+2>
Area Address	31	<C+0+3>
QuicNet Channel	COM1:	(QuicNet)

Communication Addresses

Manual Plan	14	<C+A+1>
Manual Offset		<C+B+1>

Manual Selection

Max Initial	0	<F+0+E>
Red Revert	2.0	<F+0+F>
All Red Start	5.0	<F+C+0>

Start / Revert Times

Row	Column Numbers ----> / Phase Names ---->	Phase 1	2	3	4	5	6	7	8
0	Ped Walk	0	0	7	7	0	7	0	0
1	Ped FDW	0	0	22 ~~18~~	15 ~~12~~	0	18 ~~14~~	0	0
2	Min Green	3	10	5	5	3	10	0	0
3	Type 3 Limit	0	15	0	0	0	15	0	0
4	Added Initial	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	Veh Extension	1.5	4.5	3.5	3.5	1.5	4.5	0.0	0.0
6	Max Gap	1.5	7.0	5.5	5.5	1.5	7.0	0.0	0.0
7	Min Gap	1.5	2.0	1.5	1.5	1.5	2.0	0.0	0.0
8	Max Limit	12	35	12	40	12	35	0	0
9	Max Limit 2	0	0	0	0	0	0	0	0
A	- - - - - -	0	0	0	0	0	0	0	0
B	Call To Phase	0	0	0	0	0	0	0	0
C	Reduce By	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0
D	Reduce Every	0.0	6.0	0.0	3.0	0.0	6.0	0.0	0.0
E	Yellow Change	3.6 ~~3.0~~	5.2 ~~5.0~~	3.6 ~~5.0~~	5.2 ~~5.0~~	3.6 ~~3.0~~	5.2 ~~5.0~~	0.0	0.0
F	Red Clear	0.5	1.0	1.0	1.0	0.5	1.0	0.0	0.0

Phase Timing - Bank 1 <F Page>

	E		F	Row
RR-1 Delay	0	Permit	123456__	0
RR-1 Clear	10	Red Lock	_____	1
EV-A Delay	0	Yellow Lock	_____	2
EV-A Clear	5	Min Recall	_2___6__	3
EV-B Delay	0	Ped Recall	_____	4
EV-B Clear	5	*View Set Peds*	- - - - -	5
EV-C Delay	0	Rest In Walk	_____	6
EV-C Clear	5	Red Rest	_____	7
EV-D Delay	0	Dual Entry	_~~2~~___~~6~~__	8
EV-D Clear	5	Max Recall	_____	9
RR-2 Delay	0	Soft Recall	_____	A
RR-2 Clear	10	Max 2	_____	B
View EV Delay	- - -	Cond. Service	_____	C
View EV Clear	- - -	Man Cntrl Calls	_____	D
View RR Delay	- - -	Yellow Start	_~~2~~ 4 ~~6~~__	E
View RR Clear	- - -	First Phases	_2___6__	F

Preempt Timing **Phase Functions** <F Page>

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

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

Coordination <C Page>

Row	Column Numbers ---->	Plan 1	2	3	4	5	6	7	8	9	Row
	Plan Name ---->										
0	Cycle Length	100	100	100	100	100	100	100	100	100	0
1	Phase 1 - ForceOff	65	65	65	65	65	65	65	65	65	1
2	Phase 2 - ForceOff	0	0	0	0	0	0	0	0	0	2
3	Phase 3 - ForceOff	25	25	25	25	25	25	25	25	25	3
4	Phase 4 - ForceOff	40	40	40	40	40	40	40	40	40	4
5	Phase 5 - ForceOff	65	65	65	65	65	65	65	65	65	5
6	Phase 6 - ForceOff	0	0	0	0	0	0	0	0	0	6
7	Phase 7 - ForceOff	25	25	25	25	25	25	25	25	25	7
8	Phase 8 - ForceOff	40	40	40	40	40	40	40	40	40	8
9	Ring Offset	0	0	0	0	0	0	0	0	0	9
A	Offset 1	0	0	0	0	0	0	0	0	0	A
B	Offset 2	0	0	0	0	0	0	0	0	0	B
C	Offset 3	0	0	0	0	0	0	0	0	0	C
D	Permissive	12	12	12	12	12	12	12	12	0	D
E	Hold Release	255	255	255	255	255	255	255	255	0	E
F	Zone Offset	0	0	0	0	0	0	0	0	0	F

(* = Coordination Recall)

Sync Phases <C Page>

Row		E	Row
0			0
1	Plan 1 - Sync	_2___6__	1
2	Plan 2 - Sync	_2___6__	2
3	Plan 3 - Sync	_2___6__	3
4	Plan 4 - Sync	_2___6__	4
5	Plan 5 - Sync	_2___6__	5
6	Plan 6 - Sync	_2___6__	6
7	Plan 7 - Sync	_2___6__	7
8	Plan 8 - Sync	_2___6__	8
9	Plan 9 - Sync	_2___6__	9
A	Coord Ped *	_____	A
B	NEMA Hold	_____	B
C			C
D			D
E			E
F			F

Configuration <E Page>

Row	Column Numbers ---->	E	Row
0	Exclusive Phases	___4____	0
1	RR-1 Clear Phases	_____	1
2	RR-2 Clear Phases	_____	2
3	RR-2 Limited Service	_____	3
4	Prot / Perm Phases	_____	4
5	Overlap A - Green Omit	_____	5
6	Overlap B - Green Omit	_____	6
7	Overlap C - Green Omit	_____	7
8	Overlap D - Green Omit	_____	8
9	Overlap Yellow Flash	_____	9
A	EV-A Phases	_2__5___	A
B	EV-B Phases	___4____	B
C	EV-C Phases	1____6__	C
D	EV-D Phases	__3_____	D
E	Extra 1 Config. Bits	1_3_____	E
F	IC Select (Interconnect)	_2_____	F

Configuration <E Page>

	F
RR Overlap A - Phases	_____
RR Overlap B - Phases	_____
RR Overlap C - Phases	_____
RR Overlap D - Phases	_____
Ped 2P	_____
Ped 6P	____6__
Ped 4P	___4____
Ped 8P	__3_____
Yellow Flash Phases	_____
Overlap A - Phases	_____
Overlap B - Phases	_____
Overlap C - Phases	_____
Overlap D - Phases	_____
Restricted Phases	_____
Assign 5 Outputs	_____

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = EV Advance
5 =
6 = Special Event
7 = Pretimed Operation
8 = Split Ring Operation

Assign 5 Outputs
(Ped Loadswitch Yellows)
1 = Right Turn Overlap
2 = TOD Outputs
3 = EV Beacon - Steady
4 = EV Beacon - Flashing
5 = Special Event Outputs
6 = Phase 3 & 7 Ped
7 = Advanced Warning Sign
8 =

Force-Off Adjust	0

Coord Force-Off Adjust for Ped Service <C+D+F>

Transition Type	0

TBC Transition <C+D+D>

Transition Type
0 = Shortway
Non-zero = Lengthen

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 =
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

Lag Phases <C Page>

	F	Row
Free Lag	_23__67_	0
Plan 1 - Lag	_2_4_6_8	1
Plan 2 - Lag	_2_4_6_8	2
Plan 3 - Lag	_2_4_6_8	3
Plan 4 - Lag	_2_4_6_8	4
Plan 5 - Lag	_2_4_6_8	5
Plan 6 - Lag	_2_4_6_8	6
Plan 7 - Lag	_2_4_6_8	7
Plan 8 - Lag	_2_4_6_8	8
Plan 9 - Lag	_2_4_6_8	9
Coord Max *	_____	A
Coord Lag *	_____	B
		C
		D
		E
		F

Row	Time	Plan	Offset	Day of Week
0	00:00	0	0	
1	00:00	0	0	
2	00:00	0	0	
3	00:00	0	0	
4	00:00	0	0	
5	00:00	0	0	
6	00:00	0	0	
7	00:00	0	0	
8	00:00	0	0	
9	00:00	0	0	
A	00:00	0	0	
B	00:00	0	0	
C	00:00	0	0	
D	00:00	0	0	
E	00:00	0	0	
F	00:00	0	0	

TOD Coordination
<9 Key with C+D+9=0>

Plan Select
1 thru 9 = Coordination Plan 1 thru 9
14 or E = Free
15 or F = Flash

Offset Select
A = Offset A
B = Offset B
C = Offset C

Time	Funct.	Day of Week	Column F Phases/Bits
00:00	0		
00:00	0		
00:00	0		
00:00	0		
00:00	0		
00:00	0		
00:00	0		
00:00	0		
00:00	0		
00:00	0		
00:00	0		
00:00	0		
00:00	0		
00:00	0		
00:00	0		
00:00	0		

TOD Function
<7 Key>

<D Page>

T.O.D. Functions
0 = Permitted Phases
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 2 - Phase Bank 2
Bit 3 - Phase Bank 3
Bit 4 - Disable Detector OFF Monitor
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 4

Time	Plan	Offset	Day of Week
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	

Holiday # 1
TOD Coordination
<9 Key with C+D+9=1>

Time	Plan	Offset	Day of Week
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	

Holiday # 2
TOD Coordination
<9 Key with C+D+9=2>

Time	Plan	Offset	Day of Week	Row
00:00	0	0		0
00:00	0	0		1
00:00	0	0		2
00:00	0	0		3
00:00	0	0		4
00:00	0	0		5
00:00	0	0		6
00:00	0	0		7
00:00	0	0		8
00:00	0	0		9
00:00	0	0		A
00:00	0	0		B
00:00	0	0		C
00:00	0	0		D
00:00	0	0		E
00:00	0	0		F

Holiday # 3
TOD Coordination
<9 Key with C+D+9=3>

Month Select
1 = January
2 = February
3 = March
4 = April
5 = May
6 = June
7 = July
8 = August
9 = September
A = October
B = November
C = December

Row		Day	Year	Month	Day of Week
A	Holiday # 1 Date	0	0	0	
B	Holiday # 2 Date	0	0	0	
C	Holiday # 3 Date	0	0	0	

Holiday Dates
<8 Key>

Row	1 Delay	3 Carry-over	Detector Name	332 Input File	Detector Number
0	0.0	0.0		I-1	14
1	0.0	0.0		I-2U	1
2	0.0	0.0		I-2L	5
3	0.0	0.0		I-3U	21
4	0.0	0.0		I-3L	25
5	0.0	0.0		I-4	9
6	0.0	0.0		I-5	16
7	0.0	0.0		I-6U	3
8	0.0	0.0		I-6L	7
9	0.0	0.0		I-7U	23
A	0.0	0.0		I-7L	27
B	0.0	0.0		I-8	11
C	0.0	0.0		I-9U	18
D	0.0	0.0		I-9L	20
E	- - -	- - -	- - -	- - -	- - -
F	- - -	- - -	- - -	- - -	- - -

Row	2 Delay	4 Carry-over	Detector Name	332 Input File	Detector Number
0	0.0	0.0		J-1	13
1	0.0	0.0		J-2U	2
2	0.0	0.0		J-2L	6
3	0.0	0.0		J-3U	22
4	0.0	0.0		J-3L	26
5	0.0	0.0		J-4	10
6	0.0	0.0		J-5	15
7	0.0	0.0		J-6U	4
8	0.0	0.0		J-6L	8
9	0.0	0.0		J-7U	24
A	0.0	0.0		J-7L	28
B	0.0	0.0		J-8	12
C	0.0	0.0		J-9U	17
D	0.0	0.0		J-9L	19
E	- - -	- - -	- - -	- - -	- - -
F	- - -	- - -	- - -	- - -	- - -

Detector Delay & Carryover <D Page>

Row		9 Green Clear	C Yellow Change	D Red Clear	0 Load-Switch #
A	Overlap A	0.0	0.0	0.0	0
B	Overlap B	0.0	0.0	0.0	0
C	Overlap C	0.0	0.0	0.0	0
D	Overlap D	0.0	0.0	0.0	0

Overlap Timing <F Page> <D Page>

Row	Detector Numbers	E
A	1 2 3 4 5 6 7 8	12345678
B	9 10 11 12 -- -- -- --	1234____
C	13 14 15 16 17 18 19 20	12345678
D	-- -- -- -- 21 22 23 24	____5678
E	-- -- -- -- -- -- -- --	1234____
F	-- 25 26 27 28 -- -- --	_2345___

Active Detectors <D Page>

Note: Initialized data is for all detectors to be active (ie, all flag bits set). A Detector which is "not flagged", will not be active as a Phase Detector, and WILL NOT call or extend its associated phase. It will still function as a System Detector.

Row		0 Detector Number
0		
1	System Det. # 1	0
2	System Det. # 2	0
3	System Det. # 3	0
4	System Det. # 4	0
5	System Det. # 5	0
6	System Det. # 6	0
7	System Det. # 7	0
8	System Det. # 8	0

System Detectors <D Page>

Max ON (minutes)	5	<D+A+E>
Max OFF (minutes)	60	<D+A+F>

Detector Failure Monitor

Phase Number	0	<F+C+1>
Time Before Yellow	0.0	<F+C+3>

Advance Warning Beacon - Sign 1

Phase Number	0	<F+D+1>
Time Before Yellow	0.0	<F+D+3>

Advance Warning Beacon - Sign 2

Long Failure	0.0	<F+0+6>
Short Failure	0.0	<F+0+7>

Power Cycle Correction (Default = 0.5)

Disable Parity	0	<D+B+0>

Dial-Up Telephone Communications
(If set to a non-zero value, parity will be disabled)

Row	Column Numbers ---->	Phase 1	2	3	4	5	6	7	8
	Phase Names ----->								
0	Ped Walk	0	7	0	7	0	7	0	7
1	Ped FDW	0	10	0	10	0	10	0	10
2	Min Green	3	7	3	7	3	7	3	7
3	Type 3 Limit	0	0	0	0	0	0	0	0
4	Added Initial	0.0	1.2	0.0	1.2	0.0	1.2	0.0	1.2
5	Veh Extension	0.5	3.5	0.5	3.5	0.5	3.5	0.5	3.5
6	Max Gap	0.5	5.0	0.5	5.0	0.5	5.0	0.5	5.0
7	Min Gap	0.5	2.0	0.5	2.0	0.5	2.0	0.5	2.0
8	Max Limit	17	40	17	40	17	40	17	40
9	Max Limit 2	30	70	30	70	30	70	30	70
A	- - - - - -	0	0	0	0	0	0	0	0
B	Call To Phase	0	0	0	0	0	0	0	0
C	Reduce By	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
D	Reduce Every	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
E	Yellow Change	3.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0
F	Red Clear	0.0	0.5	0.0	1.0	0.0	0.5	0.0	1.0

Phase Timing - Bank 2 <F Page>

Row	Column Numbers ---->	Phase 1	2	3	4	5	6	7	8
	Phase Names ----->								
0	Ped Walk	0	7	0	7	0	7	0	7
1	Ped FDW	0	10	0	10	0	10	0	10
2	Min Green	3	7	3	7	3	7	3	7
3	Type 3 Limit	0	0	0	0	0	0	0	0
4	Added Initial	0.0	1.2	0.0	1.2	0.0	1.2	0.0	1.2
5	Veh Extension	0.5	3.5	0.5	3.5	0.5	3.5	0.5	3.5
6	Max Gap	0.5	5.0	0.5	5.0	0.5	5.0	0.5	5.0
7	Min Gap	0.5	2.0	0.5	2.0	0.5	2.0	0.5	2.0
8	Max Limit	17	40	17	40	17	40	17	40
9	Max Limit 2	30	70	30	70	30	70	30	70
A	- - - - - -	0	0	0	0	0	0	0	0
B	Call To Phase	0	0	0	0	0	0	0	0
C	Reduce By	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
D	Reduce Every	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
E	Yellow Change	3.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0
F	Red Clear	0.0	0.5	0.0	1.0	0.0	0.5	0.0	1.0

Phase Timing - Bank 3 <F Page>

Row		7 Time	8 Dwell	9 Hold	A Advance	B Force Off	C Vehicle Call	D Permit Phases	E Ped Omit	F Output
0	Delay Only --->	0	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -
1		0	0							
2		0	0							
3		0	0							
4		0	0							
5		0	0							
6		0	0							
7		0	0							
8		0	0							
9	Limited Service	0	0							
A	Int. --->	- - -	0							
B		0	0							
C		0	0							
D		0	0							
E		0	0							
F		0	0							

<--- Limited Service Interval
(Set Dwell = 255)

Special Event Schedule <C Page with F+9+F=22>

Comments and Responses
Appendix G

ALBERT A.
WEBB
ASSOCIATES

City of Menifee

CITY OF MENIFEE

Public Works/Engineering

DATE: **February 6, 2018**

TO: **Lisa Gordon, Planning Manager**
Community Development Department

FROM: **Yolanda Macalalad for Nick Minicilli, Contract Traffic Engineer**
Land Development – PW Department

SUBJECT: **JPN Haun-Holland Commercial Center Draft TIA Report – 1st Review**

PROJECT NO: **PM 37121, Case No. 2016-185**

Traffic Engineering has reviewed the Draft Traffic Impact Analysis report for the JPN Haun-Holland Commercial Center Project dated December 2017 and have the following comments:

1. Existing Newport Road/Haun Road Lane Configuration: The westbound approach of the Newport Road/Haun Road intersection is not constructed with a dedicated right-turn lane as shown in Figure 3-A and as reflected in the intersection analysis. Currently there are ***two left-turn lanes, two through lanes, and one shared through/right-turn lane*** on the westbound approach of the intersection. Please revise Figure 3-A and intersection analysis to reflect the correct lane configuration at the Newport Road/Haun Road intersection.

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3. Existing Newport Road/Antelope Road Lane Configuration: A dedicated right-turn lane was recently constructed on the southbound approach of the Newport Road/Antelope Road intersection. The southbound approach currently consists of ***two left-turn lanes, one through lane, one shared through/right-turn lane, and one right-turn lane***. Please revise Figure 3-A and intersection analysis to reflect the correct lane configuration at the Newport Road/Antelope Road intersection.

4. Figure 3-A Existing Roadway System: Figure 3-A shows that the intersection of Sherman Road/Holland Road is controlled as an all-way stop. The actual control is as a two-way stop on the northbound and southbound approaches. The intersection analysis reflects the correct two-way stop control, so only Figure 3-A needs to be revised.

5. Existing Newport Road/Menifee Road Lane Configuration: The City plans to restripe the eastbound approach of the Newport Road/Menifee Road intersection with ***one left-turn lane, two through lanes and one shared through/right-turn lane*** in the next several months. The planned improvement is scheduled to be completed by mid-2018. Please revise Figure 3-A and the intersection analysis to reflect the planned improvement for both existing and future scenarios.

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8. Existing Scott Road/Antelope Road Lane Configuration: The lane configurations for the eastbound and westbound approach of the Scott Road/Antelope Road intersection is not correct as shown in Figure 3-A and as reflected in the intersection analysis. The eastbound and westbound approaches of the intersection are each currently striped with ***one left-turn lane, one through lane and one shared through/right-turn lane***. Please revise Figure 3-A and intersection analysis to reflect the correct lane configuration at the Scott Road/Antelope Road intersection.

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16. Project Opening Year 2021 Intersection Lane Geometrics Figures: Please provide two figures showing the Project Opening Year 2021 Intersection Lane Geometrics: 1) Without Holland Overpass, and 2) With Holland Overpass. Both of these figures will include the future intersection improvements along Scott Road, and the other future improvements as described in earlier comments.

17. Project Only Trips With Holland Overpass: In Section 4, please provide figures showing the project only trips through the study intersections for Project Opening Year 2021 with Holland Overpass, based on the trip distribution with Holland Overpass shown in Figure 4-B.

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21. Roadway Segment Analysis Tables: Please include columns showing the volume-to-capacity (v/c) ratios for all roadway segment analysis tables. In addition, please include a column showing the project-only daily trips for roadway segment analysis tables. For Year 2021 Cumulative scenarios, please include a column showing the cumulative-only daily volumes that are added to existing volumes.

22. Year 2021 Roadway Segment Analysis Tables: Why are several segments forecast to operate at LOS E in the year 2021 scenarios not identified as operating at a deficient LOS in the analysis tables? LOS E is permitted on segments between closely spaced intersections in close proximity to the I-215 freeway such as Newport Road between Haun Road and Antelope Road. The roadway segment analysis tables are showing that LOS E is permitted on several segments of Newport Road away from I-215, as well as on segments of Haun Road between Newport Road and Scott Road. Please identify segments not in close proximity to I-215 as exceeding target LOS if operating at LOS E.

23. Mitigation Measures Without Holland Road Overpass: Mitigation measures for project significant impacts under Project Opening Year 2021 conditions without the Holland Road Overpass should consider fair share toward construction of the Holland Road Overpass as mitigation. Specifically, the appropriate mitigation for project significant impacts along Newport Road should be fair share toward construction of the Holland Road overpass. The method of calculating the fair share percentage for the Holland Road Overpass would be different than the typical fair share calculation method. For locations where the recommended mitigation is fair share toward the Holland Road Overpass, the fair share should be calculated as the proportion of project daily trips to the total ADT volume on the Holland Road Overpass under the Project Opening Year 2021 With Holland Overpass Plus Project scenario. The following equation provides an example of this fair share calculation:

    X (Project ADT) / Y (Total 2021 With Overpass Plus Project ADT) = Z (Fair Share %)

24. Tables 6-7 and 6-9: The project results in direct impacts at the intersections of Haun Road/Holland Road and Sherman Road/Holland Road under Existing Plus Project conditions. Therefore, the project is fully responsible for installing the recommended traffic signals at these two intersections. Fair share contributions for the traffic signals are not acceptable.

25. Tables 6-7 through 6-10: The project improvements and fair share summary tables need to be formatted to present the improvements and fair shares for each study scenario in which a project significant impact occurs. Currently, Tables 6-7 and 6-9 are only showing the improvements and fairs shares for the "Cumulative With Overpass" scenario. Existing Plus Project and Cumulative Without Overpass must also be included.

    These four tables need to be consolidated into two tables: Tables 6-7 and 6-9 should be consolidated into one table for the study intersections, and Tables 6-8 and 6-10 should be consolidated into one table for the study roadway segments. The columns showing LOS without and with the mitigation should be removed from these tables since this information is already provided in tables in Section 5. The revised Tables 6-7 and 6-8 should include: 1) impacted locations per scenario, 2) impact type per scenario (direct or cumulative), 3) recommended mitigation per scenario, and 4) Project Responsibility (100%, fair share, or TUMF fee).

26. Tables 6-7 and 6-9: The Antelope Road/Newport Road intersection needs to be added to the consolidated Table 6-7 for the 2021 Without Overpass scenario, and the mitigation should be identified as a fair share toward constructing the Holland Road Overpass.

27. Tables 6-8 and 6-10: Cumulative impacts for the 2021 scenarios both without and with the Holland Overpass will occur on the following roadway segments that are missing from Tables 6-8 and 6-10:

    - Haun Road from Holland Road to Scott Road
    - Newport Road from Murrieta Road to Bradley Road
    - Newport Road from Bradley Road to Haun Road
    - Newport Road from Antelope Road to Menifee Road
    - Holland Road from Hanover Lane to Palomar Road

    A fair share contribution toward constructing the Holland Road Overpass should be identified as the mitigation measure for the segments of Newport Road and for Haun Road between Newport Road and Holland Road. Fair share contributions toward widening Haun Road from Holland Road to Scott Road, and toward widening Holland Road between Bradley Road and Haun Road should be included as mitigation in the consolidated Table 6-7.

28. Tables 6-8 and 6-10: The segment of the Holland Road Overpass between Haun Road and Hanover Lane should not be listed as an impacted segment in these tables. Please remove the segment from the list and only identify construction of the Holland Road Overpass as a mitigation measure for impacted locations under the 2021 Without Overpass scenario.

29. Year 2021 With Overpass Cumulative Impacts: Table 5-13 shows that cumulative impacts would still occur on the several study segments of Newport Road between Murrieta Road and Menifee Road for the Year 2021 Cumulative With Overpass With Project scenario. The Year 2021 cumulative-only volumes may be overestimated on some of the study area roadways, particularly on Newport Road and on Holland Road. The Year 2021 analysis may have overestimated the number of completed development projects or the number of trips on some of the study roadways. We recommend having the Planning Department review the list more closely and determine if the number of projects and/or number of residential units should be adjusted downward to reflect a more realistic scenario.

30. Year 2021 With Overpass ADT Volumes: Table 5-13 shows that ADT volumes increased on the following roadway segments from the Year 2021 Without Overpass to With Overpass scenarios, where it should be expected that volumes would have decreased with the overpass in place:
    - Haun Road between Newport Road and Holland Road; and
    - Newport Road between Antelope Road and Menifee Road.

    There are also substantial increases in the Year 2021 With Overpass ADT volumes on some segments where such increases do not make sense, such as Bradley Road between Park Avenue and Newport Road, or La Piedra Road between Sherman Road and Haun Road.

    The comparison in ADT volumes between the Year 2021 Without and With Overpass scenarios show that the Year 2021 With Overpass ADT volumes on Scott Road between Haun Road and Antelope Road have decreased TOO MUCH. The Holland Road Overpass would not result in traffic volumes on Scott Road decreasing by 13,000 ADT, the expected decrease would be closer to 2,000-3,000 ADT. By comparison, Newport Road between Haun Road and Antelope Road is showing a decrease of 5,000-7,000 ADT, which is reasonable to expect.

31. Haun Road Between Newport Road and La Piedra Road: Tables 5-7 and 5-13 show that the addition of daily project traffic to Haun Road between Newport Road and La Piedra Road would result in a change in LOS from acceptable to deficient for Year 2021 With Project conditions, both without and with the Holland Overpass. Based on these findings, the project would cause a direct impact to this segment requiring full responsibility for mitigation. This segment is already built to its ultimate width as a 4-lane Major, so the findings are showing that additional widening and reclassification of the roadway segment may be needed. We suggest taking another look at the forecast ADT volumes, which are showing up to 33,000 ADT under the Year 2021 With Project With Overpass scenario.

Should you have any questions please contact me at (951) 672-6777, or you can also contact me by email at nminicilli@cityofmenifee.us.

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Murrieta, CA 92562
951.686.1070

August 3, 2018

Rob Blough,
City Traffic Engineer
Land Development – PW Department
29714 Haun Road
Menifee, CA 92586

Subject: JPN Haun-Holland Commercial Center Draft TIA Report – 1st Review

Mr. Rob Blough,

The below is an itemized list of the comments in the JPN Haun-Holland Commercial Center Draft Traffic Impact Analysis – 1st Review Letter, dated February 6, 2018 and our response to the comments.

PROJECT NO: PM 37121, Case No. 2016-185

1. Existing Newport Road/Haun Road Lane Configuration: The westbound approach of the Newport Road/Haun Road intersection is not constructed with a dedicated right-turn lane as shown in Figure 3-A and as reflected in the intersection analysis. Currently there are ***two left-turn lanes, two through lanes, and one shared through/right-turn lane*** on the westbound approach of the intersection. Please revise Figure 3-A and intersection analysis to reflect the correct lane configuration at the Newport Road/Haun Road intersection.

   WEBB: TIA has been updated.

2. Existing Newport Road/Antelope Road Lane Configuration: The eastbound approach of the Newport Road/Antelope Road intersection is not constructed with two through lanes and a dedicated right-turn lane as shown in Figure 3-A and as reflected in the intersection analysis. Currently there are two left-turn lanes, two through lanes, and one shared through/right-turn lane on the eastbound approach of the intersection. Please revise Figure 3-A and intersection analysis to reflect the correct lane configuration at the Newport Road/Antelope Road intersection.

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Sherman Road/Holland Road is controlled as an all-way stop. The actual control is as a two-way stop on the northbound and southbound approaches. The intersection analysis reflects the correct two-way stop control, so only Figure 3-A needs to be revised.

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WEBB: TIA has been updated with counts provided by the City and collected counts.

13. Page 5-1: Page 5-1 states that both Sherman Road/Holland Road and Haun Road/Holland Road are operating at an unacceptable LOS under Existing Plus Project conditions, but indicates that a direct impact requiring mitigation only occurs at the intersection of Sherman Road/Holland Road. According to Table 5- 1, the Haun Road/Holland Road operates at LOS D under existing conditions, but worsens to LOS E with the addition of trips from the project. The project also results in a direct impact at the Haun Road/Holland Road intersection, and installation of a traffic signal is required to mitigate the project's direct impacts at both Sherman Road/Holland Road and Haun Road/Holland Road.

    WEBB: TIA has been updated, per the meeting held on July 17th the Menifee Meadows project would be conditioned to install a signal at the intersection of Sherman/Holland Road and JPN Haun would contribute a fair share. Vise versa for the intersection of Haun and Holland Road the Menifee Meadows project would contribute a fair share and the JPN Haun project would be conditioned to the installation of the signal.

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28. Tables 6-8 and 6-10: The segment of the Holland Road Overpass between Haun Road and Hanover Lane should not be listed as an impacted segment in these tables. Please remove the segment from the list and only identify construction of the Holland Road Overpass as a mitigation measure for impacted locations under the 2021 Without Overpass scenario.

    WEBB: TIA has been updated.

29. Year 2021 With Overpass Cumulative Impacts: Table 5-13 shows that cumulative impacts would still occur on the several study segments of Newport Road between Murrieta Road and Menifee Road for the Year 2021 Cumulative With Overpass With Project scenario. The Year 2021 cumulative-only volumes may be overestimated on some of the study area roadways, particularly on Newport Road and on Holland Road. The Year 2021 analysis may have overestimated the number of completed development projects or the number of trips on some of the study roadways. We recommend having the Planning Department review the list more closely and determine if the number of projects and/or number of residential units should be adjusted downward to reflect a more realistic scenario.

    WEBB: TIA has been updated.

30. Year 2021 With Overpass ADT Volumes: Table 5-13 shows that ADT volumes increased on the following roadway segments from the Year 2021 Without Overpass to With Overpass scenarios, where it should be expected that volumes would have decreased with the overpass in place:
    - Haun Road between Newport Road and Holland Road; and
    - Newport Road between Antelope Road and Menifee Road.

    There are also substantial increases in the Year 2021 With Overpass ADT volumes on some segments where such increases do not make sense, such as Bradley Road between Park Avenue and Newport Road, or La Piedra Road between Sherman Road and Haun Road.

    The comparison in ADT volumes between the Year 2021 Without and With Overpass scenarios show that the Year 2021 With Overpass ADT volumes on Scott Road between Haun Road and Antelope Road have decreased TOO MUCH. The Holland Road Overpass would not result in traffic volumes on Scott Road decreasing by 13,000 ADT, the expected decrease would be closer to 2,000-3,000 ADT. By comparison, Newport Road between Haun Road and Antelope Road is showing a decrease of 5,000-7,000 ADT, which is reasonable to expect.

    WEBB: TIA has been updated.

31. Haun Road Between Newport Road and La Piedra Road: Tables 5-7 and 5-13 show that the addition of daily project traffic to Haun Road between Newport Road and La Piedra Road would result in a change in LOS from acceptable to deficient for Year 2021 With Project conditions, both without and with the Holland Overpass. Based on these findings, the project would cause a direct impact to this segment requiring full responsibility for mitigation. This segment is already built to its ultimate width as a 4-lane Major, so the findings are showing that additional widening and reclassification of the roadway segment may be needed. We suggest taking another look at the forecast ADT volumes, which are showing up to 33,000 ADT under the Year 2021 With Project With Overpass scenario.

    WEBB: TIA has been updated.

Nancy Guzman, E.I.T.
Assistant Engineer

CITY OF MENIFEE

MEMORANDUM

PUBLIC WORK/ENGINEERING DEPARTMENT

DATE: **September 14, 2018**

TO: **Lisa Gordon, Planning Manager**
Myron Fikse, Senior Engineer
Christopher Heron, Engineering Technician

FROM: **Rob Blough, City Traffic Engineer**
Jonathan Smith, Public Works Director/City Engineer

CC: **Nick Minicilli, Contract Traffic Engineer**

SUBJECT: **2016-185 JPN Haun-Holland Commercial Center TIA – 2nd Review**

Traffic Engineering has reviewed the Draft Traffic Impact Analysis report for the JPN Haun-Holland Commercial Center Project dated August 2018 and have the following comments:

1. Figure 2-B – Project Site Plan: The site plan currently shown in the TIA just shows parcels and no developments on the site. Please show the site plan with the developments on the site if available.
2. Page 3-3, Existing ADT Volumes: No description was provided about where the existing ADT came from. Provide a description on which segment ADT was provided by the City and which segment daily counts was collected.
3. Figure 4-L and Figure 4-M: Both "with project" figures do not show geometry at the driveway intersections 20, 21 and 22. Please show geometry at the three driveway intersections that was used in the analysis.
4. Table 3-5 and Table 5-2: The ADT count for Haun Road south of Newport Rd shows 33,501, but 22,820 was used in the analysis. Please justify.
5. Table 3-5 and Table 5-2: 24-hour segment counts is not provided for all the segments in the appendix.
6. Page 4-11, Intersection 21: A discussion should be added about the southbound dual left turn to the project site. A discussion should also be added about the Haun Road roadway cross-section adjacent to the project site based on the City's roadway design concept.
7. Page 5-1: Page 5-1 states that both Sherman Road/Holland Road and Haun Road/Holland Road are operating at an unacceptable LOS under Existing Plus Project conditions but indicates that a direct impact requiring mitigation only occurs at the intersection of Sherman Road/Holland Road. According to Table 5-1, the Haun Road/Holland Road operates at LOS D under existing conditions but worsens to LOS E with the addition of trips from the project. The project also results in a

direct impact at the Haun Road/Holland Road intersection, and installation of a traffic signal is required to mitigate the project's direct impacts at both Sherman Road/Holland Road and Haun Road/Holland Road. **(2nd Comment)**

- Response to August 3, 2018 response to comments – Regardless of the agreement between the JPN project applicant and Menifee Meadows project, the JPN project causes direct impact on both the intersections and needs to be pointed out in the TIA report.

8. Figure 4-H and Figure 4-I: Add "Cumulative" before Projects in the title of the figure, as these figures are cumulative projects volume figures.

9. Tables 6-9: The project results in direct impacts at the intersections of Haun Road/Holland Road and Sherman Road/Holland Road under Existing Plus Project conditions. Therefore, the project is fully responsible for installing the recommended traffic signals at these two intersections. Fair share contributions for the traffic signals are not acceptable. **(2nd Comment)**

10. Table 6-9: The project results in direct impacts at the intersections of Sherman Road/Holland Road under Existing Plus Project conditions. Please add "Existing Plus Project" under the "Scenario Impacted" column of the table.

11. Table 6-9 and Table 6-10: Both the table should show the type of impact; direct or cumulative. **(2nd Comment)**

12. Tables 6-9: The Antelope Road/Newport Road intersection needs to be added for the 2021 Without Overpass scenario, and the mitigation should be identified as a fair share toward constructing the Holland Road Overpass. **(2nd Comment)**

13. Tables 6-10: The project results in a direct impact on Haun Road from Newport Road to La Piedra Road for both the 2021 without and with overpass. This segment should be listed in Table 6-10 and the mitigation to this segment should be identified as a fair share contribution towards the construction of Holland Road Overpass.

14. Table 6-10: A fair share contribution toward constructing the Holland Road Overpass should be identified as the mitigation measure for Haun Road from Newport Road to La Piedra Road, Newport Road from Bradley Road to Haun Road and La Piedra Road from Sherman Road to Haun Road for the 2021 Without Overpass scenario.

15. Tables 6-10: The segment of the Holland Road Overpass between Haun Road and Hanover Lane should not be listed as an impacted segment in these tables. Please remove the segment from the list and only identify construction of the Holland Road Overpass as a mitigation measure for impacted locations under the 2021 Without Overpass scenario. **(2nd Comment)**

If you have any questions on these comments please contact Rob Blough at 951-723-3724 or email at rblough@cityofmenifee.us

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October 4, 2018

Rob Blough,
City Traffic Engineer
Land Development – PW Department
29714 Haun Road
Menifee, CA 92586

Subject: 2016-185 JPN Haun-Holland Commercial Center TIA – 2nd Review

Mr. Rob Blough,

The below is an itemized list of the comments in the JPN Haun-Holland Commercial Center Traffic Impact Analysis – 2nd Review Letter, dated September 14, 2018 and our response to the comments. PROJECT NO: PM 37121, Case No. 2016-185

1. Figure 2-B – Project Site Plan: The site plan currently shown in the TIA just shows parcels and no developments on the site. Please show the site plan with the developments on the site if available

   WEBB: Site Plan has been provided (Page 2-4).

2. Page 3-3, Existing ADT Volumes: No description was provided about where the existing ADT came from. Provide a description on which segment ADT was provided by the City and which segment daily counts was collected.

   WEBB: ADT count data dates and source have been provided (Page 3-3). Appendix has been updated to include the source of the count on the top left. Attachment 1 at the end of this letter reflects the specific dates and source of the count. New counts collected by Webb March 13, 2018 have now been added to Appendix C as well as any previously missing counts.

3. Figure 4-L and Figure 4-M: Both "with project" figures do not show geometry at the driveway intersections 20, 21 and 22. Please show geometry at the three driveway intersections that was used in the analysis.

   WEBB: Project Driveway #22 has been removed from the study as a bus turn-out was provided at that location. The analysis and study have been updated to reflect the geometric as illustrated in Figure 4-L and Figure 4-M.

4. Table 3-5 and Table 5-2: The ADT count for Haun Road south of Newport Rd shows 33,501, but 22,820 was used in the analysis. Please justify.

   WEBB: Webb coordinated with City's contract reviewer to collect a count north of La Piedra (now included in Appendix C). The agreed direction was that the count along Haun Road north of La Piedra Road (ADT=12,141) would be averaged with the City provided count along Haun Road south of Newport Road (ADT=33,501). The average count for the Haun Road segment between Newport Road and La Piedra Road ((33,501+12,141) /2 = 22,820) results in 22,820 which was utilized in the study.

5. Table 3-5 and Table 5-2: 24-hour segment counts is not provided for all the segments in the appendix.

   WEBB: See response to comment 2.

6. Page 4-11, Intersection 21: A discussion should be added about the southbound dual left turn to the project site. A discussion should also be added about the Haun Road roadway cross-section adjacent to the project site based on the City's roadway design concept.

   WEBB: A discussion has been added under the "*Circulation Recommendations for Project Design Features and Mitigation Measures*" section (Page 1-7 & 6-14). The conceptual striping plan detailing the geometrics of the main project driveway 2 at Haun Road has also been included in Appendix I.

7. Page 5-1: Page 5-1 states that both Sherman Road/Holland Road and Haun Road/Holland Road are operating at an unacceptable LOS under Existing Plus Project conditions but indicates that a direct impact requiring mitigation only occurs at the intersection of Sherman Road/Holland Road. According to Table 5-1, the Haun Road/Holland Road operates at LOS D under existing conditions but worsens to LOS E with the addition of trips from the project. The project also results in a direct impact at the Haun Road/Holland Road intersection, and installation of a traffic signal is required to mitigate the project's direct impacts at both Sherman Road/Holland Road and Haun Road/Holland Road. **(2nd Comment)**

   - Response to August 3, 2018 response to comments – Regardless of the agreement between the JPN project applicant and Menifee Meadows project, the JPN project causes direct impact on both the intersections and needs to be pointed out in the TIA report.

   WEBB: Page 5-1 statement has been updated to:

   "The project causes a direct impact at the intersection of Sherman Road (NS) / Holland Road (EW) and at the intersection of Haun Road (NS) / Holland Road (EW) which is expected to be mitigated with the installation of a proposed signal"

   Both Sherman Road and Holland Road and of Haun Road and Holland Road intersection improvements describes below have been identified as 100 percent project responsibility (Pages 1-8/1-9 and Page 6-16) See statement below:

- ***Installation of a traffic signal*** *at the intersection of Sherman Road and Holland Road (#11) –* [C] *– Project Responsibility*
  Northbound: Construct one left-turn lane. *One shared through and right-turn lane.*

Southbound: ***Construct one left-turn lane.*** *One shared through and right-turn lane.*
Eastbound: ***Restripe to provide one left-turn lane. One through lane. One right-turn lane.***
Westbound: ***Restripe to provide one left-turn lane. One through lane. One right-turn lane.***

(C) The project causes a direct impact to the intersection of Sherman Road and Holland Road; therefore, if the Menifee Meadows project does not improve the intersection the JPN Haun project would be responsible for mitigating the direct project impact caused at the intersection of Sherman Road and Holland Road.

- ***Installation of a traffic signal*** *at the intersection of Haun Road and Holland Road (#15) – (D) – Project Responsibility*
  Northbound: Two left-turn lanes. One through lanes One shared through and right-turn lane.
  Southbound: *One left-turn lane. Two through lanes. One right-turn lane.*
  Eastbound: One left-turn lane. One through lane. One right-turn lane.
  Westbound: One left-turn lane. Two through lanes. One right-turn lane.

8. Figure 4-H and Figure 4-I: Add "Cumulative" before Projects in the title of the figure, as these figures are cumulative projects volume figures.

   WEBB: Figure 4-H and Figure 4-I have been updated to reflect this change (Page 4- & 6-14)

9. Tables 6-9: The project results in direct impacts at the intersections of Haun Road/Holland Road and Sherman Road/Holland Road under Existing Plus Project conditions. Therefore, the project is fully responsible for installing the recommended traffic signals at these two intersections. Fair share contributions for the traffic signals are not acceptable. **(2nd Comment)**

   WEBB:

10. Table 6-9: The project results in direct impacts at the intersections of Sherman Road/Holland Road under Existing Plus Project conditions. Please add "Existing Plus Project" under the "Scenario Impacted" column of the table.

    WEBB: Table 1-1 and Table 6-9 (Pages 1-10 and 6-19) has been updated to reflect the project responsibility to install a signal at the intersection of Sherman Road and Holland Road as shown below.

No.	Intersection	Scenario Impacted	Impact Type	Improvement Measure	Funding Mechanism	Existing Volume		Project Volume		EACP Volume		Net New Volume		AM	PM	% Fair Share
						AM	PM	AM	PM	AM	PM	AM	PM	Fair Share	Fair Share	
6	Antelope Road (NS) / Newport Road (EW)	EACP No Overpass	Cumulative	Improve intersection geometrics to include: • Eastbound: Re-stripe one right-turn	Fair Share	5236	5335	199	238	6849	7017	1613	1682	12.3%	14.2%	14.2%
7	Menifee Road (NS) / Newport Road (EW)	EACP No Overpass	Cumulative	Improve intersection geometrics to include: • Southbound: Add a right-turn overlap.	Fair Share	4387	4040	126	151	5556	4940	1169	900	10.8%	16.8%	16.8%
		EACP With Overpass				4354	3989	81	97	5322	4940	968	951	8.4%	10.2%	
9	Bradley Road (NS) / Holland Road (EW)	EACP No Overpass	Cumulative	Improve intersection geometrics to include: • Eastbound: re-stripe to add one right-turn lane.	Fair Share	2200	1903	90	108	2862	2506	662	603	13.6%	17.9%	17.9%
		EACP With Overpass				2222	1935	90	108	3021	2711	798	776	11.3%	13.9%	
11	Sherman Road (NS) / Holland Road (EW)	Existing Plus Project	Direct	Improve intersection geometrics to include: Intersection Control: Install a traffic signal. • Northbound: Construct a left-turn lane. • Southbound: Construct a left-turn lane • Eastbound: Restring to provide one left-turn lane, one through lane and one right-turn lane. • Westbound: Restring to provide one left-turn lane, one through lane and one right-turn lane.	Project Responsibility	--										100%
		EACP No Overpass														
		EACP With Overpass														
15	Haun Road (NS) / Holland Road (EW)	Existing Plus Project	Direct	Improve intersection geometrics to include: Intersection Control: Install a traffic signal. • Northbound: Construct a second left-turn lane. • Westbound: Construct one left-turn lane.	Project Responsibility	--										100%
		EACP No Overpass														
		EACP With Overpass														
16	Haun-Zeiders Road (NS) / Scott Road (EW)	EACP No Overpass	Cumulative	Improve intersection geometrics to include: • Westbound: Add a right-turn overlap.	TUMF Fees	2148	1954	109	129	4430	4289	2282	2335	4.8%	5.5%	5.5%
22	Antelope Road (NS) / Albion Lane (EW)	EACP With Overpass	Cumulative	Improve intersection geometrics to include: Intersection Control: Install a traffic signal.	Fair Share	1163	1282	45	54	1524	1745	360	463	12.5%	11.7%	11.7%
24	Palomar Road (NS) / Holland Road (EW)	EACP With Overpass	Cumulative	Improve intersection geometrics to include: Intersection Control: Install a traffic signal. • Eastbound: Construct a left-turn lane. • Westbound: Restripe a left-turn lane.	Fair Share	773	623	45	54	1276	1275	503	652	9.0%	8.3%	8.3%
Project Design Features						Project Design Features										
20	Haun Road (NS) / Driveway 1 (EW)	Project Developer	N/A	Improve intersection geometrics to include: Intersection Control: Install a stop sign. • Northbound: Construct a second through lane. • Westbound:Construct a right-turn lane. Stop controlled.	Project Responsibility	--										100%
21	Haun Road (NS) / Driveway 2 (EW)	Project Developer	N/A	Improve intersection geometrics to include: Intersection Control: Install a traffic signal. • Northbound: Construct a second through lane. •Southbound: Construct two left-turn lanes. • Westbound: Construct one left-turn	Project Responsibility	--										100%

11. Table 6-9 and Table 6-10: Both the table should show the type of impact; direct or cumulative. **(2nd Comment)**

    WEBB: See Table provided in response to comment 10.

12. Tables 6-9: The Antelope Road/Newport Road intersection needs to be added for the 2021 Without Overpass scenario, and the mitigation should be identified as a fair share toward constructing the Holland Road Overpass. **(2nd Comment)**

    WEBB: See Table provided in response to comment 10.

13. Tables 6-10: The project results in a direct impact on Haun Road from Newport Road to La Piedra Road for both the 2021 without and with overpass. This segment should be listed in Table 6-10 and the mitigation to this segment should be identified as a fair share contribution towards the construction of Holland Road Overpass.

    WEBB: Table 6-10 has been updated. Table is also provided as response to comment 14.

14. Table 6-10: A fair share contribution toward constructing the Holland Road Overpass should be identified as the mitigation measure for Haun Road from Newport Road to La Piedra Road, Newport Road from Bradley Road to Haun Road and La Piedra Road from Sherman Road to Haun Road for the 2021 Without Overpass scenario.

    WEBB: The roadway segment of La Piedra Road from Sherman Road to Haun Road does not fail under any scenario. It was identified as failing however the existing ADT was typed in incorrectly and has now been reflected throughout the report. The remaining two segments Haun Road from Newport Road to La Piedra Road and Newport Road from Bradley Road to Haun Road have been updated to provide a fair share percentage to be used toward the construction of the overpass as requested.

Roadway Segment	Scenario Impacted	Impact Type	Recommended Improvement	Funding Mechanism	Existing Volume	Project Volume	EACP + Overpass ADT	EACP No Overpass ADT	Net ADT	% Fair Share
Bradley Road										
1. Park Avenue to Newport Road	EACP w/o Overpass	Cumulative	Construct one additional through lane in each direction. For a total of 4 through lanes with one TWLTL.	Fair Share	14,984	520	--	19,933	4,949	10.51%
	EACP with Overpass				14,984	520	19,633	--	4,549	**11.43%**
Haun Road										
4. Newport Road to La Piedra Road	Existing Plus Project	Direct	Roadway has reached its ultimate conditions, project's fair share percent contribution is provided. Roadway segment mitigated by the construction of the Holland Overpass.	Fair Share to be applied toward the construction of the Overpass	22,821	8,826				**27.89%**
	EACP without Overpass				22,821	8,826		31,647		27.89%
	EACP with Overpass				21,457	7,786	34,582			22.51%
5. La Piedra Road to Holland Road	EACP w/o Overpass	Cumulative	Construct one additional northbound through lane for a total of 4 through lanes with one TWLTL.	Fair Share	12,141	9,346	--	24,411	12,270	76.17%
	EACP with Overpass				14,005	8,306	24,470	--	10,465	**79.37%**
6. Holland Road to Scott Road	EACP w/o Overpass	Cumulative	Construct one additional through lane in each direction for a total of 4 through lanes with one TWLTL.	Fair Share	10,858	1,248	--	15,881	5,023	**24.85%**
	EACP with Overpass				10,464	1,040	16,609	--	6,145	16.92%
Newport Road										
8. Bradley Road to Haun Road	EACP w/o Overpass	Cumulative	Roadway has reached its ultimate conditions, project's fair share percent contribution is provided. Roadway segment mitigated by the construction of the Holland Overpass.	Fair Share to be applied toward the construction of the Overpass	43,696	1,560	--	56,501	--	2.76%
	EACP with Overpass				42,271	1,560	53,528	--	--	**2.91%**
Scott Road										
13. Haun Road to I-215 SB Ramps	EACP w/o Overpass	Cumulative	Construct two additional through lane in each direction. For a total of 6 through lanes.	TUMF Fees	--					
	EACP with Overpass									
14. I-215 NB Ramps to Antelope Road	EACP w/o Overpass	Cumulative	Construct two additional through lane in each direction. For a total of 6 through lanes.	TUMF Fees	--					
	EACP with Overpass									

XX= *Highest Fair Share percentage would be applied toward mitigation improvement.*

15. Tables 6-10: The segment of the Holland Road Overpass between Haun Road and Hanover Lane should not be listed as an impacted segment in these tables. Please remove the segment from the list and only identify construction of the Holland Road Overpass as a mitigation measure for impacted locations under the 2021 Without Overpass scenario. **(2nd Comment)**

    WEBB: Holland Road Overpass between Haun Road and Hanover Lane has been removed from the table (see response to comment 14).

Attachment 1 – ADT count Source Data

#	Street:	From:	To:		Date Collected	Provided by
1	Bradley Road	Park Avenue	Newport Road	14984	11/16/2016	City
2	Bradley Road	Newport Road	La Piedra Road	12389	11/16/2016	City
3	Bradley Road	La Piedra Road	Holland Road	8469	3/13/2018	WEBB
4	Haun Road	Newport Road	La Piedra Road	22821	3/13/2018 & 11/16/2016	Average of one City count & one WEBB counts
5	Haun Road	La Piedra Road	Holland Road	12141	3/13/2018	WEBB
6	Haun Road	Holland Road	Scott Road	10858	3/13/2018	WEBB
7	Newport Road	Murrieta Road	Bradley Road	34448	11/16/2016	Average of two City counts
8	Newport Road	Bradley Road	Haun Road	43696	1/26/2017	City
9	Newport Road	Haun Road	I-215 SB Ramps	55824	1/26/2017	City
10	Newport Road	I-215 NB Ramps	Antelope Road	66584	3/13/2018	WEBB
11	Newport Road	Antelope Road	Menifee Road	38566	11/16/2016	City
12	La Piedra Road	Sherman Road	Haun Road	2411	3/13/2018	WEBB
13	Scott Road	Haun Road	I-215 SB Ramps	26108	2/16/2017	City
14	Scott Road	I-215 NB Ramps	Antelope Road	40170	2/9/2017	City
15	Holland Road	Bradley Road	Sherman Road	12356	3/13/2018	WEBB
16	Holland Road	Sherman Road	Haun Road	11631	3/13/2018	WEBB
17	Holland Road	Haun Road	Hanover Lane	7233	Holland Overpass Study	
18	Holland Road	Hanover Lane	Palomar Road	6054	3/13/2018	WEBB
19	Holland Road	Palomar Road	Menifee Road	6054	3/13/2018	WEBB

CITY OF MENIFEE

MEMORANDUM

PUBLIC WORK/ENGINEERING DEPARTMENT

DATE: **April 24, 2019**

TO: **Lisa Gordon, Planning Manager**
Myron Fikse, Senior Engineer
Christopher Heron, Engineering Technician

FROM: **Rob Blough, City Traffic Engineer**
Jonathan Smith, Public Works Director/City Engineer

CC: **Nick Minicilli, Contract Traffic Engineer**

SUBJECT: **2016-185 JPN Haun-Holland Commercial Center TIA – 4th Review**

Traffic Engineering has reviewed the Draft Traffic Impact Analysis report for the JPN Haun-Holland Commercial Center Project dated October 2018 and have the following comments:

1. Pages 1-8, 1-9 and 6-16 Mitigation Measures at Sherman Road / Holland Road intersection #11: The project results in direct impact at the Sherman Road/Holland Road intersection under Existing Plus Project conditions. Therefore, the project is fully responsible for installing the recommended traffic signals at this intersection. Please remove references to the Menifee Meadows project and amend text as follows:

   "The project will pay 100 percent of the improvements at Sherman Road and Holland Road".

2. Pages 1-9 and 6-16 Haun Road and Holland Road intersection #15: Please amend paragraph (D) to state that "The project will pay 100 percent…"

3. Table 1-2 and Table 6-10: The recommended improvements for Haun Road from La Piedra to Scott will include a median and not a TWLTL. Please adjust wording in the table.

4. Table 4-1: Please amend the land use title in Table 4-1 for the gas station with convenience market and car wash, land use category 946, it is currently listed as General Office Building LUC 710. The trip generation rates are correct and in line with LUC 946.

5. Page 5-1: Please amend the second paragraph on page 5-1 to state clearly that the direct impacts at the Sherman Road / Holland Road and Haun Road / Holland Road intersections, will be mitigated by the installation of traffic signals.

   a. 2nd Review comments dated September 14, 2018: Page 5-1 states that both Sherman Road/Holland Road and Haun Road/Holland Road are operating at an unacceptable LOS under Existing Plus Project conditions but indicates that a direct impact requiring mitigation only occurs at the intersection of Sherman

Road/Holland Road. According to Table 5-1, the Haun Road/Holland Road operates at LOS D under existing conditions but worsens to LOS E with the addition of trips from the project. The project also results in a direct impact at the Haun Road/Holland Road intersection, and installation of a traffic signal is required to mitigate the project's direct impacts at both Sherman Road/Holland Road and Haun Road/Holland Road. (2nd Comment)

b. Response to August 3, 2018 response to comments – Regardless of the agreement between the JPN project applicant and Menifee Meadows project, the JPN project causes direct impact on both the intersections and needs to be pointed out in the TIA report.

6. Section 6, Figures 6-A, 6-B and 6-C: The figure titles are not showing on the pdf version. Please update.

If you have any questions on these comments please contact Rob Blough at 951-723-3724 or email at rblough@cityofmenifee.us

ALBERT A. WEBB ASSOCIATES

Memorandum

To: Rob Blough, City Traffic Engineer
Jonathan Smith, Public Works Director/City Engineer

CC: Lisa Gordon, Planning Manager
Myron Fikse, Senior Engineer
Christopher Heron, Engineering Technician
Nick Minicilli, Contract Traffic Engineer

From: Nicholas Lowe, P.E., Nancy Guzman, E.I.T. – Albert A. Webb Associates

Date: May 2, 2019

Re: 2016-185 JPN Haun-Holland Commercial Center TIA – 4th Review

The following memorandum is a summary of the responses to comments provided by the City of Menifee regarding the Draft Traffic Impact Analysis JPN Haun-Holland Commercial Center Report dated October 2018. The comment letter is dated April 24, 2019.

1. Pages 1-8, 1-9 and 6-16 Mitigation Measures at Sherman Road / Holland Road intersection #11: The project results in direct impact at the Sherman Road/Holland Road intersection under Existing Plus Project conditions. Therefore, the project is fully responsible for installing the recommended traffic signals at this intersection. Please remove references to the Menifee Meadows project and amend text as follows:

   "The project will pay 100 percent of the improvements at Sherman Road and Holland Road".

Response	Updated Pages
TIA has been revised.	1-8,1-9 & 6-16

2. Pages 1-9 and 6-16 Haun Road and Holland Road intersection #15: Please amend paragraph (D) to state that "The project will pay 100 percent…"

Response	Updated Pages
TIA has been revised.	1-9 & 6-16

3. Table 1-2 and Table 6-10: The recommended improvements for Haun Road from La Piedra to Scott will include a median and not a TWLTL. Please adjust wording in the table.

Response	Updated Pages
TIA has been revised.	1-11 & 6-19

4. Table 4-1: Please amend the land use title in Table 4-1 for the gas station with convenience market and car wash, land use category 946, it is currently listed as General Office Building LUC 710. The trip generation rates are correct and in line with LUC 946.

Response	Updated Page
TIA has been revised (Table 4-1).	4-2

5. Page 5-1: Please amend the second paragraph on page 5-1 to state clearly that the direct impacts at the Sherman Road / Holland Road and Haun Road / Holland Road intersections will be mitigated by the installation of traffic signals.

    a. 2nd Review comments dated September 14, 2018: Page 5-1 states that both Sherman Road/Holland Road and Haun Road/Holland Road are operating at an unacceptable LOS under Existing Plus Project conditions but indicates that a direct impact requiring mitigation only occurs at the intersection of ShermanRoad/Holland Road. According to Table 5-1, the Haun Road/Holland Road operates at LOS D under existing conditions but worsens to LOS E with the addition of trips from the project. The project also results in a direct impact at the Haun Road/Holland Road intersection, and installation of a traffic signal is required to mitigate the project's direct impacts at both Sherman Road/Holland Road and Haun Road/Holland Road. (2nd Comment)

    b. Response to August 3, 2018 response to comments – Regardless of the agreement between the JPN project applicant and Menifee Meadows project, the JPN project causes direct impact on both the intersections and needs to be pointed out in the TIA report.

Response	Updated Page
TIA has been revised.	5-1

6. Section 6, Figures 6-A, 6-B and 6-C: The figure titles are not showing on the pdf version. Please update.

Response	Updated Page
TIA has been revised.	6-4, 6-8 & 6-12

Simulation Reports
Appendix H

ALBERT A.
WEBB
ASSOCIATES

EACP AM + Overpass

Summary of All Intervals

Start Time	6:55
End Time	7:20
Total Time (min)	25
Time Recorded (min)	20
# of Intervals	2
# of Recorded Intervals	1
Vehs Entered	1578
Vehs Exited	1610
Starting Vehs	166
Ending Vehs	134
Travel Distance (mi)	879
Travel Time (hr)	49.5
Total Delay (hr)	23.6
Total Stops	1646
Fuel Used (gal)	36.7

Interval #0 Information Seeding

Start Time	6:55
End Time	7:00
Total Time (min)	5

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	7:00
End Time	7:20
Total Time (min)	20

Volumes adjusted by Growth Factors.

Vehs Entered	1578
Vehs Exited	1610
Starting Vehs	166
Ending Vehs	134
Travel Distance (mi)	879
Travel Time (hr)	49.5
Total Delay (hr)	23.6
Total Stops	1646
Fuel Used (gal)	36.7

Intersection: 5: Haun Rd & RIRO Driveway Menifee Village Driveway

Movement	WB	NB
Directions Served	R	TR
Maximum Queue (ft)	78	55
Average Queue (ft)	29	6
95th Queue (ft)	62	33
Link Distance (ft)	710	379
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 6: Haun Rd & Main Access Driveway Menifee Village Driveway

Movement	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	R	T	TR	L	T	T
Maximum Queue (ft)	94	79	53	96	118	74	31
Average Queue (ft)	43	37	14	29	89	10	12
95th Queue (ft)	85	62	49	89	135	49	36
Link Distance (ft)	663	663	740	740		379	379
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)					200		
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 9: Haun Rd & JPN Main Access

Movement	WB	WB	NB	NB	SB	SB	SB	SB
Directions Served	L	R	T	TR	L	L	T	T
Maximum Queue (ft)	179	229	266	237	287	294	317	75
Average Queue (ft)	84	152	150	170	167	187	61	22
95th Queue (ft)	153	243	255	256	268	281	251	69
Link Distance (ft)	1051	1051	284	284			301	301
Upstream Blk Time (%)			0		0	0	1	
Queuing Penalty (veh)			0		0	0	8	
Storage Bay Dist (ft)					300	300		
Storage Blk Time (%)					0	0	1	
Queuing Penalty (veh)					0	0	5	

Intersection: 14: La Piedra Rd & Haun Rd

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	TR	L	T	T	R
Maximum Queue (ft)	255	188	115	94	51	280	280	174	329	295	175
Average Queue (ft)	182	119	44	39	21	105	118	82	172	145	57
95th Queue (ft)	274	191	93	82	49	211	227	172	325	292	131
Link Distance (ft)	662	662	862	862		336	336		1078	1078	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)					165			150			150
Storage Blk Time (%)						1		0	8	4	
Queuing Penalty (veh)						1		0	4	14	

Intersection: 15: Haun Road

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	SB
Directions Served	L	T	R	L	T	T	R	L	L	T	TR	L
Maximum Queue (ft)	371	264	116	166	128	127	73	211	229	125	189	156
Average Queue (ft)	233	182	61	123	88	53	40	76	144	65	102	98
95th Queue (ft)	331	288	101	175	144	113	65	197	214	125	157	151
Link Distance (ft)	1125	1125			423	423				532	532	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)			275	275			200	275	275			275
Storage Blk Time (%)		0										
Queuing Penalty (veh)		1										

Intersection: 15: Haun Road

Movement	SB	SB	SB
Directions Served	T	T	R
Maximum Queue (ft)	171	150	201
Average Queue (ft)	102	105	104
95th Queue (ft)	187	160	178
Link Distance (ft)	240	240	240
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 20: RIRO Driveway 1 & Haun Rd

Movement	WB	SB
Directions Served	R	T
Maximum Queue (ft)	30	96
Average Queue (ft)	12	10
95th Queue (ft)	36	57
Link Distance (ft)	608	740
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 34

Intersection: 6: Haun Rd & Main Access Driveway

Phase	1	2	6	8
Movement(s) Served	SBL	NBT	SBT	WBL
Maximum Green (s)	21.5	76.5	101.5	31.5
Minimum Green (s)	5.0	5.0	5.0	5.0
Recall	None	C-Max	C-Max	None
Avg. Green (s)	12.0	112.4	171.7	8.0
g/C Ratio	0.09	0.80	0.92	0.04
Cycles Skipped (%)	0	0	25	25
Cycles @ Minimum (%)	0	0	0	0
Cycles Maxed Out (%)	0	100	75	0
Cycles with Peds (%)	0	0	0	0

Controller Summary
Average Cycle Length (s): 140.0
Number of Complete Cycles : 7

Intersection: 9: Haun Rd & JPN Main Access

Phase	1	2	6	8
Movement(s) Served	SBL	NBT	SBT	WBL
Maximum Green (s)	27.5	55.5	86.5	46.5
Minimum Green (s)	5.0	5.0	5.0	5.0
Recall	None	C-Max	C-Max	None
Avg. Green (s)	26.9	92.0	140.3	11.8
g/C Ratio	0.19	0.66	0.88	0.07
Cycles Skipped (%)	0	0	13	11
Cycles @ Minimum (%)	0	0	0	0
Cycles Maxed Out (%)	89	100	88	0
Cycles with Peds (%)	0	0	0	0

Controller Summary
Average Cycle Length (s): 140.0
Number of Complete Cycles : 7

Intersection: 14: La Piedra Rd & Haun Rd

Phase	1	2	3	4	5	6	7	8
Movement(s) Served	SBL	NBT	WBL	EBT	NBL	SBT	EBL	WBT
Maximum Green (s)	10.2	53.3	9.2	53.3	8.5	55.0	33.5	29.0
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall	None	C-Max	None	None	None	C-Max	None	None
Avg. Green (s)	9.4	84.2	8.0	26.4	6.2	90.7	30.3	7.9
g/C Ratio	0.06	0.60	0.04	0.19	0.03	0.65	0.22	0.03
Cycles Skipped (%)	13	0	22	0	43	0	0	50
Cycles @ Minimum (%)	0	0	0	0	0	0	0	0
Cycles Maxed Out (%)	0	100	44	0	0	100	0	0
Cycles with Peds (%)	0	0	0	0	0	0	0	0

Controller Summary
Average Cycle Length (s): 140.0
Number of Complete Cycles : 7

Intersection: 15: Haun Road

Phase	1	2	3	4	5	6	7	8
Movement(s) Served	SBL	NBT	WBL	EBT	NBL	SBT	EBL	WBT
Maximum Green (s)	20.8	30.2	26.3	50.2	21.5	29.5	46.5	30.0
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall	None	C-Max	None	None	C-Max	None	None	None
Avg. Green (s)	14.2	58.8	25.8	28.0	48.2	24.8	38.6	15.2
g/C Ratio	0.10	0.42	0.18	0.20	0.34	0.16	0.27	0.11
Cycles Skipped (%)	0	0	0	0	0	11	0	0
Cycles @ Minimum (%)	0	0	0	0	0	0	0	0
Cycles Maxed Out (%)	0	100	11	0	100	0	11	0
Cycles with Peds (%)	0	0	0	0	0	0	0	0

Controller Summary
Average Cycle Length (s): 141.5
Number of Complete Cycles : 7

EACP PM + Overpass

Summary of All Intervals

Start Time	3:55
End Time	4:20
Total Time (min)	25
Time Recorded (min)	20
# of Intervals	2
# of Recorded Intervals	1
Vehs Entered	1740
Vehs Exited	1710
Starting Vehs	185
Ending Vehs	215
Travel Distance (mi)	967
Travel Time (hr)	68.0
Total Delay (hr)	40.0
Total Stops	2261
Fuel Used (gal)	44.2

Interval #0 Information Seeding

Start Time	3:55
End Time	4:00
Total Time (min)	5

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	4:00
End Time	4:20
Total Time (min)	20

Volumes adjusted by Growth Factors.

Vehs Entered	1740
Vehs Exited	1710
Starting Vehs	185
Ending Vehs	215
Travel Distance (mi)	967
Travel Time (hr)	68.0
Total Delay (hr)	40.0
Total Stops	2261
Fuel Used (gal)	44.2

Intersection: 5: Haun Rd & RIRO Driveway Menifee Village Driveway

Movement	WB
Directions Served	R
Maximum Queue (ft)	54
Average Queue (ft)	38
95th Queue (ft)	55
Link Distance (ft)	705
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 6: Haun Rd & Main Access Driveway Menifee Village Driveway

Movement	WB	WB	NB	NB	SB	SB	SB	SB
Directions Served	L	R	T	TR	L	L	T	T
Maximum Queue (ft)	246	54	240	386	118	135	50	140
Average Queue (ft)	82	42	56	107	82	97	5	45
95th Queue (ft)	176	60	191	323	122	138	30	113
Link Distance (ft)	657	657	727	727			379	379
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)					200	200		
Storage Blk Time (%)								
Queuing Penalty (veh)								

Intersection: 9: Haun Rd & JPN Main Access

Movement	WB	WB	NB	NB	SB	SB	SB	SB
Directions Served	L	R	T	TR	L	L	T	T
Maximum Queue (ft)	534	898	250	303	118	143	118	172
Average Queue (ft)	279	767	186	221	72	104	48	83
95th Queue (ft)	535	968	268	319	112	146	116	169
Link Distance (ft)	1051	1051	282	282			301	301
Upstream Blk Time (%)				3				
Queuing Penalty (veh)				13				
Storage Bay Dist (ft)					300	300		
Storage Blk Time (%)								
Queuing Penalty (veh)								

Intersection: 14: La Piedra Rd & Haun Rd

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	TR	L	T	T	R
Maximum Queue (ft)	152	216	186	161	134	240	289	112	368	332	175
Average Queue (ft)	78	110	143	111	49	160	184	57	177	144	47
95th Queue (ft)	138	189	202	176	139	239	265	109	317	284	150
Link Distance (ft)	662	662	862	862		336	336		1078	1078	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)					165			150			150
Storage Blk Time (%)						8			13	8	0
Queuing Penalty (veh)						4			9	12	0

Intersection: 15: Haun Road

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	SB
Directions Served	L	T	R	L	T	T	R	L	L	T	TR	L
Maximum Queue (ft)	456	247	73	172	238	182	99	287	299	374	324	235
Average Queue (ft)	266	148	41	100	150	102	58	131	183	157	237	181
95th Queue (ft)	431	254	65	175	215	194	91	279	278	307	366	243
Link Distance (ft)	1014	1014			420	420				533	533	
Upstream Blk Time (%)												3
Queuing Penalty (veh)												0
Storage Bay Dist (ft)			275	275			200	275	275			275
Storage Blk Time (%)						0		0	2			3
Queuing Penalty (veh)						0		0	3			6

Intersection: 15: Haun Road

Movement	SB	SB	SB	B22
Directions Served	T	T	R	T
Maximum Queue (ft)	302	274	228	71
Average Queue (ft)	200	158	149	7
95th Queue (ft)	329	276	253	42
Link Distance (ft)	236	236	236	282
Upstream Blk Time (%)	5	3	0	
Queuing Penalty (veh)	18	10	1	
Storage Bay Dist (ft)				
Storage Blk Time (%)	5			
Queuing Penalty (veh)	9			

Intersection: 20: RIRO Driveway 1 & Haun Rd

Movement	WB
Directions Served	R
Maximum Queue (ft)	97
Average Queue (ft)	45
95th Queue (ft)	82
Link Distance (ft)	608
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 86

Intersection: 6: Haun Rd & Main Access Driveway

Phase	1	2	6	8
Movement(s) Served	SBL	NBT	SBT	WBL
Maximum Green (s)	15.5	82.5	101.5	31.5
Minimum Green (s)	5.0	5.0	5.0	5.0
Recall	None	C-Max	C-Max	None
Avg. Green (s)	12.6	104.8	120.9	11.9
g/C Ratio	0.08	0.75	0.86	0.08
Cycles Skipped (%)	10	0	0	0
Cycles @ Minimum (%)	0	0	0	0
Cycles Maxed Out (%)	0	100	100	0
Cycles with Peds (%)	0	0	0	0

Controller Summary
Average Cycle Length (s): 140.0
Number of Complete Cycles : 8

Intersection: 9: Haun Rd & JPN Main Access

Phase	1	2	6	8
Movement(s) Served	SBL	NBT	SBT	WBL
Maximum Green (s)	23.5	53.1	80.1	52.9
Minimum Green (s)	5.0	5.0	5.0	5.0
Recall	None	C-Max	C-Max	None
Avg. Green (s)	23.5	84.7	111.7	21.6
g/C Ratio	0.17	0.61	0.80	0.15
Cycles Skipped (%)	0	0	0	0
Cycles @ Minimum (%)	0	0	0	0
Cycles Maxed Out (%)	100	100	100	0
Cycles with Peds (%)	0	0	0	0

Controller Summary
Average Cycle Length (s): 140.0
Number of Complete Cycles : 8

Intersection: 14: La Piedra Rd & Haun Rd

Phase	1	2	3	4	5	6	7	8
Movement(s) Served	SBL	NBT	WBL	EBT	NBL	SBT	EBL	WBT
Maximum Green (s)	10.5	63.9	24.9	26.7	10.9	63.5	22.5	29.1
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall	None	C-Max	None	None	None	C-Max	None	None
Avg. Green (s)	9.0	83.5	20.1	16.5	12.5	87.5	22.2	14.1
g/C Ratio	0.06	0.60	0.14	0.10	0.04	0.62	0.16	0.09
Cycles Skipped (%)	0	0	0	11	56	0	0	11
Cycles @ Minimum (%)	0	0	0	0	0	0	0	0
Cycles Maxed Out (%)	0	100	0	0	11	100	0	0
Cycles with Peds (%)	0	0	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 140.0

Number of Complete Cycles : 8

Intersection: 15: Haun Road

Phase	1	2	3	4	5	6	7	8
Movement(s) Served	SBL	NBT	WBL	EBT	NBL	SBT	EBL	WBT
Maximum Green (s)	23.5	32.0	18.1	55.4	23.0	32.5	41.5	32.0
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall	None	C-Max	None	None	C-Max	None	None	None
Avg. Green (s)	22.4	49.3	14.7	47.2	40.0	31.7	37.7	19.6
g/C Ratio	0.16	0.34	0.08	0.33	0.28	0.18	0.26	0.14
Cycles Skipped (%)	0	0	25	0	0	20	0	0
Cycles @ Minimum (%)	0	0	0	0	0	0	0	0
Cycles Maxed Out (%)	25	100	25	25	100	20	25	0
Cycles with Peds (%)	0	0	0	0	0	0	0	0

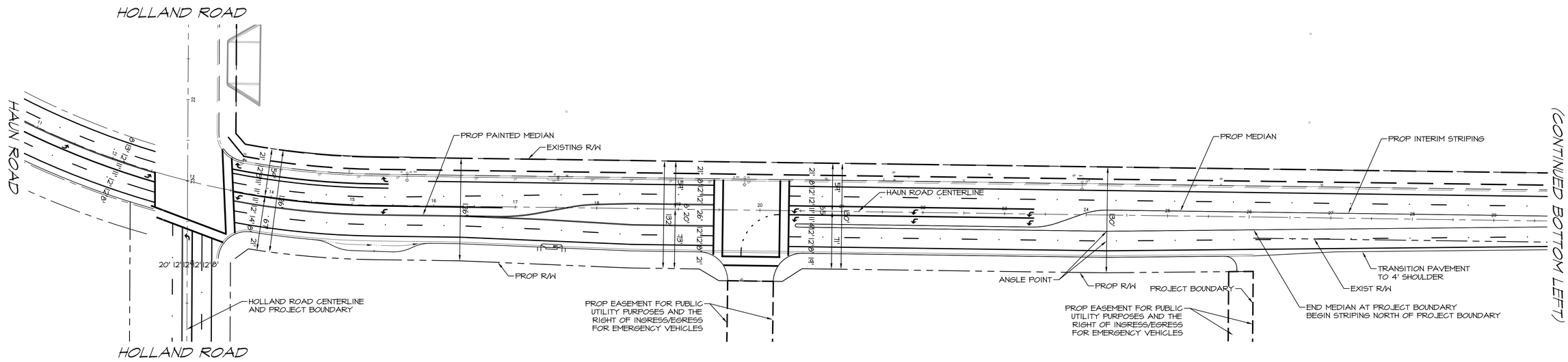
Controller Summary

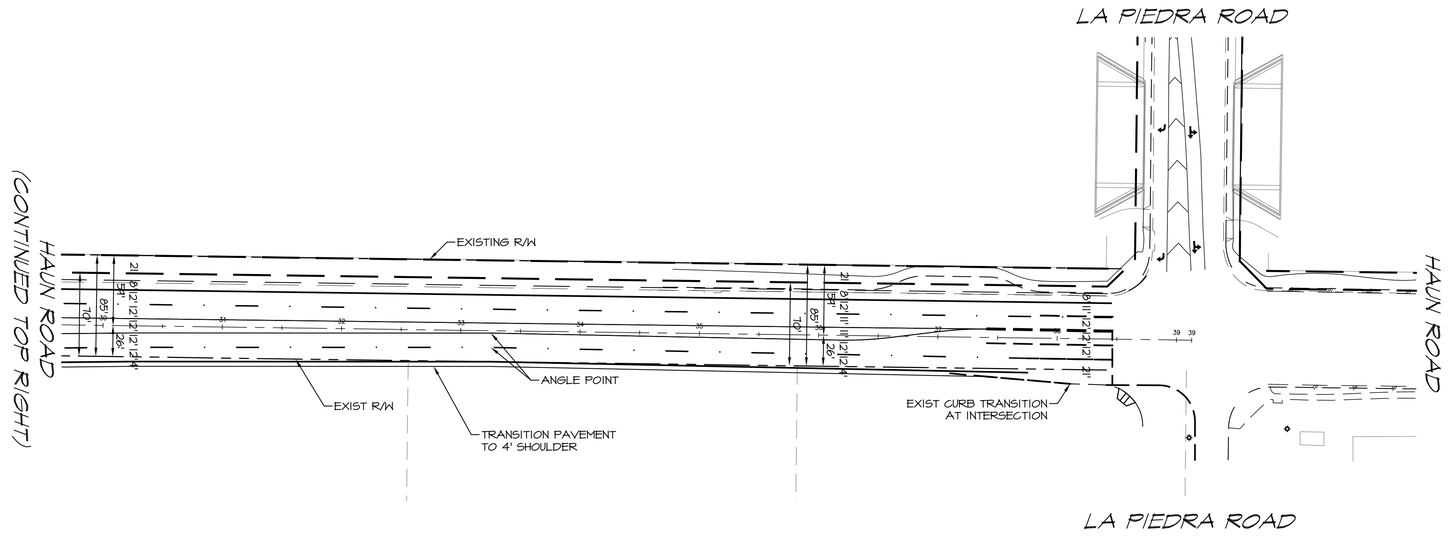
Average Cycle Length (s): 143.0

Number of Complete Cycles : 8

Conceptual Striping Exhibit
Appendix I

ALBERT A. WEBB ASSOCIATES





1" = 60'

60 30 0 60 120 180

REVISIONS	DATE	BY

TPM 37121
SCHEDULE "E"

CITY OF MENIFEE
CONCEPTUAL STRIPING PLAN
JPN CORPORATION
SECTION 3, T. 6 S., R. 3 W.

SCALE:	#########	ALBERT A. WEBB ASSOCIATES	W.O. 2016-0059
DATE:	5/1/2020	ENGINEERING CONSULTANTS 3788 McCRAY STREET RIVERSIDE CA. 92506 PH. (951) 686-1070 FAX (951) 788-1256	SHEET 4
DESIGNED:	ABE		OF 4 SHEETS
CHECKED:	SKK		
PLN CK. REF:	REF		DWG. NO.
F.B.	F.B.		

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